NOTICE OF 30-DAY PERIOD
FOR PUBLIC COMMENT

Preliminary Findings Regarding the Renewal of a
Federally Enforceable State Operating Permit (FESOP)

for Hot Mix, Inc. in Decatur County

FESOP Renewal No.: F031-43698-00028

The Indiana Department of Environmental Management (IDEM) has received an application from Hot Mix, Inc. located at 992 South County Road 800 East, Greensburg, Indiana 47240 for a renewal of its FESOP issued on November 23, 2011. If approved by IDEM’s Office of Air Quality (OAQ), this proposed renewal would allow Hot Mix, Inc. to continue to operate its existing source.

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

A copy of the permit application and IDEM’s preliminary findings have been sent to:

Greensburg Public Library
1110 East Main St.
Greensburg, IN 47240

and

IDEM Southeast Regional Office
820 West Sweet Street
Brownstown, IN 47220-9557

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

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

How can you participate in this process?

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

You may request that IDEM hold a public hearing about this draft permit. If adverse comments concerning the air pollution impact of this draft permit are received, with a request for a public hearing, IDEM will decide whether or not to hold a public hearing. IDEM could also decide to hold a public meeting instead of, or in addition to, a public hearing. If a public hearing or meeting is held, IDEM will
make a separate announcement of the date, time, and location of that hearing or meeting. At a hearing, you would have an opportunity to submit written comments and make verbal comments. At a meeting, you would have an opportunity to submit written comments, ask questions, and discuss any air pollution concerns with IDEM staff.

Comments and supporting documentation, or a request for a public hearing should be sent in writing to IDEM at the address below. If you comment via e-mail, please include your full U.S. mailing address so that you can be added to IDEM’s mailing list to receive notice of future action related to this permit. If you do not want to comment at this time, but would like to receive notice of future action related to this permit application, please contact IDEM at the address below. Please refer to permit number F031-43698-00028 in all correspondence.

Comments should be sent to:

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

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

For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Air Permits page on the Internet at: https://www.in.gov/idem/airpermit/2358.htm; and the Citizens’ Guide to IDEM on the Internet at: https://www.in.gov/idem/6900.htm.

What will happen after IDEM makes a decision?

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

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

Madhurima D. Moulik, Ph.D., Section Chief  
Permits Branch  
Office of Air Quality
Federally Enforceable State Operating Permit Renewal
OFFICE OF AIR QUALITY

Hot Mix, Inc.
992 South County Road 800 East
Greensburg, Indiana 47240

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

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

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

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

| Operation Permit No.: F031-43698-00028 |
| Master Agency Interest ID: 6426 |
| Issued by: Madhurima D. Moulik, Ph.D., Section Chief |
| Permits Branch |
| Office of Air Quality | Issuance Date: |
| Expiration Date: |
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SECTION A 

SOURCE SUMMARY

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

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

<table>
<thead>
<tr>
<th>Source Address:</th>
<th>992 South County Road 800 East, Greensburg, Indiana 47240</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Source Phone Number:</td>
<td>513-771-0820</td>
</tr>
<tr>
<td>SIC Code:</td>
<td>2951 (Asphalt Paving Mixtures and Blocks)</td>
</tr>
<tr>
<td>County Location:</td>
<td>Decatur</td>
</tr>
<tr>
<td>Source Location Status:</td>
<td>Attainment for all criteria pollutants</td>
</tr>
<tr>
<td>Source Status:</td>
<td>Federally Enforceable State Operating Permit Program Minor Source, under PSD Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories</td>
</tr>
</tbody>
</table>

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

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

(a) One (1) drum-mix, hot-mix asphalt plant, identified as EU-07, approved in 2021 for construction, with a maximum throughput capacity of 300 tons of raw material per hour, processing blast furnace slag, steel slag, and asbestos-free recycled asphalt shingles in the aggregate mix, equipped with one (1) 110.0 million British thermal units (MMBtu) per hour dryer burner, firing natural gas, No. 2 distillate fuel oil, and waste oil, as available, and equipped with one (1) baghouse for particulate control, exhausting through one (1) stack, identified as stack SV-7. No crushing of RAP or grinding of shingles occurs at this source.

(b) Material feeding, conveying, and loading operations consisting of the following:

(1) Raw material storage piles, including:

   (i) Aggregate storage pile(s), total capacity 43,450 tons;

   (ii) Reclaimed asphalt pavement (RAP) storage pile(s), total capacity 16,250 tons;

   (iii) Blast Furnace and/or Steel Slag storage pile(s), total capacity 1,000 tons; and

   (iv) Recycled asphalt shingles pile(s), total capacity 750 tons.

(2) One (1) mineral filler storage silo;

(3) Six (6) hoppers, including:

   (i) Four (4) cold feed bins for coarse to fine aggregate; and

   (ii) Two (2) feed bins for recycled asphalt pavement and recycled shingles.
(4) Five (5) conveyors, including:
   (i) Three (3) conveyors for transporting coarse to fine aggregates to the rotary dryer;
   (ii) One (1) conveyor for transporting recycled asphalt pavement and recycled shingles to the rotary dryer; and
   (iii) One (1) drag slat conveyor transporting hot-mixed asphalt to the asphalt storage silo.

(5) One (1) bucket elevator; and

(6) Three (3) hot-mixed asphalt storage silo;

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

(c) Cold-mix (stockpile mix) asphalt manufacturing operations and storage piles.

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

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

(a) One (1) 4.0 million British thermal units per hour (MMBtu/hr) hot oil heater, identified as EU-02, constructed in 1997, firing natural gas and No. 2 fuel oil, as available, and exhausting to stack SV-2;

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

(b) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to ten thousand five hundred (10,500) gallons, and dispensing less than or equal to two hundred thousand (230,000) gallons per month;

(c) Four (4) storage tanks, exhausting at stacks SV-3, SV-4, SV-5, and SV-6, including:
   (1) Two (2) liquid asphalt cement storage tanks, identified as EU-03 and EU-04, constructed in 1997, with a maximum storage capacity of 20,000 gallons, each;
   (2) One (1) No. 2 fuel oil storage tank, identified as EU-05, constructed in 1997, with a maximum storage capacity of 12,000 gallons; and
   (3) One (1) waste oil storage tank, identified as EU-06, constructed in 1997, with a maximum storage capacity of 15,000 gallons.

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

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

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

B.1 Definitions [326 IAC 2-8-1]
Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]
(a) This permit, F031-43698-00028, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

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

B.3 Term of Conditions [326 IAC 2-1.1-9.5]
Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

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

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

B.4 Enforceability [326 IAC 2-8-6] [IC 13-17-12]
Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Severability [326 IAC 2-8-4(4)]
The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]
This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Provide Information [326 IAC 2-8-4(5)(E)]
(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.
B.8 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

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

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

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

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

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

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

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

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

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

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

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

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

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

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

The submittal by the Permittee does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
B.10 Compliance Order Issuance [326 IAC 2-8-5(b)]

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

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

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

1. Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
2. A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
3. Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

The Permittee shall implement the PMPs.

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

1. Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
2. A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
3. Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

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

The Permittee shall implement the PMPs.

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

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

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

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

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

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

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

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

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

   Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
   Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
   Facsimile Number: 317-233-6865
   Southeast Regional Office phone: (812) 358-2027; fax: (812) 358-2058.

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

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

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

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

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

(C) Corrective actions taken.

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

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

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

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

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

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

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

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

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

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

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

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

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

(a) All terms and conditions of permits established prior to F031-43698-00028 and issued pursuant to permitting programs approved into the state implementation plan have been either:
(1) incorporated as originally stated,
(2) revised, or
(3) deleted.

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

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

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

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

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

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

(1) That this permit contains a material mistake.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(2) Any approval required by 326 IAC 2-8-11.1 has been obtained;
(3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);

(4) The Permittee notifies the:

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

and

United States Environmental Protection Agency, Region 5  
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)  
77 West Jackson Boulevard  
Chicago, Illinois 60604-3590

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

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

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

(b) Emission Trades [326 IAC 2-8-15(b)]

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

(c) Alternative Operating Scenarios [326 IAC 2-8-15(c)]

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

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

B.19 Source Modification Requirement [326 IAC 2-8-11.1]

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

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

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee’s right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:
Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

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

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

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

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

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

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

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

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

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

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

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

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

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

(c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-8590 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.
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 two hundred fifty (250) tons per twelve (12) consecutive month period.

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

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

C.3 Opacity [326 IAC 5-1]

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

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

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

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

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

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

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

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

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

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

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

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(d).
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(1)][326 IAC 2-8-5(a)(1)]

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

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

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

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

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

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

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

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

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.
Corrective Actions and Response Steps [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

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

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

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

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

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

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

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

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

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

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

(1) initial inspection and evaluation;

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

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

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

(1) monitoring results;

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

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

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

(e) The Permittee shall record the reasonable response steps taken.
C.16 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

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

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

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

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

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

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

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

   (AA) All calibration and maintenance records.
   (BB) All original strip chart recordings for continuous monitoring instrumentation.
   (CC) Copies of all reports required by the FESOP.

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

   (AA) The date, place, as defined in this permit, and time of sampling or measurements.
   (BB) The dates analyses were performed.
   (CC) The company or entity that performed the analyses.
   (DD) The analytical techniques or methods used.
   (EE) The results of such analyses.
   (FF) The operating conditions as existing at the time of sampling or measurement.

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

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

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

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

(b) The address for report submittal is:

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

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

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

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:

(a) One (1) drum-mix, hot-mix asphalt plant, identified as EU-07, approved in 2021 for construction, with a maximum throughput capacity of 300 tons of raw material per hour, processing blast furnace slag, steel slag, and asbestos-free recycled asphalt shingles in the aggregate mix, equipped with one (1) 110.0 million British thermal units (MMBtu) per hour dryer burner, firing natural gas, No. 2 distillate fuel oil, and waste oil, as available, and equipped with one (1) baghouse for particulate control, exhausting through one (1) stack, identified as stack SV-7. No crushing of RAP or grinding of shingles occurs at this source.

(b) Material feeding, conveying, and loading operations consisting of the following:

(1) Raw material storage piles, including:
   (i) Aggregate storage pile(s), total capacity 43,450 tons;
   (ii) Reclaimed asphalt pavement (RAP) storage pile(s), total capacity 16,250 tons;
   (iii) Blast Furnace and/or Steel Slag storage pile(s), total capacity 1,000 tons; and
   (iv) Recycled asphalt shingles pile(s), total capacity 750 tons.

(2) One (1) mineral filler storage silo;

(3) Six (6) hoppers, including:
   (i) Four (4) cold feed bins for coarse to fine aggregate; and
   (ii) Two (2) feed bins for recycled asphalt pavement and recycled shingles.

(4) Five (5) conveyors, including:
   (i) Three (3) conveyors for transporting coarse to fine aggregates to the rotary dryer;
   (ii) One (1) conveyor for transporting recycled asphalt pavement and recycled shingles to the rotary dryer; and
   (iii) One (1) drag slat conveyor transporting hot-mixed asphalt to the asphalt storage silo.

(5) One (1) bucket elevator; and

(6) Three (3) hot-mixed asphalt storage silo;

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

Insignificant Activities:

(a) One (1) 4.0 million British thermal units per hour (MMBtu/hr) hot oil heater, identified as EU-02, constructed in 1997, firing natural gas and No. 2 fuel oil, as available, and exhausting to stack SV-2;
Emission Limitations and Standards [326 IAC 2-8-4(1)]

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

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

(a) The amount of hot-mix asphalt processed shall not exceed 600,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month; and

(b) PM emissions from the dryer/mixer shall not exceed 0.282 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 (twelve) consecutive month period and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

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

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

(a) The amount of hot-mix asphalt processed shall not exceed 600,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) The PM10 emissions from the dryer/mixer shall not exceed 0.123 pounds per ton of asphalt processed.

(c) The PM2.5 emissions from the dryer/mixer shall not exceed 0.148 pounds per ton of asphalt processed.

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

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

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

D.1.3 FESOP Limits: SO2 and HAPs [326 IAC 2-8-4][326 IAC 2-2][326 IAC 8-1-6]

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

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

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

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

   (2) The sulfur content of the waste fuel oil shall not exceed 0.75% by weight.

   (3) The waste oil combusted shall not contain more than 1.00% ash, 0.20% chlorine,
       and 0.01% lead.

   (4) The HCl emissions shall not exceed 13.2 pounds of HCl per 1,000 gallons of 
       waste oil burned.

   (5) The sulfur content of the Blast Furnace slag shall not exceed 1.50% by weight.

   (6) The SO2 emissions from the dryer/mixer shall not exceed 0.740 pounds per ton 
       of Blast Furnace slag processed in the aggregate mix.

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

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

(b) Single Fuel and Slag Usage Limitations:

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

       (A) Natural gas usage shall not exceed 363 million cubic feet (MMCF) per 
           twelve (12) consecutive month period, with compliance determined at the 
           end of each month;

       (B) No. 2 fuel oil usage shall not exceed 1,800,419 gallons per twelve (12) 
           consecutive month period, with compliance determined at the end of 
           each month;

       (C) Waste oil usage shall not exceed 1,159,453 gallons per twelve (12) 
           consecutive month period, with compliance determined at the end of 
           each month; and

       (D) The Blast Furnace slag usage shall not exceed 60,000 tons per twelve 
           (12) consecutive month period, with compliance determined at the end 
           of each month.

   Note: The source is only permitted to burn the above-listed fuels.

(c) Multiple Fuel and Slag Usage Limitation:

   When combusting more than one fuel per twelve (12) consecutive month period in the 
   dryer/mixer burner, in conjunction with the use of slag in the aggregate mix, SO2 
   emissions from the dryer/mixer shall not exceed 40.11 tons per twelve (12) consecutive 
   month period, with compliance determined at the end of each month.

(d) Asphalt Shingle Usage Limitation

   Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 
   326 IAC 2-2 (PSD) and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants 
   (HAPs)) not applicable, the Permittee shall not grind recycled asphalt shingles on-site 
   and shall only use certified asbestos-free recycled shingles, post consumer waste and/or 
   factory seconds, as an additive in its aggregate mix.
Compliance with these limits, combined with the potential to emit SO2 and HAPs from all other emission units at this source, shall limit the source-wide total potential to emit of SO2 to less than 100 tons per twelve (12) consecutive month period, any single HAP to less than ten (10) tons per twelve (12) consecutive month period, and total HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period and shall render the requirements of 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), and 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP) not applicable.

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

Pursuant to 326 IAC 6-2-3, the particulate emissions from the hot oil heater, identified as EU-02, shall not exceed six tenths (0.6) pounds of particulate matter per MMBtu heat input.

D.1.5 Sulfur Dioxide (SO2) [326 IAC 7-1.1-1][326 IAC 7-2-1]

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

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

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

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

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

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

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

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

D.1.7 Particulate Control

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

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

D.1.8 Testing Requirements [326 IAC 2-8-5(a)(1), (4)][326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Conditions D.1.1(b), D.1.2(b), and D.1.2(c), the Permittee shall perform PM, PM10, and PM2.5 testing of the dryer/mixer not later than 180 days after initial startup of the Dryer/mixer, utilizing methods approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM10 and PM2.5 includes filterable and condensable particulate matter.
In order to demonstrate compliance with Condition D.1.3(a)(6), when using Blast Furnace slag, the Permittee shall perform SO2 testing for the aggregate dryer within one hundred eighty (180) days of initial use of Blast Furnace slag in the aggregate mix, utilizing methods as approved by the Commissioner. Testing shall only be performed if the company has not previously performed SO2 testing while using Blast Furnace slag in the aggregate mix at one of their other Indiana facilities. Testing shall be conducted in accordance with Section C- Performance Testing.

D.1.9 Sulfur Dioxide (SO2) Emissions and Sulfur Content

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

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

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

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

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

(3) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 110.0 MMBtu/hr burner, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

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

(b) Compliance with the Blast Furnace slag limitation established in Condition D.1.3(a)(5) shall be determined utilizing one of the following options. Pursuant to 326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements), compliance shall be demonstrated on a thirty (30) day calendar-month average.

(1) Maintaining all records of vendor analyses or certifications of Blast Furnace slag delivered; or

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

Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 110.0 MMBtu/hr burner, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, or other procedures approved by IDEM, OAQ.

A determination of noncompliance pursuant to any of the methods specified in (1) or (2) above shall not be refuted by evidence of compliance pursuant to the other method.
Compliance with the Steel slag limitations established in Condition D.1.3(a)(7) shall be determined utilizing one of the following options. Pursuant to 326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements), compliance shall be demonstrated on a thirty (30) day calendar-month average.

1. Maintaining all records of vendor analyses or certifications of slag delivered; or

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

Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the 110.0 MMBtu/hr burner, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6, or other procedures approved by IDEM, OAQ.

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

D.1.10 Hydrogen Chloride (HCl) Emissions and Ash, Chlorine, and Lead Content

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

D.1.11 Multiple Fuel and Slag Usage Limitations

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

Sulfur Dioxide (SO2) Emission Calculation

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

where:

- \( S \) = tons of sulfur dioxide emissions for a 12-month consecutive period
- \( G \) = million cubic feet of natural gas used in the last 12 months
- \( O \) = gallons of No. 2 fuel oil used in the last 12 months
- \( W \) = gallons of Waste oil used in the last 12 months
- \( B \) = tons of Blast Furnace slag used in the last 12 months
- \( T \) = tons of Steel slag used in the last 12 months

Emission Factors

- \( E_G = 0.6 \text{ lb/MMCF of natural gas} \)
- \( E_O = 71.0 \text{ lb/1000 gallons of No. 2 fuel oil} \)
- \( E_W = 110.3 \text{ lb/1000 gallons of Waste oil} \)
- \( E_B = 0.74 \text{ lb/ton of Blast Furnace slag used} \)
- \( E_T = 0.0014 \text{ lb/ton of Steel slag used} \)

D.1.12 Shingle Asbestos Content

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

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

(2) Analyzing a sample of the factory second shingles delivery to determine the asbestos content of the factory second shingles, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

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

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

D.1.13 Visible Emissions Notations

(a) Visible emission notations from the conveyors, screens, material transfer points, and dryer/mixer stack (SV-7) exhaust shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

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

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

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

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

D.1.14 Broken or Failed Bag Detection

In the event that bag failure has been observed:

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

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

Bag failure can be indicated by a significant drop in the baghouse’s pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces, or triboflows.
Record Keeping and Reporting Requirements  [326 IAC 2-8-4(3)]

D.1.15 Record Keeping Requirements

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

(b) To document the compliance status with Conditions D.1.3 and D.1.5, the Permittee shall maintain records in accordance with (1) through (10) below. Records maintained for (1) through (10) below shall be taken monthly and shall be complete and sufficient to establish compliance with the limits established in Conditions D.1.3 and D.1.5.

(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 since the last compliance determination period;

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

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

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

   (A) Fuel supplier certifications;

   (B) The name of the fuel supplier; and

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

(6) Actual blast furnace and steel slag usage, sulfur content, and equivalent sulfur dioxide emission rates for all blast furnace and steel slag used at the source since the last compliance determination period;

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

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

   (A) Blast furnace and steel slag supplier certifications;

   (B) The name of the blast furnace and steel slag supplier; and

   (C) A statement from the blast furnace and steel slag supplier that certifies the sulfur content of the blast furnace and steel slag.

(9) A certification, signed by the owner or operator, that the records of the shingle supplier certifications represent all of the shingles used during the period; and

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

(A) Shingle supplier certifications;
(B) The name of the shingle supplier(s); and
(C) A statement from the shingle supplier(s) that certifies the asbestos content of the shingles from their company.

(d) To document the compliance status with Condition D.1.13, the Permittee shall maintain records of visible emission notations of the dryer/mixer stack (SV-7) exhaust once per day. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g., the process did not operate that day).

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

D.1.16 Reporting Requirements

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

Emissions Unit Description:

(c) Cold-mix (stockpile mix) asphalt manufacturing operations and storage piles.

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

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

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

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

(a) Penetrating prime coating
(b) Stockpile storage
(c) Application during the months of November, December, January, February, and March.

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

(a) Pursuant to 326 IAC 2-8-4, the VOC emissions from the sum of the binders shall not exceed 34.16 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

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

(1) Cut back asphalt rapid cure, containing a maximum of 25.3% of the liquid binder by weight of VOC solvent and 95.0% by weight of VOC solvent evaporating.

(2) Cut back asphalt medium cure, containing a maximum of 28.6% of the liquid binder by weight of VOC solvent and 70.0% by weight of VOC solvent evaporating.

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

(4) Emulsified asphalt with solvent, containing a maximum of 15.0% of liquid binder by weight of VOC solvent and 46.4% by weight of the VOC solvent in the liquid blend evaporating. The percent oil distillate in emulsified asphalt with solvent liquid, as determined by ASTM, must be seven percent (7%) or less of the total emulsion by volume.

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

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

(1) The amount of VOC solvent used in rapid cure cutback asphalt shall not exceed 35.96 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
(2) The amount of VOC solvent used in medium cure cutback asphalt shall not exceed 48.80 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(3) The amount of VOC solvent used in slow cure cutback asphalt shall not exceed 135.65 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(4) The amount of VOC solvent used in emulsified asphalt shall not exceed 73.63 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(5) The amount of VOC solvent used in all other asphalt shall not exceed 1,366.49 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

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

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

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

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<th>Type of binder</th>
<th>adjustment factor</th>
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<td>cutback asphalt medium cure</td>
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</tbody>
</table>

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

Note: The source has opted to limit source-wide potential to emit VOCs to less than 50 tons per twelve (12) consecutive month period. This would allow for the co-location of an additional asphalt plant to the same location, as long as the co-located plant has a limited potential to emit from all of its emission units equal to or less than those that are issued within this permit.

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

D.2.3 Record Keeping Requirements

(a) To document the compliance status with Condition D.2.2(c)(1) through (5), the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained
shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limits established in Condition D.2.2(c)(1) through (5).

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

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

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

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

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

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

D.2.4 Reporting Requirements

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

(a) One (1) drum-mix, hot-mix asphalt plant, identified as EU-07, approved in 2021 for construction, with a maximum throughput capacity of 300 tons of raw material per hour, processing blast furnace slag, steel slag, and asbestos-free recycled asphalt shingles in the aggregate mix, equipped with one (1) 110.0 million British thermal units (MMBtu) per hour dryer burner, firing natural gas, No. 2 distillate fuel oil, and waste oil, as available, and equipped with one (1) baghouse for particulate control, exhausting through one (1) stack, identified as stack SV-7. No crushing of RAP or grinding of shingles occurs at this source.

(b) Material feeding, conveying, and loading operations consisting of the following:

(1) Raw material storage piles, including:
   (i) Aggregate storage pile(s), total capacity 43,450 tons;
   (ii) Reclaimed asphalt pavement (RAP) storage pile(s), total capacity 16,250 tons;
   (iii) Blast Furnace and/or Steel Slag storage pile(s), total capacity 1,000 tons; and
   (iv) Recycled asphalt shingles pile(s), total capacity 750 tons.

(2) One (1) mineral filler storage silo;

(3) Six (6) hoppers, including:
   (i) Four (4) cold feed bins for coarse to fine aggregate; and
   (ii) Two (2) feed bins for recycled asphalt pavement and recycled shingles.

(4) Five (5) conveyors, including:
   (i) Three (3) conveyors for transporting coarse to fine aggregates to the rotary dryer;
   (ii) One (1) conveyor for transporting recycled asphalt pavement and recycled shingles to the rotary dryer; and
   (iii) One (1) drag slat conveyor transporting hot-mixed asphalt to the asphalt storage silo.

