



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: July 8, 2010

RE: Meshberger Brothers Stone Corp / 035-29289-000086

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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**New Source Construction and Federally Enforceable
State Operating Permit
OFFICE OF AIR QUALITY**

**Meshberger Brothers Stone Corp
8700 South County Road 600 West
Daleville, Indiana 47334**

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

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

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

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

Operation Permit No.: F035-29289-00086	
Issued by:  Iryn Caillung, Section Chief Permits Branch Office of Air Quality	Issuance Date: Expiration Date: July 8, 2010 July 8, 2015

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SECTION A SOURCE SUMMARY

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

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

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

Source Address:	8700 South County Road 600 West, Daleville, Indiana 47334
General Source Phone Number:	260-334-5311
SIC Code:	2951
County Location:	Delaware
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) counterflow asphalt drum mixer (EU#6) and dryer, identified as EU#4, capable of processing 260 tons per hour of raw material, equipped with one (1) 100 million (MM) British thermal units (Btu) per hour dual fuel natural gas burner, identified as EU#3, using No. 2 distillate fuel oil, equipped with one (1) fabric filter baghouse (EU#7), in line, for particulate matter (PM) control, exhausting at one (1) stack SV#1. The burner is fired by natural gas as the primary fuel and with No. 2 distillate fuel oil as a backup fuel. This asphalt plant does not use slag in its aggregate mix and does not produce cold mix.

Under 40 CFR 60, NSPS subpart I, this is considered an affected hot-mix asphalt facility.

- (b) One (1) Recycled Asphalt Product (RAP) system, approved for construction in 2010, with a maximum throughput capacity of 75 tons of asphalt per hour, consisting of a RAP screen, conveyor and a 50 hp electric powered crusher, consisting of the following:

- (1) One (1) RAP cold feed system feed bin (EU#18), 20 tons capacity,
- (2) One (1) RAP cold feed system lump breaker (EU#19), capacity 75 tph,
- (3) One (1) RAP cold feed system conveyor system (EU#20), capacity 75 tph and
- (4) RAP storage pile (EU#21) with a total maximum capacity of 150,000 tons, acreage of .34 acres with fugitive emissions controlled by water spray.

Under 40 CFR 60 NSPS Subpart OOO, this is an affected facility (i.e. crushers and grinding mills) at hot mix asphalt facility that reduces the size of nonmetallic minerals embedded in recycled asphalt pavement.

- (c) Material Handling and conveying operations, approved for construction in 2010, consisting of the following:

- (1) one (1) open conveyor, identified as EU#2, maximum capacity 300 ton per hour,
 - (2) one (1) screw conveyor, capacity 35 tph,
 - (3) one (1) drag slat conveyor, maximum capacity 300 tph, identified as EU#11, equipped with No. 2 fuel oil, and natural gas fired heater, rated at 2.00 million British thermal units per hour (MMBtu/hr), identified as EU#16, exhausting through stack SV#3,
 - (4) one (1) hot bucket elevator, 300 tons per hour,
 - (5) six (6) cold feed bins, identified as EU#1, combined maximum capacity 300 ton per hour,
 - (6) one (1) Fines storage bin, capacity 25 tons,
 - (7) two (2) hot mix storage bins, capacity 200 tons each.
- (d) One (1) liquid asphalt storage tank, identified as EU#13, with a maximum storage capacity of 30,000 gallon, exhausting through SV#2.

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:

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

- (a) Unpaved and paved roads and parking lots with public access. [326 IAC 6-4],
- (b) One (1) Cut back asphalt slow cure cold mix storage, identified as EU#17, with a maximum storage capacity of 500 tons per year rated at 0.01 acres.

NOTE: The cold mix is not produced by the plant, but cold mix is stored on site.

- (c) Asphalt storage Heater (Electric)- No emissions from combustion.

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) for 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 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.3 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4][326 IAC 2-8]

This document shall also become the approval to operate pursuant to 326 IAC 2-5.1-4 and 326 IAC 2-8 when prior to the start of operation, the following requirements are met:

- (a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), verifying that the emission units were constructed as proposed in the application or the permit. The emission units covered in this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM if constructed as proposed.
- (b) If actual construction of the emission units differs from the construction proposed in the application, the source may not begin operation until the permit has been revised pursuant to 326 IAC 2 and an Operation Permit Validation Letter is issued.
- (c) The Permittee shall attach the Operation Permit Validation Letter received from the Office of Air Quality (OAQ) to this permit.

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

- (a) This permit, F035-29289-00086, is issued for a fixed term of five (5) 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.5 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.6 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.7 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.8 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.9 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.10 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

- (a) A certification required by this permit meets the requirements of 326 IAC 2-8-5(a)(1) if:
 - (i) it contains a certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1), and
 - (ii) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.11 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. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent 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.12 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.13 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)][326 IAC 2-8-5(a)(1)]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall 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.

- (b) 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).

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

B.14 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.15 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to F035-29289-00086 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.16 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.17 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.18 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 IGCM 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.19 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.20 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.21 Source Modification Requirement [326 IAC 2-8-11.1]

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

B.22 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.23 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.24 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.25 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

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

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

(a) Pursuant to 326 IAC 2-8:

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

(b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.

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

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

C.3 Opacity [326 IAC 5-1]

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

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

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

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

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

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

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

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

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

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

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

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

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue

MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

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

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

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

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

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

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any

monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

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

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

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 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

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

C.13 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.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) The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, and ending on the last day of the reporting period. 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:

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

- (a) One (1) counterflow asphalt drum mixer (EU#6) and dryer, identified as EU#4, capable of processing 260 tons per hour of raw material, equipped with one (1) 100 million (MM) British thermal units (Btu) per hour dual fuel natural gas burner, identified as EU#3, using No. 2 distillate fuel oil, equipped with one (1) fabric filter baghouse (EU#7), in line, for particulate matter (PM) control, exhausting at one (1) stack SV#1. The burner is fired by natural gas as the primary fuel and with No. 2 distillate fuel oil as a backup fuel. This asphalt plant does not use slag in its aggregate mix and does not produce cold mix.

Under 40 CFR 60, NSPS subpart I, this is considered an affected hot-mix asphalt facility.

- (b) One (1) Recycled Asphalt Product (RAP) system, approved for construction in 2010, with a maximum throughput capacity of 75 tons of asphalt per hour, consisting of a RAP screen, conveyor and a 50 hp electric powered crusher, consisting of the following:
- (1) One (1) RAP cold feed system feed bin (EU#18), 20 tons capacity,
 - (2) One (1) RAP cold feed system lump breaker (EU#19), capacity 75 tph,
 - (3) One (1) RAP cold feed system conveyor system (EU#20), capacity 75 tph and
 - (4) RAP storage pile (EU#21) with a total maximum capacity of 150,000 tons, acreage of .34 acres with fugitive emissions controlled by water spray.

Under 40 CFR 60 NSPS Subpart OOO, this is an affected facility (i.e. crushers and grinding mills) at hot mix asphalt facility that reduces the size of nonmetallic minerals embedded in recycled asphalt pavement.

- (c) Material Handling and conveying operations, approved for construction in 2010, consisting of the following:
- (1) one (1) open conveyor, identified as EU#2, maximum capacity 300 ton per hour,
 - (2) one (1) screw conveyor, capacity 35 tph,
 - (3) one (1) drag slat conveyor, maximum capacity 300 tph, identified as EU#11, equipped with No. 2 fuel oil, and natural gas fired heater, rated at 2.00 million British thermal units per hour (MMBtu/hr), identified as EU#16, exhausting through stack SV#3,
 - (4) one (1) hot bucket elevator, 300 tons per hour,
 - (5) six (6) cold feed bins, identified as EU#1, combined maximum capacity 300 ton per hour,
 - (6) one (1) Fines storage bin, capacity 25 tons,
 - (7) two (2) hot mix storage bins, capacity 200 tons each
- (d) One (1) liquid asphalt storage tank, identified as EU#13, with a maximum storage capacity of 30,000 gallon, exhausting through SV#2.

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

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

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

- (a) In order to render 326 IAC 2-2 not applicable, the amount of asphalt processed shall not exceed 1,112,520 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) PM emissions from the dryer/mixer shall not exceed 0.313 pounds per ton of asphalt processed.

Compliance with these PM limitations, combined with the limited PM potential to emit (PTE) from other emission units at this source, shall limit the source-wide total potential to emit PM to less than 250 tons per twelve (12) consecutive month period and shall render 326 IAC 2-2 (PSD) not applicable.

D.1.2 Dryer and Mixer FESOP Limits [326 IAC 2-8-4] [326 IAC 2-2]

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

- (a) The amount of asphalt processed shall not exceed 1,112,520 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) The PM₁₀ emissions from the dryer/mixer shall not exceed 0.137 pounds per ton of asphalt processed.
- (c) The PM_{2.5} emissions from the dryer/mixer shall not exceed 0.162 pounds per ton of asphalt processed.
- (d) The CO emissions from the dryer/mixer shall not exceed 0.130 pounds per ton of asphalt processed.
- (e) The VOC emissions from the dryer/mixer shall not exceed 0.032 pounds per ton of asphalt processed.
- (f) The SO₂ emissions from the dryer/mixer shall not exceed 0.011 pounds per ton of asphalt processed.
- (g) The Permittee shall not use slag as an aggregate additive in its hot mix asphalt operation.

Compliance with these limitations, combined with the limited PTE from other emission units at this source, shall limit the source-wide total potential to emit PM₁₀, PM_{2.5}, CO, VOC, and SO₂ to less than 100 tons per twelve (12) consecutive month period, and shall render 326 IAC 2-7 (Part 70) and 326 IAC 2-2 (PSD) not applicable.

D.1.3 Fuel Limitations [326 IAC 2-8-4][326 IAC 2-2]

Pursuant to 326 IAC 2-8-4, the Permittee shall comply with the following fuel limitations combusted in the dryer/mixer burner and all other combustion equipment:

(a) Sulfur Content Specifications

The sulfur content of No.2 fuel oil shall not exceed 0.50 percent by weight.

(b) Single Fuel Usage Limitations:

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

- (1) Natural gas usage shall not exceed 876 million cubic feet per twelve (12) consecutive month period, with compliance determined at the end of each month,
- (2) No. 2 fuel oil usage shall not exceed 2,663,516 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(c) Multiple Fuel Usage Limitation:

When combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner, SO₂ emissions from the dryer/mixer and all other combustion equipment shall be less than 100 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

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

D.1.4 Sulfur Dioxide (SO₂) [326 IAC 7-1.1-1][326 IAC 7-2-1]

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

- (a) The sulfur dioxide (SO₂) emissions from the dryer/mixer burner shall not exceed 0.5 pounds per million Btu heat input when using distillate oil.
- (b) Pursuant to 326 IAC 7-2-1, compliance shall be demonstrated on a calendar month average.

D.1.5 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

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

- (a) The amount of asphalt processed shall not exceed 1,112,520 tons per twelve (12) consecutive month period.
- (b) VOC emissions from the dryer/mixer shall not exceed 0.032 pound of VOC per ton of hot mix asphalt produced.

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

D.1.6 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the dryer/burner and counterflow drum mixer unit and their control device.

Compliance Determination Requirements

D.1.7 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

- (a) Within sixty (60) days after achieving maximum capacity, but not later than one hundred and eighty (180) days after startup, in order to demonstrate compliance with Condition D.1.1, the Permittee shall perform PM testing of the dryer/mixer utilizing methods

approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration.

- (b) In order to demonstrate compliance with Conditions D.1.2(b) and D.1.2(c), the Permittee shall perform PM2.5 and PM10 testing on the dryer/mixer within 180 days of promulgation of the new or revised condensible PM test method(s) referenced in the U.S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM2.5), signed on May 8th, 2008 or within 180 days after initial start up, which ever is later. This testing shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing. PM10 and PM2.5 includes filterable and condensible PM.

D.1.8 Particulate Control

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

D.1.9 Multiple Fuel Usage Limitation

- (a) In order to comply with Condition D.1.3 when combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner and hot oil heating system, the Permittee shall limit fuel usage in the dryer/mixer burner and hot oil heating system according to the following formulas:

Sulfur Dioxide (SO₂) emission calculation:

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

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 fuel oil used in last 12 months

E_G = 0.60 lb/million cubic feet of natural gas

E_O = 71.00 lb/1000 gallons of No. 2 fuel oil

D.1.10 Sulfur Dioxide Emissions and Sulfur Content

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

- (1) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the sulfur dioxide emissions do not exceed five-tenths (0.5) pounds per million British thermal units heat input when combusting No. 2 fuel oil, by:
- (A) Providing vendor analysis of fuel delivered, if accompanied by a vendor certification; or

- (B) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.
 - (i) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and
 - (ii) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling.
- (2) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 100 million British thermal units per hour burner, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

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

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

D.1.11 Visible Emissions Notations

- (a) Visible emission notations of the conveyors, screens, material transfer points, 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 in accordance with Section C - Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances shall be considered a deviation from this permit.

D.1.12 Baghouse Parametric Monitoring [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- (a) The Permittee shall record the pressure drop across the baghouse used in conjunction with the dryer/mixer at least once per day when the dryer/mixer is in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 1.0 and 10.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Response to Excursions or Exceedances. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.
- (b) The instruments used for determining the pressure and temperature shall comply with Section C - Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.1.13 Broken or Failed Bag Detection

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

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

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

D.1.14 Record Keeping Requirements

- (a) To document compliance with Conditions D.1.1(a), D.1.2(a) and D.1.5 the Permittee shall keep records of the amount of asphalt processed through the dryer/mixer. Records necessary to demonstrate compliance shall be available within thirty (30) days of the end of each compliance period.
- (b) To document compliance with Conditions D.1.3, and D.1.4, the Permittee shall maintain records in accordance with (1) through (7) below.
 - (1) Calendar dates covered in the compliance determination period;
 - (2) Actual fuel usage, sulfur content, heat content, and equivalent sulfur dioxide emission rates for each fuel used at the source per month;
 - (3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

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

- (5) Fuel supplier certifications;
- (6) The name of the fuel suppliers; and
- (7) A statement from the fuel supplier that certifies the sulfur content of the No. 2 fuel oil.

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

- (e) To document compliance with Conditions D.1.3(c) and D.1.9 when combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner and all other combustion equipment, the Permittee shall maintain records of actual fuel usage, and equivalent nitrogen oxides and sulfur dioxide emission rates for each fuel used at the

source per month.

- (f) To document compliance with Condition D.1.11, the Permittee shall maintain daily records of the visible emission notations from each of the conveyors, screens, material transfer points, and dryer/mixer stack (SV-1) exhaust. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the plant did not operate that day).
- (g) To document compliance with Condition D.1.12, the Permittee shall maintain the following:
 - (1) Daily records of the pressure drop across the baghouse controlling the dryer/mixer. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g., the dryer/mixer did not operate that day).
- (h) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.15 Reporting Requirements

- (a) A quarterly summary of the information to document compliance with Conditions D.1.1(a), D.1.2(a), D.1.3(b), D.1.3(c), D.1.5 and D.1.9 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.2

FACILITY CONDITIONS

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

One (1) Cut back asphalt slow cure cold mix storage, identified as EU#17, with a maximum storage capacity of 500 tons per year rated at 0.01 acres.

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

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

D.2.1 Volatile Organic Compound (VOC) [326 IAC 8-5-2][326 IAC 2-8-4][326 IAC 2-2]

- (a) Pursuant to 326 IAC 8-5-2 (Miscellaneous Operations: Asphalt Paving), the use of cutback asphalt or asphalt emulsion shall not contain more than seven percent (7%) oil distillate by volume of emulsion for any paving application except the following purposes:
- (1) penetrating prime coating
 - (2) stockpile storage
 - (3) application during the months of November, December, January, February and March.

Therefore, the requirements of 326 IAC 2-7 will not apply. This limit will also render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

SECTION E.1

FACILITY OPERATION CONDITIONS

Emissions Unit Description: Hot-Mix Asphalt Plant

- (a) One (1) counterflow asphalt drum mixer (EU#6) and dryer, identified as EU#4, capable of processing 260 tons per hour of raw material, equipped with one (1) 100 million (MM) British thermal units (Btu) per hour dual fuel natural gas burner, identified as EU#3, using No. 2 distillate fuel oil, equipped with one (1) fabric filter baghouse (EU#7), in line, for particulate matter (PM) control, exhausting at one (1) stack SV#1. The burner is fired by natural gas as the primary fuel and with No. 2 distillate fuel oil as a backup fuel. This asphalt plant does not use slag in its aggregate mix and does not produce cold mix.

Under 40 CFR 60, NSPS subpart I, this is considered an affected hot-mix asphalt facility.

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

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

E.1.1 General Provisions Relating to 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 D of this permit), which are incorporated by reference as 326 IAC 12, except as otherwise specified in 40 CFR Part 60, Subpart I:

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

SECTION E.2

FACILITY OPERATION CONDITIONS

Emissions Unit Description: Hot-Mix Asphalt Plant

- (b) One (1) Recycled Asphalt Product (RAP) system, approved for construction in 2010, with a maximum throughput capacity of 75 tons of asphalt per hour, consisting of a RAP screen, conveyor and a 50 hp electric powered crusher, consisting of the following:
- (1) One (1) RAP cold feed system feed bin (EU#18), 20 tons capacity,
 - (2) One (1) RAP cold feed system lump breaker (EU#19), capacity 75 tph,
 - (3) One (1) RAP cold feed system conveyor system (EU#20), capacity 75 tph and
 - (4) RAP storage pile (EU#21) with a total maximum capacity of 150,000 tons, acreage of .34 acres with fugitive emissions controlled by water spray.

Under 40 CFR 60 NSPS Subpart OOO, this is an affected facility (i.e. crushers and grinding mills) at hot mix asphalt facility that reduces the size of nonmetallic minerals embedded in recycled asphalt pavement.

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

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

- 40 CFR 60.670
- 40 CFR 60.671
- 40 CFR 60.672
- 40 CFR 60.673
- 40 CFR 60.675
- 40 CFR 60.676

**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 Corp
Source Address: 8700 South County Road 600 West, Daleville, Indiana 47334
FESOP Permit No.: F035-29289-00086

**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 Corp
Source Address: 8700 South County Road 600 West, Daleville, Indiana 47334
FESOP Permit No.: F035-29289-00086

This form consists of 2 pages

Page 1 of 2

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

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

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

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

Page 2 of 2

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

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

FESOP Usage Report
(Submit Report Quarterly)

Source Name: Meshberger Brothers Stone Corp
Source Address: 8700 South County Road 600 West, Daleville, Indiana 47334
FESOP Permit No.: F035-29289-00086
Facility: EU-01
Parameters: Sulfur Dioxide (SO₂) Emissions

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

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

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 fuel oil used in last 12 months
E_G = 0.60 lb/million cubic feet of natural gas
E_O = 71.00 lb/1000 gallons of No. 2 fuel oil

Multiple Fuel Quarterly Report

QUARTER: _____ YEAR: _____

Month		Column 1	Column 2	Column 1 + Column 2	Equation Results
	Fuel Types / Slag (units)	Usage This Month	Usage Previous 11 Months	Usage 12 Month Total	Emissions (tons per 12 months)
Month 1	Natural Gas (million cubic feet)				Nitrogen Oxides = Sulfur Dioxide =
	No. 2 Fuel Oil (gallons)				
Month 2	Natural Gas (million cubic feet)				Nitrogen Oxides = Sulfur Dioxide =
	No. 2 Fuel Oil (gallons)				
Month 3	Natural Gas (million cubic feet)				Nitrogen Oxides = Sulfur Dioxide =
	No. 2 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: _____
- Attach a signed certification to complete this report No deviation occurred in this month.

Attach a signed certification to complete this report.

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

FESOP Quarterly Report

Source Name: Meshberger Brothers Stone Corp
Source Address: 8700 South County Road 600 West, Daleville, Indiana 47334
FESOP Permit No.: F035-29289-00086
Facility: Dryer/Burner (EU#01)
Parameter: Hot Mix Asphalt Production
Limit: The amount of hot mix asphalt produced in the dryer/burner shall not exceed 1,112,520 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

YEAR: _____

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

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

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

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

Source Name: Meshberger Brothers Stone Corp
Source Address: 8700 South County Road 600 West, Daleville, Indiana 47334
FESOP Permit No.: F035-29289-00086

Months: _____ to _____ Year: _____

Page 1 of 2

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

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

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

Meshberger Brothers Stone Corp
8700 South County Road 600 West
Daleville, Indiana 47334

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of _____ for _____
(Title) (Company Name)
3. By virtue of my position with _____, I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of _____.
(Company Name)
4. I hereby certify that Meshberger Brothers Stone Corp 8700 South County Road 600 West, Daleville, Indiana 47334, completed construction of the drum hot-mix asphalt plant on _____ in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on **May 24, 2010** and as permitted pursuant to New Source Construction Permit and Federally Enforceable State Operating Permit No. F035-29289-00086, Plant ID No. 035-00086 issued on _____.
5. **Permittee, please cross out the following statement if it does not apply:** Additional (operations/facilities) were constructed/substituted as described in the attachment to this document and were not made in accordance with the construction permit.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature _____
Date _____

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of Indiana
on this _____ day of _____, 20____. My Commission expires: _____.

Signature _____
Name _____ (typed or printed)

**Indiana Department of Environmental Management
Office of Air Quality**

Attachment A

MESHBERGER BROTHERS STONE CORPORATION

ASPHALT PLANT SITE FUGITIVE DUST CONTROL PLAN

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

Paved roads and parking lots:

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

Unpaved roads and parking lots:

- (1) paving with asphalt;
- (2) treating with emulsified asphalt;
- (3) watering;
- (4) double chip and seal the road surface.

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

- (1) applying water at the feed and the intermediate points.