(5) One (1) bucket elevator; and

(6) Three (3) hot-mixed asphalt storage silo;

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

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

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

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

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

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

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

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

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

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

E.1.3 Testing Requirements [326 IAC 2-1.1-11] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

In order to document the compliance status with Condition E.1.2, the Permittee shall perform the testing required under 40 CFR 60, Subpart I, utilizing methods as approved by the Commissioner, at least once every five (5) years from the date of the most recent valid compliance demonstration. Section C - Performance Testing contains the Permittee’s obligation with regard to the performance testing required by this condition.
SECTION E.2  NESHAP

Emissions Unit Description:

Insignificant Activities:

(a) One (1) 4.0 million British thermal units per hour (MMBtu/hr) hot oil heater, identified as EU-02, constructed in 1997, firing natural gas and No. 2 fuel oil, as available, and exhausting to stack SV-2; [326 IAC 6-2]

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

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

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


(a) Pursuant to 40 CFR 63.1 the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1, for the emission unit(s) listed above, except as otherwise specified in 40 CFR Part 63, Subpart JJJJJJ.

(b) Pursuant to 40 CFR 63.10, 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 National Emission Standards for Hazardous Air Pollutants (NESHAPs): Area Source Standards for Industrial, Commercial, and Institutional Boilers Area Sources [40 CFR Part 63, Subpart JJJJJJ] [326 IAC 20]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart JJJJJJ (included as Attachment C to the operating permit), for the emission unit(s) listed above:

(1) 40 CFR 63.11193;
(2) 40 CFR 63.11194(a)(1),(b),(e);
(3) 40 CFR 63.11196(a)(1);
(4) 40 CFR 63.11200;
(5) 40 CFR 63.11201(b),(d);
(6) 40 CFR 63.11205(a);
(7) 40 CFR 63.11210(c);
(8) 40 CFR 63.11214(b);
(9) 40 CFR 63.11223(a),(b)(1) - (7);
(10) 40 CFR 63.11225(a),(b),(c),(d),(g);
(11) 40 CFR 63.11235
(12) 40 CFR 63.11236
(13) 40 CFR 63.11237
(14) 40 CFR 63.11237
(15) Table 2
Table 8
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE AND ENFORCEMENT BRANCH  

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)  
CERTIFICATION  

Source Name: Hot Mix, Inc.  
Source Address: 992 South County Road 800 East, Greensburg, Indiana 47240  
FESOP Permit No.: F031-43698-00028  

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

Please check what document is being certified:  

☐ Annual Compliance Certification Letter  
☐ Test Result (specify) ____________________________________________________________  
☐ Report (specify) ________________________________________________________________  
☐ Notification (specify) ____________________________________________________________  
☐ Affidavit (specify) ____________________________________________________________  
☐ Other (specify) ________________________________________________________________  

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

Signature:  
Printed Name:  
Title/Position:  
Date:
FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) EMERGENCY OCCURRENCE REPORT

Source Name: Hot Mix, Inc.
Source Address: 992 South County Road 800 East, Greensburg, Indiana 47240
FESOP Permit No.: F031-43698-00028

This form consists of 2 pages

☐ This is an emergency as defined in 326 IAC 2-7-1(12)
  • The Permittee must notify the Office of Air Quality (OAQ), within four (4) daytime business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
  • The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-8-12

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

Facility/Equipment/Operation:

Control Equipment:

Permit Condition or Operation Limitation in Permit:

Description of the Emergency:

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

<table>
<thead>
<tr>
<th>Date/Time Emergency started:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date/Time Emergency was corrected:</td>
</tr>
<tr>
<td>Was the facility being properly operated at the time of the emergency?</td>
</tr>
<tr>
<td>Type of Pollutants Emitted: TSP, PM-10, SO₂, VOC, NOₓ, CO, Pb, other:</td>
</tr>
<tr>
<td>Estimated amount of pollutant(s) emitted during emergency:</td>
</tr>
<tr>
<td>Describe the steps taken to mitigate the problem:</td>
</tr>
<tr>
<td>Describe the corrective actions/response steps taken:</td>
</tr>
<tr>
<td>Describe the measures taken to minimize emissions:</td>
</tr>
</tbody>
</table>

If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: ________________________________________________
Title / Position: ________________________________________________
Date: __________________________________________________________
Phone: _________________________________________________________
Indiana Department of Environmental Management
Office of Air Quality
Compliance and Enforcement Branch

FESOP Quarterly Report

Source Name: Hot Mix, Inc.
Source Address: 992 South County Road 800 East, Greensburg, Indiana 47240
FESOP Permit No.: F031-43698-00028
Facility: Dryer/Mixer (EU-07)
Parameter: Hot-mix Asphalt Production
Limit: The amount of hot-mix asphalt produced shall not exceed 600,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Quarter: ___________ Year: _________________

<table>
<thead>
<tr>
<th>Month</th>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 1 + Column 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hot-mix Asphalt Produced This Month (tons)</td>
<td>Hot-mix Asphalt Produced Previous 11 Months (tons)</td>
<td>12 Month Total Hot-mix Asphalt Produced (tons)</td>
</tr>
<tr>
<td>Month 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Month 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Month 3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

☐ No deviation occurred in this quarter.

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

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


Source Name: Hot Mix, Inc.
Source Address: 992 South County Road 800 East, Greensburg, Indiana 47240
FESOP Permit No.: F031-43698-00028
Facility: Dryer/Mixer (EU-07)

Parameter: Fuel & Slag Usage / SO2 emissions
Emission Limits: Sulfur dioxide (SO2) emissions shall not exceed 40.11 tons per twelve (12) consecutive month period, with compliance determined at the end of each month, using the equation found in Condition D.1.11(a).

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

<table>
<thead>
<tr>
<th>Fuel Type (Units)</th>
<th>Fuel Usage Limit (per 12 consecutive month period)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Gas (MMCF)</td>
<td>363</td>
</tr>
<tr>
<td>No. 2 Distillate Fuel Oil (gallons)</td>
<td>1,800,419</td>
</tr>
<tr>
<td>Waste Oil (gallons)</td>
<td>1,159,453</td>
</tr>
<tr>
<td>Blast Furnace Slag (tons)</td>
<td>60,000</td>
</tr>
</tbody>
</table>

Facility: Cold-mix Asphalt Production
Parameter: Binder Usage / VOC Emissions
Emission Limits: Volatile Organic Compound (VOC) emissions from the sum of the binders shall not exceed 34.16 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

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

<table>
<thead>
<tr>
<th>Type of Binder</th>
<th>Binder Usage Limit (per 12 consecutive month period)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cutback Asphalt Rapid Cure</td>
<td>35.96</td>
</tr>
<tr>
<td>Cutback Asphalt Medium Cure</td>
<td>48.80</td>
</tr>
<tr>
<td>Cutback Asphalt Slow Cure</td>
<td>136.65</td>
</tr>
<tr>
<td>Emulsified Asphalt</td>
<td>73.63</td>
</tr>
<tr>
<td>Other Asphalt</td>
<td>1,366.49</td>
</tr>
</tbody>
</table>
### FESOP Quarterly Report - Fuel & Slag Usage / SO2 emissions

<table>
<thead>
<tr>
<th>QUARTER: ___________</th>
<th>YEAR: ___________</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Month</strong></td>
<td><strong>Fuel Types / Slag (units)</strong></td>
</tr>
<tr>
<td><strong>Month 1</strong></td>
<td>Natural Gas (MMCF)</td>
</tr>
<tr>
<td></td>
<td>No. 2 Fuel Oil (gallons)</td>
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<td>Waste Fuel Oil (gallons)</td>
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<td></td>
<td>Blast Furnace Slag (tons)</td>
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<td></td>
<td>Steel Slag Usage (tons)</td>
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<tr>
<td><strong>Month 2</strong></td>
<td>Natural Gas (MMCF)</td>
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<tr>
<td></td>
<td>No. 2 Fuel Oil (gallons)</td>
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<td>Waste Fuel Oil (gallons)</td>
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<td>Blast Furnace Slag (tons)</td>
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<td></td>
<td>Steel Slag Usage (tons)</td>
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<tr>
<td><strong>Month 3</strong></td>
<td>Natural Gas (MMCF)</td>
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<td></td>
<td>No. 2 Fuel Oil (gallons)</td>
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<td></td>
<td>Waste Fuel Oil (gallons)</td>
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<td></td>
<td>Blast Furnace Slag (tons)</td>
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<tr>
<td></td>
<td>Steel Slag Usage (tons)</td>
</tr>
</tbody>
</table>

☐ No deviation occurred in this reporting period.

☐ Deviation/s occurred in this reporting period.

Submitted by: _____________________________ Date: __________________________

Title / Position: __________________________ Phone: _______________________

Deviation has been reported on: ______________ Signature: ______________________
## FESOP Quarterly Report - Binder Usage / VOC Emissions

**QUARTER:** _______________  **YEAR:** _______________

<table>
<thead>
<tr>
<th>Month</th>
<th>Binder Types (units)</th>
<th>Usage This Month</th>
<th>Usage Previous 11 Months</th>
<th>Usage 12 Month Total</th>
<th>VOC Emissions (tons per 12 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>Column 1</td>
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<td>Column 1 + Column 2</td>
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<td></td>
<td>Equation Results</td>
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<tr>
<td>Month 1</td>
<td>Cutback asphalt rapid cure liquid binder (million cubic feet)</td>
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<td></td>
<td>Cutback asphalt medium cure liquid binder (gallons)</td>
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<td></td>
<td>Cutback asphalt slow cure liquid binder (gallons)</td>
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<td></td>
<td>Emulsified asphalt with solvent liquid binder</td>
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<td></td>
<td>Other asphalt with solvent liquid binder</td>
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<td>Month 2</td>
<td>Cutback asphalt rapid cure liquid binder (million cubic feet)</td>
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<td>Cutback asphalt medium cure liquid binder (gallons)</td>
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<td>Cutback asphalt slow cure liquid binder (gallons)</td>
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<td>Emulsified asphalt with solvent liquid binder</td>
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<td></td>
<td>Other asphalt with solvent liquid binder</td>
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<tr>
<td>Month 3</td>
<td>Cutback asphalt rapid cure liquid binder (million cubic feet)</td>
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<td></td>
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<td>Other asphalt with solvent liquid binder</td>
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</tbody>
</table>

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

Submitted by: ___________________________  Date: ______________
Title / Position: ___________________________  Phone: ______________
Deviation has been reported on: ________________  Signature: ___________________________

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

\[ \text{Adjustment factor} \]

<table>
<thead>
<tr>
<th>Type of Binder</th>
<th>Adjustment Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cutback Asphalt Rapid Cure</td>
<td>1.053</td>
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<tr>
<td>Cutback Asphalt Medium Cure</td>
<td>1.429</td>
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<tr>
<td>Cutback Asphalt Slow Cure</td>
<td>4.0</td>
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<tr>
<td>Emulsified Asphalt</td>
<td>2.155</td>
</tr>
<tr>
<td>Other Asphalt</td>
<td>40.0</td>
</tr>
</tbody>
</table>
This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B - Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C-General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

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

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

Form Completed by: _______________________________________________________
Title / Position: ___________________________________________________________
Date: ___________________________________________________________________
Phone: _________________________________________________________________
Attachment A

Federally Enforceable State Operating Permit (FESOP) No: 031-43698-00028

Hot Mix, Inc.
992 South County Road 800 East
Greensburg, Indiana 47240

HOT-MIX ASPHALT CONCRETE PLANT

FUGITIVE PARTICULATE MATTER EMISSIONS CONTROL PLAN

1. Fugitive particulate matter (dust) emissions from paved roads, unpaved roads, and parking lots will be controlled by one or more of the following measures:

   A. Paved roads and parking lots:

      1. Cleaning by vacuum sweeping on an as needed basis (monthly at a minimum).
      2. Power brooming while wet from either rain or the application of water.
      3. Limiting travel from unpaved areas onto paved areas.
      4. Maintaining a good roadway surface. (free of potholes)

   B. Unpaved roads and parking lots:

      1. Paving with asphalt when possible.
      2. Treating with water on an as needed basis.
      3. Minimizing traffic in the unpaved areas.

2. Fugitive particulate matter (dust) emissions from material handling will be controlled by one or more of the following measures:

   A. Paved roads and parking lots:

      1. Maintain vehicle bodies in a condition to prevent leaking.
      2. Maintain a 10 MPH speed limit in the yard.

   B. Unpaved roads and parking lots:

      1. Handle aggregates in a moist condition.
      2. Apply water on an as needed basis.
      3. Minimize drop heights of aggregates.

3. Plan Implementation

   A. The effective date of this plan was July 7, 1997.
   B. Date of most recent update: September 2, 2011.

Reference
Attachment B

Federally Enforceable State Operating Permit (FESOP) No: F031-43698-00028

[Downloaded from the eCFR on May 13, 2013]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

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.


§ 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]
What This Subpart Covers

§63.11193 Am I subject to this subpart?

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

§63.11194 What is the affected source of this subpart?

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

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

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

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

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

(d) An affected source is a reconstructed source if the boiler meets the reconstruction criteria as defined in §63.2, you commenced reconstruction after June 4, 2010, and the boiler meets the applicability criteria at the time you commence reconstruction.

(e) An existing dual-fuel fired boiler meeting the definition of gas-fired boiler, as defined in §63.11237, that meets the applicability requirements of this subpart after June 4, 2010 due to a fuel switch from gaseous fuel to solid fossil fuel, biomass, or liquid fuel is considered to be an existing source under this subpart as long as the boiler was designed to accommodate the alternate fuel.

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

[76 FR 15591, Mar. 21, 2011, as amended at 78 FR 7506, Feb. 1, 2013]

§63.11195 Are any boilers not subject to this subpart?

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

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

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

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

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

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

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

(g) Any boiler that is used as a control device to comply with another subpart of this part, or part 60, part 61, or part 65 of this chapter provided that at least 50 percent of the average annual heat input during any 3 consecutive calendar years to the boiler is provided by regulated gas streams that are subject to another standard.

(h) Temporary boilers as defined in this subpart.

(i) Residential boilers as defined in this subpart.

(j) Electric boilers as defined in this subpart.

(k) An electric utility steam generating unit (EGU) as defined in this subpart.


§63.11196 What are my compliance dates?

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

(1) If the existing affected boiler is subject to a work practice or management practice standard of a tune-up, you must achieve compliance with the work practice or management practice standard no later than March 21, 2014.

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

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

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

(d) If you own or operate an industrial, commercial, or institutional boiler and would be subject to this subpart except for the exemption in §63.11195(b) for commercial and industrial solid waste incineration units covered by 40 CFR part 60, subpart CCCC or subpart DDDD, and you cease combusting solid waste, you must be in compliance with this subpart on the effective date of the waste to fuel switch as specified in §60.2145(a)(2) and (3) of subpart CCCC or §60.2710(a)(2) and (3) of subpart DDDD.

[76 FR 15591, Mar. 21, 2011, as amended at 78 FR 7506, Feb. 1, 2013]


§63.11200 What are the subcategories of boilers?

The subcategories of boilers, as defined in §63.11237 are:

(a) Coal.

(b) Biomass.

(c) Oil.

(d) Seasonal boilers.

(e) Oil-fired boilers with heat input capacity of equal to or less than 5 million British thermal units (Btu) per hour.

(f) Boilers with an oxygen trim system that maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune-up.

(g) Limited-use boilers.

[78 FR 7506, Feb. 1, 2013]

§63.11201 What standards must I meet?

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

(b) You must comply with each work practice standard, emission reduction measure, and management practice specified in Table 2 to this subpart that applies to your boiler. An energy assessment completed on or after January 1, 2008 that meets or is amended to meet the energy assessment requirements in Table 2 to this subpart satisfies the energy assessment requirement. A facility that operates under an energy management program established through energy management systems compatible with ISO 50001, that includes the affected units, also satisfies the energy assessment requirement.

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

(d) These standards apply at all times the affected boiler is operating, except during periods of startup and shutdown as defined in §63.11237, during which time you must comply only with Table 2 to this subpart.
General Compliance Requirements

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

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

(b) You must demonstrate compliance with all applicable emission limits using performance stack testing, fuel analysis, or a continuous monitoring system (CMS), including a continuous emission monitoring system (CEMS), a continuous opacity monitoring system (COMS), or a continuous parameter monitoring system (CPMS), where applicable. You may demonstrate compliance with the applicable mercury emission limit using fuel analysis if the emission rate calculated according to §63.11211(c) is less than the applicable emission limit. Otherwise, you must demonstrate compliance using stack testing.

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

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

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

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

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

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

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

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

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

(3) You must operate and maintain the CMS in continuous operation according to the site-specific monitoring plan.
§63.11210 What are my initial compliance requirements and by what date must I conduct them?

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

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

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

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

(e) For new or reconstructed oil-fired boilers that commenced construction or reconstruction on or before September 14, 2016, that combust only oil that contains no more than 0.50 weight percent sulfur or a mixture of 0.50 weight percent sulfur oil with other fuels not subject to a particulate matter (PM) emission limit under this subpart and that do not use a post-combustion technology (except a wet scrubber) to reduce PM or sulfur dioxide emissions, you are not subject to the PM emission limit in Table 1 of this subpart until September 14, 2019, providing you monitor and record on a monthly basis the type of fuel combusted. If you intend to burn a new type of fuel or fuel mixture that does not meet the requirements of this paragraph, you must conduct a performance test within 60 days of burning the new fuel. On and after September 14, 2019, you are subject to the PM emission limit in Table 1 of this subpart and you must demonstrate compliance with the PM emission limit in Table 1 no later than March 12, 2020.

(f) For new or reconstructed boilers that combust only ultra-low-sulfur liquid fuel as defined in §§63.11237, you are not subject to the PM emission limit in Table 1 of this subpart providing you monitor and record on a monthly basis the type of fuel combusted. If you intend to burn a fuel other than ultra-low-sulfur liquid fuel or gaseous fuels as defined in §§63.11237, you must conduct a performance test within 60 days of burning the new fuel.

(g) For new or reconstructed affected boilers that have applicable work practice standards or management practices, you are not required to complete an initial performance tune-up, but you are required to complete the applicable biennial or 5-year tune-up as specified in §§63.11223 no later than 25 months or 61 months, respectively, after the initial startup of the new or reconstructed affected source.

(h) For affected boilers that ceased burning solid waste consistent with §§63.11196(d) and for which your initial compliance date has passed, you must demonstrate compliance within 60 days of the effective date of the waste-to-fuel switch as specified in §§60.2145(a)(2) and (3) of subpart CCCC or §§60.2710(a)(2) and (3) of subpart DDDD. If you have not conducted your compliance demonstration for this subpart within the previous 12 months, you must complete all compliance demonstrations for this subpart before you commence or recommence combustion of solid waste.

(i) For affected boilers that switch fuels or make a physical change to the boiler that results in the applicability of a different subcategory within subpart JJJJJJ or the boiler becoming subject to subpart JJJJJJJ, you must demonstrate compliance within 180 days of the effective date of the fuel switch or the physical change. Notification of such changes must be submitted according to §§63.11225(g).

(j) For boilers located at existing major sources of HAP that limit their potential to emit (e.g., make a physical change or take a permit limit) such that the existing major source becomes an area source, you must comply with the applicable provisions as specified in paragraphs (j)(1) through (3) of this section.
(1) Any such existing boiler at the existing source must demonstrate compliance with subpart JJJJJJ within 180 days of the later of March 21, 2014 or upon the existing major source commencing operation as an area source.

(2) Any new or reconstructed boiler at the existing source must demonstrate compliance with subpart JJJJJJ within 180 days of the later of March 21, 2011 or startup.

(3) Notification of such changes must be submitted according to §63.11225(g).

(k) For existing affected boilers that have not operated on solid fossil fuel, biomass, or liquid fuel between the effective date of the rule and the compliance date that is specified for your source in §63.11196, you must comply with the applicable provisions as specified in paragraphs (k)(1) through (3) of this section.

(1) You must complete the initial compliance demonstration, if subject to the emission limits in Table 1 to this subpart, as specified in paragraphs (a) and (b) of this section, no later than 180 days after the re-start of the affected boiler on solid fossil fuel, biomass, or liquid fuel and according to the applicable provisions in §63.7(a)(2).

(2) You must complete the initial performance tune-up, if subject to the tune-up requirements in §63.11223, by following the procedures described in §63.11223(b) no later than 30 days after the re-start of the affected boiler on solid fossil fuel, biomass, or liquid fuel.

(3) You must complete the one-time energy assessment, if subject to the energy assessment requirements specified in Table 2 to this subpart, no later than the compliance date specified in §63.11196.


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

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

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

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

(2) For an electrostatic precipitator operated with a wet scrubber, you must establish the minimum total secondary electric power (secondary voltage and secondary current), as defined in §63.11237, as your operating limits during the three-run performance stack test.

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

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

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

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

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

\[ P_{90} = \text{mean} + (SD \times t) \]

Where:

\[ P_{90} = 90\text{th percentile confidence level mercury concentration, in pounds per million Btu.} \]

\[ \text{mean} = \text{Arithmetic average of the fuel mercury concentration in the fuel samples analyzed according to } \S 63.11213, \text{ in units of pounds per million Btu.} \]

\[ SD = \text{Standard deviation of the mercury concentration in the fuel samples analyzed according to } \S 63.11213, \text{ in units of pounds per million Btu.} \]

\[ t = t \text{ distribution critical value for } 90\text{th percentile (0.1) probability for the appropriate degrees of freedom (number of samples minus one) as obtained from a Distribution Critical Value Table.} \]

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

[76 FR 15591, Mar. 21, 2011, as amended at 78 FR 7508, Feb. 1, 2013]

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

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

(b) You must conduct each stack test according to the requirements in Table 4 to this subpart. Boilers that use a CEMS for carbon monoxide (CO) are exempt from the initial CO performance testing in Table 4 to this subpart and the oxygen concentration operating limit requirement specified in Table 3 to this subpart.

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

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

(e) To determine compliance with the emission limits, you must use the F-Factor methodology and equations in sections 12.2 and 12.3 of EPA Method 19 of appendix A-7 to part 60 of this chapter to convert the measured PM concentrations and the measured mercury concentrations that result from the performance test to pounds per million Btu heat input emission rates.
§63.11213   What fuel analyses and procedures must I use for the performance tests?

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

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

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

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

(a) If you own or operate an existing or new coal-fired boiler with a heat input capacity of less than 10 million Btu per hour, you must conduct a performance tune-up according to §63.11210(c) or (g), as applicable, and §63.11223(b). If you own or operate an existing coal-fired boiler with a heat input capacity of less than 10 million Btu per hour, you must submit a signed statement in the Notification of Compliance Status report that indicates that you conducted an initial tune-up of the boiler.

(b) If you own or operate an existing or new biomass-fired boiler or an existing or new oil-fired boiler, you must conduct a performance tune-up according to §63.11210(c) or (g), as applicable, and §63.11223(b). If you own or operate an existing biomass-fired boiler or existing oil-fired boiler, you must submit a signed statement in the Notification of Compliance Status report that indicates that you conducted an initial tune-up of the boiler.

(c) If you own or operate an existing affected boiler with a heat input capacity of 10 million Btu per hour or greater, you must submit a signed certification in the Notification of Compliance Status report that an energy assessment of the boiler and its energy use systems was completed according to Table 2 to this subpart and that the assessment is an accurate depiction of your facility at the time of the assessment or that the maximum number of on-site technical hours specified in the definition of energy assessment applicable to the facility has been expended.

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


Continuous Compliance Requirements

§63.11220   When must I conduct subsequent performance tests or fuel analyses?

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

(b) For new or reconstructed boilers that commenced construction or reconstruction on or before September 14, 2016, when demonstrating initial compliance with the PM emission limit, if your boiler's performance test results show
that your PM emissions are equal to or less than half of the PM emission limit, you do not need to conduct further performance tests for PM until September 14, 2021, but must continue to comply with all applicable operating limits and monitoring requirements and must comply with the provisions as specified in paragraphs (b)(1) through (4) of this section.

(1) A performance test for PM must be conducted by September 14, 2021.

(2) If your performance test results show that your PM emissions are equal to or less than half of the PM emission limit, you may choose to conduct performance tests for PM every fifth year. Each such performance test must be conducted no more than 61 months after the previous performance test.

(3) If you intend to burn a new type of fuel other than ultra-low-sulfur liquid fuel or gaseous fuels as defined in §63.11237, you must conduct a performance test within 60 days of burning the new fuel type.

(4) If your performance test results show that your PM emissions are greater than half of the PM emission limit, you must conduct subsequent performance tests on a triennial basis as specified in paragraph (a) of this section.

(c) For new or reconstructed boilers that commenced construction or reconstruction after September 14, 2016, when demonstrating initial compliance with the PM emission limit, if your boiler’s performance test results show that your PM emissions are equal to or less than half of the PM emission limit, you may choose to conduct performance tests for PM every fifth year, but must continue to comply with all applicable operating limits and monitoring requirements and must comply with the provisions as specified in paragraphs (c)(1) through (3) of this section.

(1) Each such performance test must be conducted no more than 61 months after the previous performance test.

(2) If you intend to burn a new type of fuel other than ultra-low-sulfur liquid fuel or gaseous fuels as defined in §63.11237, you must conduct a performance test within 60 days of burning the new fuel type.

(3) If your performance test results show that your PM emissions are greater than half of the PM emission limit, you must conduct subsequent performance tests on a triennial basis as specified in paragraph (a) of this section.

(d) If you demonstrate compliance with the mercury emission limit based on fuel analysis, you must conduct a fuel analysis according to §63.11213 for each type of fuel burned as specified in paragraphs (d)(1) through (3) of this section. If you plan to burn a new type of fuel or fuel mixture, you must conduct a fuel analysis before burning the new type of fuel or mixture in your boiler. You must recalculate the mercury emission rate using Equation 1 of §63.11211. The recalculated mercury emission rate must be less than the applicable emission limit.

(1) For existing boilers and new or reconstructed boilers that commenced construction or reconstruction on or before September 14, 2016, when demonstrating initial compliance with the mercury emission limit, if the mercury constituents in the fuel or fuel mixture are measured to be equal to or less than half of the mercury emission limit, you do not need to conduct further fuel analysis sampling until September 14, 2017, but must continue to comply with all applicable operating limits and monitoring requirements and must comply with the provisions as specified in paragraphs (d)(1)(i) and (ii) of this section.

(i) Fuel analysis sampling for mercury must be conducted by September 14, 2017.

(ii) If your fuel analysis results show that the mercury constituents in the fuel or fuel mixture are equal to or less than half of the mercury emission limit, you may choose to conduct fuel analysis sampling for mercury every 12 months.

(2) For new or reconstructed boilers that commenced construction or reconstruction after September 14, 2016, when demonstrating initial compliance with the mercury emission limit, if the mercury constituents in the fuel or fuel mixture are measured to be equal to or less than half of the mercury emission limit, you may choose to conduct fuel analysis sampling for mercury every 12 months, but must continue to comply with all applicable operating limits and monitoring requirements.

(3) When demonstrating compliance with the mercury emission limit, if the mercury constituents in the fuel or fuel mixture are greater than half of the mercury emission limit, you must conduct quarterly sampling.
(e) For existing affected boilers that have not operated on solid fossil fuel, biomass, or liquid fuel since the previous compliance demonstration and more than 3 years have passed since the previous compliance demonstration, you must complete your subsequent compliance demonstration no later than 180 days after the re-start of the affected boiler on solid fossil fuel, biomass, or liquid fuel.

[81 FR 63127, Sept. 14, 2016]

§63.11221 Is there a minimum amount of monitoring data I must obtain?

(a) You must monitor and collect data according to this section and the site-specific monitoring plan required by §63.11205(c).

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

(c) You may not use data collected during periods of startup and shutdown, monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, or required monitoring system quality assurance or quality control activities in calculations used to report emissions or operating levels. Any such periods must be reported according to the requirements in §63.11225. You must use all the data collected during all other periods in assessing the operation of the control device and associated control system.

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


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

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

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

2. If you have an applicable mercury or PM emission limit, you must keep records of the type and amount of all fuels burned in each boiler during the reporting period. If you have an applicable mercury emission limit, you must demonstrate that all fuel types and mixtures of fuels burned would result in lower emissions of mercury than the applicable emission limit (if you demonstrate compliance through fuel analysis), or result in lower fuel input of mercury than the maximum values calculated during the last performance stack test (if you demonstrate compliance through performance stack testing).
(3) If you have an applicable mercury emission limit and you plan to burn a new type of fuel, you must determine the mercury concentration for any new fuel type in units of pounds per million Btu, using the procedures in Equation 1 of §63.11211 based on supplier data or your own fuel analysis, and meet the requirements in paragraphs (a)(3)(i) or (ii) of this section.

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

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

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

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

[76 FR 15591, Mar. 21, 2011, as amended at 81 FR 63127, Sept. 14, 2016]

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

(a) For affected sources subject to the work practice standard or the management practices of a tune-up, you must conduct a performance tune-up according to paragraph (b) of this section and keep records as required in §63.11225(c) to demonstrate continuous compliance. You must conduct the tune-up while burning the type of fuel (or fuels in the case of boilers that routinely burn two types of fuels at the same time) that provided the majority of the heat input to the boiler over the 12 months prior to the tune-up.

(b) Except as specified in paragraphs (c) through (f) of this section, you must conduct a tune-up of the boiler biennially to demonstrate continuous compliance as specified in paragraphs (b)(1) through (7) of this section. Each biennial tune-up must be conducted no more than 25 months after the previous tune-up. For a new or reconstructed boiler, the first biennial tune-up must be no later than 25 months after the initial startup of the new or reconstructed boiler.

(1) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may delay the burner inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection.

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

(3) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection.

(4) Optimize total emissions of CO. This optimization should be consistent with the manufacturer’s specifications, if available, and with any nitrogen oxide requirement to which the unit is subject.
(5) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.

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

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

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

(iii) The type and amount of fuel used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.

(7) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of startup.

c) Boilers with an oxygen trim system that maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune-up must conduct a tune-up of the boiler every 5 years as specified in paragraphs (b)(1) through (7) of this section. Each 5-year tune-up must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed boiler with an oxygen trim system, the first 5-year tune-up must be no later than 61 months after the initial startup. You may delay the burner inspection specified in paragraph (b)(1) of this section and inspection of the system controlling the air-to-fuel ratio specified in paragraph (b)(3) of this section until the next scheduled unit shutdown, but you must inspect each burner and system controlling the air-to-fuel ratio at least once every 72 months. If an oxygen trim system is utilized on a unit without emission standards to reduce the tune-up frequency to once every 5 years, set the oxygen level no lower than the oxygen concentration measured during the most recent tune-up.

d) Seasonal boilers must conduct a tune-up every 5 years as specified in paragraphs (b)(1) through (7) of this section. Each 5-year tune-up must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed seasonal boiler, the first 5-year tune-up must be no later than 61 months after the initial startup. You may delay the burner inspection specified in paragraph (b)(1) of this section and inspection of the system controlling the air-to-fuel ratio specified in paragraph (b)(3) of this section until the next scheduled unit shutdown, but you must inspect each burner and system controlling the air-to-fuel ratio at least once every 72 months. Seasonal boilers are not subject to the emission limits in Table 1 to this subpart or the operating limits in Table 3 to this subpart.

e) Oil-fired boilers with a heat input capacity of equal to or less than 5 million Btu per hour must conduct a tune-up every 5 years as specified in paragraphs (b)(1) through (7) of this section. Each 5-year tune-up must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed oil-fired boiler with a heat input capacity of equal to or less than 5 million Btu per hour, the first 5-year tune-up must be no later than 61 months after the initial startup. You may delay the burner inspection specified in paragraph (b)(1) of this section and inspection of the system controlling the air-to-fuel ratio specified in paragraph (b)(3) of this section until the next scheduled unit shutdown, but you must inspect each burner and system controlling the air-to-fuel ratio at least once every 72 months.

(f) Limited-use boilers must conduct a tune-up every 5 years as specified in paragraphs (b)(1) through (7) of this section. Each 5-year tune-up must be conducted no more than 61 months after the previous tune-up. For a new or reconstructed limited-use boiler, the first 5-year tune-up must be no later than 61 months after the initial startup. You may delay the burner inspection specified in paragraph (b)(1) of this section and inspection of the system controlling the air-to-fuel ratio specified in paragraph (b)(3) of this section until the next scheduled unit shutdown, but you must inspect each burner and system controlling the air-to-fuel ratio at least once every 72 months. Limited-use boilers are not subject to the emission limits in Table 1 to this subpart, the energy assessment requirements in Table 2 to this subpart, or the operating limits in Table 3 to this subpart.

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


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

(a) If your boiler is subject to a CO emission limit in Table 1 to this subpart, you must either install, operate, and maintain a CEMS for CO and oxygen according to the procedures in paragraphs (a)(1) through (6) of this section, or install, calibrate, operate, and maintain an oxygen analyzer system, as defined in §63.11237, according to the manufacturer's recommendations and paragraphs (a)(7) and (d) of this section, as applicable, by the compliance date specified in §63.11196. Where a certified CO CEMS is used, the CO level shall be monitored at the outlet of the boiler, after any add-on controls or flue gas recirculation system and before release to the atmosphere. Boilers that use a CO CEMS are exempt from the initial CO performance testing and oxygen concentration operating limit requirements specified in §63.11211(a) of this subpart. Oxygen monitors and oxygen trim systems must be installed to monitor oxygen in the boiler flue gas, boiler firebox, or other appropriate intermediate location.

(1) Each CO CEMS must be installed, operated, and maintained according to the applicable procedures under Performance Specification 4, 4A, or 4B at 40 CFR part 60, appendix B, and each oxygen CEMS must be installed, operated, and maintained according to Performance Specification 3 at 40 CFR part 60, appendix B. Both the CO and oxygen CEMS must also be installed, operated, and maintained according to the site-specific monitoring plan developed according to paragraph (c) of this section.

(2) You must conduct a performance evaluation of each CEMS according to the requirements in §63.8(e) and according to Performance Specifications 3 and 4, 4A, or 4B at 40 CFR part 60, appendix B.

(3) Each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) every 15 minutes. You must have CEMS data values from a minimum of four successive cycles of operation representing each of the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CEMS calibration, quality assurance, or maintenance activities are being performed, to have a valid hour of data.

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

(5) You must calculate hourly averages, corrected to 3 percent oxygen, from each hour of CO CEMS data in parts per million CO concentrations and determine the 10-day rolling average of all recorded readings, except as provided in §63.11221(c). Calculate a 10-day rolling average from all of the hourly averages collected for the 10-day operating period using Equation 2 of this section.

\[
10\text{-day average} = \frac{\sum_{i=1}^{n} H_{pvi}}{n} \quad \text{[Eq. 2]} \]

Where:

\( H_{pvi} \) = the hourly parameter value for hour \( i \)

\( n \) = the number of valid hourly parameter values collected over 10 boiler operating days

(6) For purposes of collecting CO data, you must operate the CO CEMS as specified in §63.11221(b). For purposes of calculating data averages, you must use all the data collected during all periods in assessing compliance, except that you must exclude certain data as specified in §63.11221(c). Periods when CO data are unavailable may constitute monitoring deviations as specified in §63.11221(d).

(7) You must operate the oxygen analyzer system at or above the minimum oxygen level that is established as the operating limit according to Table 6 to this subpart when firing the fuel or fuel mixture utilized during the most recent
CO performance stack test. Operation of oxygen trim systems to meet these requirements shall not be done in a manner which compromises furnace safety.

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

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

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

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

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

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

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

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

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

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

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

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

(d) If you have an operating limit that requires the use of a CMS, you must install, operate, and maintain each CPMS according to the procedures in paragraphs (d)(1) through (4) of this section.

(1) The CPMS must complete a minimum of one cycle of operation every 15 minutes. You must have data values from a minimum of four successive cycles of operation representing each of the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CMS calibration, quality assurance, or maintenance activities are being performed, to have a valid hour of data.

(2) You must calculate hourly arithmetic averages from each hour of CPMS data in units of the operating limit and determine the 30-day rolling average of all recorded readings, except as provided in §63.11221(c). Calculate a 30-day rolling average from all of the hourly averages collected for the 30-day operating period using Equation 3 of this section.
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Attachment C

30-day average = \frac{\sum_{i=1}^{n} Hpvi}{n} \quad \text{(Eq. 3)}

Where:

Hpvi = the hourly parameter value for hour i

n = the number of valid hourly parameter values collected over 30 boiler operating days

(3) For purposes of collecting data, you must operate the CPMS as specified in §63.11221(b). For purposes of calculating data averages, you must use all the data collected during all periods in assessing compliance, except that you must exclude certain data as specified in §63.11221(c). Periods when CPMS data are unavailable may constitute monitoring deviations as specified in §63.11221(d).

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

(e) If you have an applicable opacity operating limit under this rule, you must install, operate, certify and maintain each COMS according to the procedures in paragraphs (e)(1) through (8) of this section by the compliance date specified in §63.11196.

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

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

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

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

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

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

(7) You must calculate and record 6-minute averages from the opacity monitoring data and determine and record the daily block average of recorded readings, except as provided in §63.11221(c).

(8) For purposes of collecting opacity data, you must operate the COMS as specified in §63.11221(b). For purposes of calculating data averages, you must use all the data collected during all periods in assessing compliance, except that you must exclude certain data as specified in §63.11221(c). Periods when COMS data are unavailable may constitute monitoring deviations as specified in §63.11221(d).

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

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

(2) Each bag leak detection system must be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer’s written specifications and recommendations and in accordance with EPA-454/R-98-015 (incorporated by reference, see §63.14).
(3) The bag leak detection system must be certified by the manufacturer to be capable of detecting particulate matter emissions at concentrations of 10 milligrams per actual cubic meter or less.

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

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

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

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

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

[76 FR 15591, Mar. 21, 2011, as amended at 78 FR 7510, Feb. 1, 2013]

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

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

(1) You must submit all of the notifications in §§63.7(b); 63.8(e) and (f); and 63.9(b) through (e), (g), and (h) that apply to you by the dates specified in those sections except as specified in paragraphs (a)(2) and (4) of this section.

(2) An Initial Notification must be submitted no later than January 20, 2014 or within 120 days after the source becomes subject to the standard.

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

(4) You must submit the Notification of Compliance Status no later than 120 days after the applicable compliance date specified in §63.11196 unless you own or operate a new boiler subject only to a requirement to conduct a biennial or 5-year tune-up or you must conduct a performance stack test. If you own or operate a new boiler subject to a requirement to conduct a tune-up, you are not required to prepare and submit a Notification of Compliance Status for the tune-up. If you must conduct a performance stack test, you must submit the Notification of Compliance Status within 60 days of completing the performance stack test. You must submit the Notification of Compliance Status in accordance with paragraphs (a)(4)(i) and (vi) of this section. The Notification of Compliance Status must include the information and certification(s) of compliance in paragraphs (a)(4)(i) through (v) of this section, as applicable, and signed by a responsible official.

(i) You must submit the information required in §63.9(h)(2), except the information listed in §63.9(h)(2)(ii)(B), (D), (E), and (F). If you conduct any performance tests or CMS performance evaluations, you must submit that data as specified in paragraph (e) of this section. If you conduct any opacity or visible emission observations, or other monitoring procedures or methods, you must submit that data to the Administrator at the appropriate address listed in §63.13.

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

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

(iv) For units that install bag leak detection systems: “This facility complies with the requirements in §63.11224(f).”
(v) For units that do not qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act: “No secondary materials that are solid waste were combusted in any affected unit.”

(vi) The notification must be submitted electronically using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA’s Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written Notification of Compliance Status must be submitted to the Administrator at the appropriate address listed in §63.13.

(5) If you are using data from a previously conducted emission test to serve as documentation of conformance with the emission standards and operating limits of this subpart, you must include in the Notification of Compliance Status the date of the test and a summary of the results, not a complete test report, relative to this subpart.

(b) You must prepare, by March 1 of each year, and submit to the delegated authority upon request, an annual compliance certification report for the previous calendar year containing the information specified in paragraphs (b)(1) through (4) of this section. You must submit the report by March 15 if you had any instance described by paragraph (b)(3) of this section. For boilers that are subject only to the energy assessment requirement and/or a requirement to conduct a biennial or 5-year tune-up according to §63.11232(a) and not subject to emission limits or operating limits, you may prepare only a biennial or 5-year compliance report as specified in paragraphs (b)(1) and (2) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with the official's name, title, phone number, email address, and signature, certifying the truth, accuracy and completeness of the notification and a statement of whether the source has complied with all the relevant standards and other requirements of this subpart. Your notification must include the following certification(s) of compliance, as applicable, and signed by a responsible official:

(i) "This facility complies with the requirements in §63.11223 to conduct a biennial or 5-year tune-up, as applicable, of each boiler."

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

(iii) “This facility complies with the requirement in §§63.11214(d) and 63.11223(g) to minimize the boiler's time spent during startup and shutdown and to conduct startups and shutdowns according to the manufacturer's recommended procedures or procedures specified for a boiler of similar design if manufacturer's recommended procedures are not available.”

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

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

(c) You must maintain the records specified in paragraphs (c)(1) through (7) of this section.

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

(2) You must keep records to document conformance with the work practices, emission reduction measures, and management practices required by §63.11214 and §63.11223 as specified in paragraphs (c)(2)(i) through (vi) of this section.
(i) Records must identify each boiler, the date of tune-up, the procedures followed for tune-up, and the manufacturer's specifications to which the boiler was tuned.

(ii) For operating units that combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to §241.3(b)(1) of this chapter, you must keep a record which documents how the secondary material meets each of the legitimacy criteria under §241.3(d)(1). If you combust a fuel that has been processed from a discarded non-hazardous secondary material pursuant to §241.3(b)(4) of this chapter, you must keep records as to how the operations that produced the fuel satisfies the definition of processing in §241.2 and each of the legitimacy criteria in §241.3(d)(1) of this chapter. If the fuel received a non-waste determination pursuant to the petition process submitted under §241.3(c) of this chapter, you must keep a record that documents how the fuel satisfies the requirements of the petition process. For operating units that combust non-hazardous secondary materials as fuel per §241.4, you must keep records documenting that the material is a listed non-waste under §241.4(a).

(iii) For each boiler required to conduct an energy assessment, you must keep a copy of the energy assessment report.

(iv) For each boiler subject to an emission limit in Table 1 to this subpart, you must keep records of monthly fuel use by each boiler, including the type(s) of fuel and amount(s) used. For each new oil-fired boiler that meets the requirements of §63.11210(e) or (f), you must keep records, on a monthly basis, of the type of fuel combusted.

(v) For each boiler that meets the definition of seasonal boiler, you must keep records of days of operation per year.

(vi) For each boiler that meets the definition of limited-use boiler, you must keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and records of fuel use for the days the boiler is operating.

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

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

(5) Records of actions taken during periods of malfunction to minimize emissions in accordance with the general duty to minimize emissions in §63.11205(a), including corrective actions to restore the malfunctioning boiler, air pollution control, or monitoring equipment to its normal or usual manner of operation.

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

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

(ii) Person conducting the monitoring.

(iii) Technique or method used.

(iv) Operating conditions during the activity.

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

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

(7) If you use a bag leak detection system, you must keep the records specified in paragraphs (c)(7)(i) through (iii) of this section.
(i) Records of the bag leak detection system output.

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

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

(d) Your records must be in a form suitable and readily available for expeditious review. You must keep each record for 5 years following the date of each recorded action. You must keep each record on-site or be accessible from a central location by computer or other means that instantly provide access at the site for at least 2 years after the date of each recorded action. You may keep the records off site for the remaining 3 years.

(e)(1) Within 60 days after the date of completing each performance test (as defined in §63.2) required by this subpart, you must submit the results of the performance tests, including any associated fuel analyses, following the procedure specified in either paragraph (e)(1)(i) or (ii) of this section.

(i) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (https://www3.epa.gov/ttn/chief/ert/ert_info.html) at the time of the test, you must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (https://cdx.epa.gov/.) Performance test data must be submitted in a file format generated through the use of the EPA's ERT or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT Web site. If you claim that some of the performance test information being submitted is confidential business information (CBI), you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

(ii) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the test, you must submit the results of the performance test to the Administrator at the appropriate address listed in §63.13.

(2) Within 60 days after the date of completing each CEMS performance evaluation (as defined in §63.2), you must submit the results of the performance evaluation following the procedure specified in either paragraph (e)(2)(i) or (ii) of this section.

(i) For performance evaluations of continuous monitoring systems measuring relative accuracy test audit (RATA) pollutants that are supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) Performance evaluation data must be submitted in a file format generated through the use of the EPA's ERT or an alternate file format consistent with the XML schema listed on the EPA's ERT Web site. If you claim that some of the performance evaluation information being submitted is CBI, you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic storage media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

(ii) For any performance evaluations of continuous monitoring systems measuring RATA pollutants that are not supported by the EPA's ERT as listed on the EPA's ERT Web site at the time of the evaluation, you must submit the results of the performance evaluation to the Administrator at the appropriate address listed in §63.13.

(f) If you intend to commence or recommence combustion of solid waste, you must provide 30 days prior notice of the date upon which you will commence or recommence combustion of solid waste. The notification must identify:
(1) The name of the owner or operator of the affected source, the location of the source, the boiler(s) that will commence burning solid waste, and the date of the notice.

(2) The currently applicable subcategory under this subpart.

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

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

(g) If you have switched fuels or made a physical change to the boiler and the fuel switch or change resulted in the applicability of a different subcategory within this subpart, in the boiler becoming subject to this subpart, or in the boiler switching out of this subpart due to a fuel change that results in the boiler meeting the definition of gas-fired boiler, as defined in §63.11237, or you have taken a permit limit that resulted in you becoming subject to this subpart or no longer being subject to this subpart, you must provide notice of the date upon which you switched fuels, made the physical change, or took a permit limit within 30 days of the change. The notification must identify:

(1) The name of the owner or operator of the affected source, the location of the source, the boiler(s) that have switched fuels, were physically changed, or took a permit limit, and the date of the notice.

(2) The date upon which the fuel switch, physical change, or permit limit occurred.


§63.11226   [Reserved]

Other Requirements and Information

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

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

§63.11236   Who implements and enforces this subpart?

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

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

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

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

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

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

(4) Approval of a major change to monitoring under §63.8(f). A “major change to monitoring” is defined in §63.90.
(5) Approval of major change to recordkeeping and reporting under §63.10(f). A “major change to recordkeeping/reporting” is defined in §63.90.

[76 FR 15591, Mar. 21, 2011, as amended at 78 FR 7513, Feb. 1, 2013]

§63.11237 What definitions apply to this subpart?