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

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

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

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

Indiana Department of Environmental Management
Office of Air Quality

Attachment B

MESHBERGER BROTHERS STONE CORP.
ASPHALT DIVISION

EMISSIONS CONTROL PREVENTATIVE MAINTENANCE PLAN

The following individuals are responsible for inspecting, maintaining and repairing emission control devices on the asphalt plants:

Asphalt plant operator
Loader operator
Asphalt plant maintenance foreman
Asphalt plant superintendent
QC personnel

Inspection items, conditions and schedule

- A) Daily pre-start check
- 1) Check baghouse air compressor for proper operation and pressure
 - 2) Check exhausts fan, damper, screw conveyors, rotary valves or tip valves
 - 3) Preheat baghouse as per Standard Operating Procedure
- B) Daily while plant is under normal operating conditions
- 1) Record baghouse pressure differential from photohelic gauge on Daily Log
 - 2) Observe stack and fugitive emissions twice in morning and twice in afternoon, separated by at least 1 hour. Record observation as "Normal" or "Abnormal" on Daily Log. If conditions are "Abnormal" follow Standard Operating Procedure.
 - 3) Observe baghouse inlet temperature and record on Daily Log. Make adjustments to plant controls to keep temperature within our stated operating range of 175° F. - 300°F.
 - 4) Observe fugitive emissions for conveyor transfer points, RAP feed bin, and RAP lump breaker. Record observation as "Normal" or "Abnormal" on Daily Log. If conditions are "Abnormal" follow Standard Operating Procedure.
- C) Daily after production has stopped
- 1) Pulse bags to remove excess dust cake
 - 2) Drain air tanks and reservoirs

D) Weekly during operating season

- 1) Check compressed air system for leaks. Repair as needed
- 2) Check ductwork and baghouse housing for leaks. Repair as required
- 3) Check fugitive dust system for leaks and plugging. Repair as required

E) Monthly during operating season

- 1) Check exhaust fan drive belts for tension and wear. Repair or replace as necessary
- 2) Check dampers and linkage for proper operation

F) Once per each quarter (every 3 months)

- 1) Perform "black light" leak detection test in baghouse. Replace any leaking bags or seals as needed

G) Each year during off season

- 1) Check bags for useful life
- 2) Check baghouse, exhaust ductwork, and fugitive dust system for wear or rust. Repair as required
- 3) Calibrate photohelic gauge

H) Inventory of spare parts

Maintain the following list of parts as a minimum

- a) Bags – 20
- b) Cages – 5
- c) Seals – 20
- d) Pulse valves – 1
- e) Solenoids for pulse valves or repair kits – 3

**Indiana Department of Environmental Management
Office of Air Quality**

Attachment C

Subpart 000—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 expeditiously as practical if the owner or operator finds that water is not flowing properly during an inspection of the water spray nozzles. The owner or operator must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under §60.676(b).

(1) If an affected facility relies on water carryover from upstream water sprays to control fugitive emissions, then that affected facility is exempt from the 5-year repeat testing requirement specified in Table 3 of this subpart provided that the affected facility meets the criteria in paragraphs (b)(1)(i) and (ii) of this section:

(i) The owner or operator of the affected facility conducts periodic inspections of the upstream water spray(s) that are responsible for controlling fugitive emissions from the affected facility. These inspections are conducted according to paragraph (b) of this section and §60.676(b), and

(ii) The owner or operator of the affected facility designates which upstream water spray(s) will be periodically inspected at the time of the initial performance test required under §60.11 of this part and §60.675 of this subpart.

(2) If an affected facility that routinely uses wet suppression water sprays ceases operation of the water sprays or is using a control mechanism to reduce fugitive emissions other than water sprays during the monthly inspection (for example, water from recent rainfall), the logbook entry required under §60.676(b) must specify the control mechanism being used instead of the water sprays.

(c) Except as specified in paragraph (d) or (e) of this section, the owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses a baghouse to control emissions must conduct quarterly 30-minute visible emissions inspections using EPA Method 22 (40 CFR part 60, Appendix A-7). The Method 22 (40 CFR part 60, Appendix A-7) test shall be conducted while the baghouse is operating. The test is successful if no visible emissions are observed. If any visible emissions are observed, the owner or operator of the affected facility must initiate corrective action within 24 hours to return the baghouse to normal operation. The owner or operator must record each Method 22 (40 CFR part 60, Appendix A-7) test, including the date and any corrective actions taken, in the logbook required under §60.676(b). The owner or operator of the affected facility may establish a different baghouse-specific success level for the visible emissions test (other than no visible emissions) by conducting a PM performance test according to §60.675(b) simultaneously with a Method 22 (40 CFR part 60, Appendix A-7) to determine what constitutes normal visible emissions from that affected facility's baghouse when it is in compliance with the applicable PM concentration limit in Table 2 of this subpart. The revised visible emissions success level must be incorporated into the permit for the affected facility.

(d) As an alternative to the periodic Method 22 (40 CFR part 60, Appendix A-7) visible emissions inspections specified in paragraph (c) of this section, the owner or operator of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses a baghouse to control emissions may use a bag leak detection system. The owner or operator must install, operate, and maintain the bag leak detection system according to paragraphs (d)(1) through (3) of this section.

(1) Each bag leak detection system must meet the specifications and requirements in paragraphs (d)(1)(i) through (viii) of this section.

(i) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 1 milligram per dry standard cubic meter (0.00044 grains per actual cubic foot) or less.

(ii) The bag leak detection system sensor must provide output of relative PM loadings. The owner or operator shall continuously record the output from the bag leak detection system using electronic or other means (*e.g.* , using a strip chart recorder or a data logger).

(iii) The bag leak detection system must be equipped with an alarm system that will sound when the system detects an increase in relative particulate loading over the alarm set point established according to paragraph (d)(1)(iv) of this section, and the alarm must be located such that it can be heard by the appropriate plant personnel.

(iv) In the initial adjustment of the bag leak detection system, the owner or operator must establish, at a minimum, the baseline output by adjusting the sensitivity (range) and the averaging period of the device, the alarm set points, and the alarm delay time.

(v) Following initial adjustment, the owner or operator shall not adjust the averaging period, alarm set point, or alarm delay time without approval from the Administrator or delegated authority except as provided in paragraph (d)(1)(vi) of this section.

(vi) Once per quarter, the owner or operator may adjust the sensitivity of the bag leak detection system to account for seasonal effects, including temperature and humidity, according to the procedures identified in the site-specific monitoring plan required by paragraph (d)(2) of this section.

(vii) The owner or operator must install the bag leak detection sensor downstream of the fabric filter.

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

(2) The owner or operator of the affected facility must develop and submit to the Administrator or delegated authority for approval of a site-specific monitoring plan for each bag leak detection system. The owner or operator must operate and maintain the bag leak detection system according to the site-specific monitoring plan at all times. Each monitoring plan must describe the items in paragraphs (d)(2)(i) through (vi) of this section.

(i) Installation of the bag leak detection system;

(ii) Initial and periodic adjustment of the bag leak detection system, including how the alarm set-point will be established;

(iii) Operation of the bag leak detection system, including quality assurance procedures;

(iv) How the bag leak detection system will be maintained, including a routine maintenance schedule and spare parts inventory list;

(v) How the bag leak detection system output will be recorded and stored; and

(vi) Corrective action procedures as specified in paragraph (d)(3) of this section. In approving the site-specific monitoring plan, the Administrator or delegated authority may allow owners and operators more than 3 hours to alleviate a specific condition that causes an alarm if the owner or operator identifies in the monitoring plan this specific condition as one that could lead to an alarm, adequately explains why it is not feasible to alleviate this condition within 3 hours of the time the alarm occurs, and demonstrates that the requested time will ensure alleviation of this condition as expeditiously as practicable.

(3) For each bag leak detection system, the owner or operator must initiate procedures to determine the cause of every alarm within 1 hour of the alarm. Except as provided in paragraph (d)(2)(vi) of this section, the owner or operator must alleviate the cause of the alarm within 3 hours of the alarm by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to the following:

(i) Inspecting the fabric filter for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in PM emissions;

(ii) Sealing off defective bags or filter media;

(iii) Replacing defective bags or filter media or otherwise repairing the control device;

(iv) Sealing off a defective fabric filter compartment;

(v) Cleaning the bag leak detection system probe or otherwise repairing the bag leak detection system; or

(vi) Shutting down the process producing the PM emissions.

(e) As an alternative to the periodic Method 22 (40 CFR part 60, Appendix A-7) visible emissions inspections specified in paragraph (c) of this section, the owner or operator of any affected facility that is subject to the requirements for processed stone handling operations in the Lime Manufacturing NESHAP (40 CFR part 63, subpart AAAAA) may follow the continuous compliance requirements in row 1 items (i) through (iii) of Table 6 to Subpart AAAAA of 40 CFR part 63.

§ 60.675 Test methods and procedures.

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendices A-1 through A-7 of this part or other methods and procedures as

specified in this section, except as provided in §60.8(b). Acceptable alternative methods and procedures are given in paragraph (e) of this section.

(b) The owner or operator shall determine compliance with the PM standards in §60.672(a) as follows:

(1) Except as specified in paragraphs (e)(3) and (4) of this section, Method 5 of Appendix A–3 of this part or Method 17 of Appendix A–6 of this part shall be used to determine the particulate matter concentration. The sample volume shall be at least 1.70 dscm (60 dscf). For Method 5 (40 CFR part 60, Appendix A–3), if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters. If the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter.

(2) Method 9 of Appendix A–4 of this part and the procedures in §60.11 shall be used to determine opacity.

(c)(1) In determining compliance with the particulate matter standards in §60.672(b) or §60.672(e)(1), the owner or operator shall use Method 9 of Appendix A–4 of this part and the procedures in §60.11, with the following additions:

(i) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

(ii) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun (Method 9 of Appendix A–4 of this part, Section 2.1) must be followed.

(iii) For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.

(2)(i) In determining compliance with the opacity of stack emissions from any baghouse that controls emissions only from an individual enclosed storage bin under §60.672(f) of this subpart, using Method 9 (40 CFR part 60, Appendix A–4), the duration of the Method 9 (40 CFR part 60, Appendix A–4) observations shall be 1 hour (ten 6-minute averages).

(ii) The duration of the Method 9 (40 CFR part 60, Appendix A–4) observations may be reduced to the duration the affected facility operates (but not less than 30 minutes) for baghouses that control storage bins or enclosed truck or railcar loading stations that operate for less than 1 hour at a time.

(3) When determining compliance with the fugitive emissions standard for any affected facility described under §60.672(b) or §60.672(e)(1) of this subpart, the duration of the Method 9 (40 CFR part 60, Appendix A–4) observations must be 30 minutes (five 6-minute averages). Compliance with the applicable fugitive emission limits in Table 3 of this subpart must be based on the average of the five 6-minute averages.

(d) To demonstrate compliance with the fugitive emission limits for buildings specified in §60.672(e)(1), the owner or operator must complete the testing specified in paragraph (d)(1) and (2) of this section. Performance tests must be conducted while all affected facilities inside the building are operating.

(1) If the building encloses any affected facility that commences construction, modification, or reconstruction on or after April 22, 2008, the owner or operator of the affected facility must conduct an initial Method 9 (40 CFR part 60, Appendix A–4) performance test according to this section and §60.11.

(2) If the building encloses only affected facilities that commenced construction, modification, or reconstruction before April 22, 2008, and the owner or operator has previously conducted an initial Method 22 (40 CFR part 60, Appendix A–7) performance test showing zero visible emissions, then the owner or operator has demonstrated compliance with the opacity limit in §60.672(e)(1). If the owner or operator has not conducted an initial performance test for the building before April 22, 2008, then the owner or operator must conduct an initial Method 9 (40 CFR part 60, Appendix A–4) performance test according to this section and §60.11 to show compliance with the opacity limit in §60.672(e)(1).

(e) The owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) For the method and procedure of paragraph (c) of this section, if emissions from two or more facilities continuously interfere so that the opacity of fugitive emissions from an individual affected facility cannot be read, either of the following procedures may be used:

(i) Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream.

(ii) Separate the emissions so that the opacity of emissions from each affected facility can be read.

(2) A single visible emission observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions are met:

(i) No more than three emission points may be read concurrently.

(ii) All three emission points must be within a 70 degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points.

(iii) If an opacity reading for any one of the three emission points equals or exceeds the applicable standard, then the observer must stop taking readings for the other two points and continue reading just that single point.

(3) Method 5I of Appendix A-3 of this part may be used to determine the PM concentration as an alternative to the methods specified in paragraph (b)(1) of this section. Method 5I (40 CFR part 60, Appendix A-3) may be useful for affected facilities that operate for less than 1 hour at a time such as (but not limited to) storage bins or enclosed truck or railcar loading stations.

(4) In some cases, velocities of exhaust gases from building vents may be too low to measure accurately with the type S pitot tube specified in EPA Method 2 of Appendix A-1 of this part [*i.e.*, velocity head <1.3 mm H₂O (0.05 in. H₂O)] and referred to in EPA Method 5 of Appendix A-3 of this part. For these conditions, the owner or operator may determine the average gas flow rate produced by the power fans (*e.g.*, from vendor-supplied fan curves) to the building vent. The owner or operator may calculate the average gas velocity at the building vent measurement site using Equation 1 of this section and use this average velocity in determining and maintaining isokinetic sampling rates.

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

Where:

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

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

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

(f) To comply with §60.676(d), the owner or operator shall record the measurements as required in §60.676(c) using the monitoring devices in §60.674 (a)(1) and (2) during each particulate matter run and shall determine the averages.

(g) For performance tests involving only Method 9 (40 CFR part 60 Appendix A-4) testing, the owner or operator may reduce the 30-day advance notification of performance test in §60.7(a)(6) and 60.8(d) to a 7-day advance notification.

(h) [Reserved]

(i) If the initial performance test date for an affected facility falls during a seasonal shut down (as defined in §60.671 of this subpart) of the affected facility, then with approval from the permitting authority, the owner or operator may postpone the initial performance test until no later than 60 calendar days after resuming operation of the affected facility.

§ 60.676 Reporting and recordkeeping.

(a) Each owner or operator seeking to comply with §60.670(d) shall submit to the Administrator the following information about the existing facility being replaced and the replacement piece of equipment.

(1) For a crusher, grinding mill, bucket elevator, bagging operation, or enclosed truck or railcar loading station:

(i) The rated capacity in megagrams or tons per hour of the existing facility being replaced and

(ii) The rated capacity in tons per hour of the replacement equipment.

(2) For a screening operation:

(i) The total surface area of the top screen of the existing screening operation being replaced and

(ii) The total surface area of the top screen of the replacement screening operation.

(3) For a conveyor belt:

(i) The width of the existing belt being replaced and

(ii) The width of the replacement conveyor belt.

(4) For a storage bin:

(i) The rated capacity in megagrams or tons of the existing storage bin being replaced and

(ii) The rated capacity in megagrams or tons of replacement storage bins.

(b)(1) Owners or operators of affected facilities (as defined in §§60.670 and 60.671) for which construction, modification, or reconstruction commenced on or after April 22, 2008, must record each periodic inspection required under §60.674(b) or (c), including dates and any corrective actions taken, in a logbook (in written or electronic format). The owner or operator must keep the logbook onsite and make hard or electronic copies (whichever is requested) of the logbook available to the Administrator upon request.

(2) For each bag leak detection system installed and operated according to §60.674(d), the owner or operator must keep the records specified in paragraphs (b)(2)(i) through (iii) of this section.

(i) Records of the bag leak detection system output;

(ii) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and

(iii) The date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and whether the cause of the alarm was alleviated within 3 hours of the alarm.

(3) The owner or operator of each affected facility demonstrating compliance according to §60.674(e) by following the requirements for processed stone handling operations in the Lime Manufacturing NESHAP (40 CFR part 63, subpart

AAAAA) must maintain records of visible emissions observations required by §63.7132(a)(3) and (b) of 40 CFR part 63, subpart AAAAA.

(c) During the initial performance test of a wet scrubber, and daily thereafter, the owner or operator shall record the measurements of both the change in pressure of the gas stream across the scrubber and the scrubbing liquid flow rate.

(d) After the initial performance test of a wet scrubber, the owner or operator shall submit semiannual reports to the Administrator of occurrences when the measurements of the scrubber pressure loss and liquid flow rate decrease by more than 30 percent from the average determined during the most recent performance test.

(e) The reports required under paragraph (d) of this section shall be postmarked within 30 days following end of the second and fourth calendar quarters.

(f) The owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in §60.672 of this subpart, including reports of opacity observations made using Method 9 (40 CFR part 60, Appendix A–4) to demonstrate compliance with §60.672(b), (e) and (f).

(g) The owner or operator of any wet material processing operation that processes saturated and subsequently processes unsaturated materials, shall submit a report of this change within 30 days following such change. At the time of such change, this screening operation, bucket elevator, or belt conveyor becomes subject to the applicable opacity limit in §60.672(b) and the emission test requirements of §60.11.

(h) The subpart A requirement under §60.7(a)(1) for notification of the date construction or reconstruction commenced is waived for affected facilities under this subpart.

(i) A notification of the actual date of initial startup of each affected facility shall be submitted to the Administrator.

(1) For a combination of affected facilities in a production line that begin actual initial startup on the same day, a single notification of startup may be submitted by the owner or operator to the Administrator. The notification shall be postmarked within 15 days after such date and shall include a description of each affected facility, equipment manufacturer, and serial number of the equipment, if available.

(2) For portable aggregate processing plants, the notification of the actual date of initial startup shall include both the home office and the current address or location of the portable plant.

(j) The requirements of this section remain in force until and unless the Agency, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such States. In that event, affected facilities within the State will be relieved of the obligation to comply with the reporting requirements of this section, provided that they comply with requirements established by the State.

(k) Notifications and reports required under this subpart and under subpart A of this part to demonstrate compliance with this subpart need only to be sent to the EPA Region or the State which has been delegated authority according to §60.4(b).

Table 1 to Subpart 000—Exceptions to Applicability of Subpart A to Subpart 000

Table 1 to Subpart 000—Exceptions to Applicability of Subpart A to Subpart 000

Subpart A reference	Applies to subpart 000	Explanation
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60.4, Address	Yes	Except in §60.4(a) and (b) submittals need not be submitted to both the EPA Region and delegated State authority (§60.676(k)).
60.7, Notification and recordkeeping	Yes	Except in (a)(1) notification of the date construction or reconstruction commenced (§60.676(h)).
		Also, except in (a)(6) performance tests involving only Method 9 (40 CFR part 60, Appendix A-4) require a 7-day advance notification instead of 30 days (§60.675(g)).
60.8, Performance tests	Yes	Except in (d) performance tests involving only Method 9 (40 CFR part 60, Appendix A-4) require a 7-day advance notification instead of 30 days (§60.675(g)).
60.11, Compliance with standards and maintenance requirements	Yes	Except in (b) under certain conditions (§§60.675(c)), Method 9 (40 CFR part 60, Appendix A-4) observation is reduced from 3 hours to 30 minutes for fugitive emissions.
60.18, General control device	No	Flares will not be used to comply with the emission limits.

Table 2 to Subpart 000—Stack Emission Limits for Affected Facilities With Capture Systems

Table 2 to Subpart 000—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)	An initial performance test according to §60.8 of this part and §60.675 of this subpart; and Monitoring of wet

		7 percent for dry control devices on individual enclosed storage bins	scrubber parameters according to §60.674(a) and §60.676(c), (d), and (e); and
			Monitoring of baghouses according to §60.674(c), (d), or (e) and §60.676(b).

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

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

Table 3 to Subpart 000—Fugitive Emission Limits

Table 3 to Subpart 000—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.

**Indiana Department of Environmental Management
Office of Air Quality**

Attachment D

Title 40: Protection of Environment

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 aggregate and mixing with asphalt cements.

[51 FR 12325, Apr. 10, 1986]

§ 60.92 Standard for particulate matter.

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

Indiana Department of Environmental Management Office of Air Quality

Addendum to the Technical Support Document (TSD) for a New Source Construction and a Federally Enforceable Operating Permit (FESOP)

Source Background and Description

Source Name:	Meshberger Brothers Stone Corp
Source Location:	8700 South County Road 600 West, Daleville, IN 47334
County:	Delaware
SIC Code:	2951
Operation Permit No.:	F 035-29289-00086
Permit Reviewer:	Swarna Prabha

On June 4, 2010, the Office of Air Quality (OAQ) had a third notice published in Muncie Star Press, Muncie, Indiana, stating that Meshberger Brothers Stone Corp had applied for a Federally Enforceable Operating Permit (FESOP) to construct and operate a new stationary drum hot-mix asphalt plant capable of producing hot mix asphalt. The notice also stated that the OAQ proposed to issue a FESOP 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. Pursuant to 326 IAC 2-1.1-6(d), the source did not provide notice in writing to all owners or occupants of land adjoining the land which is the subject of the application during the first and the second public notice period which was published on April 9, 2010 and March 8, 2010 respectively. A public meeting was held on May 6, 2010, at the Daleville High School Gym, 8400 S Bronco Dr, Daleville In 47334. This addendum addresses written comments received during the public comment periods for all three notices published in Muncie Star Press, Muncie, Indiana. No new comments were received during the third public notice published in Muncie Star Press, Muncie, Indiana.

Comments and Responses

Written comments on the draft permit were submitted by John & Chris Wearly, Dan Bits, Mark Findling, Ron Myers, Ruth & Johnnie McCool, Charles and Barbara Pahmier, Jerry and Barbara Timmons, Jerry J. and Mary Ann Moore, Leanna Collins, David & Brenda Southerland, Nicki Combs, Sandy Hird, Deborah McManus, M.A.T., CCC-SLP, David and Katherine Guentenspberger, Tim Konkle, Kim Huff, Sheila Grimes, Lenora Thornbro, Mr. and Mrs. David Smith, Frank Lay, Greg Wilson, Jeff Phillips, Claude Beaty, and Andrea Morrow.

Petitions were collected and submitted by Jerry and Barbara Timmons and Lenora Thornbro in response to the Meshberger Brothers Stone Corp locating in Daleville, Indiana.

NOTE: The Technical Support Document (TSD) is used by IDEM, OAQ for historical purposes. IDEM, OAQ does not make any changes to the original TSD, but the Permit will have the updated changes.

Comment 1: Zoning

Comments were received addressing local zoning issues stating "How do you know that the parcel for this plant is zoned for this type of business"? We moved in the area from the city to get away from all the auto emissions smoke stack and pollution. We thought we have cleaner air to breathe and have a healthier environment. We do not think we should have this facility in our area, They need to be in an Industrial Park.