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

10-day rolling average means the arithmetic mean of all valid hours of data from 10 successive operating days, except for periods of startup and shutdown and periods when the unit is not operating.

30-day rolling average means the arithmetic mean of all valid hours of data from 30 successive operating days, except for periods of startup and shutdown and periods when the unit is not operating.

Annual capacity factor means the ratio between the actual heat input to a boiler from the fuels burned during a calendar year and the potential heat input to the boiler had it been operated for 8,760 hours during a year at the maximum steady state design heat input capacity.

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

Bag leak detection system means a group of instruments that are capable of monitoring particulate matter loadings in the exhaust of a fabric filter (i.e., baghouse) in order to detect bag failures. A bag leak detection system includes, but is not limited to, an instrument that operates on electrodynamic, triboelectric, light scattering, light transmittance, or other principle to monitor relative particulate matter loadings.

Biodiesel means a mono-alkyl ester derived from biomass and conforming to ASTM D6751-11b, Standard Specification for Biodiesel Fuel Blend Stock (B100) for Middle Distillate Fuels (incorporated by reference, see §63.14).

Biomass means any biomass-based solid fuel that is not a solid waste. This includes, but is not limited to, wood residue and wood products (e.g., trees, tree stumps, tree limbs, bark, lumber, sawdust, sander dust, chips, scraps, slabs, millings, and shavings); animal manure, including litter and other bedding materials; vegetative agricultural and silvicultural materials, such as logging residues (slash), nut and grain hulls and chaff (e.g., almond, walnut, peanut, rice, and wheat), bagasse, orchard prunings, corn stalks, coffee bean hulls and grounds. This definition of biomass is not intended to suggest that these materials are or are not solid waste.

Biomass subcategory includes any boiler that burns any biomass and is not in the coal subcategory.

Boiler means an enclosed device using controlled flame combustion in which water is heated to recover thermal energy in the form of steam and/or hot water. Controlled flame combustion refers to a steady-state, or near steady-state, process wherein fuel and/or oxidizer feed rates are controlled. A device combusting solid waste, as defined in §241.3 of this chapter, is not a boiler unless the device is exempt from the definition of a solid waste incineration unit as provided in section 129(g)(1) of the Clean Air Act. Waste heat boilers, process heaters, and autoclaves are excluded from the definition of Boiler.

Boiler system means the boiler and associated components, such as, feedwater systems, combustion air systems, fuel systems (including burners), blowdown systems, combustion control systems, steam systems, and condensate return systems, directly connected to and serving the energy use systems.

Calendar year means the period between January 1 and December 31, inclusive, for a given year.

Coal means all solid fuels classifiable as anthracite, bituminous, sub-bituminous, or lignite by the American Society for Testing and Materials in ASTM D388 (incorporated by reference, see §63.14), coal refuse, and petroleum coke. For the purposes of this subpart, this definition of “coal” includes synthetic fuels derived from coal including, but not
limited to, solvent-refined coal, coal-oil mixtures, and coal-water mixtures. Coal derived gases are excluded from this definition.

**Coal subcategory** includes any boiler that burns any solid fossil fuel and no more than 15 percent biomass on an annual heat input basis.

**Commercial boiler** means a boiler used in commercial establishments such as hotels, restaurants, and laundries to provide electricity, steam, and/or hot water.

**Common stack** means the exhaust of emissions from two or more affected units through a single flue. Affected units with a common stack may each have separate air pollution control systems located before the common stack, or may have a single air pollution control system located after the exhausts come together in a single flue.

**Daily block average** means the arithmetic mean of all valid emission concentrations or parameter levels recorded when a unit is operating measured over the 24-hour period from 12 a.m. (midnight) to 12 a.m. (midnight), except for periods of startup and shutdown and periods when the unit is not operating.

**Deviation** (1) Means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(i) Fails to meet any applicable requirement or obligation established by this subpart including, but not limited to, any emission limit, operating limit, or work practice standard; or

(ii) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit.

(2) A deviation is not always a violation.

**Distillate oil** means fuel oils that contain 0.05 weight percent nitrogen or less and comply with the specifications for fuel oil numbers 1 and 2, as defined by the American Society of Testing and Materials in ASTM D396 (incorporated by reference, see §63.14) or diesel fuel oil numbers 1 and 2, as defined by the American Society for Testing and Materials in ASTM D975 (incorporated by reference, see §63.14), kerosene, and biodiesel as defined by the American Society of Testing and Materials in ASTM D6751-11b (incorporated by reference, see §63.14).

**Dry scrubber** means an add-on air pollution control system that injects dry alkaline sorbent (dry injection) or sprays an alkaline sorbent (spray dryer) to react with and neutralize acid gas in the exhaust stream forming a dry powder material. Sorbent injection systems used as control devices in fluidized bed boilers are included in this definition. A dry scrubber is a dry control system.

**Dry scrubber** means an add-on air pollution control system that injects dry alkaline sorbent (dry injection) or sprays an alkaline sorbent (spray dryer) to react with and neutralize acid gas in the exhaust stream forming a dry powder material. Sorbent injection systems used as control devices in fluidized bed boilers and process heaters are included in this definition. A dry scrubber is a dry control system.

**Electric boiler** means a boiler in which electric heating serves as the source of heat. Electric boilers that burn gaseous or liquid fuel during periods of electrical power curtailment or failure are included in this definition.

**Electric utility steam generating unit (EGU)** means a fossil fuel-fired combustion unit of more than 25 megawatts that serves a generator that produces electricity for sale. A fossil fuel-fired unit that cogenerates steam and electricity and supplies more than one-third of its potential electric output capacity and more than 25 megawatts electrical output to any utility power distribution system for sale is considered an electric utility steam generating unit. To be “capable of combusting” fossil fuels, an EGU would need to have these fuels allowed in their operating permits and have the appropriate fuel handling facilities on-site or otherwise available (e.g., coal handling equipment, including coal storage area, belts and conveyers, pulverizers, etc.; oil storage facilities). In addition, fossil fuel-fired EGU means any EGU that fired fossil fuel for more than 10.0 percent of the average annual heat input in any 3 consecutive calendar years or for more than 15.0 percent of the annual heat input during any one calendar year after April 16, 2015.
Electrostatic precipitator (ESP) means an add-on air pollution control device used to capture particulate matter by charging the particles using an electrostatic field, collecting the particles using a grounded collecting surface, and transporting the particles into a hopper. An electrostatic precipitator is usually a dry control system.

Energy assessment means the following for the emission units covered by this subpart:

1. The energy assessment for facilities with affected boilers with less than 0.3 trillion Btu per year (TBtu/year) heat input capacity will be 8 on-site technical labor hours in length maximum, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s) and any on-site energy use system(s) accounting for at least 50 percent of the affected boiler(s) energy (e.g., steam, hot water, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities, within the limit of performing an 8-hour energy assessment.

2. The energy assessment for facilities with affected boilers with 0.3 to 1.0 TBtu/year heat input capacity will be 24 on-site technical labor hours in length maximum, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s) and any on-site energy use system(s) accounting for at least 33 percent of the affected boiler(s) energy (e.g., steam, hot water, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities, within the limit of performing a 24-hour energy assessment.

3. The energy assessment for facilities with affected boilers with greater than 1.0 TBtu/year heat input capacity will be up to 24 on-site technical labor hours in length for the first TBtu/year plus 8 on-site technical labor hours for every additional 1.0 TBtu/year not to exceed 160 on-site technical hours, but may be longer at the discretion of the owner or operator of the affected source. The boiler system(s) and any on-site energy use system(s) accounting for at least 20 percent of the affected boiler(s) energy (e.g., steam, hot water, or electricity) production, as applicable, will be evaluated to identify energy savings opportunities.

4. The on-site energy use system(s) serving as the basis for the percent of affected boiler(s) energy production, as applicable, in paragraphs (1), (2), and (3) of this definition may be segmented by production area or energy use area as most logical and applicable to the specific facility being assessed (e.g., product X manufacturing area; product Y drying area; Building Z).

Energy management program means a program that includes a set of practices and procedures designed to manage energy use that are demonstrated by the facility's energy policies, a facility energy manager and other staffing responsibilities, energy performance measurement and tracking methods, an energy saving goal, action plans, operating procedures, internal reporting requirements, and periodic review intervals used at the facility. Facilities may establish their program through energy management systems compatible with ISO 50001.

Energy use system (1) Includes the following systems located on the site of the affected boiler that use energy provided by the boiler:

   i. Process heating; compressed air systems; machine drive (motors, pumps, fans); process cooling; facility heating, ventilation, and air conditioning systems; hot water systems; building envelop; and lighting; or

   ii. Other systems that use steam, hot water, process heat, or electricity, provided by the affected boiler.

2. Energy use systems are only those systems using energy clearly produced by affected boilers.

Equivalent means the following only as this term is used in Table 5 to this subpart:

1. An equivalent sample collection procedure means a published voluntary consensus standard or practice (VCS) or EPA method that includes collection of a minimum of three composite fuel samples, with each composite consisting of a minimum of three increments collected at approximately equal intervals over the test period.

2. An equivalent sample compositing procedure means a published VCS or EPA method to systematically mix and obtain a representative subsample (part) of the composite sample.
(3) An equivalent sample preparation procedure means a published VCS or EPA method that: Clearly states that the standard, practice or method is appropriate for the pollutant and the fuel matrix; or is cited as an appropriate sample preparation standard, practice or method for the pollutant in the chosen VCS or EPA determinative or analytical method.

(4) An equivalent procedure for determining heat content means a published VCS or EPA method to obtain gross calorific (or higher heating) value.

(5) An equivalent procedure for determining fuel moisture content means a published VCS or EPA method to obtain moisture content. If the sample analysis plan calls for determining mercury using an aliquot of the dried sample, then the drying temperature must be modified to prevent vaporizing this metal. On the other hand, if metals analysis is done on an “as received” basis, a separate aliquot can be dried to determine moisture content and the mercury concentration mathematically adjusted to a dry basis.

(6) An equivalent mercury determinative or analytical procedure means a published VCS or EPA method that clearly states that the standard, practice, or method is appropriate for mercury and the fuel matrix and has a published detection limit equal or lower than the methods listed in Table 5 to this subpart for the same purpose.

Fabric filter means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media, also known as a baghouse. A fabric filter is a dry control system.

Federally enforceable means all limitations and conditions that are enforceable by the EPA Administrator, including, but not limited to, the requirements of 40 CFR parts 60, 61, 63, and 65, requirements within any applicable state implementation plan, and any permit requirements established under 40 CFR 52.21 or under 40 CFR 51.18 and 40 CFR 51.24.

Fluidized bed boiler means a boiler utilizing a fluidized bed combustion process that is not a pulverized coal boiler.

Fluidized bed combustion means a process where a fuel is burned in a bed of granulated particles, which are maintained in a mobile suspension by the forward flow of air and combustion products.

Fossil fuel means natural gas, oil, coal, and any form of solid, liquid, or gaseous fuel derived from such material.

Fuel type means each category of fuels that share a common name or classification. Examples include, but are not limited to, bituminous coal, sub-bituminous coal, lignite, anthracite, biomass, distillate oil, residual oil. Individual fuel types received from different suppliers are not considered new fuel types.

Gaseous fuels includes, but is not limited to, natural gas, process gas, landfill gas, coal derived gas, refinery gas, hydrogen, and biogas.

Gas-fired boiler includes any boiler that burns gaseous fuels not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or for periodic testing, maintenance, or operator training on liquid fuel. Periodic testing, maintenance, or operator training on liquid fuel shall not exceed a combined total of 48 hours during any calendar year.

Heat input means heat derived from combustion of fuel in a boiler and does not include the heat input from preheated combustion air, recirculated flue gases, returned condensate, or exhaust gases from other sources such as gas turbines, internal combustion engines, kilns.

Hot water heater means a closed vessel with a capacity of no more than 120 U.S. gallons in which water is heated by combustion of gaseous, liquid, or biomass fuel and hot water is withdrawn for use external to the vessel. Hot water boilers (i.e., not generating steam) combusting gaseous, liquid, or biomass fuel with a heat input capacity of less than 1.6 million Btu per hour are included in this definition. The 120 U.S. gallon capacity threshold to be considered a hot water heater is independent of the 1.6 million Btu per hour heat input capacity threshold for hot water boilers. Hot water heater also means a tankless unit that provides on-demand hot water.
Hourly average means the arithmetic average of at least four CMS data values representing the four 15-minute periods in an hour, or at least two 15-minute data values during an hour when CMS calibration, quality assurance, or maintenance activities are being performed.

Industrial boiler means a boiler used in manufacturing, processing, mining, and refining or any other industry to provide steam, hot water, and/or electricity.

Institutional boiler means a boiler used in institutional establishments such as, but not limited to, medical centers, nursing homes, research centers, institutions of higher education, elementary and secondary schools, libraries, religious establishments, and governmental buildings to provide electricity, steam, and/or hot water.

Limited-use boiler means any boiler that burns any amount of solid or liquid fuels and has a federally enforceable annual capacity factor of no more than 10 percent.

Liquid fuel includes, but is not limited to, distillate oil, residual oil, any form of liquid fuel derived from petroleum, used oil meeting the specification in 40 CFR 279.11, liquid biofuels, biodiesel, and vegetable oil.

Load fraction means the actual heat input of a boiler divided by heat input during the performance test that established the minimum sorbent injection rate or minimum activated carbon injection rate, expressed as a fraction (e.g., for 50 percent load the load fraction is 0.5). For boilers that co-fire natural gas with a solid or liquid fuel, the load fraction is determined by the actual heat input of the solid or liquid fuel divided by heat input of the solid or liquid fuel fired during the performance test (e.g., if the performance test was conducted at 100 percent solid fuel firing, for 100 percent load firing 50 percent solid fuel and 50 percent natural gas, the load fraction is 0.5).

Minimum activated carbon injection rate means load fraction multiplied by the lowest hourly average activated carbon injection rate measured according to Table 6 to this subpart during the most recent performance stack test demonstrating compliance with the applicable emission limit.

Minimum oxygen level means the lowest hourly average oxygen level measured according to Table 6 to this subpart during the most recent performance stack test demonstrating compliance with the applicable carbon monoxide emission limit.

Minimum scrubber liquid flow rate means the lowest hourly average scrubber liquid flow rate (e.g., to the particulate matter scrubber) measured according to Table 6 to this subpart during the most recent performance stack test demonstrating compliance with the applicable emission limit.

Minimum scrubber pressure drop means the lowest hourly average scrubber pressure drop measured according to Table 6 to this subpart during the most recent performance stack test demonstrating compliance with the applicable emission limit.

Minimum sorbent injection rate means:

(1) The load fraction multiplied by the lowest hourly average sorbent injection rate for each sorbent measured according to Table 6 to this subpart during the most recent performance stack test demonstrating compliance with the applicable emission limits; or

(2) For fluidized bed combustion, the lowest average ratio of sorbent to sulfur measured during the most recent performance test.

Minimum total secondary electric power means the lowest hourly average total secondary electric power determined from the values of secondary voltage and secondary current to the electrostatic precipitator measured according to Table 6 to this subpart during the most recent performance stack test demonstrating compliance with the applicable emission limits.

Natural gas means:
(1) A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in geologic formations beneath the earth's surface, of which the principal constituent is methane; or

(2) Liquefied petroleum gas, as defined by the American Society for Testing and Materials in ASTM D1835 (incorporated by reference, see §63.14); or

(3) A mixture of hydrocarbons that maintains a gaseous state at ISO conditions (i.e., a temperature of 288 Kelvin, a relative humidity of 60 percent, and a pressure of 101.3 kilopascals). Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 35 and 41 megajoules (MJ) per dry standard cubic meter (950 and 1,100 Btu per dry standard cubic foot); or

(4) Propane or propane-derived synthetic natural gas. Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C3H8.

Oil subcategory includes any boiler that burns any liquid fuel and is not in either the biomass or coal subcategories. Gas-fired boilers that burn liquid fuel only during periods of gas curtailment, gas supply interruptions, startups, or for periodic testing are not included in this definition. Periodic testing on liquid fuel shall not exceed a combined total of 48 hours during any calendar year.

Opacity means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

Operating day means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the boiler unit. It is not necessary for fuel to be combusted for the entire 24-hour period.

Oxygen analyzer system means all equipment required to determine the oxygen content of a gas stream and used to monitor oxygen in the boiler flue gas, boiler firebox, or other appropriate intermediate location. This definition includes oxygen trim systems.

Oxygen trim system means a system of monitors that is used to maintain excess air at the desired level in a combustion device over its operating load range. A typical system consists of a flue gas oxygen and/or carbon monoxide monitor that automatically provides a feedback signal to the combustion air controller or draft controller.

Particulate matter (PM) means any finely divided solid or liquid material, other than uncombined water, as measured by the test methods specified under this subpart, or an approved alternative method.

Performance testing means the collection of data resulting from the execution of a test method used (either by stack testing or fuel analysis) to demonstrate compliance with a relevant emission standard.

Period of gas curtailment or supply interruption means a period of time during which the supply of gaseous fuel to an affected boiler is restricted or halted for reasons beyond the control of the facility. The act of entering into a contractual agreement with a supplier of natural gas established for curtailment purposes does not constitute a reason that is under the control of a facility for the purposes of this definition. An increase in the cost or unit price of natural gas due to normal market fluctuations not during periods of supplier delivery restriction does not constitute a period of natural gas curtailment or supply interruption. On-site gaseous fuel system emergencies or equipment failures qualify as periods of supply interruption when the emergency or failure is beyond the control of the facility.

Process heater means an enclosed device using controlled flame, and the unit's primary purpose is to transfer heat indirectly to a process material (liquid, gas, or solid) or to a heat transfer material (e.g., glycol or a mixture of glycol and water) for use in a process unit, instead of generating steam. Process heaters are devices in which the combustion gases do not come into direct contact with process materials. Process heaters include units that heat water/water mixtures for pool heating, sidewalk heating, cooling tower water heating, power washing, or oil heating.

Qualified energy assessor means:

(1) Someone who has demonstrated capabilities to evaluate energy savings opportunities for steam generation and major energy using systems, including, but not limited to:
(i) Boiler combustion management.

(ii) Boiler thermal energy recovery, including

(A) Conventional feed water economizer,

(B) Conventional combustion air preheater, and

(C) Condensing economizer.

(iii) Boiler blowdown thermal energy recovery.

(iv) Primary energy resource selection, including

(A) Fuel (primary energy source) switching, and

(B) Applied steam energy versus direct-fired energy versus electricity.

(v) Insulation issues.

(vi) Steam trap and steam leak management.

(vii) Condensate recovery.

(viii) Steam end-use management.

(2) Capabilities and knowledge includes, but is not limited to:

(i) Background, experience, and recognized abilities to perform the assessment activities, data analysis, and report preparation.

(ii) Familiarity with operating and maintenance practices for steam or process heating systems.

(iii) Additional potential steam system improvement opportunities including improving steam turbine operations and reducing steam demand.

(iv) Additional process heating system opportunities including effective utilization of waste heat and use of proper process heating methods.

(v) Boiler-steam turbine cogeneration systems.

(vi) Industry specific steam end-use systems.

Regulated gas stream means an offgas stream that is routed to a boiler for the purpose of achieving compliance with a standard under another subpart of this part or part 60, part 61, or part 65 of this chapter.

Residential boiler means a boiler used to provide heat and/or hot water and/or as part of a residential combined heat and power system. This definition includes boilers located at an institutional facility (e.g., university campus, military base, church grounds) or commercial/industrial facility (e.g., farm) used primarily to provide heat and/or hot water for:

(1) A dwelling containing four or fewer families, or

(2) A single unit residence dwelling that has since been converted or subdivided into condominiums or apartments.
Residual oil means crude oil, fuel oil that does not comply with the specifications under the definition of distillate oil, and all fuel oil numbers 4, 5, and 6, as defined by the American Society of Testing and Materials in ASTM D396-10 (incorporated by reference, see §63.14(b)).

Responsible official means responsible official as defined in §70.2.

Seasonal boiler means a boiler that undergoes a shutdown for a period of at least 7 consecutive months (or 210 consecutive days) each 12-month period due to seasonal conditions, except for periodic testing. Periodic testing shall not exceed a combined total of 15 days during the 7-month shutdown. This definition only applies to boilers that would otherwise be included in the biomass subcategory or the oil subcategory.

Shutdown means the period in which cessation of operation of a boiler is initiated for any purpose. Shutdown begins when the boiler no longer supplies useful thermal energy (such as steam or hot water) for heating, cooling, or process purposes or generates electricity, or when no fuel is being fed to the boiler, whichever is earlier. Shutdown ends when the boiler no longer supplies useful thermal energy (such as steam or hot water) for heating, cooling, or process purposes or generates electricity, and no fuel is being combusted in the boiler.

Solid fossil fuel includes, but is not limited to, coal, coke, petroleum coke, and tire-derived fuel.

Solid fuel means any solid fossil fuel or biomass or bio-based solid fuel.

Startup means:

(1) Either the first-ever firing of fuel in a boiler for the purpose of supplying useful thermal energy (such as steam or hot water) for heating and/or producing electricity, or for any other purpose, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the useful thermal energy (such as steam or hot water) from the boiler is supplied for heating and/or producing electricity, or for any other purpose, or

(2) The period in which operation of a boiler is initiated for any purpose. Startup begins with either the first-ever firing of fuel in a boiler for the purpose of supplying useful thermal energy (such as steam or hot water) for heating, cooling, or process purposes or producing electricity, or the firing of fuel in a boiler for any purpose after a shutdown event. Startup ends 4 hours after when the boiler supplies useful thermal energy (such as steam or hot water) for heating, cooling, or process purposes or generates electricity, whichever is earlier.

Temporary boiler means any gaseous or liquid fuel boiler that is designed to, and is capable of, being carried or moved from one location to another by means of, for example, wheels, skids, carrying handles, dollies, trailers, or platforms. A boiler is not a temporary boiler if any one of the following conditions exists:

(1) The equipment is attached to a foundation.

(2) The boiler or a replacement remains at a location within the facility and performs the same or similar function for more than 12 consecutive months, unless the regulatory agency approves an extension. An extension may be granted by the regulating agency upon petition by the owner or operator of a unit specifying the basis for such a request. Any temporary boiler that replaces a temporary boiler at a location within the facility and performs the same or similar function will be included in calculating the consecutive time period unless there is a gap in operation of 12 months or more.

(3) The equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year.

(4) The equipment is moved from one location to another within the facility but continues to perform the same or similar function and serve the same electricity, steam, and/or hot water system in an attempt to circumvent the residence time requirements of this definition.

Tune-up means adjustments made to a boiler in accordance with the procedures outlined in §63.11223(b).
Ultra-low-sulfur liquid fuel means a distillate oil that has less than or equal to 15 parts per million (ppm) sulfur.

Useful thermal energy means energy (i.e., steam or hot water) that meets the minimum operating temperature, flow, and/or pressure required by any energy use system that uses energy provided by the affected boiler.

Vegetable oil means oils extracted from vegetation.

Voluntary Consensus Standards (VCS) mean technical standards (e.g., materials specifications, test methods, sampling procedures, business practices) developed or adopted by one or more voluntary consensus bodies. EPA/Office of Air Quality Planning and Standards, by precedent, has only used VCS that are written in English. Examples of VCS bodies are: American Society of Testing and Materials (ASTM, 100 Barr Harbor Drive, P.O. Box CB700, West Conshohocken, Pennsylvania 19428-B2959, (800) 262-1373, http://www.astm.org), American Society of Mechanical Engineers (ASME, Three Park Avenue, New York, NY 10016-5990, (800) 843-2763, http://www.asme.org), International Standards Organization (ISO 1, ch. de la Voie-Creuse, Case postale 56, CH-1211 Geneva 20, Switzerland, +41 22 749 01 11, http://www.iso.org/iso/home.htm), Standards Australia (AS Level 10, The Exchange Centre, 20 Bridge Street, Sydney, GPO Box 476, Sydney NSW 2001, +61 2 9237 6171 http://www.standards.org.au), British Standards Institution (BSI, 389 Chiswick High Road, London, W4 4AL, United Kingdom, +44 (0)20 896 9001, http://www.bsigroup.com), Canadian Standards Association (CSA, 5060 Spectrum Way, Suite 100, Mississauga, Ontario L4W 5N6, Canada, 800-463-6727, http://www.csa.ca), European Committee for Standardization (CEN CENELEC Management Centre Avenue Marnix 17 B-1000 Brussels, Belgium +32 2 550 08 11, http://www.cen.eu/cen), and German Engineering Standards (VDI Guidelines Department, P.O. Box 10 11 39 40002, Duesseldorf, Germany, +49 211 6214-230, http://www.vdi.eu). The types of standards that are not considered VCS are standards developed by: the United States, e.g., California Air Resources Board (CARB) and Texas Commission on Environmental Quality (TCEQ); industry groups, such as American Petroleum Institute (API), Gas Processors Association (GPA), and Gas Research Institute (GRI); and other branches of the U.S. Government, e.g., Department of Defense (DOD) and Department of Transportation (DOT). This does not preclude EPA from using standards developed by groups that are not VCS bodies within their rule. When this occurs, EPA has done searches and reviews for VCS equivalent to these non-EPA methods.

Waste heat boiler means a device that recovers normally unused energy (i.e., hot exhaust gas) and converts it to usable heat. Waste heat boilers are also referred to as heat recovery steam generators. Waste heat boilers are heat exchangers generating steam from incoming hot exhaust gas from an industrial (e.g., thermal oxidizer, kiln, furnace) or power (e.g., combustion turbine, engine) equipment. Duct burners are sometimes used to increase the temperature of the incoming hot exhaust gas.

Wet scrubber means any add-on air pollution control device that mixes an aqueous stream or slurry with the exhaust gases from a boiler to control emissions of particulate matter or to absorb and neutralize acid gases, such as hydrogen chloride. A wet scrubber creates an aqueous stream or slurry as a byproduct of the emissions control process.

Work practice standard means any design, equipment, work practice, or operational standard, or combination thereof, which is promulgated pursuant to section 112(h) of the Clean Air Act.

Table 1 to Subpart JJJJJJ of Part 63—Emission Limits

As stated in §63.11201, you must comply with the following applicable emission limits:

<table>
<thead>
<tr>
<th>If your boiler is in this subcategory . . .</th>
<th>For the following pollutants . . .</th>
<th>You must achieve less than or equal to the following emission limits, except during periods of startup and shutdown . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. New coal-fired boilers with heat input capacity of 30 million British thermal units per hour (MMBtu/hr) or greater that do not meet the definition of limited-use boiler</td>
<td>a. PM (Filterable) b. Mercury c. CO</td>
<td>3.0E-02 pounds(lb) per million British thermal units (MMBtu) of heat input. 2.2E-05 lb per MMBtu of heat input. 420 parts per million (ppm) by volume on a dry basis corrected to 3 percent oxygen (3-run average or 10-day rolling average).</td>
</tr>
<tr>
<td>2. New coal-fired boilers with heat input capacity of between 10 and 30 MMBtu/hr that do not meet the definition of limited-use boiler</td>
<td>a. PM (Filterable) b. Mercury c. CO</td>
<td>4.2E-01 lb per MMBtu of heat input. 2.2E-05 lb per MMBtu of heat input. 420 ppm by volume on a dry basis corrected to 3 percent oxygen (3-run average or 10-day rolling average).</td>
</tr>
<tr>
<td>3. New biomass-fired boilers with heat input capacity of 30 MMBtu/hr or greater that do not meet the definition of seasonal boiler or limited-use boiler</td>
<td>PM (Filterable)</td>
<td>3.0E-02 lb per MMBtu of heat input.</td>
</tr>
<tr>
<td>4. New biomass-fired boilers with heat input capacity of between 10 and 30 MMBtu/hr that do not meet the definition of seasonal boiler or limited-use boiler</td>
<td>PM (Filterable)</td>
<td>7.0E-02 lb per MMBtu of heat input.</td>
</tr>
<tr>
<td>5. New oil-fired boilers with heat input capacity of 10 MMBtu/hr or greater that do not meet the definition of seasonal boiler or limited-use boiler</td>
<td>PM (Filterable)</td>
<td>3.0E-02 lb per MMBtu of heat input.</td>
</tr>
<tr>
<td>6. Existing coal-fired boilers with heat input capacity of 10 MMBtu/hr or greater that do not meet the definition of limited-use boiler</td>
<td>a. Mercury b. CO</td>
<td>2.2E-05 lb per MMBtu of heat input. 420 ppm by volume on a dry basis corrected to 3 percent oxygen (3-run average or 10-day rolling average).</td>
</tr>
</tbody>
</table>


Table 2 to Subpart JJJJJJ of Part 63—Work Practice Standards, Emission Reduction Measures, and Management Practices

As stated in §63.11201, you must comply with the following applicable work practice standards, emission reduction measures, and management practices:

<table>
<thead>
<tr>
<th>If your boiler is in this subcategory . . .</th>
<th>You must meet the following . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Existing or new coal-fired, new biomass-fired, or new oil-fired boilers (units with heat input capacity of 10 MMBtu/hr or greater)</td>
<td>Minimize the boiler's startup and shutdown periods and conduct startups and shutdowns according to the manufacturer's recommended procedures. If manufacturer's recommended procedures are not available, you must follow recommended procedures for a unit of similar design for which manufacturer's recommended procedures are available.</td>
</tr>
<tr>
<td>2. Existing coal-fired boilers with heat input capacity of less than 10 MMBtu/hr that do not meet the definition of limited-use boiler, or use an oxygen trim system that maintains an optimum air-to-fuel ratio</td>
<td>Conduct an initial tune-up as specified in §63.11214, and conduct a tune-up of the boiler biennially as specified in §63.11223.</td>
</tr>
<tr>
<td>If your boiler is in this subcategory . . .</td>
<td>You must meet the following . . .</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>3. New coal-fired boilers with heat input capacity of less than 10 MMBtu/hr that do not meet the definition of limited-use boiler, or use an oxygen trim system that maintains an optimum air-to-fuel ratio</td>
<td>Conduct a tune-up of the boiler biennially as specified in §63.11223.</td>
</tr>
<tr>
<td>4. Existing oil-fired boilers with heat input capacity greater than 5 MMBtu/hr that do not meet the definition of seasonal boiler or limited-use boiler, or use an oxygen trim system that maintains an optimum air-to-fuel ratio</td>
<td>Conduct an initial tune-up as specified in §63.11214, and conduct a tune-up of the boiler biennially as specified in §63.11223.</td>
</tr>
<tr>
<td>5. New oil-fired boilers with heat input capacity greater than 5 MMBtu/hr that do not meet the definition of seasonal boiler or limited-use boiler, or use an oxygen trim system that maintains an optimum air-to-fuel ratio</td>
<td>Conduct a tune-up of the boiler biennially as specified in §63.11223.</td>
</tr>
<tr>
<td>6. Existing biomass-fired boilers that do not meet the definition of seasonal boiler or limited-use boiler, or use an oxygen trim system that maintains an optimum air-to-fuel ratio</td>
<td>Conduct an initial tune-up as specified in §63.11214, and conduct a tune-up of the boiler biennially as specified in §63.11223.</td>
</tr>
<tr>
<td>7. New biomass-fired boilers that do not meet the definition of seasonal boiler or limited-use boiler, or use an oxygen trim system that maintains an optimum air-to-fuel ratio</td>
<td>Conduct a tune-up of the boiler biennially as specified in §63.11223.</td>
</tr>
<tr>
<td>8. Existing seasonal boilers</td>
<td>Conduct an initial tune-up as specified in §63.11214, and conduct a tune-up of the boiler every 5 years as specified in §63.11223.</td>
</tr>
<tr>
<td>9. New seasonal boilers</td>
<td>Conduct a tune-up of the boiler every 5 years as specified in §63.11223.</td>
</tr>
<tr>
<td>10. Existing limited-use boilers</td>
<td>Conduct an initial tune-up as specified in §63.11214, and conduct a tune-up of the boiler every 5 years as specified in §63.11223.</td>
</tr>
<tr>
<td>11. New limited-use boilers</td>
<td>Conduct a tune-up of the boiler every 5 years as specified in §63.11223.</td>
</tr>
<tr>
<td>12. Existing oil-fired boilers with heat input capacity of equal to or less than 5 MMBtu/hr</td>
<td>Conduct an initial tune-up as specified in §63.11214, and conduct a tune-up of the boiler every 5 years as specified in §63.11223.</td>
</tr>
<tr>
<td>13. New oil-fired boilers with heat input capacity of equal to or less than 5 MMBtu/hr</td>
<td>Conduct a tune-up of the boiler every 5 years as specified in §63.11223.</td>
</tr>
<tr>
<td>14. Existing coal-fired, biomass-fired, or oil-fired boilers with an oxygen trim system that maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune-up</td>
<td>Conduct an initial tune-up as specified in §63.11214, and conduct a tune-up of the boiler every 5 years as specified in §63.11223.</td>
</tr>
<tr>
<td>15. New coal-fired, biomass-fired, or oil-fired boilers with an oxygen trim system that maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune-up</td>
<td>Conduct a tune-up of the boiler every 5 years as specified in §63.11223.</td>
</tr>
</tbody>
</table>
If your boiler is in this subcategory . . . You must meet the following . . .

16. Existing coal-fired, biomass-fired, or oil-fired boilers (units with heat input capacity of 10 MMBtu/hr and greater), not including limited-use boilers

Must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in this table satisfies the energy assessment requirement. Energy assessor approval and qualification requirements are waived in instances where past or amended energy assessments are used to meet the energy assessment requirements. A facility that operated under an energy management program developed according to the ENERGY STAR guidelines for energy management or compatible with ISO 50001 for at least 1 year between January 1, 2008, and the compliance date specified in §63.11196 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items (1) to (4) appropriate for the on-site technical hours listed in §63.11237:

(1) A visual inspection of the boiler system,

(2) An evaluation of operating characteristics of the affected boiler systems, specifications of energy use systems, operating and maintenance procedures, and unusual operating constraints,

(3) An inventory of major energy use systems consuming energy from affected boiler(s) and which are under control of the boiler owner or operator,

(4) A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage,

(5) A list of major energy conservation measures that are within the facility's control,

(6) A list of the energy savings potential of the energy conservation measures identified, and

(7) A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.


Table 3 to Subpart JJJJJJJ of Part 63—Operating Limits for Boilers With Emission Limits

As stated in §63.11201, you must comply with the applicable operating limits:

<table>
<thead>
<tr>
<th>If you demonstrate compliance with applicable emission limits using . . .</th>
<th>You must meet these operating limits except during periods of startup and shutdown . . .</th>
</tr>
</thead>
</table>
| 1. Fabric filter control | a. Maintain opacity to less than or equal to 10 percent opacity (daily block average); OR  
b. Install and operate a bag leak detection system according to §63.11224 and operate the fabric filter such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during each 6-month period. |
| 2. Electrostatic precipitator control | a. Maintain opacity to less than or equal to 10 percent opacity (daily block average); OR  
b. Maintain the 30-day rolling average total secondary electric power of the electrostatic precipitator at or above the minimum total secondary electric power as defined in §63.11237. |
If you demonstrate compliance with applicable emission limits using . . . You must meet these operating limits except during periods of startup and shutdown.

3. Wet scrubber control
   Maintain the 30-day rolling average pressure drop across the wet scrubber at or above the minimum scrubber pressure drop as defined in §63.11237 and the 30-day rolling average liquid flow rate at or above the minimum scrubber liquid flow rate as defined in §63.11237.

4. Dry sorbent or activated carbon injection control
   Maintain the 30-day rolling average sorbent or activated carbon injection rate at or above the minimum sorbent injection rate or minimum activated carbon injection rate as defined in §63.11237. When your boiler operates at lower loads, multiply your sorbent or activated carbon injection rate by the load fraction (e.g., actual heat input divided by the heat input during the performance stack test; for 50 percent load, multiply the injection rate operating limit by 0.5).

5. Any other add-on air pollution control type.
   This option is for boilers that operate dry control systems. Boilers must maintain opacity to less than or equal to 10 percent opacity (daily block average).

6. Fuel analysis
   Maintain the fuel type or fuel mixture (annual average) such that the mercury emission rate calculated according to §63.11211(c) are less than the applicable emission limit for mercury.

7. Performance stack testing
   For boilers that demonstrate compliance with a performance stack test, maintain the operating load of each unit such that it does not exceed 110 percent of the average operating load recorded during the most recent performance stack test.

8. Oxygen analyzer system
   For boilers subject to a CO emission limit that demonstrate compliance with an oxygen analyzer system as specified in §63.11224(a), maintain the 30-day rolling average oxygen level at or above the minimum oxygen level as defined in §63.11237. This requirement does not apply to units that install an oxygen trim system since these units will set the trim system to the level specified in §63.11224(a)(7).

[78 FR 7519, Feb. 1, 2013]

Table 4 to Subpart JJJJJJ of Part 63—Performance (Stack) Testing Requirements

As stated in §63.11212, you must comply with the following requirements for performance (stack) test for affected sources:

<table>
<thead>
<tr>
<th>To conduct a performance test for the following pollutant. . .</th>
<th>You must. . .</th>
<th>Using. . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Particulate Matter</td>
<td>a. Select sampling ports location and the number of traverse points</td>
<td>Method 1 in appendix A-1 to part 60 of this chapter.</td>
</tr>
<tr>
<td></td>
<td>b. Determine velocity and volumetric flow-rate of the stack gas</td>
<td>Method 2, 2F, or 2G in appendix A-2 to part 60 of this chapter.</td>
</tr>
<tr>
<td></td>
<td>c. Determine oxygen and carbon dioxide concentrations of the stack gas</td>
<td>Method 3A or 3B in appendix A-2 to part 60 of this chapter, or ASTM D6522-00 (Reapproved 2005), a or ANSI/ASME PTC 19.10-1981. a</td>
</tr>
<tr>
<td></td>
<td>d. Measure the moisture content of the stack gas</td>
<td>Method 4 in appendix A-3 to part 60 of this chapter.</td>
</tr>
</tbody>
</table>
To conduct a performance test for the following pollutant. You must. Using.

| e. Measure the particulate matter emission concentration | Method 5 or 17 (positive pressure fabric filters must use Method 5D) in appendix A-3 and A-6 to part 60 of this chapter and a minimum 1 dscm of sample volume per run. |
| f. Convert emissions concentration to lb/MMBtu emission rates | Method 19 F-factor methodology in appendix A-7 to part 60 of this chapter. |

2. Mercury

| a. Select sampling ports location and the number of traverse points | Method 1 in appendix A-1 to part 60 of this chapter. |
| b. Determine velocity and volumetric flow-rate of the stack gas | Method 2, 2F, or 2G in appendix A-2 to part 60 of this chapter. |
| c. Determine oxygen and carbon dioxide concentrations of the stack gas | Method 3A or 3B in appendix A-2 to part 60 of this chapter, or ASTM D6522-00 (Reapproved 2005), or ANSI/ASME PTC 19.10-1981. |
| d. Measure the moisture content of the stack gas | Method 4 in appendix A-3 to part 60 of this chapter. |
| e. Measure the mercury emission concentration | Method 29, 30A, or 30B in appendix A-8 to part 60 of this chapter or Method 101A in appendix B to part 61 of this chapter or ASTM Method D6784-02. Collect a minimum 2 dscm of sample volume with Method 29 of 101A per run. Use a minimum run time of 2 hours with Method 30A. |
| f. Convert emissions concentration to lb/MMBtu emission rates | Method 19 F-factor methodology in appendix A-7 to part 60 of this chapter. |

3. Carbon Monoxide

| a. Select the sampling ports location and the number of traverse points | Method 1 in appendix A-1 to part 60 of this chapter. |
| b. Determine oxygen and carbon dioxide concentrations of the stack gas | Method 3A or 3B in appendix A-2 to part 60 of this chapter, or ASTM D6522-00 (Reapproved 2005), or ANSI/ASME PTC 19.10-1981. |
| c. Measure the moisture content of the stack gas | Method 4 in appendix A-3 to part 60 of this chapter. |
| d. Measure the carbon monoxide emission concentration | Method 10, 10A, or 10B in appendix A-4 to part 60 of this chapter or ASTM D6522-00 (Reapproved 2005) and a minimum 1 hour sampling time per run. |

*Incorporated by reference, see §63.14.

Table 5 to Subpart JJJJJJ of Part 63—Fuel Analysis Requirements

As stated in §63.11213, you must comply with the following requirements for fuel analysis testing for affected sources:
To conduct a fuel analysis for the following pollutant . . . You must . . . Using . . .

1. Mercury
   a. Collect fuel samples Procedure in §63.11213(b) or ASTM D2234/D2234M\(^a\) (for coal) or ASTM D6323\(^a\) (for biomass) or equivalent.
   b. Compose fuel samples Procedure in §63.11213(b) or equivalent.
   c. Prepare composited fuel samples EPA SW-846-3050B\(^a\) (for solid samples) or EPA SW-846-3020A\(^a\) (for liquid samples) or ASTM D2013/D2013Ma (for coal) or ASTM D5198\(^a\) (for biomass) or equivalent.
   d. Determine heat content of the fuel type ASTM D5865\(^a\) (for coal) or ASTM E711\(^a\) (for biomass) or equivalent.
   e. Determine moisture content of the fuel type ASTM D3173 or ASTM E871 or equivalent.
   f. Measure mercury concentration in fuel sample ASTM D6722\(^a\) (for coal) or EPA SW-846-7471B\(^a\) (for solid samples) or EPA SW-846-7470A\(^a\) (for liquid samples) or equivalent.
   g. Convert concentrations into units of lb/MMBtu of heat content

\(^a\)Incorporated by reference, see §63.14.

**Table 6 to Subpart JJJJJJ of Part 63—Establishing Operating Limits**

As stated in §63.11211, you must comply with the following requirements for establishing operating limits:

<table>
<thead>
<tr>
<th>If you have an applicable emission limit for . . .</th>
<th>And your operating limits are based on . . .</th>
<th>You must . . .</th>
<th>Using . . .</th>
<th>According to the following requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. PM or mercury</td>
<td>a. Wet scrubber operating parameters</td>
<td>Establish site-specific minimum scrubber pressure drop and minimum scrubber liquid flow rate operating limits according to §63.11211(b)</td>
<td>Data from the pressure drop and liquid flow rate monitors and the PM or mercury performance stack tests</td>
<td>(a) You must collect pressure drop and liquid flow rate data every 15 minutes during the entire period of the performance stack tests;</td>
</tr>
<tr>
<td></td>
<td>b. Electrostatic precipitator operating parameters</td>
<td>Establish a site-specific minimum total secondary electric power operating limit according to §63.11211(b)</td>
<td>Data from the secondary electric power monitors and the PM or mercury performance stack tests</td>
<td>(b) Determine the average pressure drop and liquid flow rate for each individual test run in the three-run performance stack test by computing the average of all the 15-minute readings taken during each test run.</td>
</tr>
</tbody>
</table>

(a) You must collect secondary electric power data every 15 minutes during the entire period of the performance stack tests;
<table>
<thead>
<tr>
<th>If you have an applicable emission limit for</th>
<th>And your operating limits are based on</th>
<th>You must . . .</th>
<th>According to the following requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>. . .</td>
<td>. . .</td>
<td>. . .</td>
<td>(b) Determine the average total secondary electric power for each individual test run in the three-run performance stack test by computing the average of all the 15-minute readings taken during each test run.</td>
</tr>
</tbody>
</table>

2. Mercury

| Dry sorbent or activated carbon injection rate operating parameters | Establish a site-specific minimum sorbent or activated carbon injection rate operating limit according to §63.11211(b) | Data from the sorbent or activated carbon injection rate monitors and the mercury performance stack tests | (a) You must collect sorbent or activated carbon injection rate data every 15 minutes during the entire period of the performance stack tests; |

| . . .                                      | . . .                                 | . . .          | (b) Determine the average sorbent or activated carbon injection rate for each individual test run in the three-run performance stack test by computing the average of all the 15-minute readings taken during each test run. |

| . . .                                      | . . .                                 | . . .          | (c) When your unit operates at lower loads, multiply your sorbent or activated carbon injection rate by the load fraction, as defined in §63.11237, to determine the required injection rate. |

3. CO

| Oxygen | Establish a unit-specific limit for minimum oxygen level | Data from the oxygen analyzer system specified in §63.11224(a) | (a) You must collect oxygen data every 15 minutes during the entire period of the performance stack tests; |

| . . .                                      | . . .                                 | . . .          | (b) Determine the average hourly oxygen concentration for each individual test run in the three-run performance stack test by computing the average of all the 15-minute readings taken during each test run. |

4. Any pollutant for which compliance is demonstrated by a performance stack test

| Boiler operating load | Establish a unit-specific limit for maximum operating load according to §63.11212(c) | Data from the operating load monitors (fuel feed monitors or steam generation monitors) | (a) You must collect operating load data (fuel feed rate or steam generation data) every 15 minutes during the entire period of the performance test. |

| . . .                                      | . . .                                 | . . .          | (b) Determine the average operating load by computing the hourly averages using all of the 15-minute readings taken during each performance test. |
If you have an applicable emission limit for . . . And your operating limits are based on . . . You must . . . Using . . . According to the following requirements

(c) Determine the average of the three test run averages during the performance test, and multiply this by 1.1 (110 percent) as your operating limit.


Table 7 to Subpart JJJJJ of Part 63—Demonstrating Continuous Compliance

As stated in §63.11222, you must show continuous compliance with the emission limitations for affected sources according to the following:

<table>
<thead>
<tr>
<th>If you must meet the following operating limits . . .</th>
<th>You must demonstrate continuous compliance by . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Opacity</td>
<td>a. Collecting the opacity monitoring system data according to §§63.11224(e) and §63.11221; and</td>
</tr>
<tr>
<td></td>
<td>b. Reducing the opacity monitoring data to 6-minute averages; and</td>
</tr>
<tr>
<td></td>
<td>c. Maintaining opacity to less than or equal to 10 percent (daily block average).</td>
</tr>
<tr>
<td>2. Fabric Filter Bag Leak Detection Operation</td>
<td>Installing and operating a bag leak detection system according to §63.11224(f) and operating the fabric filter such that the requirements in §63.11222(a)(4) are met.</td>
</tr>
<tr>
<td>3. Wet Scrubber Pressure Drop and Liquid Flow Rate</td>
<td>a. Collecting the pressure drop and liquid flow rate monitoring system data according to §§63.11224 and 63.11221; and</td>
</tr>
<tr>
<td></td>
<td>b. Reducing the data to 30-day rolling averages; and</td>
</tr>
<tr>
<td></td>
<td>c. Maintaining the 30-day rolling average pressure drop and liquid flow rate at or above the minimum pressure drop and minimum liquid flow rate according to §63.11211.</td>
</tr>
<tr>
<td>4. Dry Scrubber Sorbent or Activated Carbon Injection Rate</td>
<td>a. Collecting the sorbent or activated carbon injection rate monitoring system data for the dry scrubber according to §§63.11224 and 63.11221; and</td>
</tr>
<tr>
<td></td>
<td>b. Reducing the data to 30-day rolling averages; and</td>
</tr>
<tr>
<td></td>
<td>c. Maintaining the 30-day rolling average sorbent or activated carbon injection rate at or above the minimum sorbent or activated carbon injection rate according to §63.11211.</td>
</tr>
<tr>
<td>5. Electrostatic Precipitator Total Secondary Electric Power</td>
<td>a. Collecting the total secondary electric power monitoring system data for the electrostatic precipitator according to §§63.11224 and 63.11221; and</td>
</tr>
<tr>
<td></td>
<td>b. Reducing the data to 30-day rolling averages; and</td>
</tr>
<tr>
<td></td>
<td>c. Maintaining the 30-day rolling average total secondary electric power at or above the minimum total secondary electric power according to §63.11211.</td>
</tr>
<tr>
<td>6. Fuel Pollutant Content</td>
<td>a. Only burning the fuel types and fuel mixtures used to demonstrate compliance with the applicable emission limit according to §63.11213 as applicable; and</td>
</tr>
<tr>
<td></td>
<td>b. Keeping monthly records of fuel use according to §§63.11222(a)(2) and 63.11225(b)(4).</td>
</tr>
</tbody>
</table>
If you must meet the following operating limits . . .