Response to Comment 1:

IDEM, OAQ does not have authority to regulate zoning. This matter is under the separate authority of local government units, such as a zoning board, county council or county commission. This regulation is done by zoning, planning, and construction regulations. IDEM, OAQ is required to issue air pollution control permits to sources that have indicated that they can comply with all applicable air pollution control requirements, whether or not the local government unit has made zoning or construction approvals. During the public meeting several comments had indicated they are aware that this area is zoned commercial and therefore properly zoned.

There are no changes to the permit due to this comment.

Comment 2:

Several comments were submitted requesting that IDEM deny Meshberger Brothers Stone Corporation's request to construct and operate the stationary hot-mix asphalt plant. Many concerns were expressed dangerous chemicals will be emitted into the air, causing daily sufferings, long term health effects of citizen's breathing the air. Concerns were also expressed regarding the effect of this asphalt plant to an elementary school which is 3 miles away.

Response to Comment 2:

The federal Clean Air Act requires the United States Environmental Protection Agency (U.S. EPA) to set National Ambient Air Quality Standards (NAAQS) for six criteria pollutants. These criteria pollutants are carbon monoxide (CO), lead, sulfur dioxide (SO₂), particulate matter to a diameter of 10 microns (PM₁₀), particulate matter to a diameter of 2.5 microns (PM_{2.5}), nitrogen oxides (NO_x) and ground level ozone. The U.S. EPA sets these standards at levels that protect human health, which is why the NAAQS are often referred to as the federal health standards for outdoor air. The NAAQS limit for all criteria pollutants is set low enough to protect human health, including the health of sensitive persons, such as asthmatics, children, and the elderly. More information about each of these pollutants is available at <http://www.epa.gov/air/airpollutants.html> on U.S. EPA's website. The complete table of the NAAQS for all six criteria pollutants can be found at the <http://www.epa.gov/air/criteria.html> website. EPA's website <http://www.epa.gov/air/urbanair/6poll.html> provides more detailed information about the health effects of these six common air pollutants and why they are regulated.

The Office of Air Quality issues air pollution control permits to facilities that emit regulated levels of pollutants to the air. Permits require sources to comply with all health-based and technology-based standards established by the U.S. EPA and the Indiana Air Pollution Control Board. If an applicant demonstrates that they will be able to comply with all Federal and State laws regarding air pollution, IDEM is required by law to issue the air permit. For information on how to get involved in Indiana's Environmental Rulemaking Process, please go to <http://www.in.gov/idem/rules/involved.html>.

Since many comments expressed concern about the health impacts from air pollution emissions from Meshberger Brothers Stone Corporation's, IDEM, OAQ, conducted an air modeling analysis of the Limited Potential to Emit (PTE) criteria pollutants from this proposed source to estimate whether the Limited PTE criteria pollutants will cause or contribute to a violation of any National Ambient Air Quality Standard (NAAQS). The criteria pollutants included in the modeling analysis were carbon monoxide (CO), lead

(Pb), sulfur dioxide (SO₂), particulate matter to a diameter of 2.5 microns (PM_{2.5}), and nitrogen oxides (NO_x).

The Screen 3 modeling results indicated that the Limited PTE criteria pollutants (Pb, SO₂, NO_x, and CO) from this source will not exceed the National Ambient Air Quality Standards (NAAQS) (see Appendix A of the ATSD for more details).

Modeling results for Hazardous Air Pollutants (HAP) indicate all HAP emissions are below regulatory thresholds (see Appendix B of the ATSD for more details). All modeled HAP emission hazard quotients are below levels the EPA has established to be health concerns. VOC emissions cannot be modeled at this time because the VOC emissions from the source cannot be fully specified.

Meshberger Brothers Stone Corp will operate under Federally Enforceable State Operating Permit ([FESOP](#)). The FESOP limits emissions to less than the Part 70 permit thresholds and is issued to sources that would otherwise have to operate in accordance with the Part 70 permit requirements in 326 IAC 2-7. Emission limits are restrictions over a given period of time on the amount of a pollutant which may be emitted from a source into the outside air. These restrictions may also include limitations on a source's production or operation, such as limiting quantities of raw materials consumed, fuel combusted, hours of operation, or conditions which specify that the source must install and maintain controls that reduce emissions to a specified emission rate or to a specified efficiency level. Additionally, the source may be required to do stack testing, maintain records, and/or submit reports to demonstrate compliance with their FESOP limits. The Meshberger Brothers Stone Corp. FESOP includes; emission limitations for each of the NAAQS criteria pollutants based on annual asphalt production limitations, and asphalt dryer/mixer fuel input and fuel characteristic (such as sulfur content) limitations, emissions testing (PM and PM₁₀) for the asphalt dryer/mixer, emissions control device operation and monitoring requirements for the asphalt dryer/mixer, visible emissions limitations and monitoring requirements for the material handling and storage operations, fugitive dust control requirements as stated in the fugitive dust control plan included in Section C of the permit, and recordkeeping and quarterly reporting to document compliance with the production, fuel usage and fuel characteristic limitations and compliance monitoring requirements contained in Section D of the permit.

IDEM, OAQ believes these requirements are sufficient to control emissions from all areas of the plant. However, violations observed by an IDEM inspector would be evaluated by IDEM's Compliance Branch and Office of Enforcement, and the appropriate action would be initiated to ensure compliance with applicable permit conditions and State and Federal regulations.

Stack emissions that fall to ground level and cross the plant boundary would be considered a violation of the fugitive dust rules under 326 Indiana Administrative Code (IAC) 6-4. Any citizen observing a possible violation of the plant's permit should immediately file a complaint with IDEM. Citizens may make a complaint about any air pollution concern by contacting the following Delaware County IDEM OAQ Compliance Inspector;

Anthony Rench, Environmental Manager
Indiana Department of Environmental Management
100 North Senate Avenue
MC-61-53 IGCN 1003
Indianapolis, IN 46204-2551
Ph: 317-234-3495
email: arench@idem.in.gov

by submitting a complaint on line at <http://www.in.gov/idem/4174.htm>, by contacting IDEM's Complaint Coordinator at (800) 451-6027, extension 24464, or by sending a written complaint to IDEM, Attn: Complaint Coordinator, 100 North Senate Avenue, MC 50-03 IGCN 1313, Indianapolis, IN 46204-2251.

No change has been made to the permit as a result of this comment.

Comment 3:

Dust causes my allergies lots of problem in summer, it limits the hour I spend outside and residents cannot even open the windows to their houses.

Response to Comment 3:

The dust problems that are described here would be considered fugitive dust, which is particulate matter that crosses the property boundary of a plant at ground level. These types of emissions are regulated under this source's permit and under 326 IAC 6-4 and 326 IAC 6-5. Condition C.7 of the permit requires the plant operator to follow the Asphalt Plant Site Fugitive Dust Control Plan, attachment A to the permit. The fugitive dust control plan requires the plant operator to control emissions from the aggregate stockpiles, on an as needed basis, by maintaining a minimum number and size of stockpiles, by applying asphalt coating around the stockpiles, by applying water around the stockpiles and/or by applying water on the stockpiles. The fugitive dust control plan also requires the plant operator to control emissions from the roads, parking lots, conveyors, and the transferring, transportation and loading of material. IDEM, OAQ believes these requirements are sufficient to control fugitive dust from all areas of the plant. However, violations observed by an IDEM inspector would be evaluated by IDEM's Compliance Branch and Office of Enforcement, and the appropriate action would be initiated to ensure compliance with applicable permit conditions and State and Federal regulations.

IDEM, OAQ will continue to inspect the plant to determine if the source is adequately controlling fugitive dust emissions and ensure compliance with its permit and Indiana regulations. Any citizen observing a possible violation of the plant's permit should immediately file a complaint with IDEM. Citizens may make a complaint about any air pollution concern by contacting the following Delaware County IDEM OAQ Compliance Inspector;

Anthony Rench, Environmental Manager
Indiana Department of Environmental Management
100 North Senate Avenue
MC-61-53 IGCN 1003
Indianapolis, IN 46204-2551
Ph: 317-234-3495
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by submitting a complaint on line at <http://www.in.gov/idem/4174.htm>, by contacting IDEM's Complaint Coordinator at (800) 451-6027, extension 24464, or by sending a written complaint to IDEM, Attn: Complaint Coordinator, 100 North Senate Avenue, MC 50-03 IGCN 1313, Indianapolis, IN 46204-2251.

IDEM, OAQ's Compliance Inspector will respond to any citizen complaints of visible emissions, fugitive dust, or other air pollution concern regarding the facility by doing a complaint inspection. In every inspection, whether the result of a complaint or not, the IDEM OAQ compliance inspector will monitor the facility to determine if it is complying with the permit. The inspector prepares a written report of each inspection. Copies of

inspection reports can be obtained by contacting IDEM, OAQ's Compliance Branch at 800-452-6027, ext. 3-0178.

Comment 4:

Some residents expressed concern regarding odors and noise from the plant. They run equipment at night which makes a rumbling noise disturbing our sleep. The smell from an asphalt plant being this close will ruin any chance to sell our property any time in the future.

Response to Comment 4:

IDEM, OAQ recognizes that these matters are of great personal concern to the commenter's and other local residents. However, IDEM, OAQ does not have the authority to regulate zoning, noise, odor, or traffic on roads or railroads. These matters are under the separate authority of local government units, such as a zoning board, county council or county commission. IDEM, OAQ is required to issue air pollution control permits to sources that have indicated that they can comply with all applicable air pollution control requirements, whether or not the local government unit has made zoning or construction approvals.

However, odors might be an indicator that the source is out of compliance, please contact the current Compliance Inspector, Anthony Rench, at (317) 234-3495. In addition, IDEM's Complaint Clearinghouse provides more information regarding filing complaints is available at IDEM's website at <http://www.in.gov/idem/contact/complaints/index.html>.

There are no changes to the permit due to this comment.

Comment 5:

Meshberger Brothers Stone Corp is in the process of constructing a permanent asphalt plant on land owned by McIntire Concrete. By law they are required to inform neighbours about their proposed operation but they failed to do so and claiming their closest neighbor is McIntire Concrete. McIntire is not a neighbor, they own the property at which Meshberger is building.

Response to Comment 5:

Meshberger Brothers Stone Corp. withdrew their initial application and reapplied for FESOP Permit to fulfill the notification of the adjacent property owners required in accordance to the terms and conditions of 326 IAC 2-1.1-6(d). Pursuant to 326 IAC 2-1.1-6(d), the rule states that any person applying for a permit upon land that is either undeveloped or for which a valid existing permit has not been issued shall make, not more than ten (10) working days after submitting the permit application, a reasonable effort to provide notice to all owners or occupants of land adjoining the land which is the subject of the application. Each applicant shall pay the cost of compliance with this subsection. The notice shall be in writing and include the date on which the application was submitted and a brief description of the subject of the application. Meshberger Brothers Stone Corp notified the adjacent property owners per 326 IAC 2-1.1-6(d). IDEM verified and checked the map, and provided an opportunity for public comments during second public notice. The second public notice was published on April 10, 2010.

Comments 6:

Meshberger has already constructed the plant prior to the permit being issued. How is IDEM going to address this issue.

Response to Comment 6:

IDEM, OAQ recognizes that Meshberger constructed prior to the issuance of the permit. IDEM will take appropriate enforcement action.

Please contact the current Compliance Inspector, Anthony Rench, at (317) 234-3495. In addition, IDEM's Complaint Clearinghouse provides more information regarding filing complaints is available at IDEM's website at <http://www.in.gov/idem/contact/complaints/index.html>.

Comment 7:

During the public notice meeting, citizens expressed concerns about the height of the stack.

Response to Comment 7:

Even though asphalt concrete plants are exempted from the requirements specified in 326 IAC 1-7-3 (Actual stack height provisions), IDEM evaluated the stack height for the Meshberger Brothers Stone Corp. The GEP height will be 33.5 feet from the ground level, which is more than the required minimum height of 29.5 feet, therefore it complies.

There are no changes to the permit due to this comment.

Comment 8:

Given the experience with the previous Brooks Asphalt plant, we are extremely concerned about its future negative impact on our business. In the past, when Brooks asphalt plant was operational and the wind conditions were conducive, the smell was extremely obnoxious and was very noisy.

Response to Comment 8:

The Brook Construction was a portable plant located at 8700 South CR 600 West, Daleville, Indiana 47334. It was issued a renewal at this location on June 16, 2008, and moved to Miami on April 21, 2009. The aggregate drum mix dryer, with a maximum capacity of 300 tons per hour, was capable of using natural gas, refinery blend fuel oil, No. 4 fuel oil, No. 5 fuel oil, No. 6 fuel oil, or waste oil as back-up fuels, whereas the Meshberger Brothers Stone Corp plan to use only natural gas and No. 2 fuel oil, and the maximum production capacity of the aggregate drum mix dryer is 260 tons per hour resulting in overall less emissions. The waste oil, fuel oil No. 4, fuel oil No. 5, fuel oil No. 6, or refinery blend oil generate more emissions and waste oil is capable of generating 16 times more particulate emissions, two times of more of sulfur dioxide emissions and generates 13.2 lb per K gal (fuel used) Hydrochloric acid (HAPS) emissions. The overall limited asphalt production by Meshberger is 1,112,520 tons per twelve consecutive month period compared to 1,359,521 tons per twelve consecutive month period by Brook's Construction. The Meshberger Brothers Stone corporation does not use slag as an aggregate additive in its hot mix asphalt operation and there will be no usage of waste oil, therefore it is expected to emit less particulates and sulfur dioxide into the atmosphere, and no hydrogen chloride emissions (HAPs).

There are no changes to the permit due to this comment.

Additional Changes

IDEM, OAQ has decided to make additional revision to the permit as described below, with deleted language as ~~strikeouts~~ and new language **bolded**.

- (1) The Compliance Determination Requirements for stack testing, the Condition D.1.7 (b) the word "after initial start up" was left out. The Condition D.1.7 (b) should read as follows:

Compliance Determination Requirements

D.1.7 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

- (a) Within sixty (60) days after achieving maximum capacity, but not later than one hundred and eighty (180) days after startup, in order to demonstrate compliance with Condition D.1.1, the Permittee shall perform PM testing of the dryer/mixer utilizing methods approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration.
- (b) In order to demonstrate compliance with Conditions D.1.2(b) and D.1.2(c), the Permittee shall perform PM_{2.5} and PM₁₀ testing on the dryer/mixer within 180 days of publication of the new or revised condensible PM test method(s) referenced in the U.S. EPA's Final Rule for Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}), signed on May 8th, 2008 or within 180 days **after initial start up**, whichever is later. This testing shall be conducted utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing. PM₁₀ and PM_{2.5} includes filterable and condensible PM.

IDEM Contact

- (a) Questions regarding this proposed FESSOP can be directed to Swarna Prabha 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) 234-5376 or toll free at 1-800-452-6027 extension 4-5376.
- (b) A copy of the permit 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 New Source Construction and Federally Enforceable State Operating Permit (FESOP)

Source Description and Location

Source Name: Meshberger Brothers Stone Corp
Source Location: 8700 South County Road 600 West, Daleville, IN 47334
County: Delaware
SIC Code: 2951
Operation Permit No.: F 035-29289-00086
Permit Reviewer: Swarna Prabha

On May 24, 2010, the Office of Air Quality (OAQ) received an application from Meshberger Brothers Stone Corp, related to the construction and operation of a new stationary drum hot-mix asphalt plant capable of producing hot mix asphalt. This source does not use slag or shingles and does not produce cold mix asphalt.

Existing Approvals

There have been no previous approvals issued to this source.

County Attainment Status

The source is located in Delaware County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Attainment effective January 3, 2006, for the Muncie area, including Delaware County, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.
¹ Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM2.5.	

(Air Pollution Control Board; 326 IAC 1-4-19; filed Dec 26, 2007, 1:43 p.m.: 20080123-IR-326070308FRA)

- (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. Delaware 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**
Delaware 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, and the effective date of these rules was July 15th, 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
Delaware County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

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

Background and Description of New Source Construction

The Office of Air Quality (OAQ) has reviewed an application, submitted by Meshberger Brothers Stone Corp. on April 5, 2010, relating to the construction and operation of a new stationary drum hot mix asphalt plant.

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

- (a) One (1) counterflow asphalt drum mixer (EU#6) and dryer, identified as EU#4, capable of processing 260 tons per hour of raw material, equipped with one (1) 100 million (MM) British thermal units (Btu) per hour dual fuel natural gas burner, identified as EU#3, using No. 2 distillate fuel oil, equipped with one (1) fabric filter baghouse (EU#7), in line, for particulate matter (PM) control, exhausting at one (1) stack SV#1. The burner is fired by natural gas as the primary fuel and with No. 2 distillate fuel oil as a backup fuel. This asphalt plant does not use slag in its aggregate mix and does not produce cold mix.

Under 40 CFR 60, NSPS subpart I, this is considered an affected hot-mix asphalt facility.

- (b) One (1) Recycled Asphalt Product (RAP) system, approved for construction in 2010, with a maximum throughput capacity of 75 tons of asphalt per hour, consisting of a RAP screen, conveyer and a 50 hp electric powered crusher, consisting of the following:
- (1) One (1) RAP cold feed system feed bin (EU#18), 20 tons capacity,
 - (2) One (1) RAP cold feed system lump breaker (EU#19), capacity 75 tph,
 - (3) One (1) RAP cold feed system conveyor system (EU#20), capacity 75 tph and
 - (4) RAP storage pile (EU#21) with a total maximum capacity of 150,000 tons, acreage of .34 acres with fugitive emissions controlled by water spray.

Under 40 CFR 60 NSPS Subpart OOO, this is an affected facility (i.e. crushers and grinding mills) at hot mix asphalt facility that reduces the size of nonmetallic minerals embedded in recycled asphalt pavement.

- (c) Material Handling and conveying operations, approved for construction in 2010, consisting of the following:
- (1) one (1) open conveyor, identified as EU#2, maximum capacity 300 ton per hour,
 - (2) one (1) screw conveyor, capacity 35 tph,
 - (3) one (1) drag slat conveyor, maximum capacity 300 tph, identified as EU#11, equipped

with No. 2 fuel oil, and natural gas fired heater, rated at 2.00 million British thermal units per hour (MMBtu/hr), identified as EU#16, exhausting through stack SV#3,

- (4) one (1) hot bucket elevator, 300 tons per hour,
 - (5) six (6) cold feed bins, identified as EU#1, combined maximum capacity 300 ton per hour,
 - (6) one (1) Fines storage bin, capacity 25 tons,
 - (7) two (2) hot mix storage bins, capacity 200 tons each.
- (d) One (1) liquid asphalt storage tank, identified as EU#13, with a maximum storage capacity of 30,000 gallon, exhausting through SV#2.

Insignificant Activities

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

- (a) Unpaved and paved roads and parking lots with public access. [326 IAC 6-4],
- (b) One (1) Cut back asphalt slow cure cold mix storage, identified as EU#17, with a maximum storage capacity of 500 tons per year rated at 0.01 acres.

NOTE: The cold mix is not produced by the plant, but cold mix is stored on site.

- (c) Asphalt storage Heater (Electric)- No emissions from combustion.

Enforcement Issues

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

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – FESOP

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	Potential To Emit (tons/year)
PM	32039
PM10 ⁽¹⁾	7447.91
PM2.5	1726.32
SO ₂	226.57
NO _x	84.91
VOC	57.52
CO	152.43

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

HAPs	Potential To Emit (tons/year)
Single (Formaldehyde)	Greater than 10
Combined	Greater than 25

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) of PM10, PM2.5 SO₂, and CO is greater than one hundred (100) tons per year. The PTE of all other regulated criteria pollutants are less than one hundred (100) tons per year. The source would have been subject to the provisions of 326 IAC 2-7. However, the source will be issued a New Source Construction Permit (326 IAC 2-5.1-3) and a Federally Enforceable State Operating Permit (FESOP) (326 IAC 2-8), because the source will limit emissions to less than the Title V major source threshold levels.
- (b) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) of any single HAP is greater than ten (10) tons per year and the PTE of a combination of HAPs is greater than twenty-five (25) tons per year. Therefore, the source would have been subject to the provisions of 326 IAC 2-7. However, the source will be issued a New Source Construction Permit (326 IAC 2-5.1-3) and a FESOP (326 IAC 2-8), because the source will limit emissions of HAPs to less than the Title V major source threshold levels.

PTE of the Entire Source After Issuance of the FESOP

The table below summarizes the potential to emit of the entire source after issuance of this FESOP, reflecting all limits, of the emission units. Any control equipment is considered federally 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.

Process Description	Potential to Emit of the Entire Source After Issuance of the FESOP (tons/year)								
	Limited/Controlled Potential Emissions								
	Criteria Pollutants							Hazardous Air Pollutants	
	PM	PM10**	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Worst Single HAP
Ducted Emissions									
Fuel Combustion (worst case)	2.66	4.39	4.39	94.56	83.22	2.41	36.79	0.89	0.79 Hexane
Dryer/Mixer	174.09	76.47	89.95	6.12	30.59	17.80	72.31	4.90	1.72 Formaldehyde
Slat Conveyor (Combustion)	0.01	0.03	0.03	0.12	0.44	0.02	0.37	0	0
Hot Oil Heater-fuel combustion	0.13	0.21	0.21	4.44	1.25	0.05	0.74	0.02	0.16 Hexane
Total Ducted Emissions	174.24	76.71	90.19	99.00	84.91	17.87	73.42	4.92	1.72 Formaldehyde
Fugitive Emissions									
Asphalt Load-Out, Silo Filling, On-Site Yard	0.62	0.62	0.62	negl.	negl.	9.53	1.60	0.16	0.05 Formaldehyde
Material Storage Piles	0.43	0.15	0.15	negl.	negl.	negl.	negl.	negl.	negl.
Material Processing and Handling	3.59	1.70	0.26	negl.	negl.	negl.	negl.	negl.	negl.
Material Crushing, Screening, and Conveying	17.65	6.45	6.45	negl.	negl.	negl.	negl.	negl.	negl.
Paved and Unpaved Roads (worst case)	52.47	13.37	1.34	Negl.	Negl.	Negl.	Negl.	Negl.	Negl.
Cold Mix Asphalt *	Negl.	Negl.	Negl.	Negl.	Negl.	1.5	Negl.	Negl.	Negl.
Volatile Organic Liquid Storage Vessels	Negl.	Negl.	Negl.	Negl.	Negl.	Negl.	Negl.	Negl.	Negl.
Total Fugitive Emissions	74.76	22.29	8.81	Negl.	Negl.	11.03	1.60	0.16	0.05 Formaldehyde
Total Limited Emissions	249.00	99.00	99.00	99.00	84.91	28.90	75.02	5.08	1.79 Formaldehyde
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	NA	NA
* The VOC emissions from cold Mix asphalt storage only. The Plant does not produce cold mix asphalt. Negl. = negligible ** Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.									