You must demonstrate continuous compliance by . . .

| 7. Oxygen content | a. Continuously monitoring the oxygen content of flue gas according to §63.11224 (This requirement does not apply to units that install an oxygen trim system since these units will set the trim system to the level specified in §63.11224(a)(7)); and |
| | b. Reducing the data to 30-day rolling averages; and |
| | c. Maintaining the 30-day rolling average oxygen content at or above the minimum oxygen level established during the most recent CO performance test. |
| 8. CO emissions | a. Continuously monitoring the CO concentration in the combustion exhaust according to §§63.11224 and 63.11221; and |
| | b. Correcting the data to 3 percent oxygen, and reducing the data to 1-hour averages; and |
| | c. Reducing the data from the hourly averages to 10-day rolling averages; and |
| | d. Maintaining the 10-day rolling average CO concentration at or below the applicable emission limit in Table 1 to this subpart. |
| 9. Boiler operating load | a. Collecting operating load data (fuel feed rate or steam generation data) every 15 minutes; and |
| | b. Reducing the data to 30-day rolling averages; and |
| | c. Maintaining the 30-day rolling average at or below the operating limit established during the performance test according to §63.11212(c) and Table 6 to this subpart. |

[78 FR 7521, Feb. 1, 2013]

**Table 8 to Subpart JJJJJJ of Part 63—Applicability of General Provisions to Subpart JJJJJJ**

As stated in §63.11235, you must comply with the applicable General Provisions according to the following:

<table>
<thead>
<tr>
<th>General provisions cite</th>
<th>Subject</th>
<th>Does it apply?</th>
</tr>
</thead>
<tbody>
<tr>
<td>§63.1</td>
<td>Applicability</td>
<td>Yes.</td>
</tr>
<tr>
<td>§63.2</td>
<td>Definitions</td>
<td>Yes. Additional terms defined in §63.11237.</td>
</tr>
<tr>
<td>§63.3</td>
<td>Units and Abbreviations</td>
<td>Yes.</td>
</tr>
<tr>
<td>§63.4</td>
<td>Prohibited Activities and Circumvention</td>
<td>Yes.</td>
</tr>
<tr>
<td>§63.5</td>
<td>Preconstruction Review and Notification Requirements</td>
<td>No.</td>
</tr>
<tr>
<td>§63.6(a), (b)(1)-(b)(5), (b)(7), (c), (f)(2)-(3), (g), (i), (j)</td>
<td>Compliance with Standards and Maintenance Requirements</td>
<td>Yes.</td>
</tr>
<tr>
<td>§63.6(e)(1)(i)</td>
<td>General Duty to minimize emissions</td>
<td>No. See §63.11205 for general duty requirement.</td>
</tr>
<tr>
<td>§63.6(e)(1)(ii)</td>
<td>Requirement to correct malfunctions ASAP</td>
<td>No.</td>
</tr>
<tr>
<td>§63.6(e)(3)</td>
<td>SSM Plan</td>
<td>No.</td>
</tr>
<tr>
<td>§63.6(f)(1)</td>
<td>SSM exemption</td>
<td>No.</td>
</tr>
<tr>
<td>General provisions cite</td>
<td>Subject</td>
<td>Does it apply?</td>
</tr>
<tr>
<td>-------------------------</td>
<td>---------</td>
<td>---------------</td>
</tr>
<tr>
<td>§63.6(h)(1)</td>
<td>SSM exemption</td>
<td>No.</td>
</tr>
<tr>
<td>§63.6(h)(2) to (9)</td>
<td>Determining compliance with opacity emission standards</td>
<td>Yes.</td>
</tr>
<tr>
<td>§63.7(a), (b), (c), (d), (e)(2)-(e)(9), (f), (g), and (h)</td>
<td>Performance Testing Requirements</td>
<td>Yes.</td>
</tr>
<tr>
<td>§63.7(e)(1)</td>
<td>Performance testing</td>
<td>No. See §63.11210.</td>
</tr>
<tr>
<td>§63.8(a), (b), (c)(1), (c)(1)(ii), (c)(2) to (c)(9), (d)(1) and (d)(2), (e), (f), and (g)</td>
<td>Monitoring Requirements</td>
<td>Yes.</td>
</tr>
<tr>
<td>§63.8(c)(1)(i)</td>
<td>General duty to minimize emissions and CMS operation</td>
<td>No.</td>
</tr>
<tr>
<td>§63.8(c)(1)(iii)</td>
<td>Requirement to develop SSM Plan for CMS</td>
<td>No.</td>
</tr>
<tr>
<td>§63.8(d)(3)</td>
<td>Written procedures for CMS</td>
<td>Yes, except for the last sentence, which refers to an SSM plan. SSM plans are not required.</td>
</tr>
<tr>
<td>§63.9</td>
<td>Notification Requirements</td>
<td>Yes, excluding the information required in §63.9(h)(2)(i)(B), (D), (E) and (F). See §63.11225.</td>
</tr>
<tr>
<td>§63.10(a) and (b)(1)</td>
<td>Recordkeeping and Reporting Requirements</td>
<td>Yes.</td>
</tr>
<tr>
<td>§63.10(b)(2)(i)</td>
<td>Recordkeeping of occurrence and duration of startups or shutdowns</td>
<td>No.</td>
</tr>
<tr>
<td>§63.10(b)(2)(ii)</td>
<td>Recordkeeping of malfunctions</td>
<td>No. See §63.11225 for recordkeeping of (1) occurrence and duration and (2) actions taken during malfunctions.</td>
</tr>
<tr>
<td>§63.10(b)(2)(iii)</td>
<td>Maintenance records</td>
<td>Yes.</td>
</tr>
<tr>
<td>§63.10(b)(2)(iv) and (v)</td>
<td>Actions taken to minimize emissions during SSM</td>
<td>No.</td>
</tr>
<tr>
<td>§63.10(b)(2)(vi)</td>
<td>Recordkeeping for CMS malfunctions</td>
<td>Yes.</td>
</tr>
<tr>
<td>§63.10(b)(2)(vii) to (xiv)</td>
<td>Other CMS requirements</td>
<td>Yes.</td>
</tr>
<tr>
<td>§63.10(b)(3)</td>
<td>Recordkeeping requirements for applicability determinations</td>
<td>No.</td>
</tr>
<tr>
<td>§63.10(c)(1) to (9)</td>
<td>Recordkeeping for sources with CMS</td>
<td>No. See §63.11225 for malfunction recordkeeping requirements.</td>
</tr>
<tr>
<td>§63.10(c)(10)</td>
<td>Recording nature and cause of malfunctions</td>
<td>No. See §63.11225 for malfunction recordkeeping requirements.</td>
</tr>
<tr>
<td>§63.10(c)(11)</td>
<td>Recording corrective actions</td>
<td>No. See §63.11225 for malfunction recordkeeping requirements.</td>
</tr>
<tr>
<td>§63.10(c)(12) and (13)</td>
<td>Recordkeeping for sources with CMS</td>
<td>Yes.</td>
</tr>
<tr>
<td>§63.10(c)(15)</td>
<td>Allows use of SSM plan</td>
<td>No.</td>
</tr>
<tr>
<td>General provisions cite</td>
<td>Subject</td>
<td>Does it apply?</td>
</tr>
<tr>
<td>-------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>§63.10(d)(1) and (2)</td>
<td>General reporting requirements</td>
<td>Yes.</td>
</tr>
<tr>
<td>§63.10(d)(3)</td>
<td>Reporting opacity or visible emission observation results</td>
<td>No.</td>
</tr>
<tr>
<td>§63.10(d)(4)</td>
<td>Progress reports under an extension of compliance</td>
<td>Yes.</td>
</tr>
<tr>
<td>§63.10(d)(5)</td>
<td>SSM reports</td>
<td>No. See §63.11225 for malfunction reporting requirements.</td>
</tr>
<tr>
<td>§63.10(e)</td>
<td>Additional reporting requirements for sources with CMS</td>
<td>Yes.</td>
</tr>
<tr>
<td>§63.10(f)</td>
<td>Waiver of recordkeeping or reporting requirements</td>
<td>Yes.</td>
</tr>
<tr>
<td>§63.11</td>
<td>Control Device Requirements</td>
<td>No.</td>
</tr>
<tr>
<td>§63.12</td>
<td>State Authority and Delegation</td>
<td>Yes.</td>
</tr>
<tr>
<td>§63.13-63.16</td>
<td>Addresses, Incorporation by Reference, Availability of Information, Performance Track Provisions</td>
<td>Yes.</td>
</tr>
<tr>
<td>§63.1(a)(5), (a)(7)-(a)(9), (b)(2), (c)(3)-(4), (d), 63.6(b)(6), (c)(3), (c)(4), (d), (e)(2), (e)(3)(ii), (h)(3), (h)(5)(iv), 63.8(a)(3), 63.9(b)(3), (h)(4), 63.10(c)(2)-(4), (c)(9)</td>
<td>Reserved</td>
<td>No.</td>
</tr>
</tbody>
</table>

[76 FR 15591, Mar. 21, 2011, as amended at 78 FR 7521, Feb. 1, 2013]
Indiana Department of Environmental Management  
Office of Air Quality  
Technical Support Document (TSD) for a Federally Enforceable State Operating Permit (FESOP) Renewal  

## Source Description and Location

<table>
<thead>
<tr>
<th>Source Name:</th>
<th>Hot Mix, Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source Location:</td>
<td>992 South County Road 800 East, Greensburg, Indiana 47240</td>
</tr>
<tr>
<td>County:</td>
<td>Decatur</td>
</tr>
<tr>
<td>SIC Code:</td>
<td>2951 (Asphalt Paving Mixtures and Blocks)</td>
</tr>
<tr>
<td>Permit Renewal No.:</td>
<td>F031-43698-00028</td>
</tr>
<tr>
<td>Permit Reviewer:</td>
<td>Brian Wright</td>
</tr>
</tbody>
</table>

On January 29, 2021, Hot Mix, Inc. submitted an application to the Office of Air Quality (OAQ) requesting to renew its operating permit. OAQ has reviewed the operating permit renewal application from Hot Mix, Inc. relating to the operation of a stationary drum-mix, hot-mix asphalt plant, and cold-mix asphalt production operation. Hot Mix, Inc. was issued its second FESOP Renewal (F031-30653-00028) on November 23, 2011.

## Existing Approvals

The source was issued FESOP Renewal No. F031-30653-00028 on November 23, 2011. The source has since received the following approval:

(a) FESOP SPR No. 031-43455-00028 on January 25, 2021.

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

## Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

(a) One (1) drum-mix, hot-mix asphalt plant, identified as EU-07, approved in 2021 for construction, with a maximum throughput capacity of 300 tons of raw material per hour, processing blast furnace slag, steel slag, and asbestos-free recycled asphalt shingles in the aggregate mix, equipped with one (1) 110.0 million British thermal units (MMBtu) per hour dryer burner, firing natural gas, No. 2 distillate fuel oil, and waste oil, as available, and equipped with one (1) baghouse for particulate control, exhausting through one (1) stack, identified as stack SV-7. No crushing of RAP or grinding of shingles occurs at this source.

(b) Material feeding, conveying, and loading operations consisting of the following:

(1) Raw material storage piles, including:

(i) Aggregate storage pile(s), total capacity 43,450 tons;

(ii) Reclaimed asphalt pavement (RAP) storage pile(s), total capacity 16,250 tons;
(iii) Blast Furnace and/or Steel Slag storage pile(s), total capacity 1,000 tons; and
(iv) Recycled asphalt shingles pile(s), total capacity 750 tons.

(2) One (1) mineral filler storage silo;

(3) Six (6) hoppers, including:
(i) Four (4) cold feed bins for coarse to fine aggregate; and
(ii) Two (2) feed bins for recycled asphalt pavement and recycled shingles.

(4) Five (5) conveyors, including:
(i) Three (3) conveyors for transporting coarse to fine aggregates to the rotary dryer;
(ii) One (1) conveyor for transporting recycled asphalt pavement and recycled shingles to the rotary dryer; and
(iii) One (1) drag slat conveyor transporting hot-mixed asphalt to the asphalt storage silo.

(5) One (1) bucket elevator; and

(6) Three (3) hot-mixed asphalt storage silo;

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

(c) Cold-mix (stockpile mix) asphalt manufacturing operations and storage piles.

Insignificant Activities

The source also consists of the following insignificant activities:

(a) One (1) 4.0 million British thermal units per hour (MMBtu/hr) hot oil heater, identified as EU-02, constructed in 1997, firing natural gas and No. 2 fuel oil, as available, and exhausting to stack SV-2;

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

(b) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to ten thousand five hundred (10,500) gallons, and dispensing less than or equal to two hundred thousand (230,000) gallons per month;

(c) Four (4) storage tanks, exhausting at stacks SV-3, SV-4, SV-5, and SV-6, including:
(1) Two (2) liquid asphalt cement storage tanks, identified as EU-03 and EU-04, constructed in 1997, with a maximum storage capacity of 20,000 gallons, each;
(2) One (1) No. 2 fuel oil storage tank, identified as EU-05, constructed in 1997, with a maximum storage capacity of 12,000 gallons; and
(3) One (1) waste oil storage tank, identified as EU-06, constructed in 1997, with a maximum storage capacity of 15,000 gallons.
(d) Paved and unpaved roads and parking lots with public access.

**Enforcement Issue**

There are no enforcement actions pending.

**Emission Calculations**

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

**County Attainment Status**

The source is located in Decatur County.

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Designation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO(_2)</td>
<td>Better than national standards.</td>
</tr>
<tr>
<td>CO</td>
<td>Unclassifiable or attainment effective November 15, 1990.</td>
</tr>
<tr>
<td>O(_3)</td>
<td>Unclassifiable or attainment effective January 16, 2018, for the 2015 8-hour ozone standard.</td>
</tr>
<tr>
<td>PM(_{2.5})</td>
<td>Unclassifiable or attainment effective April 15, 2015, for the 2012 annual PM(_{2.5}) standard.</td>
</tr>
<tr>
<td>PM(_{2.5})</td>
<td>Unclassifiable or attainment effective December 13, 2009, for the 2006 24-hour PM(_{2.5}) standard.</td>
</tr>
<tr>
<td>PM(_{10})</td>
<td>Unclassifiable effective November 15, 1990.</td>
</tr>
<tr>
<td>NO(_2)</td>
<td>Unclassifiable or attainment effective January 29, 2012, for the 2010 NO(_2) standard.</td>
</tr>
<tr>
<td>Pb</td>
<td>Unclassifiable or attainment effective December 31, 2011, for the 2008 lead standard.</td>
</tr>
</tbody>
</table>

(a) **Ozone Standards**

Volatile organic compounds (VOC) and Nitrogen Oxides (NO\(_x\)) 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 NO\(_x\) emissions are considered when evaluating the rule applicability relating to ozone. Decatur County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO\(_x\) emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) **PM\(_{2.5}\)**

Decatur County has been classified as attainment for PM\(_{2.5}\). Therefore, direct PM\(_{2.5}\), SO\(_2\), and NO\(_x\) emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(c) **Other Criteria Pollutants**

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

**Fugitive Emissions**

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

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

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

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

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

<table>
<thead>
<tr>
<th>Unrestricted Potential Emissions (ton/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM(^1)</td>
</tr>
<tr>
<td>-----------------</td>
</tr>
<tr>
<td>Total PTE of Entire Source Excluding Fugitives*</td>
</tr>
<tr>
<td>Fugitives from NSPS Subpart I</td>
</tr>
<tr>
<td>Total PTE of Entire Source</td>
</tr>
<tr>
<td>Title V Major Source Thresholds</td>
</tr>
<tr>
<td>PSD Major Source Thresholds</td>
</tr>
</tbody>
</table>

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

\(^2\)PM\(_{2.5}\) listed is direct PM\(_{2.5}\).

\(^3\)Single highest source-wide HAP

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

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

(a) The potential to emit (as defined in 326 IAC 2-7-1(30)) of PM, PM10, PM2.5, SO2, VOC, and CO is equal to or greater than 100 tons per year. However, the Permittee has agreed to limit the source’s PM, PM10, PM2.5, SO2, VOC, and CO emissions to less than Title V major source thresholds. Therefore, the source will be issued a FESOP Renewal.

(b) The potential to emit (as defined in 326 IAC 2-7-1(30)) of all other regulated air pollutants are less than 100 tons per year.

(c) The potential to emit (as defined in 326 IAC 2-7-1(30)) of any single HAP is equal to or greater than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(30)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. However, the source will be issued FESOP Renewal because the source will limit HAP emissions to less than
the Title V major source threshold levels. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) subject to the provisions of 326 IAC 2-7.

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any new control equipment is considered federally enforceable only after issuance of this FESOP renewal, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

<table>
<thead>
<tr>
<th>Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)</th>
<th>PM¹</th>
<th>PM10¹</th>
<th>PM2.5¹,²</th>
<th>SO₂</th>
<th>NOₓ</th>
<th>VOC</th>
<th>CO</th>
<th>Single HAP³</th>
<th>Total HAPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total PTE of Entire Source Excluding Fugitives*</td>
<td>84.88</td>
<td>37.38</td>
<td>44.68</td>
<td>95.00</td>
<td>20.64</td>
<td>9.70</td>
<td>40.47</td>
<td>7.65 HCl</td>
<td>8.55</td>
</tr>
<tr>
<td>Fugitives from NSPS Subpart I</td>
<td>39.62</td>
<td>11.62</td>
<td>4.32</td>
<td>0</td>
<td>0</td>
<td>18.93</td>
<td>0.86</td>
<td>1.24 Xylenes</td>
<td>3.68</td>
</tr>
<tr>
<td>Total PTE of Entire Source</td>
<td>124.50</td>
<td>49.00</td>
<td>49.00</td>
<td>95.00</td>
<td>20.64</td>
<td>28.63</td>
<td>41.34</td>
<td>7.65 HCl</td>
<td>12.24</td>
</tr>
<tr>
<td>Title V Major Source Thresholds</td>
<td>NA</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>10</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>PSD Major Source Thresholds</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>NA</td>
<td>NA</td>
<td></td>
</tr>
</tbody>
</table>

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

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

The source opted to take limit(s) in order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to this source and to render the source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA). See Technical Support Document (TSD) State Rule Applicability - Entire Source section, 326 IAC 2-8 (FESOP), 326 IAC 2-2 (PSD), and 326 IAC 20 (Hazardous Air Pollutants) for more information regarding the limit(s).

(a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no PSD regulated pollutant is emitted at a rate of two hundred fifty (250) tons per year or more and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).  
(b) This source is not a major source of HAP, as defined in 40 CFR 63.2, because HAP emissions are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

Federal Rule Applicability

Federal rule applicability for this source has been reviewed as follows:

New Source Performance Standards (NSPS):

(a) The requirements of the New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc and 326 IAC 12, are still not
included in the permit for the hot oil heater, because it has a maximum heat input capacity of less than 10 MMBtu/hr.

(b) The hot-mix asphalt plant is still subject to the New Source Performance Standards for Hot Mix Asphalt Facilities, 40 CFR 60, Subpart I and 326 IAC 12, because it is a hot mix asphalt facility as defined by 40 CFR 60.91, and was constructed after the rule applicability date of July 25, 1977. The unit subject to this rule includes the following:

(a) One (1) drum-mix, hot-mix asphalt plant, identified as EU-07, approved in 2021 for construction, with a maximum throughput capacity of 300 tons of raw material per hour, processing blast furnace slag, steel slag, and asbestos-free recycled asphalt shingles in the aggregate mix, equipped with one (1) 110.0 million British thermal units (MMBtu) per hour dryer burner, firing natural gas, No. 2 distillate fuel oil, and waste oil, as available, and equipped with one (1) baghouse for particulate control, exhausting through one (1) stack, identified as stack SV-7. No crushing of RAP or grinding of shingles occurs at this source.

(b) Material feeding, conveying, and loading operations consisting of the following:

(1) Raw material storage piles, including:
   (i) Aggregate storage pile(s), total capacity 43,450 tons;
   (ii) Reclaimed asphalt pavement (RAP) storage pile(s), total capacity 16,250 tons;
   (iii) Blast Furnace and/or Steel Slag storage pile(s), total capacity 1,000 tons; and
   (iv) Recycled asphalt shingles pile(s), total capacity 750 tons.

(2) One (1) mineral filler storage silo;

(3) Six (6) hoppers, including:
   (i) Four (4) cold feed bins for coarse to fine aggregate; and
   (ii) Two (2) feed bins for recycled asphalt pavement and recycled shingles.

(4) Five (5) conveyors, including:
   (i) Three (3) conveyors for transporting coarse to fine aggregates to the rotary dryer;
   (ii) One (1) conveyor for transporting recycled asphalt pavement and recycled shingles to the rotary dryer; and
   (iii) One (1) drag slat conveyor transporting hot-mixed asphalt to the asphalt storage silo.

(5) One (1) bucket elevator; and

(6) Three (3) hot-mixed asphalt storage silo;

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

The plant is subject to the following portions of Subpart I.
The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the hot-mix asphalt plant except as otherwise specified in 40 CFR 60, Subpart A.

(c) The requirements of the New Source Performance Standard for Volatile Organic Liquid Storage Vessels, 40 CFR 60, Subpart Kb and 326 IAC 12, are still not included in this renewal for the four (4) storage tanks (EU-03 through EU-06) because the liquid stored in each of the tanks has a true maximum vapor pressure of less than fifteen kiloPascals (15.0 kPa).

(d) The requirements of the New Source Performance Standard for Nonmetallic Mineral Processing Plants, 40 CFR 60, Subpart OOO and 326 IAC 12, are still not included in the permit for the hot-mix asphalt plant, because the plant does not have a crusher or grinding mill.

(e) There are no other New Source Performance Standards (40 CFR Part 60) and 326 IAC 12 included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP):

(f) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Institutional, Commercial, and Industrial Boilers and Process Heaters, 40 CFR 63, Subpart DDDDDD and 326 IAC 20-95 are still not included in the permit for the hot oil heater, since it is not located at a major source of HAPs.

(g) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs): Asphalt processing and Asphalt Roofing Manufacturing, 40 CFR 63, Subpart LLLLLL and 326 IAC 20-71, are not included in the permit because this source is not a major source of HAPs.

(h) The requirements of the National Emission Standards for Hazardous Air Pollutants for Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing, 40 CFR 63, Subpart AAAAAA, are not included in this permit since the source does not blow asphalt, therefore, this source is not an asphalt processing plant and this source does not produce asphalt roofing products, therefore, this source is not an asphalt roofing plant.

(i) The hot oil heater (EU-02) is subject to the National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63, Subpart JJJJJJJ, because the hot oil heater is a boiler located at an area source of HAPs.

This emission unit is subject to the following portions of Subpart JJJJJJJ:

1. 40 CFR 63.11193;
2. 40 CFR 63.11194(a)(1),(b),(e);
3. 40 CFR 63.11196(a)(1);
4. 40 CFR 63.11200;
5. 40 CFR 63.11201(b),(d);
6. 40 CFR 63.11205(a);
7. 40 CFR 63.11210(c);
8. 40 CFR 63.11214(b);
9. 40 CFR 63.11223(a),(b)(1) - (7);
10. 40 CFR 63.11225(a),(b),(c),(d),(g);
11. 40 CFR 63.11235
12. 40 CFR 63.11236
13. 40 CFR 63.11237
There are no other National Emission Standards for Hazardous Air Pollutants under 40 CFR 63, 326 IAC 14 and 326 IAC 20 included in the permit.

Compliance Assurance Monitoring (CAM):

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

State Rule Applicability - Entire Source

State rule applicability for this source has been reviewed as follows:

326 IAC 1-6-3 (Preventive Maintenance Plan)
The source is subject to 326 IAC 1-6-3.

326 IAC 1-5-2 (Emergency Reduction Plans)
The source is subject to 326 IAC 1-5-2.

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

FESOP Limits/PSD Minor Source Limit
In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 326 IAC 2-7 (Part 70 Permits) and pursuant to 326 IAC 2-8-4 (FESOP), the Permittee shall comply with the following:

(a) The amount of hot-mix asphalt processed shall not exceed 600,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month; and

(b) PM emissions from the dryer/mixer shall not exceed 0.282 pounds per ton of asphalt processed.

(c) The amount of hot-mix asphalt processed shall not exceed 600,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(d) The PM10 emissions from the dryer/mixer shall not exceed 0.123 pounds per ton of asphalt processed.

(e) The PM2.5 emissions from the dryer/mixer shall not exceed 0.148 pounds per ton of asphalt processed.

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

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

(h) Fuel and Slag Specifications
(1) The sulfur content of the No. 2 fuel oil shall not exceed 0.50% by weight.

(2) The sulfur content of the waste fuel oil shall not exceed 0.75% by weight.

(3) The waste oil combusted shall not contain more than 1.00% ash, 0.20% chlorine, and 0.01% lead.
(4) The HCl emissions shall not exceed 13.2 pounds of HCl per 1,000 gallons of waste oil burned.

(5) The sulfur content of the Blast Furnace slag shall not exceed 1.50% by weight.

(6) The SO2 emissions from the dryer/mixer shall not exceed 0.740 pounds per ton of Blast Furnace slag processed in the aggregate mix.

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

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

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

(A) Natural gas usage shall not exceed 363 million cubic feet (MMCF) per twelve (12) consecutive month period, with compliance determined at the end of each month;

(B) No. 2 fuel oil usage shall not exceed 1,800,419 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month;

(C) Waste oil usage shall not exceed 1,159,453 gallons per twelve (12) consecutive month period, with compliance determined at the end of each month; and

(D) The Blast Furnace slag usage shall not exceed 60,000 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(j) Multiple Fuel and Slag Usage Limitation:
When combusting more than one fuel per twelve (12) consecutive month period in the dryer/mixer burner, in conjunction with the use of slag in the aggregate mix, SO2 emissions from the dryer/mixer shall not exceed 40.11 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

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

(l) In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), and in order to render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, VOC and HAPs emissions from cold-mix asphalt production shall be limited as follows:

(A) VOC emissions from the sum of the binders shall not exceed 13.79 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

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

(i) Cut back asphalt rapid cure, containing a maximum of 25.3% of the liquid binder by weight of VOC solvent and 95.0% by weight of VOC solvent evaporating.
(ii) Cut back asphalt medium cure, containing a maximum of 28.6% of the liquid binder by weight of VOC solvent and 70.0% by weight of VOC solvent evaporating.

(iii) Cut back asphalt slow cure, containing a maximum of 20.0% of the liquid binder by weight of VOC solvent and 25.0% by weight of VOC solvent evaporating.

(iv) Emulsified asphalt with solvent, containing a maximum of 15.0% of liquid binder by weight of VOC solvent and 46.4% by weight of the VOC solvent in the liquid blend evaporating. The percent oil distillate in emulsified asphalt with solvent liquid, as determined by ASTM, must be seven percent (7%) or less of the total emulsion by volume.

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

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

(i) The amount of VOC solvent used in rapid cure cutback asphalt shall not exceed 14.52 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(ii) The amount of VOC solvent used in medium cure cutback asphalt shall not exceed 19.70 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(iii) The amount of VOC solvent used in slow cure cutback asphalt shall not exceed 55.16 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(iv) The amount of VOC solvent used in emulsified asphalt shall not exceed 29.72 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(v) The amount of VOC solvent used in all other asphalt shall not exceed 551.63 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

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

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

\[
\text{VOC emitted (tons/yr)} = \frac{\text{VOC solvent used for each binder (tons/yr)}}{\text{Adjustment factor}}
\]
Hot Mix, Inc.  Page 11 of 14
Greensburg, Indiana  TSD for FESOP Renewal F031-43698-00028
Permit Reviewer: Brian Wright

<table>
<thead>
<tr>
<th>Type of Binder</th>
<th>Adjustment Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cutback Asphalt Rapid Cure</td>
<td>1.053</td>
</tr>
<tr>
<td>Cutback Asphalt Medium Cure</td>
<td>1.429</td>
</tr>
<tr>
<td>Cutback Asphalt Slow Cure</td>
<td>4.000</td>
</tr>
<tr>
<td>Emulsified Asphalt</td>
<td>2.155</td>
</tr>
<tr>
<td>Other Asphalt</td>
<td>40.0</td>
</tr>
</tbody>
</table>

(E) The total HAP content of the solvent(s) used in the cold-mix asphalt liquid binder shall not exceed 26.08% by weight.

(F) The highest single HAP content of the solvent(s) used in the cold-mix asphalt binder shall not exceed 9.00% by weight.

Compliance with these limits, combined with the potential to emit PM10, PM2.5, SO2, and VOC from all other emission units at this source, shall limit the source-wide total potential to emit of PM10, PM2.5, VOC, SO2 and CO to less than 100 tons per 12 consecutive month period, each, and shall render 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

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

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The provisions of 326 IAC 2-4.1 apply to any owner or operator who constructs or reconstructs a major source of hazardous air pollutants (HAP), as defined in 40 CFR 63.41, after July 27, 1997, unless the major source has been specifically regulated under or exempted from regulation under a NESHAP that was issued pursuant to Section 112(d), 112(h), or 112(j) of the Clean Air Act (CAA) and incorporated under 40 CFR 63. On and after June 29, 1998, 326 IAC 2-4.1 is intended to implement the requirements of Section 112(g)(2)(B) of the Clean Air Act (CAA).

The operation of this source will emit less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 2-6 (Emission Reporting)
This source is not subject to 326 IAC 2-6 (Emission Reporting), because it is not required to have an operating permit pursuant to 326 IAC 2-7 (Part 70); it is not located in Lake, Porter, Clark, or Floyd County, and its potential to emit lead is less than 5 tons per year. Therefore, this rule does not apply.

326 IAC 5-1 (Opacity Limitations)
This source is subject to the opacity limitations specified in 326 IAC 5-1-2(1).

326 IAC 6-4 (Fugitive Dust Emissions Limitations)
The source is subject to the requirements of 326 IAC 6-4, because the materials handling, paved and unpaved roads, cold mix asphalt production, and fuel dispensing have the potential to emit fugitive particulate emissions. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.

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

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

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

State Rule Applicability – Individual Facilities

State rule applicability has been reviewed as follows:

Dryer/Mixer

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(a), the requirements of 326 IAC 6-3-2 are applicable to the dryer/mixer, since it is a manufacturing process not exempted from this rule under 326 IAC 6-3-1(b) and is not subject to a particulate matter limitation that is as stringent as or more stringent than the particulate limitation established in this rule as specified in 326 IAC 6-3-1(c). The dryer/mixer is subject to particulate limitations under 40 CFR 60, Subpart I.

Particulate from the dryer/mixer shall be controlled by a baghouse and the Permittee shall operate the control device in accordance with manufacturer’s specifications.

326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations)
Pursuant to 326 IAC 7-1.19(a), the one (1) 110 MMBtu/hr dryer burner is subject to the requirements of 326 IAC 7, since it has a potential to emit sulfur dioxide of equal to or greater than twenty-five (25) tons per year. Therefore, pursuant to this rule, sulfur dioxide emissions from the one (1) 110 MMBtu/hr dryer burner at this source shall be limited to:

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

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

Note: No.2 fuel oil is distillate oil.

326 IAC 7-2-1 (Sulfur Dioxide Reporting Requirements)
Pursuant to 326 IAC 7-2-1(c), this source shall continue to submit reports of calendar month average sulfur content, heat content, fuel consumption and sulfur dioxide emission rate (pounds SO2 per MMBtu), to the OAQ upon request.

326 IAC 8-5-2 (Asphalt Paving Rules)
The one (1) dryer/mixer is subject to the requirements of 326 IAC 8-5-2 since it was constructed after January 1, 1980 and applies asphalt paving.

Pursuant to 326 IAC 8-5-2, Volatile Organic Compound Rules for Asphalt Pavers, the cutback asphalt or asphalt emulsions produced by the source shall not contain more than seven percent (7%) oil distillate by volume of emulsion as determined by ASTM D244-80a “Emulsific Asphalts” ASTM part 15, 1981 ASTM 1916 Race St., Philadelphia, PA 19103, Library of Congress Card Catalog #40-10712, for any paving application except as used for the following purposes:

(a) penetrating prime coating;

(b) stockpile storage;
Hot Oil Heater

326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)
The one (1) existing No. 2 distillate fuel oil fired hot oil heater, having a maximum rated heat input capacity of four (4) MMBtu/hr, is subject to 326 IAC 6-2-4 because it was constructed after the rule applicability date of September 21, 1983, and it meets the definition of an indirect heating unit, as defined in 326 IAC 1-2-19, since it combusts fuel to produce usable heat that is to be transferred through a heat-conducting materials barrier or by a heat storage medium to a material to be heated so that the material being heated is not contacted by, and adds no substance to the products of combustion.

Pursuant to 326 IAC 6-2-4(a), for a total source maximum operating capacity rating less than ten (10) MMBtu/hr, the pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input shall not exceed six tenths (0.6) pounds per MMBtu (lb/MMBtu).

326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations)
The one (1) hot oil heater is not subject to the requirements of 326 IAC 7-1.1-1, since the potential to emit sulfur dioxide from each is less than twenty-five (25) tons per year and ten (10) pounds per hour.

326 IAC 8-1-6 (New Facilities: General Reduction Requirements)
The one (1) hot oil heater is not subject to the requirements of 326 IAC 8-1-6, since the unlimited VOC potential emissions is less than twenty-five (25) tons per year.

Storage Tanks

326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)
Pursuant to 326 IAC 8-4-3(a), the storage tanks are each not subject to the requirements of 326 IAC 8-4-3, since each is not a petroleum liquid storage vessels with capacities greater than thirty-nine thousand (39,000) gallons.

326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)
Pursuant to 326 IAC 8-9-6(a), the storage tanks are not subject to 326 IAC 8-9 since the source is not located in Clark, Floyd, Lake, or Porter County.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-8 are required to assure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source’s failure to take the appropriate corrective actions within a specific time period.

(a) The Compliance Determination Requirements applicable to this source are as follows:

Testing Requirements:
Summary of Testing Requirements

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Control Device</th>
<th>Timeframe for Testing</th>
<th>Pollutant/Parameter</th>
<th>Frequency of Testing</th>
<th>Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dryer/Mixer</td>
<td>Baghouse</td>
<td>180 days*</td>
<td>PM, PM10, PM2.5</td>
<td>Once every five (5) years</td>
<td>326 IAC 2-2 326 IAC 2-8-4 40 CFR 60, Subpart I</td>
</tr>
</tbody>
</table>

* 180 days after the startup of the replacement drum-mixer

(b) The Compliance Monitoring Requirements applicable to this source are as follows:

<table>
<thead>
<tr>
<th>Control Device</th>
<th>Type of Monitoring</th>
<th>Frequency</th>
<th>Range or Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dryer/Mixer Baghouse</td>
<td>Visible Emissions Notations</td>
<td>Daily</td>
<td>Normal/Abnormal</td>
</tr>
</tbody>
</table>

These monitoring conditions are necessary because the baghouse for the dryer/mixer must operate properly to assure compliance with 326 IAC 2-8 (FESOP) and in order to render 326 IAC 2-2 not applicable.

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on January 29, 2021.

The operation of this stationary drum-mix, hot-mix asphalt plant, and cold-mix asphalt production operation shall be subject to the conditions of the attached proposed FESOP Renewal No. F031-43698-00028.

The staff recommends to the Commissioner that the FESOP Renewal be approved.

IDEM Contact

(a) If you have any questions regarding this permit, please contact Brian Wright, Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251, or by telephone at (317) 234-6544 or (800) 451-6027, and ask for Brian Wright or (317) 234-6544.

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

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Air Permits page on the Internet at: https://www.in.gov/idem/airpermit/2358.htm; and the Citizens’ Guide to IDEM on the Internet at: https://www.in.gov/idem/6900.htm.
## Appendix A.1: Unlimited Emissions Calculations

### Entire Source - Drum mix

**Company Name:** Hot Mix, Inc.  
**Source Address:** 992 South County Road 800 East, Greensburg, Indiana 47240  
**Permit Number:** F031-43698-00028  
**Reviewer:** Brian Wright  
**Date Submitted:** 11/9/2020

### Asphalt Plant Maximum Capacity - Drum Mix

<table>
<thead>
<tr>
<th>Maximum Hourly Asphalt Production</th>
<th>300 ton/hr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Annual Asphalt Production</td>
<td>2,628,000 ton/yr</td>
</tr>
<tr>
<td>Maximum Annual Blast Furnace Slag Usage</td>
<td>1,103,760 ton/yr</td>
</tr>
<tr>
<td>Maximum Dryer Fuel Input Rate</td>
<td>110.00 MMBtu/hr</td>
</tr>
</tbody>
</table>

**Per cent sulfur:**
- 1.50%
- 1.50%

**Per cent ash:**
- 1.00%

**Per cent chlorine:**
- 0.200%

**Per cent lead:**
- 0.010%

### Unlimited/Uncontrolled Emissions

<table>
<thead>
<tr>
<th>Process Description</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>Total HAPs</th>
<th>Worst Case HAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ducted Emissions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dryer Fuel Combustion (worst case)</td>
<td>220.25</td>
<td>175.51</td>
<td>175.51</td>
<td>379.42</td>
<td>68.83</td>
<td>3.44</td>
<td>40.47</td>
<td>49.32</td>
<td>45.43 (hydrogen chloride)</td>
</tr>
<tr>
<td>Dryer/Mixer (Process)</td>
<td>36,792.00</td>
<td>8,541.00</td>
<td>1,971.00</td>
<td>76.21</td>
<td>72.27</td>
<td>42.05</td>
<td>170.82</td>
<td>14.01</td>
<td>4.07 (formaldehyde)</td>
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<tr>
<td>Dryer/Mixer Slag Processing (worst case)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>408.39</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Hot Oil Heater Fuel Combustion (worst case)</td>
<td>0.25</td>
<td>0.41</td>
<td>0.41</td>
<td>8.89</td>
<td>2.50</td>
<td>0.10</td>
<td>1.47</td>
<td>0.041</td>
<td>0.032 (hexane)</td>
</tr>
<tr>
<td>Total Unlimited/Uncontrolled PTE</td>
<td>36,962.55</td>
<td>8,591.17</td>
<td>1,989.22</td>
<td>796.69</td>
<td>74.77</td>
<td>42.14</td>
<td>172.29</td>
<td>49.36</td>
<td>45.43 (hydrogen chloride)</td>
</tr>
</tbody>
</table>

### Fugitive Emissions

<table>
<thead>
<tr>
<th>Process Description</th>
<th>PM</th>
<th>PM10</th>
<th>PM2.5</th>
<th>SO2</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
<th>Total HAPs</th>
<th>Worst Case HAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt Load-Out, Silo Filling, On-Site Yard</td>
<td>1.46</td>
<td>1.46</td>
<td>1.46</td>
<td>-</td>
<td>-</td>
<td>22.51</td>
<td>3.79</td>
<td>0.38</td>
<td>0.12 (formaldehyde)</td>
</tr>
<tr>
<td>Material Storage Piles</td>
<td>0.96</td>
<td>0.33</td>
<td>0.33</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Material Processing and Handling</td>
<td>8.49</td>
<td>4.02</td>
<td>0.61</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Material Screening and Conveying</td>
<td>34.95</td>
<td>12.23</td>
<td>12.23</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Unpaved and Paved Roads (worst case)</td>
<td>124.45</td>
<td>51.72</td>
<td>3.17</td>
<td>31,581.99</td>
<td>-</td>
<td>8,237.75</td>
<td>2,842.38 (xylenes)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cold Mix Asphalt Production</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>31,604.50</td>
<td>3.79</td>
<td>8,238.13</td>
<td>2,842.38 (xylenes)</td>
</tr>
<tr>
<td>Gasoline Fuel Transfer and Dispensing</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0 (xylenes)</td>
</tr>
<tr>
<td>Volatile Organic Liquid Storage Vessels</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total Fugitive Emissions</td>
<td>170.30</td>
<td>49.76</td>
<td>17.80</td>
<td>0</td>
<td>0</td>
<td>31,604.50</td>
<td>3.79</td>
<td>8,238.13</td>
<td>2,842.38 (xylenes)</td>
</tr>
</tbody>
</table>

**Total Unlimited/Uncontrolled Emissions:** 36,962.55

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


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

### Maximum Capacity

| Maximum Hourly Asphalt Production = 300 ton/hr | 17.21 |
| Maximum Annual Asphalt Production = 2,828,000 ton/yr | 1.35E-01 |
| Maximum Fuel Input Rate = 17.00 MMBtu/hr | 5.0E-04 |

Natural Gas Usage = 964 MMCF/yr

- **No. 2 Fuel Oil Usage = 6.882,657 gal/yr and 5.90 % sulfur**
- **Residual (No. 5 or No. 6) Fuel Oil Usage = 5.882,657 gal/yr and 6.10 % sulfur**
- **Propane Usage = 59,103 gal/yr and 0.110 % pr/1000 lb sulfur**
- **Butane Usage = 2.2E-03 tons/yr and 0.75 % sulfur**

| HCl = Hydrogen Chloride | 0.20 |
| SO2 = Sulfur Dioxide | 5.25E-03 |
| VOC | 1.32E-03 |

**Abbreviations**

PM = Particulate Matter  
PM10 = Particulate Matter (>10 um)

### Unlimited/Uncontrolled Emissions

<table>
<thead>
<tr>
<th>Emission Factor (units)</th>
<th>Unlimited/Uncontrolled Potential to Emit (tonnes/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chromat</strong></td>
<td></td>
</tr>
<tr>
<td>PM</td>
<td>1.2</td>
</tr>
<tr>
<td>NOx</td>
<td>2.1E-04</td>
</tr>
<tr>
<td>SO2</td>
<td>2.1E-04</td>
</tr>
<tr>
<td>VOC</td>
<td>2.2E-04</td>
</tr>
<tr>
<td><strong>Hazardous Air Pollutant</strong></td>
<td></td>
</tr>
<tr>
<td>Acrylonitrile</td>
<td>3.98E-04</td>
</tr>
<tr>
<td>Ammonia</td>
<td>3.9E-02</td>
</tr>
<tr>
<td>Benzene</td>
<td>3.8E-02</td>
</tr>
<tr>
<td>Butadiene</td>
<td>2.8E-02</td>
</tr>
<tr>
<td>Carbon Monoxide</td>
<td>2.8E-02</td>
</tr>
<tr>
<td>Chromium</td>
<td>2.8E-02</td>
</tr>
<tr>
<td>Lead</td>
<td>2.8E-02</td>
</tr>
<tr>
<td>Mercury</td>
<td>2.8E-02</td>
</tr>
<tr>
<td>Nickel</td>
<td>2.8E-02</td>
</tr>
<tr>
<td>Selenium</td>
<td>2.8E-02</td>
</tr>
<tr>
<td>Toluene</td>
<td>2.8E-02</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2.8E-02</td>
</tr>
</tbody>
</table>

### Propane and Butane: AP-42 Chapter 1.5 (dated 7/08), Tables 1.5-1 (assuming PM = PM10)

### Natural Gas Usage = 964 MMCF/yr

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
- **Fuel Oil** | AP-42 Chapter 1.4 (dated 7/98), Tables 1.4-1, 1.4-2, 1.4-3, and 1.4-4

### Methodology

- Natural Gas Usage (MMCF/yr) = [Maximum Fuel Input Rate (MMBtu/hr) * 0.878 (hr/mmcf)] * [11,000,000 Btu/MMBtu]
- Oil Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr) / 1,000,000 Btu/MMBtu] * 0.878 (hr/mmcf)
- Butane Usage (gal/yr) = [Maximum Fuel Input Rate (MMBtu/hr) / 1,000,000 Btu/MMBtu] * 0.878 (hr/mmcf)
- PM10 = Particulate Matter (>10 um)  
- PM2.5 = Particulate Matter (< 2.5 um)
- SO2 = Sulfur Dioxide
- NOx = Nitric Oxide
- CO = Carbon Monoxide
- VOC = Volatile Organic Compounds
- NOx = Nitric Oxide
- CO = Carbon Monoxide
- VOC = Volatile Organic Compounds

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. 5 fuel oil.
Appendix A.1: Unlimited Emissions Calculations

Dryer/Mixer Process Emissions

Company Name: Hot Mix, Inc.
Source Address: 992 South County Road 800 East, Greensburg, Indiana 47240
Permit Number: F031-43698-00028
Reviewer: Brian Wright
Date Submitted: 11/9/2020

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

Maximum Hourly Asphalt Production = 300 ton/hr
Maximum Annual Asphalt Production = 2,628,000 ton/yr

### Criteria Pollutant

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Natural</th>
<th>No. 2 Fuel Oil</th>
<th>Waste Oil</th>
<th>Natural</th>
<th>No. 2 Fuel Oil</th>
<th>Waste Oil</th>
<th>Worse Case PTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM*</td>
<td>28</td>
<td>28</td>
<td>28</td>
<td>36.792</td>
<td>36.792</td>
<td>36.792</td>
<td>36.792</td>
</tr>
<tr>
<td>PM2.5*</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
<td>1.971</td>
<td>1.971</td>
<td>1.971</td>
<td>1.971</td>
</tr>
<tr>
<td>SO2**</td>
<td>0.0034</td>
<td>0.011</td>
<td>0.058</td>
<td>4.5</td>
<td>14.5</td>
<td>76.2</td>
<td>76.21</td>
</tr>
<tr>
<td>NOx**</td>
<td>0.006</td>
<td>0.056</td>
<td>0.055</td>
<td>34.2</td>
<td>72.3</td>
<td>72.3</td>
<td>72.27</td>
</tr>
<tr>
<td>VOC**</td>
<td>0.032</td>
<td>0.032</td>
<td>0.032</td>
<td>42.0</td>
<td>42.0</td>
<td>42.0</td>
<td>42.05</td>
</tr>
<tr>
<td>CO***</td>
<td>0.13</td>
<td>0.13</td>
<td>0.13</td>
<td>170.8</td>
<td>170.8</td>
<td>170.8</td>
<td>170.82</td>
</tr>
</tbody>
</table>