(a) FESOP Status

This new 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 new source is not a major source of HAPs, as defined in 40 CFR 63.41, because the potential to emit HAPs is 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).

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

(a) Fuel Specifications

- (1) The sulfur content of No.2 fuel oil shall not exceed 0.50 percent by weight.

(b) Single Fuel Usage Limitations:

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

- (1) Natural gas usage shall not exceed 876 million cubic feet per twelve (12) consecutive month period, with compliance determined at the end of each month;
- (2) No. 2 fuel oil usage shall not exceed 2,663,516 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(c) Multiple Fuel Usage Limitation:

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

SO₂ emissions from the dryer/mixer and all other combustion equipment shall be less than 100 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

The Permittee shall limit fuel usage in the dryer/mixer burner and hot oil heating system according to the following formula:

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

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 fuel oil used in last 12 months

E_G = 0.60 lb/million cubic feet of natural gas

E_O = 71.00 lb/1000 gallons of No. 2 fuel oil

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

- (a) The amount of asphalt processed shall not exceed 1,112,520 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) The PM10 emissions from the dryer/mixer shall not exceed 0.137 pounds per ton of asphalt processed.
- (c) The PM2.5 emissions from the dryer/mixer shall not exceed 0.162 pounds per ton of asphalt processed.

- (d) The CO emissions from the dryer/mixer shall not exceed 0.130 pounds per ton of asphalt processed.
- (e) The VOC emissions from the dryer/mixer shall not exceed 0.032 pounds per ton of asphalt processed.
- (f) The SO₂ emissions from the dryer/mixer shall not exceed 0.011 pounds per ton of asphalt processed.
- (g) The Permittee shall not use slag as an aggregate additive in its hot mix asphalt operation.

Compliance with these limits, combined with the limited PTE from all other emission units at this source, shall limit the source-wide total potential to emit PM₁₀, PM_{2.5}, CO, VOC and SO₂ to less than 100 tons per 12 consecutive month period, and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (PSD), not applicable.

(b) PSD Minor Source

This new source is not a major stationary source, under PSD (326 IAC 2-2), because the potential to emit PM is limited to less than 250 tons per year and the potential to emit all other attainment regulated pollutants are less than 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) The amount of asphalt processed shall not exceed 1,112,520 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (2) PM emissions from the dryer/mixer shall not exceed 0.313 pounds per ton of asphalt processed.

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

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

- (a) This stationary drum hot-mix asphalt plant, approved for construction in 2010, is subject to the New Source Performance Standard for Hot Mix Asphalt Facilities (40 CFR 60.90, Subpart I), which is incorporated by reference as 326 IAC 12, because it meets the definition of a hot-mix asphalt facility pursuant to the rule and it was constructed after June 11, 1973. This rule limits particulate matter emissions to 0.04 grains per dry standard cubic foot (gr/dscf) and also limits visible emissions to 20% opacity.

The source will be able to comply with this rule by using a baghouse to limit particulate matter emissions from the dryer/mixer to less than 0.04 gr/dscf.

The dryer/mixer is subject to the following portions of 40 CFR 60, Subpart I:

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

(4) 40 CFR 60.93.

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) The requirements of the New Source Performance Standard for Asphalt Processing and Asphalt Roofing Manufacture, 40 CFR 60, Subpart UU (326 IAC 12), are not included in the permit, since pursuant to 40 CFR 60.471, the stationary drum hot-mix asphalt plant is not an asphalt processing plant because it does not blow asphalt, or an asphalt roofing plant because it does not produce asphalt roofing products, and pursuant to 40 CFR 60.101(a) the stationary drum hot-mix asphalt plant is not a petroleum refinery because it is not engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation of petroleum or through redistillation, cracking or reforming of unfinished petroleum derivatives.
- (c) The RAP lump breaker, feed bin, and conveyor system are subject to 326 IAC 12 and 40 CFR 60, Subpart OOO (New Source Performance Standards for Nonmetallic Mineral Processing Plants), because they are affected facilities that were constructed after August 31, 1983, located at a source that meets the definition of a non-metallic mineral processing plant as defined under 40 CFR 60.

The asphalt recycling breaker, feed bin, and conveyor system are subject to the following portions of 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 60.675
- (6) 40 CFR 60.676

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 12-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 60, Subpart OOO.

- (d) The requirements of the New Source Performance Standard for Calciners and Dryers in Mineral Industries, 40 CFR 60, Subpart UUU (326 IAC 12), are not included in the permit, since a stationary drum hot-mix asphalt plant is not a mineral processing plant, meaning that it does not process or produce any of the following minerals, their concentrates or any mixture of which the majority (>50 percent) is 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.
- (e) The one (1) 30,000 gallon liquid asphalt storage tank, identified as EU#13 is not subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.110, Subpart Kb) "Standards of Performance for Volatile Organic Liquid Storage Vessels". The storage tank has a capacity greater than 75 m³ (19,813 gallons) but less than 151 m³ (39,890 gallons) and the liquid stored in the tank has a maximum true vapor pressures of less than 15.0 kPa. Therefore, pursuant to 40 CFR 60.110b(b), this tank is exempt from this rule and the requirements of this rule are not included in the permit for this tank.
- (f) There are no New Source Performance Standards (NSPS)(40 CFR Part 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (g) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Asphalt Processing and Asphalt Roofing Manufacturing, 40 CFR 63, Subpart LLLLL (326 IAC

20-71, are not included in the permit, since the hot mix asphalt plant is not a major source of HAPs, is not located at and is not part of a major source of HAP emissions, and does not engage in the preparation of asphalt flux or asphalt roofing materials.

- (h) 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)

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

State Rule Applicability Determination

- (a) 326 IAC 2-8-4 (FESOP)
FESOP applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.
- (b) 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.
- (c) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The unlimited potential to emit of HAPs from the new units is greater than ten (10) tons per year for any single HAP and/or greater than twenty-five (25) tons per year of a combination of HAPs. However, the source shall limit the potential to emit of HAPs from the new units 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 source is not subject to the requirements of 326 IAC 2-4.1. See PTE of the Entire Source After Issuance of the FESOP Section above.
- (d) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (e) 326 IAC 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.
- (f) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
The source is subject to the requirements of 326 IAC 6-4, because 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 Roads each have the potential to emit fugitive particulate emissions. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

- (g) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is subject to the requirements of 326 IAC 6-5, because 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 Roads have combined potential fugitive particulate emissions greater than 25 tons per year. Pursuant to 326 IAC 6-5, fugitive particulate matter emissions shall be controlled according to the Fugitive Dust Control Plan, which is included as Attachment A to the permit.
- (h) 326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations)
The asphalt counter flow drum mixer (EU#4) and dryer EU#6), is subject to 326 IAC 7-1.1 because it has potential SO₂ emissions of greater than 25 tons per year (limited potential emissions are 94.43 tons per year). Pursuant to this rule, sulfur dioxide emissions from the dryer/mixer burner shall be limited to five-tenths (0.5) pounds per million Btu for distillate oil combustion (including No. 2 fuel oil).
- (i) 326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements)
Pursuant to this rule, the source shall submit reports of calendar month average sulfur content, heat content, fuel consumption, and sulfur dioxide emission rate (pounds SO₂ per MMBtu), to the OAQ upon request.
- (j) 326 IAC 1-7-5 (Exemptions; limitations)
Although asphalt concrete plants are exempted from the requirements specified in 326 IAC 1-7-3 (Actual stack height provisions), IDEM evaluated the stack height for the Meshberger Brothers Stone Corp. The stack height will be 33.5 feet from the ground level, which is more than the required minimum height of 29.5 feet measured from the ground level, therefore it complies.

Pursuant to 326 IAC 1-7-4 (3) for stacks in existence after January 12, 1979:

$H_g = H + 1.5L$, where:

Hg = GEP height, measured from the ground level elevation at the base of the stack.

H = Height of nearby structure (s) measured from the ground elevation at the base of the stack.

The nearby structure (control house) is listed as 12' high, and will be elevated on piers of approximately 4', therefore the height and the length of the nearby structure:

$$H = 12' + 4' = 16'$$

$$L = 9'$$

$$H_g = 16' + (1.5 \times 9') = 29.5' \text{ (GEP)}$$

The Permittee also provided following information regarding the stack size/height (the stack has not been erected yet):

The stack dimensions 50" X 39.5" X16' high. The stack will be mounted on top of the exhaust fan on the unit trailer which will add another 14' in height. The unit trailer will be on an elevated pad of 3.5' above ground, therefore estimated height for the top of the stack to be 33.5 feet.

NOTE: The stack height is greater than the GEP height of 29.5'

- (j) 326 IAC 8-1-6 (New Facilities; General Reduction Requirements)
In order to render the requirements of 326 IAC 8-1-6 not applicable, the dryer/mixer shall be limited as follows:

The unlimited VOC potential emissions from the dryer/mixer are greater than twenty-five (25) tons per year. However, the source shall limit the VOC potential emissions from the dryer/mixer to less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 8-1-6 do not apply.

(1) The amount of asphalt processed shall not exceed 1,112,520 tons per twelve (12) consecutive month period.

(2) VOC emissions from the dryer/mixer shall not exceed 0.032 pounds of VOC per ton of

asphalt produced.

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

(k) 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
- (c) application during the months of November, December, January, February and March.

The owner or operator will not process emulsified or cutback asphalt at this source unless proper approval has been obtained from IDEM, OAQ. Therefore, this source will comply with this rule. This source is subject to 326 IAC 8-5-2, therefore the requirements of 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities) are not included in the permit for this source. Therefore, this source is not subject to this rule.

(l) 326 IAC 6.8 (Particulate Matter Limitations)

This source is not a portable source to be located in Lake or Porter Counties; therefore, the requirements of 326 IAC 6.8 does not apply.

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

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

(n) 326 IAC 12-1 (New Source Performance Standards)

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

(o) 26 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

Particulate emissions from this asphalt plant are subject to a more stringent particulate requirement in 40 CFR 60, Subpart I, Therefore, the asphalt plant is exempt from the requirements of 326 IAC 6-3 when operating in Delaware county.

(p) 26 IAC 6-2 (Emission Limitations for Sources of Indirect Heating)

The dryer/mixer is not subject to the requirements of 326 IAC 6-2 because it is not a source of indirect heating.

Compliance Determination, Monitoring and Testing Requirements

(a) The dryer/mixer has applicable compliance determination conditions as specified below:

Emission Unit	Control Device	Timeframe for Testing	Pollutant	Frequency of Testing
Dryer/Mixer EU#4	Baghouse EU#7	180 days after start-up	PM	Once every five (5) years
Dryer/Mixer EU#4	Baghouse EU#7	180 days after promulgation of revised test method or 180 days after start-up, whichever is later	PM2.5 and PM10	Once every five (5) years

(b) The drum mixer and aggregate dryer/burner, baghouse stack exhaust, identified as SV-1, the conveying, screening, and material transfer points have applicable compliance monitoring conditions as specified below:

Control	Parameter	Frequency	Range	Excursions and Exceedances
Conveyors, screening, material transfer points and dryer/mixer stack (SV-1) exhaust	Visible Emissions	Daily	Normal-Abnormal	Response Steps
Baghouse for the dryer/mixer	Water Pressure Drop	Daily	1.0 to 10.0 inches	Response Steps

Air Quality Modeling

IDEM, OAQ, conducted an air modeling analysis of the Limited Potential to Emit (PTE) criteria pollutants from this proposed source to estimate whether the Limited PTE criteria pollutants will cause or contribute to a violation of any National Ambient Air Quality Standard (NAAQS). The criteria pollutants included in the modeling analysis were carbon monoxide (CO), lead (Pb), sulfur dioxide (SO₂), particulate matter to a diameter of 2.5 microns (PM2.5), and nitrogen oxides (NO_x).

The Screen 3 modeling results indicated that the Limited PTE criteria pollutants (Pb, SO₂, NO_x, and CO) from this source will not exceed the National Ambient Air Quality Standards (NAAQS) (see Appendix A of the ATSD for more details).

Modeling results for Hazardous Air Pollutants (HAP) indicate all HAP emissions are below regulatory thresholds (see Appendix B of the TSD for more details). All modeled HAP emission hazard quotients are below levels the EPA has established to be health concerns. VOC emissions cannot be modeled at this time because the VOC emissions from the source cannot be fully speciated.

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 April 5, 2010.

The construction and operation of this source shall be subject to the conditions of the attached proposed New Source Construction FESOP No. 035-29289-00374. The staff recommends to the Commissioner that this New Source Construction and FESOP be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Swarna Prabha 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) 234-5376 or toll free at 1-800-451-6027 extension 4-5376.
- (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 Corp
Source Address: 8700 South County Road 600 West
Permit Number: 035-29289-00086
Reviewer: Swarna Prabha

Asphalt Plant Maximum Capacity

Maximum Hourly Asphalt Production =	260	ton/hr									
Maximum Annual Asphalt Production =	2,277,600	ton/yr									
Maximum Annual Slag Usage =	0	ton/yr		0	% sulfur						
Maximum Dryer Fuel Input Rate =	100.0	MMBtu/hr									
Natural Gas Usage =	876	MMCF/yr									
No. 2 Fuel Oil Usage =	6,257,143	gal/yr, and		0.50	% sulfur						
No. 4 Fuel Oil Usage =	0	gal/yr, and		0.00	% sulfur						
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	gal/yr, and		0.00	% sulfur						
Propane Usage =	0	gal/yr, and		0.00	gr/100 ft3 sulfur						
Butane Usage =	0	gal/yr, and		0.00	gr/100 ft3 sulfur						
Used/Waste Oil Usage =	0	gal/yr, and		0.00	% sulfur	0.00	% ash	0.000	% chlorine,	0.000	% lead
Diesel Engine Oil Usage =	0	gal/yr, and									
Unlimited PM Dryer/Mixer Emission Factor =	28.0	lb/ton of asphalt production									
Unlimited PM10 Dryer/Mixer Emission Factor =	6.5	lb/ton of asphalt production									
Unlimited PM2.5 Dryer/Mixer Emission Factor =	1.5	lb/ton of asphalt production									
Unlimited VOC Dryer/Mixer Emission Factor =	0.032	lb/ton of asphalt production									
Unlimited CO Dryer/Mixer Emission Factor =	0.13	lb/ton of asphalt production									
Unlimited Slag SO2 Dryer/Mixer Emission Factor =	0.00	lb/ton of slag processed									

Unlimited/Uncontrolled Emissions

Process Description	Unlimited/Uncontrolled Potential to Emit (tons/year)									
	Criteria Pollutants							Hazardous Air Pollutants		
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Worst Case HAP	
Ducted Emissions										
Dryer Fuel Combustion (worst case)	6.26	10.32	10.32	222.13	83.22	2.41	36.79	1.01	0.79	(hexane)
Dryer/Mixer (Process)	31886.40	7402.20	1708.20	12.53	62.63	36.44	148.04	10.04	3.53	(formaldehyde)
Dryer/Mixer Slag Processing	0	0	0	0.00	0	0	0	0	0	
Slat Conveyor Heater Fuel Combustion (worst case)	0.13	0.21	0.21	4.44	1.25	0.05	0.74	0.020	0.016	(hexane)
Worst Case Emissions*	31886.53	7402.41	1708.41	226.57	84.47	36.49	148.78	10.06	3.53	(formaldehyde)
Fugitive Emissions										
Asphalt Load-Out, Silo Filling, On-Site Yard	1.26	1.26	1.26	0	0	19.51	3.28	0.33	0.10	(formaldehyde)
Material Storage Piles	0.43	0.15	0.15	0	0	0	0	0	0	
Material Processing and Handling	7.36	3.48	0.53	0	0	0	0	0	0	
Material Crushing, Screening, and Conveying	36.13	13.20	13.20	0	0	0	0	0	0	
Unpaved and Paved Roads (worst case)	107.43	27.38	2.74	0	0	0	0	0	0	
Cold Mix Asphalt storage	0	0	0	0	0	1.50	0	0.00	0.00	
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl	0	negl	0	
Total Fugitive Emissions	152.61	45.47	17.88	0	0.00	21.01	3.28	0.33	0.10	(formaldehyde)
Totals Unlimited/Uncontrolled PTE	32039.14	7447.88	1726.28	226.57	84.47	57.50	152.06	10.38	3.53	(formaldehyde)

negl = negligible

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

*Worst Case Emissions (tons/yr) = Worst Case Emissions from Dryer Fuel Combustion and Dryer/Mixer + Dryer/Mixer Slag Processing + Worst Case Emissions from Hot Oil Heater Fuel Combustion
 Fuel component percentages provided by the source.

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

Company Name: Meshberger Brothers Stone Corp
Source Address: 8700 South County Road 600 West
Permit Number: 035-29289-00086
Reviewer: Swarna Prabha

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 =	260	ton/hr
Maximum Annual Asphalt Production =	2,277,600	ton/yr
Maximum Fuel Input Rate =	100	MMBtu/hr
Natural Gas Usage =	876	MMCF/yr
No. 2 Fuel Oil Usage =	6,257,143	gal/yr, and
No. 4 Fuel Oil Usage =	0	gal/yr, and
Residual (No. 5 or No. 6) Fuel Oil Usage =	0	gal/yr, and
Propane Usage =	0	gal/yr, and
Butane Usage =	0	gal/yr, and
Used/Waste Oil Usage =	0	gal/yr, and
Diesel Engine Oil Usage =	0	gal/yr, and

	0.50	% sulfur
	0.00	% sulfur
	0.00	% sulfur
	0.00	gr/100 ft3 sulfur
	0.00	gr/100 ft3 sulfur
	0.00	% sulfur
	0.00	% ash
	0.000	% chlorine
	0.000	% lead

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factor (units)								Unlimited/Uncontrolled Potential to Emit (tons/yr)								Worse Case Fuel (tons/yr)
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil (lb/kgal)	Residual (No. 5 or No. 6) Fuel Oil (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Used/Waste Oil (lb/kgal)	Diesel Engine (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	No. 4 Fuel Oil (tons/yr)	Residual (No. 5 or No. 6) Fuel Oil (tons/yr)	Propane (tons/yr)	Butane (tons/yr)	Used/Waste Oil (tons/yr)	Diesel Engine (tons/yr)	
PM	1.9	2.0	7.0	3.22	0.5	0.6	0.0	43.4	0.83	6.26	0.00	0.00	0.00	0.00	0.00	0.00	6.26
PM10/PM2.5	7.6	3.3	8.3	4.72	0.5	0.6	0.0	43.4	3.33	10.32	0.00	0.00	0.000	0.000	0.00	0.00	10.32
SO2	0.6	71.0	0.0	0.0	0.000	0.000	0.0	40.6	0.26	222.13	0.00	0.00	0.000	0.000	0.00	0.00	222.13
NOx	190	24.0	47.0	47.0	13.0	15.0	19.0	617.4	83.22	75.09	0.00	0.00	0.00	0.00	0.00	0.00	83.22
VOC	5.5	0.20	0.20	0.28	1.00	1.10	1.0	49.00	2.41	0.63	0.00	0.00	0.00	0.00	0.00	0.00	2.41
CO	84	5.0	5.0	5.0	7.5	8.4	5.0	133.0	36.792	15.64	0.00	0.00	0.00	0.00	0.00	0.00	36.79
Hazardous Air Pollutant																	
HCl								0.0								0.00	0.00
Antimony			5.25E-03	5.25E-03				negl				0.00E+00	0.00E+00			negl	0.00E+00
Arsenic	2.0E-04	5.6E-04	1.32E-03	1.32E-03				1.1E-01	8.8E-05	1.75E-03	0.00E+00	0.00E+00			0.00E+00		1.8E-03
Beryllium	1.2E-05	4.2E-04	2.78E-05	2.78E-05				negl	5.3E-06	1.31E-03	0.00E+00	0.00E+00					1.3E-03
Cadmium	1.1E-03	4.2E-04	3.98E-04	3.98E-04				9.3E-03	4.8E-04	1.31E-03	0.00E+00	0.00E+00			0.00E+00		1.3E-03
Chromium	1.4E-03	4.2E-04	8.45E-04	8.45E-04				2.0E-02	6.1E-04	1.31E-03	0.00E+00	0.00E+00			0.00E+00		1.3E-03
Cobalt	8.4E-05	6.02E-03	6.02E-03	6.02E-03				2.1E-04	3.7E-05	0.00E+00	0.00E+00	0.00E+00			0.00E+00		3.7E-05
Lead	5.0E-04	1.3E-03	1.51E-03	1.51E-03				0	2.2E-04	3.94E-03	0.00E+00	0.00E+00			0.0E+00		0.00
Manganese	3.8E-04	8.4E-04	3.00E-03	3.00E-03				6.8E-02	1.7E-04	2.63E-03	0.00E+00	0.00E+00			0.00E+00		0.00
Mercury	2.6E-04	4.2E-04	1.13E-04	1.13E-04					1.1E-04	1.31E-03	0.00E+00	0.00E+00					1.3E-03
Nickel	2.1E-03	4.2E-04	8.45E-02	8.45E-02				1.1E-02	9.2E-04	1.31E-03	0.00E+00	0.00E+00			0.00E+00		0.001
Selenium	2.4E-05	2.1E-03	6.83E-04	6.83E-04				negl	1.1E-05	6.57E-03	0.00E+00	0.00E+00			negl		6.6E-03
1,1,1-Trichloroethane			2.36E-04	2.36E-04							0.00E+00	0.00E+00					0.0E+00
1,3-Butadiene								5.47E-03							0.00E+00		0.0E+00
Acetaldehyde								1.07E-01							0.00E+00		0.0E+00
Acrolein								1.30E-02							0.00E+00		0.0E+00
Benzene	2.1E-03		2.14E-04	2.14E-04				1.31E-01	9.2E-04		0.00E+00	0.00E+00			0.00E+00		9.2E-04
Bis(2-ethylhexyl)phthalate								2.2E-03							0.00E+00		0.0E+00
Dichlorobenzene	1.2E-03							8.0E-07	5.3E-04						0.00E+00		5.3E-04
Ethylbenzene			6.36E-05	6.36E-05							0.00E+00	0.00E+00			0.00E+00		0.0E+00
Formaldehyde	7.5E-02	6.10E-02	3.30E-02	3.30E-02				1.65E-01	3.3E-02	1.91E-01	0.00E+00	0.00E+00			0.00E+00		0.191
Hexane	1.8E+00								0.79								0.788
Phenol								2.4E-03							0.00E+00		0.0E+00
Toluene	3.4E-03		6.20E-03	6.20E-03				5.73E-02	1.5E-03		0.00E+00	0.00E+00			0.00E+00		1.5E-03
Total PAH Haps	negl		1.13E-03	1.13E-03				3.9E-02	2.35E-02	negl					0.00E+00		0.0E+00
Polycyclic Organic Matter		3.30E-03								1.03E-02							1.0E-02
Xylene			1.09E-04	1.09E-04					3.99E-02		0.00E+00	0.00E+00			0.00E+00		0.0E+00
Total HAPs									0.83	0.22	0.00	0.00	0	0	0.00	0.00	1.01

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
- Diesel Engine Oil: AP-42 Chapter 3.3 (dated 10/96), Tables 3.3-1 and 3.3-2

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

Abbreviations

- PM = Particulate Matter
- HCl = Hydrogen Chloride
- PAH = Polyaromatic Hydrocarbon
- 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

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

Company Name: Meshberger Brothers Stone Corp
Source Address: 8700 South County Road 600 West
Permit Number: 035-29289-00086
Reviewer: Swarna Prabha

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

Maximum Hourly Asphalt Production = 260 ton/hr
Maximum Annual Asphalt Production = 2,277,600 ton/yr

Criteria Pollutant	Uncontrolled Emission Factors (lb/ton)		Unlimited/Uncontrolled Potential to Emit (tons/yr)		
	Drum-Mix Plant (dryer/mixer)		Drum-Mix Plant (dryer/mixer)		
	Natural Gas	No. 2 Fuel Oil	Natural Gas	No. 2 Fuel Oil	Worse Case PTE
PM*	28	28	31886.4	31886.4	31886.4
PM10*	6.5	6.5	7402.2	7402.2	7402.2
PM2.5*	1.5	1.5	1708.2	1708.2	1708
SO2**	0.0034	0.011	3.9	12.5	12.5
NOx**	0.026	0.055	29.6	62.6	62.6
VOC**	0.032	0.032	36.4	36.4	36.4
CO***	0.13	0.13	148.0	148.0	148.0
Hazardous Air Pollutant					
HCl					0.00
Antimony	1.80E-07	1.80E-07	2.05E-04	2.05E-04	2.05E-04
Arsenic	5.60E-07	5.60E-07	6.38E-04	6.38E-04	6.38E-04
Beryllium	negl	negl	negl	negl	0.00E+00
Cadmium	4.10E-07	4.10E-07	4.67E-04	4.67E-04	4.67E-04
Chromium	5.50E-06	5.50E-06	6.26E-03	6.26E-03	6.26E-03
Cobalt	2.60E-08	2.60E-08	2.96E-05	2.96E-05	2.96E-05
Lead	6.20E-07	1.50E-05	7.06E-04	1.71E-02	1.71E-02
Manganese	7.70E-06	7.70E-06	8.77E-03	8.77E-03	8.77E-03
Mercury	2.40E-07	2.60E-06	2.73E-04	2.96E-03	2.96E-03
Nickel	6.30E-05	6.30E-05	0.07	0.07	0.07
Selenium	3.50E-07	3.50E-07	3.99E-04	3.99E-04	3.99E-04
2,2,4 Trimethylpentane	4.00E-05	4.00E-05	0.05	0.05	0.05
Acetaldehyde					0.00
Acrolein					0.00E+00
Benzene	3.90E-04	3.90E-04	0.44	0.44	0.44
Ethylbenzene	2.40E-04	2.40E-04	0.27	0.27	0.27
Formaldehyde	3.10E-03	3.10E-03	3.53	3.53	3.53
Hexane	9.20E-04	9.20E-04	1.05	1.05	1.05
Methyl chloroform	4.80E-05	4.80E-05	0.05	0.05	0.05
MEK					0.00
Propionaldehyde					0.00
Quinone					0.00
Toluene	1.50E-04	2.90E-03	0.17	3.30	3.30
Total PAH Haps	1.90E-04	8.80E-04	0.22	1.00	1.00
Xylene	2.00E-04	2.00E-04	0.23	0.23	0.23

10.04

3.53 (formaldehyde)

Methodology

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

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

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

* PM, PM10, and 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

HAP = Hazardous Air Pollutant

HCl = Hydrogen Chloride

PAH = Polyaromatic Hydrocarbon

SO2 = Sulfur Dioxide

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

Company Name: Meshberger Brothers Stone Corp
Source Address: 8700 South County Road 600 West
Permit Number: 035-29289-00086
Reviewer: Swarna Prabha

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

Maximum Annual Slag Usage* = ton/yr % sulfur

	Emission Factor (lb/ton)**	Unlimited Potential to Emit (tons/yr)
Criteria Pollutant	Slag Processing	Slag Processing
SO2	0.74	0.0

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
Slat Conveyor Heater
Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Meshberger Brothers Stone Corp
Source Location: 8700 South County Road 600 West
Permit Number: 035-29289-00086
Reviewer: Swarna Prabha

Maximum Hot Oil Heater Fuel Input Rate = 2.00 MMBtu/hr
 Natural Gas Usage = 18 MMCF/yr
 No. 2 Fuel Oil Usage = 125,143 gal/yr, and 0.50 % sulfur

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factor (units)		Unlimited/Uncontrolled Potential to Emit (tons/yr)		
	Slat Conveyor Heater		Slat Conveyor Heater		Worse Case Fuel (tons/yr)
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	
PM	1.9	2.0	0.017	0.125	0.13
PM10/PM2.5	7.6	3.3	0.067	0.206	0.21
SO2	0.6	71.0	0.005	4.443	4.44
NOx	100	20.0	0.876	1.251	1.25
VOC	5.5	0.20	0.048	0.013	0.05
CO	84	5.0	0.736	0.313	0.74
Hazardous Air Pollutant					
Arsenic	2.0E-04	5.6E-04	1.8E-06	3.50E-05	3.5E-05
Beryllium	1.2E-05	4.2E-04	1.1E-07	2.63E-05	2.6E-05
Cadmium	1.1E-03	4.2E-04	9.6E-06	2.63E-05	2.6E-05
Chromium	1.4E-03	4.2E-04	1.2E-05	2.63E-05	2.6E-05
Cobalt	8.4E-05		7.4E-07		7.4E-07
Lead	5.0E-04	1.3E-03	4.4E-06	7.88E-05	7.9E-05
Manganese	3.8E-04	8.4E-04	3.3E-06	5.26E-05	5.3E-05
Mercury	2.6E-04	4.2E-04	2.3E-06	2.63E-05	2.6E-05
Nickel	2.1E-03	4.2E-04	1.8E-05	2.63E-05	2.6E-05
Selenium	2.4E-05	2.1E-03	2.1E-07	1.31E-04	1.3E-04
Benzene	2.1E-03		1.8E-05		1.8E-05
Dichlorobenzene	1.2E-03		1.1E-05		1.1E-05
Ethylbenzene					0.0E+00
Formaldehyde	7.5E-02	6.10E-02	6.6E-04	3.82E-03	3.8E-03
Hexane	1.8E+00		0.02		1.6E-02
Phenol					0.0E+00
Toluene	3.4E-03		3.0E-05		3.0E-05
Total PAH Haps	negl		negl		0.0E+00
Polycyclic Organic Matter		3.30E-03		2.06E-04	2.1E-04
Total HAPs =			1.7E-02	4.5E-03	0.020

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)

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
Asphalt Load-Out, Silo Filling, and Yard Emissions**

Company Name: Meshberger Brothers Stone Corp
Source Address: 8700 South County Road 600 West
Permit Number: 035-29289-00086
Reviewer: Swarna Prabha

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 =	2,277,600	tons/yr

Pollutant	Emission Factor (lb/ton asphalt)			Unlimited/Uncontrolled Potential to Emit (tons/yr)			
	Load-Out	Silo Filling	On-Site Yard	Load-Out	Silo Filling	On-Site Yard	Total
Total PM*	5.2E-04	5.9E-04	NA	0.59	0.67	NA	1.26
Organic PM	3.4E-04	2.5E-04	NA	0.39	0.289	NA	0.68
TOC	0.004	0.012	0.001	4.74	13.88	1.253	19.9
CO	0.001	0.001	3.5E-04	1.54	1.344	0.401	3.28

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

PM/HAPs	0.028	0.033	0	0.060
VOC/HAPs	0.070	0.176	0.019	0.265
non-VOC/HAPs	3.6E-04	3.7E-05	9.6E-05	5.0E-04
non-VOC/non-HAPs	0.34	0.20	0.09	0.63

Total VOCs	4.45	13.88	1.2	19.5
Total HAPs	0.10	0.21	0.019	0.33
			Worst Single HAP	0.101
				(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)
 HAP = Hazardous Air Pollutant
 VOC = Volatile Organic Compound

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

**Company Name: Meshberger Brothers Stone Corp
Source Address: 8700 South County Road 600 West
Permit Number: 035-29289-00086
Reviewer: Swarna Prabha**

Organic Particulate-Based Compounds (Table 11.1-15)

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Unlimited/Uncontrolled Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of Total Organic PM)	Silo Filling and Asphalt Storage Tank (% by weight of Total Organic PM)	Load-out	Silo Filling	Onsite Yard	Total
PAH HAPs										
Acenaphthene	83-32-9	PM/HAP	POM	Organic PM	0.26%	0.47%	1.0E-03	1.4E-03	NA	2.4E-03
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	1.1E-04	4.0E-05	NA	1.5E-04
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	2.7E-04	3.8E-04	NA	6.5E-04
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	7.4E-05	1.6E-04	NA	2.4E-04
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	3.0E-05	0	NA	3.0E-05
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	8.5E-06	0	NA	8.5E-06
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	7.4E-06	0	NA	7.4E-06
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	8.9E-06	0	NA	8.9E-06
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	3.0E-05	2.7E-05	NA	5.8E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	4.0E-04	6.1E-04	NA	1.0E-03
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	1.4E-06	0	NA	1.4E-06
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	1.9E-04		NA	1.9E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	3.0E-03	2.9E-03	NA	5.9E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	1.8E-06	0	NA	1.8E-06
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	9.2E-03	1.5E-02	NA	0.024
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	4.9E-03	5.3E-03	NA	1.0E-02
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	8.5E-05	8.7E-05	NA	1.7E-04
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	3.1E-03	5.2E-03	NA	8.3E-03
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	5.8E-04	1.3E-03	NA	1.9E-03
Total PAH HAPs							0.023	0.033	NA	0.056
Other semi-volatile HAPs										
Phenol		PM/HAP	---	Organic PM	1.18%	0	4.6E-03	0	0	4.6E-03

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

Methodology

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

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

Abbreviations

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

**Appendix A.1: Unlimited Emissions Calculations
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		Unlimited/Uncontrolled Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of TOC)	Silo Filling and Asphalt Storage Tank (% by weight of TOC)	Load-out	Silo Filling	Onsite Yard	Total
VOC		VOC	---	TOC	94%	100%	4.45	13.88	1.18	19.51
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	3.1E-01	3.6E-02	8.1E-02	0.425
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	2.2E-03	7.6E-03	5.8E-04	0.010
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	3.4E-02	1.5E-01	8.9E-03	0.195
Total non-VOC/non-HAPS					7.30%	1.40%	0.346	0.194	0.091	0.63
Volatile organic HAPs										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	2.5E-03	4.4E-03	6.5E-04	7.6E-03
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	4.5E-04	6.8E-04	1.2E-04	1.3E-03
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	2.3E-03	5.4E-03	6.1E-04	8.3E-03
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	6.2E-04	2.2E-03	1.6E-04	3.0E-03
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	9.9E-06	5.6E-04	2.6E-06	5.7E-04
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	7.1E-04	3.2E-03	1.9E-04	4.1E-03
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	5.2E-03	0	1.4E-03	6.6E-03
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.038%	1.3E-02	5.3E-03	3.5E-03	0.022
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	4.2E-03	9.6E-02	1.1E-03	0.101
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	7.1E-03	1.4E-02	1.9E-03	0.023
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	8.5E-05	4.3E-05	2.3E-05	1.5E-04
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0.00027%	0	3.7E-05	0	3.7E-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%	3.5E-04	7.5E-04	9.1E-05	1.2E-03
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	3.6E-04	0	9.6E-05	4.6E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	9.9E-03	8.6E-03	2.6E-03	0.021
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	6.2E-05	0	1.6E-05	7.8E-05
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	1.9E-02	2.8E-02	5.1E-03	0.052
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.057%	3.8E-03	7.9E-03	1.0E-03	1.3E-02
Total volatile organic HAPs					1.50%	1.30%	0.071	0.180	0.019	0.270

Methodology

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

Abbreviations

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

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

Company Name: Meshberger Brothers Stone Corp
Source Address: 8700 South County Road 600 West
Permit Number: 035-29289-00086
Reviewer: Swarna Prabha

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

$$E_f = 1.7 \cdot (s/1.5)^3 \cdot (365-p)/235 \cdot (f/15)$$

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

Material	Silt Content (wt %)*	Emission Factor (lb/acre/day)	Maximum Anticipated Pile Size (acres)**	PTE of PM (tons/yr)	PTE of PM10/PM2.5 (tons/yr)
Sand	2.6	3.01	0.15	0.082	0.029
Limestone	1.6	1.85	0.00	0.000	0.000
RAP (EU21)	0.5	0.58	0.34	0.036	0.013
Cold mix	0	0.00	0.01	0.000	0.000
Gravel	1.6	1.85	0.92	0.311	0.109
Slag	3.8	4.40	0.00	0.000	0.000
Totals				0.43	0.15

Methodology

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

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

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

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

RAP - recycled asphalt pavement

Abbreviations

PM = Particulate Matter

PM10 = Particulate Matter (<10 um)

PM2.5 = Particulate Matter (<2.5 um)

PM2.5 = PM10

PTE = Potential to Emit

****cold mix VOC storage emissions****

The following calculations determine the amount of VOC emissions generated by the stockpile mix with Cut back asphalt slow cure of which 20 % solvent binder by weight and 25% solvent binder that evaporates, (fuel oil solvent)

Cold Storage Stockpile = 500 tons/yr stockpile mix
 (Binder throughput) Binder content @ 6.0% 30 tons per year
 · slow cure liquid binder of 20% VOC solvent = 6.00 tons per year
 solvent binder, VOC content 25% 1.5 tons/yr

Potential VOC Emissions = 1.50 tons/yr

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

Company Name: Meshberger Brothers Stone Corp
Source Address: 8700 South County Road 600 West
Permit Number: 035-29289-00086
Reviewer: Swarna Prabha

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

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

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

where: E_f = Emission factor (lb/ton)

k (PM) =	0.74	= particle size multiplier (0.74 assumed for aerodynamic diameter <=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 = 2,277,600 tons/yr
 Percent Asphalt Cement/Binder (weight %) = 5.0%
 Maximum Material Handling Throughput = 2,163,720 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	2.45	1.16	0.18
Front-end loader dumping of materials into feeder bins	2.45	1.16	0.18
Conveyor dropping material into dryer/mixer or batch tower	2.45	1.16	0.18
Total (tons/yr)	7.36	3.48	0.53

Methodology

The percent asphalt cement/binder provided by the source.
 Maximum Material Handling Throughput (tons/yr) = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
 Unlimited Potential to Emit (tons/yr) = (Maximum Material Handling Throughput (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
 Raw materials may include limestone, sand, recycled asphalt pavement (RAP), gravel, slag, and other additives
 *Worst case annual mean wind speed (Indianapolis, IN) from "Comparative Climatic Data", National Climatic Data Center, NOAA, 2006

Material Screening and Conveying (AP-42 Section 11.19.2)

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

Operation	Uncontrolled Emission Factor for PM (lbs/ton)*	Uncontrolled Emission Factor for PM10 (lbs/ton)*	Unlimited/Uncontrolled PTE of PM (tons/yr)	Unlimited/Uncontrolled PTE of PM10/PM2.5 (tons/yr)**
Crushing	0.0054	0.0024	5.84	2.60
Screening	0.025	0.0087	27.05	9.41
Conveying	0.003	0.0011	3.25	1.19
Unlimited Potential to Emit (tons/yr) =			36.13	13.20

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 Corp
Source Address: 8700 South County Road 600 West
Permit Number: 035-29289-00086
Reviewer: Swarna Prabha

Unpaved Roads at Industrial Site

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

Maximum Annual Asphalt Production =	2,277,600	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Material Handling Throughput =	2,163,720	tons/yr
Maximum Asphalt Cement/Binder Throughput =	113,880	tons/yr
Maximum No. 2 Fuel Oil Usage =	6,257,143	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per year (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	17.0	22.4	39.4	3.7E+04	3.8E+06	350	0.066	6403.1
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.0	9.7E+04	1.6E+06	350	0.066	6403.1
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.0	3.2E+03	1.5E+05	150	0.028	89.9
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	3.2E+03	3.8E+04	150	0.028	89.9
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.0	6.6E+02	2.9E+04	150	0.028	18.8
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	6.6E+02	7.9E+03	150	0.028	18.8
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.2	5.2E+05	9.9E+06	500	0.095	48785.2
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.0	5.2E+05	7.7E+06	500	0.095	48785.2
Total					1.2E+06	2.3E+07			1.1E+05

Average Vehicle Weight Per Trip =	18.9	tons/trip
Average Miles Per Trip =	0.090	miles/trip

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

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

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

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

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	5.91	1.51	0.15	lb/mile
Mitigated Emission Factor, Eext =	3.89	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)	18.92	4.82	0.48	12.44	3.17	0.32	6.22	1.59	0.16
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	18.92	4.82	0.48	12.44	3.17	0.32	6.22	1.59	0.16
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.266	0.068	0.01	0.175	0.044	0.00	0.087	0.022	0.00
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.266	0.068	0.01	0.175	0.044	0.00	0.087	0.022	0.00
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.055	0.014	0.00	0.036	0.009	0.00	0.018	0.005	0.00
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.055	0.014	0.00	0.036	0.009	0.00	0.018	0.005	0.00
Aggregate/RAP Loader Full	Front-end loader (3 CY)	144.15	36.74	3.67	94.78	24.16	2.42	47.39	12.08	1.21
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	144.15	36.74	3.67	94.78	24.16	2.42	47.39	12.08	1.21
Totals		326.77	83.28	8.33	214.86	54.76	5.48	107.43	27.38	2.74

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 Corp
Source Address: 8700 South County Road 600 West
Permit Number: 035-29289-00086
Reviewer: Swarna Prabha

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 =	0	tons/yr
Percent Asphalt Cement/Binder (weight %) =	5.0%	
Maximum Asphalt Cement/Binder Throughput =	0	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%	0.0	0.0
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	0.0	0.0
*Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	0.0	0.0
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	0.0	0.0
Other asphalt with solvent binder	25.9%	2.5%	0.0	0.0
Worst Case PTE of VOC =				0.0

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
PTE of Total HAPs (tons/yr) =	0.00
PTE of Single HAP (tons/yr) =	0.00 Xylenes

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

Volatile Organic HAP	CAS#	Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents				
		Gasoline	Kerosene	Diesel (#2) Fuel Oil	No. 2 Fuel Oil	No. 6 Fuel Oil
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%	0.31%	0.50%	0.23%	0.07%
		Xylenes	Naphthalene	Xylenes	Xylenes	Chrysene

Methodology

Maximum Asphalt Cement/Binder Throughput = [Annual Asphalt Production Limitation (tons/yr)] * [Percent Asphalt Cement/Binder (weight %)]
 Maximum VOC Solvent Usage (tons/yr) = [Maximum Asphalt Cement/Binder Throughput (tons/yr)] * [Maximum Weight % of VOC Solvent in Binder]
 PTE of VOC (tons/yr) = [Weight % VOC solvent in binder that evaporates] * [Maximum VOC Solvent Usage (tons/yr)]
 PTE of Total HAPs (tons/yr) = [Worst Case Total HAP Content of VOC solvent (weight %)] * [Worst Case Limited PTE of VOC (tons/yr)]
 PTE of Single HAP (tons/yr) = [Worst Case Single HAP Content of VOC solvent (weight %)] * [Worst Case Limited PTE of VOC (tons/yr)]
 *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>
 * source does not produce Cold Mix Asphalt. They store at site - cut back slow cure asphalt 500 tons per year. See calculations under material storage piles.

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 Corp
Source Address: 8700 South County Road 600 West
Permit Number: 035-29289-00086
Reviewer: Swarna Prabha

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:

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

Volatile Organic Compounds

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

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	#REF!
Worst Case Single HAP Content of VOC solvent (weight %)* =	#REF! Xylenes
Limited PTE of Total HAPs (tons/yr) =	#REF!
Limited PTE of Single HAP (tons/yr) =	#REF! Xylenes

Methodology

The gasoline throughput was provided by the source.

$$\text{Gasoline Throughput (kgal/yr)} = [\text{Gasoline Throughput (lbs/day)}] * [365 \text{ days/yr}] * [\text{kgal}/1000 \text{ gal}]$$

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

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

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

*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 Corp
Source Address: 8700 South County Road 600 West
Permit Number: 035-29289-00086
Reviewer: Swarna Prabha

Asphalt Plant Limitations

Maximum Hourly Asphalt Production =	260	ton/hr								
Annual Asphalt Production Limitation =	1,112,520	ton/yr								
Slag Usage Limitation =	0	ton/yr	1.50	% sulfur						
Natural Gas Limitation =	876.00	MMCF/yr								
No. 2 Fuel Oil Limitation =	2,663,590	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	0.50	% 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 =	0	gal/yr, and	1.00	% sulfur	0.50	% ash	0.200	% chlorine,	0.010	% lead
PM Dryer/Mixer Limitation =	0.313	lb/ton of asphalt production								
PM10 Dryer/Mixer Limitation =	0.138	lb/ton of asphalt production								
PM2.5 Dryer/Mixer Limitation =	0.162	lb/ton of asphalt production								
CO Dryer/Mixer Limitation =	0.130	lb/ton of asphalt production								
VOC Dryer/Mixer Limitation =	0.032	lb/ton of asphalt production								
Slag SO2 Dryer/Mixer Limitation =	0.000	lb/ton of slag processed								
Cold Mix Asphalt VOC Usage Limitation =	1.5	tons/yr								
HCl Limitation =	0	lb/kgal								

Limited/Controlled Emissions

Process Description	Limited/Controlled Potential Emissions (tons/year)								
	Criteria Pollutants							Hazardous Air Pollutants	
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAPs	Worst Case HAP
Ducted Emissions									
Dryer Fuel Combustion (worst case)	2.66	4.39	4.39	94.56	83.22	2.41	36.79	0.89	0.79 (hexane)
Dryer/Mixer (Process)	174.11	76.51	89.99	6.12	30.59	17.80	72.31	4.90	1.72 (formaldehyde)
Slag conveyor Heater Fuel Combustion (worst case)	0.13	0.21	0.21	4.44	1.25	0.05	0.74	0.02	#REF! (hexane)
Worst Case Emissions*	174.24	76.71	90.19	99.00	84.47	17.85	73.05	4.92	1.72 (formaldehyde)
Fugitive Emissions									
Asphalt Load-Out, Silo Filling, On-Site Yard	0.62	0.62	0.62	0	0	9.53	1.60	0.16	0.05 (formaldehyde)
Material Storage Piles	0.43	0.15	0.15	0	0	0	0	0	0
Material Processing and Handling	3.59	1.70	0.26	0	0	0	0	0	0
Material Crushing, Screening, and Conveying	17.65	6.45	6.45	0	0	0	0	0	0
Unpaved and Paved Roads (worst case)	52.47	13.37	1.34	0	0	0	0	0	0
Cold Mix Asphalt Storage	0	0	0	0	0	1.50	0	0.39	0.14 (xylenes)
Gasoline Fuel Transfer and Dispensing	0	0	0	0	0	0.00	0	0.00	0.00 (xylenes)
Volatile Organic Liquid Storage Vessels	0	0	0	0	0	negl	0	negl	negl
Total Fugitive Emissions	74.76	22.29	8.81	0	0	11.03	1.60	0.55	0.14 (xylenes)
Totals Limited/Controlled Emissions	249.00	99.00	99.00	99.00	84.47	28.88	74.65	5.47	1.72 (formaldehyde)

negl = negligible

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

*Worst Case Emissions (tons/yr) = Worst Case Emissions from Dryer Fuel Combustion and Dryer/Mixer + Dryer/Mixer Slag Processing + Worst Case Emissions from Hot Oil Heater Fuel Combustion
 Fuel component percentages provided by the source.

Appendix A.2: Limited Emissions Summary
Dryer/Mixer Fuel Combustion with Maximum Capacity > 100 MMBtu/hr

Company Name: Meshberger Brothers Stone Corp
8700 South County Road 600 West
Permit Number: 035-29289-00086
Reviewer: Swarna Prabha

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 =	260	ton/hr
Annual Asphalt Production Limitation =	1,112,520	ton/yr
Natural Gas Limitation =	876	MMCF/yr
No. 2 Fuel Oil Limitation =	2,663,590	gal/yr, and
No. 4 Fuel Oil Limitation =	0	gal/yr, and
Residual (No. 5 or No. 6) Fuel Oil Limitation =	0	gal/yr, and
Propane Limitation =	0	gal/yr, and
Butane Limitation =	0	gal/yr, and
Used/Waste Oil Limitation =	0	gal/yr, and

0.50	% sulfur
0.00	% sulfur
0.00	% sulfur
0.00	gr/100 ft3 sulfur
0.00	gr/100 ft3 sulfur
0.00	% sulfur
0.00	% ash
0.000	% chlorine
0.000	% lead

Limited Emissions

Criteria Pollutant	Emission Factor (units)							Limited Potential to Emit (tons/yr)							
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	No. 4 Fuel Oil* (lb/kgal)	Residual (No. 5 or No. 6) Fuel Oil (lb/kgal)	Propane (lb/kgal)	Butane (lb/kgal)	Used/Waste Oil (lb/kgal)	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	7	3.22	0.5	0.6	0	0.83	2.66	0.00	0.00	0.000	0.000	0.00	2.66
PM10	7.6	3.3	8.3	4.72	0.5	0.6	0	3.33	4.39	0.00	0.00	0.000	0.000	0.00	4.39
SO2	0.6	71.0	0.0	0.0	0.000	0.000	0.0	0.26	94.66	0.00	0.00	0.000	0.000	0.00	94.66
NOx	190	24.0	47.0	47.0	13.0	15.0	19.0	83.22	31.96	0.00	0.00	0.00	0.00	0.00	83.22
VOC	5.5	0.20	0.20	0.28	1.00	1.10	1.0	2.41	0.27	0.00	0.00	0.00	0.00	0.00	2.41
CO	84	5.0	5.0	5.0	7.5	8.4	5.0	36.79	6.66	0.00	0.00	0.00	0.00	0.00	36.79
Hazardous Air Pollutant															
HCl							0.0							0.00	0.00
Antimony			5.25E-03	5.25E-03			negl				0.00E+00	0.00E+00		negl	0.0E+00
Arsenic	2.0E-04	5.6E-04	1.32E-03	1.32E-03			1.1E-01	8.8E-05	7.46E-04		0.00E+00	0.00E+00		0.00E+00	7.5E-04
Beryllium	1.2E-05	4.2E-04	2.78E-05	2.78E-05			negl	5.3E-06	5.59E-04		0.00E+00	0.00E+00		negl	5.6E-04
Cadmium	1.1E-03	4.2E-04	3.98E-04	3.98E-04			9.3E-03	4.8E-04	5.59E-04		0.00E+00	0.00E+00		0.00E+00	5.6E-04
Chromium	1.4E-03	4.2E-04	8.45E-04	8.45E-04			2.0E-02	6.1E-04	5.59E-04		0.00E+00	0.00E+00		0.00E+00	6.1E-04
Cobalt	8.4E-05		6.02E-03	6.02E-03			2.1E-04	3.7E-05			0.00E+00	0.00E+00		0.00E+00	3.7E-05
Lead	5.0E-04	1.3E-03	1.51E-03	1.51E-03			0	2.2E-04	1.68E-03		0.00E+00	0.00E+00		0.0E+00	0.00
Manganese	3.8E-04	8.4E-04	3.00E-03	3.00E-03			6.8E-02	1.7E-04	1.12E-03		0.00E+00	0.00E+00		0.00E+00	0.00
Mercury	2.6E-04	4.2E-04	1.13E-04	1.13E-04				1.1E-04	5.59E-04		0.00E+00	0.00E+00			5.6E-04
Nickel	2.1E-03	4.2E-04	8.45E-02	8.45E-02			1.1E-02	9.2E-04	5.59E-04		0.00E+00	0.00E+00		0.00E+00	0.001
Selenium	2.4E-05	2.1E-03	6.83E-04	6.83E-04			negl	1.1E-05	2.80E-03		0.00E+00	0.00E+00		negl	2.8E-03
1,1,1-Trichloroethane			2.36E-04	2.36E-04							0.00E+00	0.00E+00			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				9.2E-04			0.00E+00	0.00E+00			9.2E-04
Bis(2-ethylhexyl)phthalate							2.2E-03							0.00E+00	0.0E+00
Dichlorobenzene	1.2E-03						8.0E-07	5.3E-04						0.00E+00	5.3E-04
Ethylbenzene			6.36E-05	6.36E-05							0.00E+00	0.00E+00			0.0E+00
Formaldehyde	7.5E-02	6.10E-02	3.30E-02	3.30E-02				3.3E-02	8.12E-02		0.00E+00	0.00E+00			0.081
Hexane	1.8E+00							0.79							0.788
Phenol							2.4E-03						0.00E+00		0.0E+00
Toluene	3.4E-03		6.20E-03	6.20E-03				1.5E-03			0.00E+00	0.00E+00			1.5E-03
Total PAH Haps	negl		1.13E-03	1.13E-03			3.9E-02	negl			0.00E+00	0.00E+00		0.00E+00	0.0E+00
Polycyclic Organic Matter		3.30E-03							4.39E-03		0.00E+00	0.00E+00			4.4E-03
Xylene			1.09E-04	1.09E-04							0.00E+00	0.00E+00			0.0E+00
Total HAPs							0.83	0.09	0.00	0.00	0	0	0.00	0.89	

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

*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)
 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.2: Limited Emissions Summary
Dryer/Mixer Fuel Combustion with Maximum Capacity > 100 MMBtu/hr**

Company Name: Meshberger Brothers Stone Corp
Source Address: 8700 South County Road 600 West
Permit Number: 035-29289-00086
Reviewer: Swarna Prabha

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

Maximum Hourly Asphalt Production =	260	ton/hr
Annual Asphalt Production Limitation =	1,112,520	ton/yr
PM Dryer/Mixer Limitation =	0.313	lb/ton of asphalt production
PM10 Dryer/Mixer Limitation =	0.138	lb/ton of asphalt production
PM2.5 Dryer/Mixer Limitation =	0.162	lb/ton of asphalt production
CO Dryer/Mixer Limitation =	0.130	lb/ton of asphalt production
VOC Dryer/Mixer Limitation =	0.032	lb/ton of asphalt production

Criteria Pollutant	Emission Factor or Limitation (lb/ton) Drum-Mix Plant (dryer/mixer, controlled by fabric filter)		Limited/Controlled Potential to Emit (tons/yr) Drum-Mix Plant (dryer/mixer, controlled by fabric filter)			Worse Case PTE
	Natural Gas	No. 2 Fuel Oil	Natural Gas	Gas	No. 2 Fuel Oil	
PM*	0.313	0.313	174.1		174.1	174.1
PM10*	0.138	0.138	76.5		76.5	76.5
PM2.5*	0.162	0.162	90.0		90.0	90.0
SO2**	0.003	0.011	1.9		6.1	6.1
NOx**	0.026	0.055	14.5		30.6	30.6
VOC**	0.032	0.032	17.8		17.8	17.8
CO***	0.130	0.130	72.3		72.3	72.3
Hazardous Air Pollutant						
HCl						0.00
Antimony	1.80E-07	1.80E-07	1.00E-04		1.00E-04	1.00E-04
Arsenic	5.60E-07	5.60E-07	3.12E-04		3.12E-04	3.12E-04
Beryllium	negl	negl	negl		negl	0.00E+00
Cadmium	4.10E-07	4.10E-07	2.28E-04		2.28E-04	2.28E-04
Chromium	5.50E-06	5.50E-06	3.06E-03		3.06E-03	3.06E-03
Cobalt	2.60E-08	2.60E-08	1.45E-05		1.45E-05	1.45E-05
Lead	6.20E-07	1.50E-05	3.45E-04		8.34E-03	8.34E-03
Manganese	7.70E-06	7.70E-06	4.28E-03		4.28E-03	4.28E-03
Mercury	2.40E-07	2.60E-06	1.34E-04		1.45E-03	1.45E-03
Nickel	6.30E-05	6.30E-05	3.50E-02		3.50E-02	3.50E-02
Selenium	3.50E-07	3.50E-07	1.95E-04		1.95E-04	1.95E-04
2,2,4 Trimethylpentane	4.00E-05	4.00E-05	2.23E-02		2.23E-02	2.23E-02
Acetaldehyde						0.00
Acrolein						0.00E+00
Benzene	3.90E-04	3.90E-04	0.22		0.22	0.22
Ethylbenzene	2.40E-04	2.40E-04	0.13		0.13	0.13
Formaldehyde	3.10E-03	3.10E-03	1.72		1.72	1.72
Hexane	9.20E-04	9.20E-04	0.51		0.51	0.51
Methyl chloroform	4.80E-05	4.80E-05	0.03		0.03	0.03
MEK						0.00
Propionaldehyde						0.00
Quinone						0.00
Toluene	1.50E-04	2.90E-03	0.08		1.61	1.61
Total PAH Haps	1.90E-04	8.80E-04	0.11		0.49	0.49
Xylene	2.00E-04	2.00E-04	0.11		0.11	0.11

4.90

Methodology 1.724406 (formaldehyde)

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

Emission Factors from AP-42 Chapter 11.1 (dated 3/04), Tables 11.1-3, 11.1-4, 11.1-7, 11.1-8, 11.1-10, and 11.1-12

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

* PM, PM10, and 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
HCl = Hydrogen Chloride
SO2 = Sulfur Dioxide

HAP = Hazardous Air Pollutant
PAH = Polyaromatic Hydrocarbon

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

Company Name: Meshberger Brothers Stone Corp
Source Address: 8700 South County Road 600 West
Permit Number: 035-29289-00086
Reviewer: Swarna Prabha

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 =

0.000

 lb/ton of slag processed

1.50

 % sulfur

	Emission Factor or Limitation (lb/ton)*	Limited Potential to Emit (tons/yr)
Criteria Pollutant	Slag Processing	Slag Processing
SO2	0.000	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
Slat Conveyor Heater
Fuel Combustion with Maximum Capacity < 100 MMBtu/hr

Company Name: Meshberger Brothers Stone Corp
Source Location: 8700 South County Road 600 West
Permit Number: 035-29289-00086
Reviewer: Swarna Prabha

Maximum Hot Oil Heater Fuel Input Rate = 2.00 MMBtu/hr
 Natural Gas Usage = 18 MMCF/yr
 No. 2 Fuel Oil Usage = 125,143 gal/yr, and 0.50 % sulfur

Unlimited/Uncontrolled Emissions

Criteria Pollutant	Emission Factor (units)		Unlimited/Uncontrolled Potential to Emit (tons/yr)		
	Slat Conveyor Heater		Slat Conveyor Heater		Worse Case Fuel (tons/yr)
	Natural Gas (lb/MMCF)	No. 2 Fuel Oil (lb/kgal)	Natural Gas (tons/yr)	No. 2 Fuel Oil (tons/yr)	
PM	1.9	2.0	0.017	0.125	0.13
PM10/PM2.5	7.6	3.3	0.067	0.206	0.21
SO2	0.6	71.0	0.005	4.443	4.44
NOx	100	20.0	0.876	1.251	1.25
VOC	5.5	0.20	0.048	0.013	0.05
CO	84	5.0	0.736	0.313	0.74
Hazardous Air Pollutant					
Arsenic	2.0E-04	5.6E-04	1.8E-06	3.50E-05	3.5E-05
Beryllium	1.2E-05	4.2E-04	1.1E-07	2.63E-05	2.6E-05
Cadmium	1.1E-03	4.2E-04	9.6E-06	2.63E-05	2.6E-05
Chromium	1.4E-03	4.2E-04	1.2E-05	2.63E-05	2.6E-05
Cobalt	8.4E-05		7.4E-07		7.4E-07
Lead	5.0E-04	1.3E-03	4.4E-06	7.88E-05	7.9E-05
Manganese	3.8E-04	8.4E-04	3.3E-06	5.26E-05	5.3E-05
Mercury	2.6E-04	4.2E-04	2.3E-06	2.63E-05	2.6E-05
Nickel	2.1E-03	4.2E-04	1.8E-05	2.63E-05	2.6E-05
Selenium	2.4E-05	2.1E-03	2.1E-07	1.31E-04	1.3E-04
Benzene	2.1E-03		1.8E-05		1.8E-05
Dichlorobenzene	1.2E-03		1.1E-05		1.1E-05
Ethylbenzene					0
Formaldehyde	7.5E-02	6.10E-02	6.6E-04	3.82E-03	0.004
Hexane	1.8E+00		0.02		0.016
Phenol					0
Toluene	3.4E-03		3.0E-05		3.0E-05
Total PAH Haps	negl		negl		0
Polycyclic Organic Matter		3.30E-03		2.06E-04	2.1E-04
Total HAPs =			1.7E-02	4.5E-03	0.020

(Hexane)

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)
 SO2 = Sulfur Dioxide
 NOx = Nitrogen Oxides
 VOC = Volatile Organic Compounds
 CO = Carbon Monoxide
 HAP = Hazardous Air Pollutant
 HCl = Hydrogen Chloride
 PAH = Polyaromatic Hydrocarbon

**Appendix A.2: Limited Emissions Summary
Asphalt Load-Out, Silo Filling, and Yard Emissions**

Company Name: Meshberger Brothers Stone Corp
Source Address: 8700 South County Road 600 West
Permit Number: 035-29289-00086
Reviewer: Swarna Prabha

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

Asphalt Temperature, T =	325	F
Asphalt Volatility Factor, V =	-0.5	
Annual Asphalt Production Limitation =	1,112,520	tons/yr

Pollutant	Emission Factor (lb/ton asphalt)			Limited Potential to Emit (tons/yr)			
	Load-Out	Silo Filling	On-Site Yard	Load-Out	Silo Filling	On-Site Yard	Total
Total PM*	5.2E-04	5.9E-04	NA	0.29	0.33	NA	0.62
Organic PM	3.4E-04	2.5E-04	NA	0.19	0.141	NA	0.33
TOC	0.004	0.012	0.001	2.31	6.78	0.612	9.7
CO	0.001	0.001	3.5E-04	0.75	0.656	0.196	1.60

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

PM/HAPs	0.013	0.016	0	0.030
VOC/HAPs	0.034	0.086	0.009	0.129
non-VOC/HAPs	1.8E-04	1.8E-05	4.7E-05	2.4E-04
non-VOC/non-HAPs	0.17	0.10	0.04	0.31

Total VOCs	2.17	6.78	0.6	9.5
Total HAPs	0.05	0.10	0.009	0.16
		Worst Single HAP		0.049
				(formaldehyde)

Methodology

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

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

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

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

$$\text{Total PM/PM10 Ef} = 0.000181 + 0.00141(-V)e^{((0.0251)(T+460)-20.43)}$$

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

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

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

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

$$\text{PM/PM10 Ef} = 0.000332 + 0.00105(-V)e^{((0.0251)(T+460)-20.43)}$$

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

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

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

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

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

Abbreviations

TOC = Total Organic Compounds

CO = Carbon Monoxide

PM = Particulate

Matter

PM10 = Particulate Matter (<10 um)

PM2.5 = Particulate Matter (<2.5 um)

HAP = Hazardous Air Pollutant

VOC = Volatile Organic Compound

**Appendix A.2: Limited Emissions Summary
Asphalt Load-Out, Silo Filling, and Yard Emissions (continued)**

Company Name: Meshberger Brothers Stone Corp
Source Address: 8700 South County Road 600 West
Permit Number: 035-29289-00086
Reviewer: Swarna Prabha

Organic Particulate-Based Compounds (Table 11.1-15)

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Limited Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of Total Organic PM)	Silo Filling and Asphalt Storage Tank (% by weight of Total Organic PM)	Load-out	Silo Filling	Onsite Yard	Total
PAH HAPs										
Acenaphthene	83-32-9	PM/HAP	POM	Organic PM	0.26%	0.47%	4.9E-04	6.6E-04	NA	1.2E-03
Acenaphthylene	208-96-8	PM/HAP	POM	Organic PM	0.028%	0.014%	5.3E-05	2.0E-05	NA	7.3E-05
Anthracene	120-12-7	PM/HAP	POM	Organic PM	0.07%	0.13%	1.3E-04	1.8E-04	NA	3.2E-04
Benzo(a)anthracene	56-55-3	PM/HAP	POM	Organic PM	0.019%	0.056%	3.6E-05	7.9E-05	NA	1.2E-04
Benzo(b)fluoranthene	205-99-2	PM/HAP	POM	Organic PM	0.0076%	0	1.4E-05	0	NA	1.4E-05
Benzo(k)fluoranthene	207-08-9	PM/HAP	POM	Organic PM	0.0022%	0	4.2E-06	0	NA	4.2E-06
Benzo(g,h,i)perylene	191-24-2	PM/HAP	POM	Organic PM	0.0019%	0	3.6E-06	0	NA	3.6E-06
Benzo(a)pyrene	50-32-8	PM/HAP	POM	Organic PM	0.0023%	0	4.4E-06	0	NA	4.4E-06
Benzo(e)pyrene	192-97-2	PM/HAP	POM	Organic PM	0.0078%	0.0095%	1.5E-05	1.3E-05	NA	2.8E-05
Chrysene	218-01-9	PM/HAP	POM	Organic PM	0.103%	0.21%	2.0E-04	3.0E-04	NA	4.9E-04
Dibenz(a,h)anthracene	53-70-3	PM/HAP	POM	Organic PM	0.00037%	0	7.0E-07	0	NA	7.0E-07
Fluoranthene	206-44-0	PM/HAP	POM	Organic PM	0.05%	0.15%	9.5E-05	2.1E-04	NA	3.1E-04
Fluorene	86-73-7	PM/HAP	POM	Organic PM	0.77%	1.01%	1.5E-03	1.4E-03	NA	2.9E-03
Indeno(1,2,3-cd)pyrene	193-39-5	PM/HAP	POM	Organic PM	0.00047%	0	8.9E-07	0	NA	8.9E-07
2-Methylnaphthalene	91-57-6	PM/HAP	POM	Organic PM	2.38%	5.27%	4.5E-03	7.4E-03	NA	0.012
Naphthalene	91-20-3	PM/HAP	POM	Organic PM	1.25%	1.82%	2.4E-03	2.6E-03	NA	4.9E-03
Perylene	198-55-0	PM/HAP	POM	Organic PM	0.022%	0.03%	4.2E-05	4.2E-05	NA	8.4E-05
Phenanthrene	85-01-8	PM/HAP	POM	Organic PM	0.81%	1.80%	1.5E-03	2.5E-03	NA	4.1E-03
Pyrene	129-00-0	PM/HAP	POM	Organic PM	0.15%	0.44%	2.8E-04	6.2E-04	NA	9.1E-04
Total PAH HAPs							0.011	0.016	NA	0.027
Other semi-volatile HAPs										
Phenol		PM/HAP	---	Organic PM	1.18%	0	2.2E-03	0	0	2.2E-03

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)
Limited Emissions

Organic Volatile-Based Compounds (Table 11.1-16)

Pollutant	CASRN	Category	HAP Type	Source	Speciation Profile		Limited Potential to Emit (tons/yr)			
					Load-out and Onsite Yard (% by weight of TOC)	Silo Filling and Asphalt Storage Tank (% by weight of TOC)	Load-out	Silo Filling	Onsite Yard	Total
VOC		VOC	---	TOC	94%	100%	2.17	6.78	0.58	9.53
non-VOC/non-HAPS										
Methane	74-82-8	non-VOC/non-HAP	---	TOC	6.50%	0.26%	1.5E-01	1.8E-02	4.0E-02	0.208
Acetone	67-64-1	non-VOC/non-HAP	---	TOC	0.046%	0.055%	1.1E-03	3.7E-03	2.8E-04	0.005
Ethylene	74-85-1	non-VOC/non-HAP	---	TOC	0.71%	1.10%	1.6E-02	7.5E-02	4.3E-03	0.095
Total non-VOC/non-HAPS					7.30%	1.40%	0.169	0.095	0.045	0.31
Volatile organic HAPs										
Benzene	71-43-2	VOC/HAP	---	TOC	0.052%	0.032%	1.2E-03	2.2E-03	3.2E-04	3.7E-03
Bromomethane	74-83-9	VOC/HAP	---	TOC	0.0096%	0.0049%	2.2E-04	3.3E-04	5.9E-05	6.1E-04
2-Butanone	78-93-3	VOC/HAP	---	TOC	0.049%	0.039%	1.1E-03	2.6E-03	3.0E-04	4.1E-03
Carbon Disulfide	75-15-0	VOC/HAP	---	TOC	0.013%	0.016%	3.0E-04	1.1E-03	8.0E-05	1.5E-03
Chloroethane	75-00-3	VOC/HAP	---	TOC	0.00021%	0.004%	4.9E-06	2.7E-04	1.3E-06	2.8E-04
Chloromethane	74-87-3	VOC/HAP	---	TOC	0.015%	0.023%	3.5E-04	1.6E-03	9.2E-05	2.0E-03
Cumene	92-82-8	VOC/HAP	---	TOC	0.11%	0	2.5E-03	0	6.7E-04	3.2E-03
Ethylbenzene	100-41-4	VOC/HAP	---	TOC	0.28%	0.038%	6.5E-03	2.6E-03	1.7E-03	0.011
Formaldehyde	50-00-0	VOC/HAP	---	TOC	0.088%	0.69%	2.0E-03	4.7E-02	5.4E-04	0.049
n-Hexane	100-54-3	VOC/HAP	---	TOC	0.15%	0.10%	3.5E-03	6.8E-03	9.2E-04	0.011
Isooctane	540-84-1	VOC/HAP	---	TOC	0.0018%	0.00031%	4.2E-05	2.1E-05	1.1E-05	7.4E-05
Methylene Chloride	75-09-2	non-VOC/HAP	---	TOC	0	0.00027%	0	1.8E-05	0	1.8E-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%	1.7E-04	3.7E-04	4.5E-05	5.8E-04
Tetrachloroethene	127-18-4	non-VOC/HAP	---	TOC	0.0077%	0	1.8E-04	0	4.7E-05	2.3E-04
Toluene	100-88-3	VOC/HAP	---	TOC	0.21%	0.062%	4.9E-03	4.2E-03	1.3E-03	0.010
1,1,1-Trichloroethane	71-55-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichloroethene	79-01-6	VOC/HAP	---	TOC	0	0	0	0	0	0
Trichlorofluoromethane	75-69-4	VOC/HAP	---	TOC	0.0013%	0	3.0E-05	0	8.0E-06	3.8E-05
m-/p-Xylene	1330-20-7	VOC/HAP	---	TOC	0.41%	0.20%	9.5E-03	1.4E-02	2.5E-03	0.026
o-Xylene	95-47-6	VOC/HAP	---	TOC	0.08%	0.057%	1.9E-03	3.9E-03	4.9E-04	6.2E-03
Total volatile organic HAPs					1.50%	1.30%	0.035	0.088	0.009	0.132

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 Corp
Source Address: 8700 South County Road 600 West
Permit Number: 035-29289-00086
Reviewer: Swarna Prabha

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.

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

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

Material	Silt Content (wt %)*	Emission Factor (lb/acre/day)	Maximum Anticipated Pile Size (acres)**	PTE of PM (tons/yr)	PTE of PM10/PM2.5 (tons/yr)
Sand	2.6	3.01	0.15	0.082	0.029
Limestone	1.6	1.85	0.00	0.000	0.000
RAP	0.5	0.58	0.34	0.036	0.013
cold mix	0	0.00	0.01	0.000	0.000
Gravel	1.6	1.85	0.92	0.311	0.109
Slag	3.8	4.40	0.00	0.000	0.000
Totals				0.43	0.15

Methodology

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

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

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

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

Abbreviations

PM = Particulate Matter

PM10 = Particulate Matter (<10 um)

PM2.5 = Particulate Matter (<2.5 um)

PM2.5 = PM10

PTE = Potential to Emit

****cold mix VOC storage emissions****

The following calculations determine the amount of VOC emissions generated by the stockpile mix with Cut back asphalt slow cure of which 20 % solvent binder by weight and 25% solvent binder that evaporates, (fuel oil solvent)

Cold Storage Stockpile =	500 tons/yr stockpile mix
(Binder throughput) Binder content @ 6.0%	30 tons per year
For slow cure liquid binder of 20% VOC solvent =	6.00 tons per year
solvent binder, VOC content 25%	1.5 tons/yr

Potential VOC Emissions = 1.50 tons/yr

Appendix A.2: Limited Emissions Summary
Material Processing, Handling, Crushing, Screening, and Conveying

Company Name: Meshberger Brothers Stone Corp
Source Address: 8700 South County Road 600 West
Permit Number: 035-29289-00086
Reviewer: Swarna Prabha

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

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

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

where: E_f = Emission factor (lb/ton)

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

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

Annual Asphalt Production Limitation = 1,112,520 tons/yr
 Percent Asphalt Cement/Binder (weight %) = 5.0%
 Maximum Material Handling Throughput = 1,056,894 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	1.20	0.57	0.09
Front-end loader dumping of materials into feeder bins	1.20	0.57	0.09
Conveyor dropping material into dryer/mixer or batch tower	1.20	0.57	0.09
Total (tons/yr)	3.59	1.70	0.26

Methodology

The percent asphalt cement/binder provided by the source.
 Maximum Material Handling Throughput (tons/yr) = [Annual Asphalt Production Limitation (tons/yr)] * [1 - Percent Asphalt Cement/Binder (weight %)]
 Limited Potential to Emit (tons/yr) = (Maximum Material Handling Throughput (tons/yr)) * (Emission Factor (lb/ton)) * (ton/2000 lbs)
 Raw materials may include limestone, sand, recycled asphalt pavement (RAP), gravel, slag, and other additives
 *Worst case annual mean wind speed (Indianapolis, IN) from "Comparative Climatic Data", National Climatic Data Center, NOAA, 2006

Material Screening and Conveying (AP-42 Section 19.2.2)

To estimate potential fugitive dust emissions from raw material crushing, screening, and conveying, AP-42 emission factors for Crushed Stone Processing Operations, Section 19.2.2 (dated 8/04) are utilized.

Operation	Uncontrolled Emission Factor for PM (lbs/ton)*	Uncontrolled Emission Factor for PM10 (lbs/ton)*	Limited PTE of PM (tons/yr)	Limited PTE of PM10/PM2.5 (tons/yr)**
Crushing	0.0054	0.0024	2.85	1.27
Screening	0.025	0.0087	13.21	4.60
Conveying	0.003	0.0011	1.59	0.58
Limited Potential to Emit (tons/yr) =			17.65	6.45

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 Corp
Source Address: 8700 South County Road 600 West
Permit Number: 035-29289-00086
Reviewer: Swarna Prabha

Unpaved Roads at Industrial Site

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

Annual Asphalt Production Limitation = 1,112,520 tons/yr
 Percent Asphalt Cement/Binder (weight %) = 5.0%
 Maximum Material Handling Throughput = 1,056,894 tons/yr
 Maximum Asphalt Cement/Binder Throughput = 55,626 tons/yr
 No. 2 Fuel Oil Limitation = 2,663,590 gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per year (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	17.0	22.4	39.4	4.7E+04	1.9E+06	350	0.066	3127.6
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.0	4.7E+04	8.0E+05	350	0.066	3127.6
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.0	1.5E+03	7.4E+04	150	0.028	43.9
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	1.5E+03	1.9E+04	150	0.028	43.9
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.0	2.8E+02	1.2E+04	150	0.028	8.0
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.0	2.8E+02	3.4E+03	150	0.028	8.0
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.2	2.5E+05	4.8E+06	500	0.095	23829.7
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.0	2.5E+05	3.8E+06	500	0.095	23829.7
Total					6.0E+05	1.1E+07			5.4E+04

Average Vehicle Weight Per Trip = 18.9 tons/trip
 Average Miles Per Trip = 0.090 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 =	18.9	18.9	18.9	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, 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 =	5.91	1.51	0.15	lb/mile
Mitigated Emission Factor, Eext =	3.89	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)	9.24	2.36	0.24	6.08	1.55	0.15	3.04	0.77	0.08
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	9.24	2.36	0.24	6.08	1.55	0.15	3.04	0.77	0.08
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.130	0.033	0.00	0.085	0.022	2.2E-03	0.043	0.011	1.1E-03
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.130	0.033	0.00	0.085	0.022	2.2E-03	0.043	0.011	1.1E-03
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	0.024	0.006	6.0E-04	0.016	0.004	4.0E-04	0.008	0.002	2.0E-04
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	0.024	0.006	6.0E-04	0.016	0.004	4.0E-04	0.008	0.002	2.0E-04
Aggregate/RAP Loader Full	Front-end loader (3 CY)	70.41	17.94	1.79	46.30	11.80	1.18	23.15	5.90	0.59
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	70.41	17.94	1.79	46.30	11.80	1.18	23.15	5.90	0.59
Totals		159.60	40.68	4.07	104.95	26.75	2.67	52.47	13.37	1.34

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.2: Limited Emissions Summary
Paved Roads
Limited Emissions

Company Name: Meshberger Brothers Stone Corp
Source Address: 8700 South County Road 600 West
Permit Number: 035-29289-00086
Reviewer: Swarna Prabha

Paved Roads at Industrial Site

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

Annual Asphalt Production Limitation	1,112,520	tons/yr
Percent Asphalt Cement/Binder (weight %)	0.05%	
Maximum Material Handling Throughput	1,111,964	tons/yr
Maximum Asphalt Cement/Binder Throughput	556	tons/yr
No. 2 Fuel Oil Limitation	2,663,590	gallons/yr

Process	Vehicle Type	Maximum Weight of Vehicle (tons)	Maximum Weight of Load (tons)	Maximum Weight of Vehicle and Load (tons/trip)	Maximum trips per year (trip/yr)	Total Weight driven per day (ton/yr)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	17.0	22.4	39.40	5.0E+04	2.0E+06	350	0.066	3290.6
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	17.0	0	17.00	5.0E+04	8.4E+05	350	0.066	3290.6
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	12.0	36.0	48.00	1.5E+01	7.4E+02	150	0.028	0.4
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	1.5E+01	1.9E+02	150	0.028	0.4
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	12.0	32.0	44.00	2.8E+02	1.2E+04	150	0.028	8.0
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	12.0	0	12.00	2.8E+02	3.4E+03	150	0.028	8.0
Aggregate/RAP Loader Full	Front-end loader (3 CY)	15.0	4.2	19.20	2.6E+05	5.1E+06	150	0.028	7521.4
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	15.0	0	15.00	2.6E+05	4.0E+06	150	0.028	7521.4
Total					6.3E+05	1.2E+07			2.2E+04

Average Vehicle Weight Per Trip = $\frac{18.9}{0.034}$ tons/trip
Average Miles Per Trip = $\frac{0.034}{1}$ miles/trip

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

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

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

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

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

Process	Vehicle Type	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Aggregate/RAP Truck Enter Full	Dump truck (16 CY)	0.97	0.19	0.03	0.89	0.17	0.03	0.44	0.09	0.01
Aggregate/RAP Truck Leave Empty	Dump truck (16 CY)	0.97	0.19	0.03	0.89	0.17	0.03	0.44	0.09	0.01
Asphalt Cement/Binder Truck Enter Full	Tanker truck (6000 gal)	0.000	0.000	3.7E-06	0.000	0.000	3.4E-06	0.000	1.2E-05	1.7E-06
Asphalt Cement/Binder Truck Leave Empty	Tanker truck (6000 gal)	0.000	0.000	3.7E-06	0.000	0.000	3.4E-06	0.000	1.2E-05	1.7E-06
Fuel Oil Truck Enter Full	Tanker truck (6000 gal)	2.4E-03	4.6E-04	6.8E-05	2.2E-03	4.2E-04	6.2E-05	1.1E-03	2.1E-04	3.1E-05
Fuel Oil Truck Leave Empty	Tanker truck (6000 gal)	2.4E-03	4.6E-04	6.8E-05	2.2E-03	4.2E-04	6.2E-05	1.1E-03	2.1E-04	3.1E-05
Aggregate/RAP Loader Full	Front-end loader (3 CY)	2.22	0.43	0.06	2.03	0.39	0.06	1.02	0.20	0.03
Aggregate/RAP Loader Empty	Front-end loader (3 CY)	2.22	0.43	0.06	2.03	0.39	0.06	1.02	0.20	0.03
Totals		6.39	1.24	0.18	5.84	1.14	0.17	2.92	0.57	0.08

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.2: Limited Emissions Summary
Cold Mix Asphalt Production and Stockpiles**

Company Name: Meshberger Brothers Stone Corp
Source Address: 8700 South County Road 600 West
Permit Number: 035-29289-00086
Reviewer: Swarna Prabha

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 = 1.5 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%	1.6	1.5	1.053
Cut back asphalt medium cure (assuming kerosene solvent)	28.6%	70.0%	2.1	1.5	1.429
Cut back asphalt slow cure (assuming fuel oil solvent)	20.0%	25.0%	6.0	1.5	4.000
Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)	15.0%	46.4%	3.2	1.5	2.155
Other asphalt with solvent binder	25.9%	0.05%	3000.0	1.5	2000.0
Worst Case Limited PTE of VOC =				1.5	

Hazardous Air Pollutants

Worst Case Total HAP Content of VOC solvent (weight %)* =	26.08%
Worst Case Single HAP Content of VOC solvent (weight %)* =	9.0% Xylenes
Limited PTE of Total HAPs (tons/yr) =	0.39
Limited PTE of Single HAP (tons/yr) =	0.14 Xylenes

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

Volatile Organic HAP	CAS#	Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents				
		Gasoline	Kerosene	Diesel (#2) Fuel Oil	No. 2 Fuel Oil	No. 6 Fuel Oil
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%	0.31%	0.50%	0.23%	0.07%
		Xylenes	Naphthalene	Xylenes	Xylenes	Chrysene

Methodology

Limited PTE of VOC (tons/yr) = [Weight % VOC solvent in binder that evaporates] * [VOC Solvent Usage Limitation (tons/yr)]

Limited PTE of Total 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/tp.htm>

** Cold Mix Asphalt Usage limitation is based on the storage of 500 tons per year of Cold Mix and usage of 6% binder content. See calculations under limited storage piles.

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 Corp
Source Address: 8700 South County Road 600 West
Permit Number: 035-29289-00086
Reviewer: Swarna Prabha

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:

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

Volatile Organic Compounds

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

Hazardous Air Pollutants

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

Methodology

The gasoline throughput was provided by the source.

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

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

PTE of Total 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 B1 - TSD
Minor Source Criteria Pollutant Modeling
SCREEN3 Data

Permit Summary

Permit Number: 035-29289-00086
 Company Name: Meshberger Brothers Stone Corp
 Source Location: 8700 South County Road 600 West, Daleville IN 47334
 County: Delaware
 SIC Code: 2951
 Permit Reviewer: Swarna Prabha

SCREEN3 Modeling Data

TABLE 3 - Pollutant Modeling Data - grams per second

Pollutant:	CO	NO _x	PM ₁₀	Pb	SO ₂
Totals (g/s):	4.2588	2.394	4.52088	0.0000126	6.38946

TABLE 4 - Stack Modeling Data

The M-Value is calculated using a unit emission rate of 1 g/s.
 The stack with the lowest M value represents the lowest dispersion coefficient and should be modeled.

Stack ID	Stack Height (m)	Stack Gas Velocity (m/s)	Stack Temp. (K)	Stack Diameter (m)	Closest building related to stack:			Closest Property Line (m)	Volumetric Flow Rate (m ³ /s)	Stack M-Value
					Height (m)	Width (m)	Length (m)			
SV1	10.21341463	25.96295372	422.04	1.162347561	3.658536585	2.743902439	8.231707317	8.262195122	27.54970884	111912.2258
0	0	#DIV/0!	255.37	0	0	0	0	0	#DIV/0!	#DIV/0!
0	0	#DIV/0!	255.37	0	0	0	0	0	#DIV/0!	#DIV/0!
0	0	#DIV/0!	255.37	0	0	0	0	0	#DIV/0!	#DIV/0!
0	0	#DIV/0!	255.37	0	0	0	0	0	#DIV/0!	#DIV/0!

APPENDIX B1-TSD
Minor Source Criteria Pollutant Modeling
Screening Form - Modeling Results

Permit Summary

Permit Number: 035-29289-00086
 Company Name: Meshberger Brothers Stone Corp
 Source Location: 8700 South County Road 600 West, Daleville IN 47334
 County: Delaware
 SIC Code: 2951
 Permit Reviewer: Swarna Prabha

Modeling Method

Model Used (please check one):
 SCREEN3 AERSCREEN
 ISC3 AERMUD
 Date Modeling Completed: 5/25/2010
 Modeler: Swarna Prabha

Modeling Results

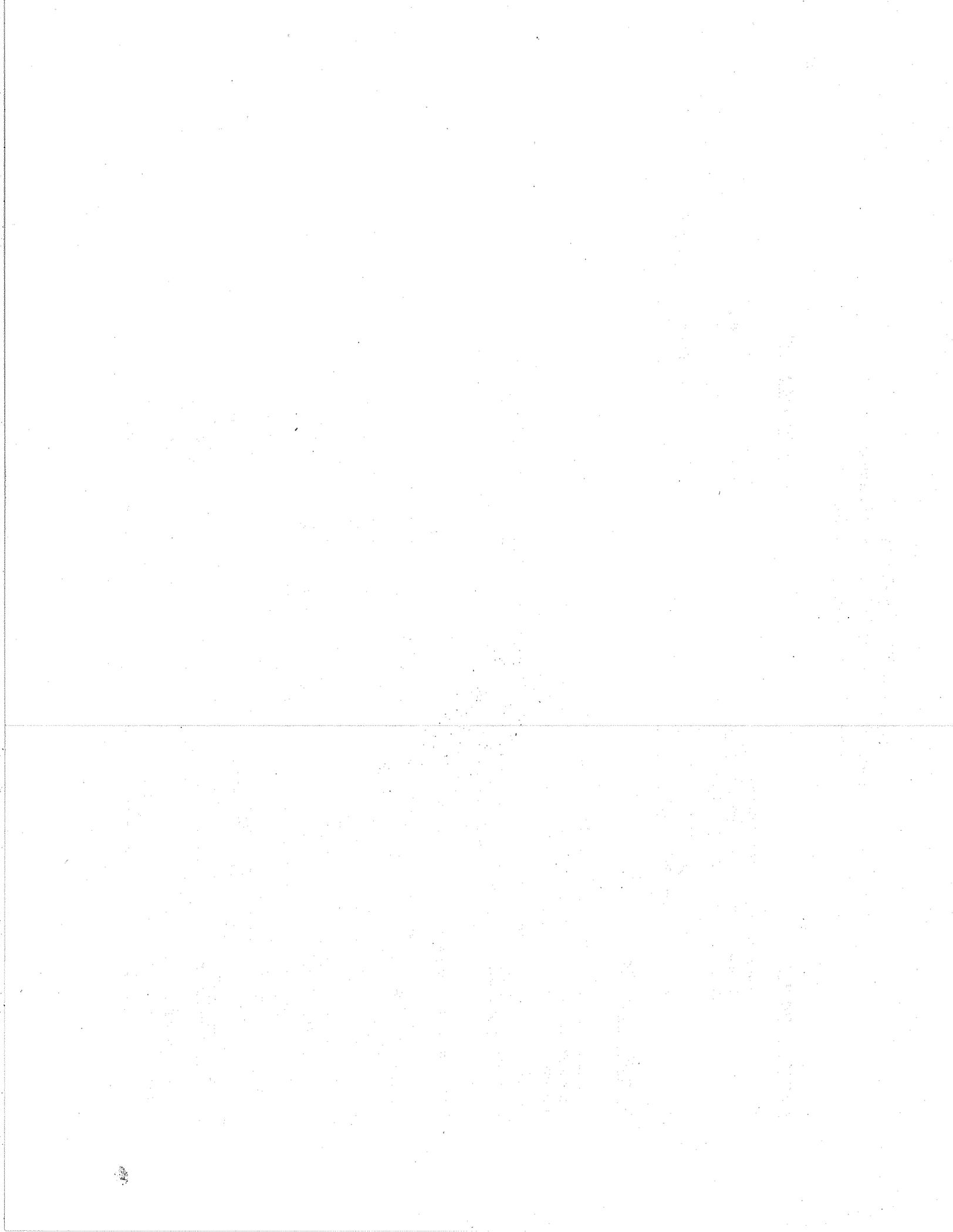
TABLE 5 - Pollutants Modeling Results: 1 Hour Concentration ($\mu\text{g}/\text{m}^3$):

The modeled concentrations in this table are the 1-hour concentrations for each pollutant. Use tables 6 and 7 to compare the modeled data to the air quality standard.

Pollutant:	CO	NO _x	PM ₁₀	Pb	SO ₂
Concentration ($\mu\text{g}/\text{m}^3$):	54.05	30.38	57.37	3.06E-03	81.1

TABLE 6 - Pollutants Maximum Concentration ($\mu\text{g}/\text{m}^3$):

Averaging Period	CO	NO _x	PM ₁₀	Pb	SO ₂
1-hour modeled concentration	54.05				
NAAQ Standard	40000				
PASS or FAIL	PASS				
3-hour modeled concentration					72.99
NAAQ Standard					1300
PASS or FAIL					PASS
8-hour modeled concentration	37.835				
NAAQ Standard/CEP Benchmark	10000				
PASS or FAIL	PASS				
24-hour modeled concentration			22.948	0.0012244	32.44
NAAQ Standard			150	1.5	365
PASS or FAIL			PASS	PASS	PASS
Annual modeled concentration		2.4304	4.5896		6.488
NAAQ Standard/CEP Benchmark		100	50		80
PASS or FAIL		PASS	PASS		PASS



TSD Appendix B2 - Minor Source Criteria Pollutant Modeling

NO	500.	27.79	4	20.0	20.1	6400.0	22.09	36.32	18.63
NO	600.	25.50	4	15.0	15.0	4800.0	26.69	42.98	21.73
NO	700.	23.11	4	15.0	15.0	4800.0	26.69	49.41	24.49
NO	800.	22.10	4	10.0	10.0	3200.0	34.93	56.02	27.70
NO	900.	20.71	4	10.0	10.0	3200.0	34.93	62.28	30.30
NO	1000.	19.37	4	8.0	8.0	2560.0	41.11	68.70	33.28
NO	1100.	18.23	4	8.0	8.0	2560.0	41.11	74.83	35.25
NO	1200.	17.12	4	8.0	8.0	2560.0	41.11	80.92	37.16
NO	1300.	16.06	4	8.0	8.0	2560.0	41.11	86.97	39.01
NO	1400.	15.07	4	8.0	8.0	2560.0	41.11	92.97	40.82
NO	1500.	14.14	4	8.0	8.0	2560.0	41.11	98.94	42.59
NO	1600.	13.45	4	5.0	5.0	1600.0	59.65	105.44	45.68
NO	1700.	13.03	4	5.0	5.0	1600.0	59.65	111.31	47.32
NO	1800.	12.61	4	5.0	5.0	1600.0	59.65	117.14	48.94
NO	1900.	12.18	4	5.0	5.0	1600.0	59.65	122.94	50.54
NO	2000.	12.04	5	1.5	1.5	10000.0	87.12	98.19	40.05

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:
 377. 30.38 4 20.0 20.1 6400.0 22.09 28.19 15.01
 NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

 *** REGULATORY (Default) ***
 PERFORMING CAVITY CALCULATIONS
 WITH ORIGINAL SCREEN CAVITY MODEL
 (BRODE, 1988)

*** CAVITY CALCULATION - 1 ***
 CONC (UG/M**3) = .0000
 CRIT WS @10M (M/S) = 99.99
 CRIT WS @ HS (M/S) = 99.99

*** CAVITY CALCULATION - 2 ***
 CONC (UG/M**3) = .0000
 CRIT WS @10M (M/S) = 99.99
 CRIT WS @ HS (M/S) = 99.99

DILUTION WS (M/S)	=	99.99	DILUTION WS (M/S)	=	99.99
CAVITY HT (M)	=	5.87	CAVITY HT (M)	=	3.97
CAVITY LENGTH (M)	=	12.04	CAVITY LENGTH (M)	=	4.04
ALONGWIND DIM (M)	=	2.74	ALONGWIND DIM (M)	=	8.23

CAVITY CONC NOT CALCULATED FOR CRIT WS > 20.0 M/S. CONC SET = 0.0

END OF CAVITY CALCULATIONS

*** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
SIMPLE TERRAIN	30.38	377.	0.

NO	700.	43.53	4	15.0	15.0	4800.0	26.74	49.41	24.49
NO	800.	41.59	4	10.0	10.0	3200.0	35.01	56.02	27.70
NO	900.	38.99	4	10.0	10.0	3200.0	35.01	62.29	30.31
NO	1000.	36.44	4	8.0	8.0	2560.0	41.21	68.70	33.29
NO	1100.	34.32	4	8.0	8.0	2560.0	41.21	74.84	35.25
NO	1200.	32.24	4	8.0	8.0	2560.0	41.21	80.93	37.16
NO	1300.	30.25	4	8.0	8.0	2560.0	41.21	86.97	39.02
NO	1400.	28.38	4	8.0	8.0	2560.0	41.21	92.97	40.83
NO	1500.	26.64	4	8.0	8.0	2560.0	41.21	98.94	42.60
NO	1600.	25.28	4	5.0	5.0	1600.0	59.80	105.45	45.69
NO	1700.	24.51	4	5.0	5.0	1600.0	59.80	111.31	47.34
NO	1800.	23.72	4	5.0	5.0	1600.0	59.80	117.14	48.96
NO	1900.	22.92	4	5.0	5.0	1600.0	59.80	122.95	50.55
NO	2000.	22.64	5	1.5	1.5	10000.0	87.23	98.20	40.07

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:									
NO	378.	57.15	4	20.0	20.1	6400.0	22.13	28.25	15.04

DWASH= MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

 *** REGULATORY (Default) ***
 PERFORMING CAVITY CALCULATIONS
 WITH ORIGINAL SCREEN CAVITY MODEL
 (BRODE, 1988)

*** CAVITY CALCULATION - 1 ***
 CONC (UG/M**3) = .0000
 CRIT WS @10M (M/S) = 99.99
 CRIT WS @ HS (M/S) = 99.99
 DILUTION WS (M/S) = 99.99
 CAVITY HT (M) = 5.87
 CAVITY LENGTH (M) = 12.04
 ALONGWIND DIM (M) = 2.74

*** CAVITY CALCULATION - 2 ***
 CONC (UG/M**3) = .0000
 CRIT WS @10M (M/S) = 99.99
 CRIT WS @ HS (M/S) = 99.99
 DILUTION WS (M/S) = 99.99
 CAVITY HT (M) = 3.97
 CAVITY LENGTH (M) = 4.04
 ALONGWIND DIM (M) = 8.23

CAVITY CONC NOT CALCULATED FOR CRIT WS > 20.0 M/S. CONC SET = 0.0

END OF CAVITY CALCULATIONS

*** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
----- SIMPLE TERRAIN	----- 57.15	----- 378.	----- 0.

5/25/10

10:59:51

*** SCREEN3 MODEL RUN ***
 *** VERSION DATED 96043 ***

CO

SIMPLE TERRAIN INPUTS:

SOURCE TYPE = POINT
 EMISSION RATE (G/S) = 4.25880
 STACK HEIGHT (M) = 10.2100
 STK INSIDE DIAM (M) = 1.1600
 STK EXIT VELOCITY (M/S) = 25.9600
 STK GAS EXIT TEMP (K) = 422.0400
 AMBIENT AIR TEMP (K) = 293.0000
 RECEPTOR HEIGHT (M) = .0000
 URBAN/RURAL OPTION = RURAL
 BUILDING HEIGHT (M) = 3.6600
 MIN HORIZ BLDG DIM (M) = 2.7400
 MAX HORIZ BLDG DIM (M) = 8.2600

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
 THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

BUOY. FLUX = 26.184 M**4/S**3; MOM. FLUX = 157.391 M**4/S**2.

*** FULL METEOROLOGY ***

 *** SCREEN AUTOMATED DISTANCES ***

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING
 DISTANCES ***

SIGMA	DIST	CONC	U10M	USTK	MIX HT	PLUME	SIGMA	
(M)	(M)	(UG/M**3)	STAB (M/S)	(M/S)	(M)	HT (M)	Y (M)	Z
	1.	.0000	1	1.0	1.0	320.0	257.84	4.32 4.30
NO	100.	1.159	6	1.0	1.0	10000.0	83.17	21.24 20.98
NO	200.	23.15	3	10.0	10.0	3200.0	34.96	24.07 14.77
NO	300.	49.42	4	20.0	20.1	6400.0	22.09	22.81 12.47
NO	400.	53.81	4	20.0	20.1	6400.0	22.09	29.67 15.67
NO	500.	49.44	4	20.0	20.1	6400.0	22.09	36.32 18.63

NO	600.	45.37	4	15.0	15.0	4800.0	26.69	42.98	21.73
NO	700.	41.11	4	15.0	15.0	4800.0	26.69	49.41	24.49
NO	800.	39.32	4	10.0	10.0	3200.0	34.93	56.02	27.70
NO	900.	36.84	4	10.0	10.0	3200.0	34.93	62.29	30.30
NO	1000.	34.45	4	8.0	8.0	2560.0	41.11	68.70	33.29
NO	1100.	32.44	4	8.0	8.0	2560.0	41.11	74.83	35.25
NO	1200.	30.46	4	8.0	8.0	2560.0	41.11	80.92	37.16
NO	1300.	28.57	4	8.0	8.0	2560.0	41.11	86.97	39.01
NO	1400.	26.80	4	8.0	8.0	2560.0	41.11	92.97	40.82
NO	1500.	25.16	4	8.0	8.0	2560.0	41.11	98.94	42.59
NO	1600.	23.92	4	5.0	5.0	1600.0	59.65	105.44	45.68
NO	1700.	23.18	4	5.0	5.0	1600.0	59.65	111.31	47.33
NO	1800.	22.43	4	5.0	5.0	1600.0	59.65	117.14	48.94
NO	1900.	21.67	4	5.0	5.0	1600.0	59.65	122.94	50.54
NO	2000.	21.42	5	1.5	1.5	10000.0	87.13	98.19	40.06

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:
 377. 54.05 4 20.0 20.1 6400.0 22.09 28.19 15.01
 NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

 *** REGULATORY (Default) ***
 PERFORMING CAVITY CALCULATIONS
 WITH ORIGINAL SCREEN CAVITY MODEL
 (BRODE, 1988)

*** CAVITY CALCULATION - 1 ***
 CONC (UG/M**3) = .0000
 CRIT WS @10M (M/S) = 99.99
 CRIT WS @ HS (M/S) = 99.99
 DILUTION WS (M/S) = 99.99
 CAVITY HT (M) = 5.87

*** CAVITY CALCULATION - 2 ***
 CONC (UG/M**3) = .0000
 CRIT WS @10M (M/S) = 99.99
 CRIT WS @ HS (M/S) = 99.99
 DILUTION WS (M/S) = 99.99
 CAVITY HT (M) = 3.97

CAVITY LENGTH (M) = 12.07 CAVITY LENGTH (M) = 4.04
ALONGWIND DIM (M) = 2.74 ALONGWIND DIM (M) = 8.26

CAVITY CONC NOT CALCULATED FOR CRIT WS > 20.0 M/S. CONC SET = 0.0

 END OF CAVITY CALCULATIONS

*** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
----- SIMPLE TERRAIN	----- 54.05	----- 377.	----- 0.

NO	500.	74.18	4	20.0	20.1	6400.0	22.09	36.32	18.63
NO	600.	68.07	4	15.0	15.0	4800.0	26.69	42.98	21.73
NO	700.	61.68	4	15.0	15.0	4800.0	26.69	49.41	24.49
NO	800.	59.00	4	10.0	10.0	3200.0	34.93	56.02	27.70
NO	900.	55.28	4	10.0	10.0	3200.0	34.93	62.28	30.30
NO	1000.	51.69	4	8.0	8.0	2560.0	41.11	68.70	33.29
NO	1100.	48.67	4	8.0	8.0	2560.0	41.11	74.83	35.25
NO	1200.	45.70	4	8.0	8.0	2560.0	41.11	80.92	37.16
NO	1300.	42.87	4	8.0	8.0	2560.0	41.11	86.97	39.01
NO	1400.	40.22	4	8.0	8.0	2560.0	41.11	92.97	40.82
NO	1500.	37.75	4	8.0	8.0	2560.0	41.11	98.94	42.59
NO	1600.	35.89	4	5.0	5.0	1600.0	59.65	105.44	45.68
NO	1700.	34.79	4	5.0	5.0	1600.0	59.65	111.31	47.32
NO	1800.	33.66	4	5.0	5.0	1600.0	59.65	117.14	48.94
NO	1900.	32.52	4	5.0	5.0	1600.0	59.65	122.94	50.54
NO	2000.	32.14	5	1.5	1.5	10000.0	87.12	98.19	40.05

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:
 377. 81.10 4 20.0 20.1 6400.0 22.09 28.19 15.01
 NO

DWASH= MEANS NO CALC MADE (CONC = 0.0)
 DWASH=NO MEANS NO BUILDING DOWNWASH USED
 DWASH=HS MEANS HUBER-SNYDER DOWNWASH USED
 DWASH=SS MEANS SCHULMAN-SCIRE DOWNWASH USED
 DWASH=NA MEANS DOWNWASH NOT APPLICABLE, X<3*LB

 *** REGULATORY (Default) ***
 PERFORMING CAVITY CALCULATIONS
 WITH ORIGINAL SCREEN CAVITY MODEL
 (BRODE, 1988)

*** CAVITY CALCULATION - 1 ***
 CONC (UG/M**3) = .0000
 CRIT WS @10M (M/S) = 99.99
 CRIT WS @ HS (M/S) = 99.99

*** CAVITY CALCULATION - 2 ***
 CONC (UG/M**3) = .0000
 CRIT WS @10M (M/S) = 99.99
 CRIT WS @ HS (M/S) = 99.99

DILUTION WS (M/S)	=	99.99	DILUTION WS (M/S)	=	99.99
CAVITY HT (M)	=	5.87	CAVITY HT (M)	=	3.97
CAVITY LENGTH (M)	=	12.04	CAVITY LENGTH (M)	=	4.04
ALONGWIND DIM (M)	=	2.74	ALONGWIND DIM (M)	=	8.23

CAVITY CONC NOT CALCULATED FOR CRIT WS > 20.0 M/S. CONC SET = 0.0

END OF CAVITY CALCULATIONS

*** SUMMARY OF SCREEN MODEL RESULTS ***

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)
----- SIMPLE TERRAIN	----- 81.10	----- 377.	----- 0.



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 Brother Stone Corp
PO Box 345
Berne IN 46711

DATE: July 8, 2010

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

SUBJECT: Final Decision
FESOP
035-29289-00086

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:
Constance Ronald
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 11/30/07



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July 8, 2010

TO: Daleville Community 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 Corp
Permit Number: 035-29289-00086

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	BMILLER 7/8/2010 Meshberger Brothers Stone Corp 035-29289-00086 Final		Type of Mail: CERTIFICATE OF MAILING ONLY	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		W. Craig Coshow Meshberger Brothers Stone Corp PO Box 345 Berne IN 46711 (Source CAATS) via confirmed delivery										
2		Mr. Charles L. Berger Attorney Berger & Berger, Attorneys at Law 313 Main Street Evansville IN 47700 (Affected Party)										
3		Ms. Susan Minkler 4909 E. CO. RD. 450N Muncie IN 47303 (Affected Party)										
4		Delaware County Health Department 200 W Main St, County Bldg Room 207-309 Muncie IN 47305-2874 (Health Department)										
5		Delaware County Commissioners 100 West Main Street Muncie IN 47305 (Local Official)										
6		Daleville Town Council P.Bo. Box 567 Daleville IN 47334 (Local Official)										
7		John and Chris Wearly 8400 S County Rd 600 W Daleville IN 47334-9792 (Affected Party)										
8		Daleville Community Library 13601 W. CR. 550 S. Daleville IN 47334 (Library)										
9		Mr. Ron Myers 8910 W. CR. 600 S Daleville IN 47334 (Affected Party)										
10		Mrs. Ruth & Johnnie McCool 9290 W. CR 600 S. Daleville IN 47334 (Affected Party)										
11		Mr. Charles & Barbara Pahmier 8700 W CR 600 S. Daleville IN 47334 (Affected Party)										
12		Mrs. Barbara Timmons 10001 S. Twilight Rd. Daleville IN 47334 (Affected Party)										
13		McIntire Concrete 8700 S. CR 600 W. Daleville IN 47334 (Affected State)										
14		Louis Carpenter 9101 W. CR 550 S. Daleville IN 47334 (Affected Party)										
15		Dane & Kristina Carpenter 8700 W. CR 550 S Daleville IN 47334 (Affected Party)										

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is \$50,000 per piece subject to a limit of \$50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is \$500. The maximum indemnity payable is \$25,000 for registered mail, sent with optional postal insurance. See Domestic Mail Manual R900, S913, and S921 for limitations of coverage on inured and COD mail. See International Mail Manual for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
14			

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1		James 9001 W. CR 550 S. Daleville IN 47334 (Affected Party)										
2		Fred & Deborah Ellingwood 9071 W. CR 550 S. Daleville IN 47334 (Affected Party)										
3		Clyde & Sandra Fisher 8861 W. CR. 500 S Daleville IN 47334 (Affected Party)										
4		Phillip & Debbie Hagan 9201 W. CR. 550 S. Daleville IN 47334 (Affected Party)										
5		Scott & Stephanie Scott 9161 W. CR 550 S. Daleville IN 47334 (Affected Party)										
6		David & Leila Knights 8713 W. CR. 550 S Daleville IN 47334 (Affected Party)										
7		Frank & Donna Lay 8709 W. CR. 550 S Daleville IN 47334 (Affected Party)										
8		Lesa Newkirk 9261 W. CR. 550 S Daleville IN 47334 (Affected Party)										
9		Jennifer Strange 8351 S. CR 600 W. Daleville IN 47334 (Affected Party)										
10		John & Christine Wearly 8400 S. CR. 600 W. Daleville IN 47334 (Affected Party)										
11		Richard & Jeannette Whitesell 8801 W. CR. 550 S Daleville IN 47334 (Affected Party)										
12		Helen Young 8921 W. CR 550 S. Daleville IN 47334 (Affected Party)										
13		Mr. & Mrs. Daniel Smith 10660 S. Twilight Rd. Daleville IN 47334 (Affected Party)										
14		Mr. Mark Findling 7550 S. 600 W. Daleville IN 47334 (Affected Party)										
15		Mr. Jerrey & Mary Ann Moore 10640 W. 500 S. Daleville IN 47334 (Affected Party)										

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1		Larry 8600 W. 400 S. Yorktown In 47396 (Affected Party)										
2		Mr. Kevin Huff 10491 S. Twilight Rd. Daleville In 47334 (Affected Party)										
3		Ms. Freda Franklin 9515 S. 600 W. Daleville IN 47334 (Affected Party)										
4		Ms. Connie Stinson 7100 S. 800 W. Daleville IN 47334 (Affected Party)										
5		Mrs. Candace Ballard 9101 S. 600 W. Daleville IN 47334 (Affected Party)										
6		Mr. Steven Taylor 11821 W. 500 S. Daleville IN 47334 (Affected Party)										
7		Mr. Galen Thornbro 5001 W. 600 S. Muncie IN 47302 (Affected Party)										
8		Mr. John Good 10200 W. 500 S. Daleville IN 47334 (Affected Party)										
9		Mr. Robert Waters 8405 S. Honeycreek Rd. Muncie IN 47302 (Affected Party)										
10		Mr. Terry Strange 8351 S. 600 W. Daleville IN 47334 (Affected Party)										
11		Mrs. Karen Trelan 10081 S. Twilight Rd. Daleville IN 47334 (Affected Party)										
12		Mrs. Lenora Thornbro 9821 S. Twilight Rd. Daleville In 47334 (Affected Party)										
13		Mrs. Lynn Guentenspberger 7391 S, 700 W. Daleville IN 47334 (Affected Party)										
14		Mr. Jeffrey Shockley 15521 W. 750 S. Daleville IN 47334 (Affected Party)										
15		Mrs. Eunice Nagel 8100 S. 600 W. Daleville IN 47334 (Affected Party)										

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1		Richard 10190 W. 550 S. Daleville IN 47334 (Affected Party)										
2		Mrs. Katherine Guentensperger 10100 W. 500 S. Daleville IN 47334 (Affected Party)										
3		Mr. James Mofield 5881 S. Proctor Rd. Muncie IN 47302 (Affected Party)										
4		Mr. Terry Terhune 10180 W. 500 S. Daleville In 47334 (Affected Party)										
5		Mr. Billy Joe Thornbro 9821 S. Twilight Rd. Daleville IN 47334 (Affected Party)										
6		Mr. Leon Calvert PO Box 544 Daleville In 47334 (Affected Party)										
7		Ms. Sheila Grimes 13710 W. Main St. Daleville IN 47334 (Affected Party)										
8		Mr. Tim Konkle 7301 S. 400 W Muncie IN 47302 (Affected Party)										
9		Mrs. Deborah McManus Daleville Elementary School 8600 S. Bronco Dr. Daleville IN 47334 (Affected Party)										
10		Mrs. Nicki Combs 4901 W. 400 S Muncie In 47302 (Affected Party)										
11		David & Brenda Southerland 9972 N. 600 West Middletown IN 47356 (Affected Party)										
12		Constance Ronald 2228 West County Road 125 South Portland IN 47371 (Consultant)										
13		Pamela & Michael Vctor 89801 West CR 550 South Daleville IN 47334 (Affected Party)										
14		Scott & Stephanie Jackson 9161 West CR 550 South Daleville IN 47334 (Affected Party)										
15		Mr. Claude Beaty 8660 W. 600S Daleville In 47334 (Affected Party)										

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