### Hazardous Air Pollutant

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Concentration (lb/ton)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCl</td>
<td>2.10E-04</td>
</tr>
<tr>
<td>Antimony</td>
<td>1.80E-07 1.80E-07 1.80E-07</td>
</tr>
<tr>
<td>Arsenic</td>
<td>5.60E-07 5.60E-07 5.60E-07</td>
</tr>
<tr>
<td>Berthmum</td>
<td>neg</td>
</tr>
<tr>
<td>Cadmium</td>
<td>4.10E-07 4.10E-07 4.10E-07</td>
</tr>
<tr>
<td>Chromium</td>
<td>5.50E-06 5.50E-06 5.50E-06</td>
</tr>
<tr>
<td>Cobalt</td>
<td>2.50E-08 2.50E-08 2.50E-08</td>
</tr>
<tr>
<td>Lead</td>
<td>6.30E-07 6.30E-07 6.30E-07</td>
</tr>
<tr>
<td>Manganese</td>
<td>7.70E-06 7.70E-06 7.70E-06</td>
</tr>
<tr>
<td>Mercury</td>
<td>2.40E-07 2.40E-07 2.40E-07</td>
</tr>
<tr>
<td>Nickel</td>
<td>6.30E-05 6.30E-05 6.30E-05</td>
</tr>
<tr>
<td>Selenium</td>
<td>3.50E-07 3.50E-07 3.50E-07</td>
</tr>
<tr>
<td>2,2,4 Trimehtylpentane</td>
<td>4.00E-05 4.00E-05 4.00E-05</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>1.30E-03</td>
</tr>
<tr>
<td>Acrolein</td>
<td>2.60E-06</td>
</tr>
<tr>
<td>Benzene</td>
<td>3.90E-04 3.90E-04 3.90E-04</td>
</tr>
<tr>
<td>Ethylene</td>
<td>2.40E-04 2.40E-04 2.40E-04</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>3.10E-03 3.10E-03 3.10E-03</td>
</tr>
<tr>
<td>Methyl chloroform</td>
<td>4.80E-05 4.80E-05 4.80E-05</td>
</tr>
<tr>
<td>MEK</td>
<td>2.00E-05</td>
</tr>
<tr>
<td>Propanaldehyde</td>
<td>1.30E-04</td>
</tr>
<tr>
<td>Quinone</td>
<td>1.50E-04</td>
</tr>
<tr>
<td>Toluene</td>
<td>1.50E-04 1.50E-04 1.50E-04</td>
</tr>
<tr>
<td>Total PAH Haps</td>
<td>1.90E-04</td>
</tr>
<tr>
<td>Xylene</td>
<td>2.00E-04 2.00E-04 2.00E-04</td>
</tr>
</tbody>
</table>

Total HAPs = 14.01

Methodology

Worst Single HAP: 4.07 (formaldehyde)

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


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

** 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 = Polycyclic Aromatic Hydrocarbon  
SO2 = Sulfur Dioxide
### Appendix A.1: Unlimited Emissions Calculations

#### Dryer/Mixer Slag Processing

**Company Name:** Hot Mix, Inc.  
**Source Address:** 992 South County Road 800 East, Greensburg, Indiana 47240  
**Permit Number:** F031-43698-00028  
**Reviewer:** Brian Wright  
**Date Submitted:** 11/9/2020

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

Maximum Annual Blast Furnace Slag Usage* = 1,103,760 ton/yr  
Maximum Annual Steel Slag Usage* = 1,103,760 ton/yr  

<table>
<thead>
<tr>
<th>Type of Slag</th>
<th>SO2 Emission Factor (lb/ton)**</th>
<th>Unlimited Potential to Emit SO2 (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blast Furnace Slag</td>
<td>0.74</td>
<td>408.39</td>
</tr>
<tr>
<td>Steel Slag</td>
<td>0.0014</td>
<td>0.77</td>
</tr>
</tbody>
</table>

**Methodology**

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

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

** Testing results for steel slag, obtained June 2009 from E & B Paving, Inc. facility located in Huntington, IN. The testing results showed a steel slag emission factor of 0.0007 lb/ton from slag containing 0.33% sulfur content. Unlimited Potential to Emit SO2 from Slag (tons/yr) = [(Maximum Annual Slag Usage (ton/yr)] * [Emission Factor (lb/ton)] * [ton/2000 lbs]

** Abbreviations**

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

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

**Company Name:** Hot Mix, Inc.  
**Source Address:** 992 South County Road 800 East, Greensburg, Indiana 47240  
**Permit Number:** F031-43698-00028  
**Reviewer:** Brian Wright  
**Date Submitted:** 11/9/2020

Maximum Hot Oil Heater Fuel Input Rate = 4.00 MMBtu/hr  
Natural Gas Usage = 35 MMCF/yr  
No. 2 Fuel Oil Usage = 250,286 gal/yr, and 0.50% sulfur

#### Unlimited/Uncontrolled Emissions

<table>
<thead>
<tr>
<th>Emission Factor (units)</th>
<th>Unlimited/Uncontrolled Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Worse Case Fuel</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Natural Gas</strong> (lb/MMCF)</td>
<td><strong>No. 2 Fuel Oil</strong> (lb/kgal)</td>
</tr>
<tr>
<td>PM</td>
<td>1.9</td>
</tr>
<tr>
<td>PM10/PM2.5</td>
<td>7.6</td>
</tr>
<tr>
<td>SO2</td>
<td>0.8</td>
</tr>
<tr>
<td>NOx</td>
<td>100</td>
</tr>
<tr>
<td>VOC</td>
<td>5.5</td>
</tr>
<tr>
<td>CO</td>
<td>84</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous Air Pollutant</th>
<th><strong>Natural Gas</strong> (lb/MMCF)</th>
<th><strong>No. 2 Fuel Oil</strong> (lb/kgal)</th>
<th><strong>Natural Gas</strong> (tons/yr)</th>
<th><strong>No. 2 Fuel Oil</strong> (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic</td>
<td>2.0E-04</td>
<td>5.0E-04</td>
<td>3.50E-06</td>
<td>7.01E-05</td>
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<tr>
<td>Beryllium</td>
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<td>2.10E-07</td>
<td>5.26E-05</td>
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<tr>
<td>Cadmium</td>
<td>1.6E-03</td>
<td>4.2E-04</td>
<td>1.93E-05</td>
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<td>Chromium</td>
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<td>Cobalt</td>
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<td>1.5E-06</td>
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<td>Lead</td>
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<td>1.05E-04</td>
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<tr>
<td>Mercury</td>
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<td>4.56E-06</td>
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<td>Nickel</td>
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<td>4.2E-04</td>
<td>3.08E-05</td>
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<tr>
<td>Selenium</td>
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<td>2.1E-03</td>
<td>2.40E-07</td>
<td>2.63E-04</td>
</tr>
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<td>Benzene</td>
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<td>3.079E-05</td>
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<td>Dichlorobenzene</td>
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<td>2.1024E-05</td>
<td>2.1E-05</td>
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<td>Ethylbenzene</td>
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<tr>
<td>Formaldehyde</td>
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<td>6.10E-02</td>
<td>1.31E-03</td>
<td>7.63E-03</td>
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<tr>
<td>Hexane</td>
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<td>0.031536</td>
<td>0.032</td>
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<tr>
<td>Phenol</td>
<td>3.4E-03</td>
<td>5.956E-05</td>
<td>6.0E-05</td>
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</tr>
<tr>
<td>Total PAH Haps</td>
<td>negl</td>
<td>negl</td>
<td>negl</td>
<td></td>
</tr>
<tr>
<td>Polycyclic Organic Matter</td>
<td>3.30E-03</td>
<td>4.13E-04</td>
<td>4.1E-04</td>
<td></td>
</tr>
</tbody>
</table>

Total HAPs = 3.3E-02, 8.9E-03, 0.041

#### Methodology

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

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)
- CO = Carbon Monoxide
- HAP = Hazardous Air Pollutant
- SO2 = Sulfur Dioxide
- NOx = Nitrogen Oxides
- VOC = Volatile Organic Compounds
- PAH = Polynuclear Hydrocarbons
Appendix A.1: Unlimited Emissions Calculations

Asphalt Load-Out, Silo Filling, and Yard Emissions

Company Name: Hot Mix, Inc.
Source Address: 992 South County Road 800 East, Greensburg, Indiana 47240
Permit Number: F031-43698-00028
Reviewer: Brian Wright
Date Submitted: 11/9/2020

Asphalt Temperature, T = 325 F
Asphalt Volatility Factor, V = -0.5
Maximum Annual Asphalt Production = 2,628,000 tons/yr

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Load-Out</th>
<th>Silo Filling</th>
<th>On-Site Yard</th>
<th>Load-Out</th>
<th>Silo Filling</th>
<th>On-Site Yard</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total PM*</td>
<td>5.2E-04</td>
<td>5.9E-04</td>
<td>NA</td>
<td>0.69</td>
<td>0.77</td>
<td>NA</td>
<td>1.46</td>
</tr>
<tr>
<td>Organic PM</td>
<td>3.4E-04</td>
<td>2.5E-04</td>
<td>NA</td>
<td>0.46</td>
<td>0.334</td>
<td>NA</td>
<td>0.78</td>
</tr>
<tr>
<td>TOC</td>
<td>0.004</td>
<td>0.012</td>
<td>0.001</td>
<td>5.46</td>
<td>16.01</td>
<td>1.445</td>
<td>22.9</td>
</tr>
<tr>
<td>CO</td>
<td>0.001</td>
<td>0.001</td>
<td>3.5E-04</td>
<td>1.77</td>
<td>1.550</td>
<td>0.463</td>
<td>3.79</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Load-Out</th>
<th>Silo Filling</th>
<th>On-Site Yard</th>
<th>Load-Out</th>
<th>Silo Filling</th>
<th>On-Site Yard</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM/HAPs</td>
<td>0.032</td>
<td>0.038</td>
<td>0</td>
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<td>0.069</td>
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<tr>
<td>VOC/HAPs</td>
<td>0.081</td>
<td>0.204</td>
<td>0.021</td>
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<td></td>
<td>0.306</td>
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<tr>
<td>non-VOC/HAPs</td>
<td>4.2E-04</td>
<td>4.3E-05</td>
<td>1.1E-04</td>
<td></td>
<td></td>
<td></td>
<td>5.8E-04</td>
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<tr>
<td>non-VOC/non-HAPs</td>
<td>0.40</td>
<td>0.23</td>
<td>0.10</td>
<td>0.73</td>
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<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Load-Out</th>
<th>Silo Filling</th>
<th>On-Site Yard</th>
<th>Load-Out</th>
<th>Silo Filling</th>
<th>On-Site Yard</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total VOCs</td>
<td></td>
<td></td>
<td></td>
<td>5.14</td>
<td>16.01</td>
<td>1.4</td>
<td>22.5</td>
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<tr>
<td>Total HAPs</td>
<td></td>
<td></td>
<td></td>
<td>0.11</td>
<td>0.24</td>
<td>0.021</td>
<td>0.38</td>
</tr>
</tbody>
</table>

Worst Single HAP 0.117 (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)


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):
Total 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 = 0.00468(-V)e^((0.0251)(T+460)-20.43)

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

Abbreviations
TOC = Total Organic Compounds
CO = Carbon Monoxide
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
HAP = Hazardous Air Pollutant
VOC = Volatile Organic Compound
### Organic Particulate-Based Compounds (Table 11.1-15)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>CASRN</th>
<th>Category</th>
<th>HAP Type</th>
<th>Source</th>
<th>Load-out and Onsite Yard (% by weight of Total Organic PM)</th>
<th>Silo Filling and Asphalt Storage Tank (% by weight of Total Organic PM)</th>
<th>Unlimited/Uncontrolled Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAH HAPs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Load-out (%)</td>
<td>Silo Filling (%)</td>
<td>Onsite Yard (%)</td>
</tr>
<tr>
<td>Acenaphthylene</td>
<td>83-32-9</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.26%</td>
<td>0.47%</td>
<td>1.2E-03</td>
</tr>
<tr>
<td>Acenaphthylene</td>
<td>208-96-8</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.28%</td>
<td>0.014%</td>
<td>1.3E-04</td>
</tr>
<tr>
<td>Anthracene</td>
<td>120-12-7</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.07%</td>
<td>0.13%</td>
<td>3.1E-04</td>
</tr>
<tr>
<td>Benzo(a)anthracene</td>
<td>56-55-3</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.019%</td>
<td>0.056%</td>
<td>6.5E-05</td>
</tr>
<tr>
<td>Benzo(b)fluoranthene</td>
<td>205-99-2</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.0076%</td>
<td>0</td>
<td>3.4E-05</td>
</tr>
<tr>
<td>Benzo(k)fluoranthene</td>
<td>207-08-9</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.0022%</td>
<td>0</td>
<td>9.9E-06</td>
</tr>
<tr>
<td>Benzo(g,h,i)perylene</td>
<td>191-24-2</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.0019%</td>
<td>0</td>
<td>8.5E-06</td>
</tr>
<tr>
<td>Benzo(e)pyrene</td>
<td>50-32-8</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.0023%</td>
<td>0</td>
<td>1.0E-05</td>
</tr>
<tr>
<td>Benzo(e)pyrene</td>
<td>192-97-2</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.0078%</td>
<td>0.0095%</td>
<td>3.5E-05</td>
</tr>
<tr>
<td>Chrysene</td>
<td>218-01-9</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.103%</td>
<td>0.21%</td>
<td>4.6E-04</td>
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<tr>
<td>Dibenz(a,h)anthracene</td>
<td>53-70-3</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.00037%</td>
<td>0</td>
<td>1.7E-06</td>
</tr>
<tr>
<td>Fluoranthene</td>
<td>206-44-0</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.09%</td>
<td>0.15%</td>
<td>2.2E-04</td>
</tr>
<tr>
<td>Fluorene</td>
<td>86-73-7</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.77%</td>
<td>1.01%</td>
<td>3.4E-03</td>
</tr>
<tr>
<td>Indeno(1,2,3-cd)pyrene</td>
<td>193-39-5</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.00047%</td>
<td>0</td>
<td>2.1E-06</td>
</tr>
<tr>
<td>2-Methylphenanthrene</td>
<td>91-57-6</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>2.38%</td>
<td>5.27%</td>
<td>1.1E-02</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>1.28%</td>
<td>1.82%</td>
<td>5.6E-03</td>
</tr>
<tr>
<td>Perylene</td>
<td>198-55-0</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.022%</td>
<td>0.03%</td>
<td>9.9E-05</td>
</tr>
<tr>
<td>Phenanthrene</td>
<td>85-01-8</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.81%</td>
<td>1.80%</td>
<td>3.6E-03</td>
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<tr>
<td>Pyrene</td>
<td>129-00-0</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.15%</td>
<td>0.44%</td>
<td>6.7E-04</td>
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<tr>
<td>Total PAH HAPs</td>
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<td></td>
<td></td>
<td></td>
<td>0.027</td>
<td>0.038</td>
<td>0.064</td>
</tr>
<tr>
<td>Other semi-volatile HAPs</td>
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<td></td>
<td></td>
<td>0.0072</td>
<td>0.0036</td>
<td>0.0046</td>
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</tbody>
</table>

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

**Methodology**

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


**Abbreviations**

PM = Particulate Matter
HAP = Hazardous Air Pollutant
POM = Polycyclic Organic Matter
### Organic Volatile-Based Compounds (Table 11.1-16)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>CASRN</th>
<th>Category</th>
<th>HAP Type</th>
<th>Source</th>
<th>Speciation Profile</th>
<th>Unlimited/Uncontrolled Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Load-out and Onsite Yard (% by weight of TOC)</td>
<td>Silo Filling and Asphalt Storage Tank (% by weight of TOC)</td>
<td>Load-out</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>94%</td>
<td>100%</td>
<td>5.14</td>
</tr>
<tr>
<td>VOC</td>
<td>VOC</td>
<td>---</td>
<td>TOC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>non-VOC/non-HAPs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methane</td>
<td>74-82-8</td>
<td>non-VOC/non-HAP</td>
<td>---</td>
<td>TOC</td>
<td>6.50%</td>
<td>0.28%</td>
</tr>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>non-VOC/non-HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.046%</td>
<td>0.055%</td>
</tr>
<tr>
<td>Ethylene</td>
<td>74-85-1</td>
<td>non-VOC/non-HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.71%</td>
<td>1.10%</td>
</tr>
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<td>Total non-VOC/non-HAPS</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td>7.30%</td>
<td>1.40%</td>
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<td>Benzene</td>
<td>71-43-2</td>
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<td>---</td>
<td>TOC</td>
<td>0.052%</td>
<td>0.032%</td>
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<tr>
<td>Bromomethane</td>
<td>74-83-9</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.0096%</td>
<td>0.0049%</td>
</tr>
<tr>
<td>2-Butanone</td>
<td>78-93-3</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.049%</td>
<td>0.039%</td>
</tr>
<tr>
<td>Carbon Disulfide</td>
<td>75-15-0</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.013%</td>
<td>0.016%</td>
</tr>
<tr>
<td>Chloroethane</td>
<td>75-00-3</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.00021%</td>
<td>0.004%</td>
</tr>
<tr>
<td>Chloromethane</td>
<td>74-87-3</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.015%</td>
<td>0.023%</td>
</tr>
<tr>
<td>Ethene</td>
<td>92-82-8</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.11%</td>
<td>0%</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.28%</td>
<td>0.038%</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>50-00-0</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.086%</td>
<td>0.69%</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>100-64-3</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.15%</td>
<td>0.10%</td>
</tr>
<tr>
<td>Isocctane</td>
<td>540-84-1</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.0018%</td>
<td>0.00031%</td>
</tr>
<tr>
<td>Methylene Chloride</td>
<td>75-09-2</td>
<td>non-VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0</td>
<td>0.00027%</td>
</tr>
<tr>
<td>MTBE</td>
<td>1634-04-4</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Styrene</td>
<td>100-42-5</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.0073%</td>
<td>0.0054%</td>
</tr>
<tr>
<td>Tetrachloroethene</td>
<td>127-18-4</td>
<td>non-VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.0077%</td>
<td>0</td>
</tr>
<tr>
<td>Toluene</td>
<td>100-88-3</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.21%</td>
<td>0.062%</td>
</tr>
<tr>
<td>1,1,1-Trichloroethane</td>
<td>71-55-6</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Trichloroethene</td>
<td>79-01-6</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Trichlorofluoromethane</td>
<td>75-69-4</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.0013%</td>
<td>0</td>
</tr>
<tr>
<td>m/p-Xylene</td>
<td>1330-20-7</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.41%</td>
<td>0.20%</td>
</tr>
<tr>
<td>o-Xylene</td>
<td>95-47-6</td>
<td>VOC/HAP</td>
<td>---</td>
<td>TOC</td>
<td>0.8%</td>
<td>0.057%</td>
</tr>
<tr>
<td>Total volatile organic HAPs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.50%</td>
<td>1.30%</td>
<td>0.062</td>
</tr>
</tbody>
</table>

### Methodology

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


### Abbreviations

TOC = Total Organic Compounds  
HAP = Hazardous Air Pollutant  
VOC = Volatile Organic Compound  
MTBE = Methyl tert butyl ether
The following calculations determine the amount of emissions created by wind erosion of storage stockpiles, based on 8,760 hours of use and USEPA's AP-42 (Pre 1983 Edition), Section 11.2.3.

\[
Ef = 1.7*(s/1.5)*(365-p)/235*(f/15)
\]
where 
- \(Ef\) = emission factor (lb/acre/day)
- \(s\) = silt content (wt %)
- \(p\) = 125 days of rain greater than or equal to 0.01 inches
- \(f\) = 15% of wind greater than or equal to 12 mph

<table>
<thead>
<tr>
<th>Material</th>
<th>Silt Content (wt %)*</th>
<th>Emission Factor (lb/acre/day)</th>
<th>Maximum Anticipated Pile Size (acres)**</th>
<th>PTE of PM (tons/yr)</th>
<th>PTE of PM10/PM2.5 (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand</td>
<td>2.6</td>
<td>3.01</td>
<td>0.50</td>
<td>0.275</td>
<td>0.096</td>
</tr>
<tr>
<td>Limestone</td>
<td>1.6</td>
<td>1.85</td>
<td>1.00</td>
<td>0.338</td>
<td>0.118</td>
</tr>
<tr>
<td>RAP</td>
<td>0.5</td>
<td>0.58</td>
<td>0.90</td>
<td>0.095</td>
<td>0.033</td>
</tr>
<tr>
<td>Gravel</td>
<td>1.6</td>
<td>1.85</td>
<td>0.50</td>
<td>0.169</td>
<td>0.069</td>
</tr>
<tr>
<td>Slag</td>
<td>3.8</td>
<td>4.40</td>
<td>0.05</td>
<td>0.040</td>
<td>0.014</td>
</tr>
<tr>
<td>Shingles</td>
<td>3.8</td>
<td>4.40</td>
<td>0.05</td>
<td>0.040</td>
<td>0.014</td>
</tr>
</tbody>
</table>

**Totals** 0.96 0.33

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

**Abbreviations**
- PM = Particulate Matter
- PM10 = Particulate Matter (<10 um)
- PM2.5 = Particulate Matter (<2.5 um)
- PTE = Potential to Emit
- RAP - recycled asphalt pavement
Appendix A.1: Unlimited Emissions Calculations

Material Processing, Handling, Crushing, Screening, and Conveying

Company Name: Hot Mix, Inc.
Source Address: 992 South County Road 800 East, Greensburg, Indiana 47240
Permit Number: F031-43698-00028
Reviewer: Brian Wright
Date Submitted: 11/9/2020

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

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

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

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

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

Maximum Annual Asphalt Production = 2,628,000 tons/yr
Percent Asphalt Cement/Binder (weight %) = 5.0%
Maximum Material Handling Throughput = 2,496,600 tons/yr

<table>
<thead>
<tr>
<th>Type of Activity (tons/yr)</th>
<th>Unlimited/Uncontrolled PTE of PM (tons/yr)</th>
<th>Unlimited/Uncontrolled PTE of PM10 (tons/yr)</th>
<th>Unlimited/Uncontrolled PTE of PM2.5 (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck unloading of materials into storage piles</td>
<td>2.83</td>
<td>1.34</td>
<td>0.20</td>
</tr>
<tr>
<td>Front-end loader dumping of materials into feeder bins</td>
<td>2.83</td>
<td>1.34</td>
<td>0.20</td>
</tr>
<tr>
<td>Conveyor dropping material into dryer/mixer or batch tower</td>
<td>2.83</td>
<td>1.34</td>
<td>0.20</td>
</tr>
<tr>
<td><strong>Total (tons/yr)</strong></td>
<td><strong>8.49</strong></td>
<td><strong>4.02</strong></td>
<td><strong>0.61</strong></td>
</tr>
</tbody>
</table>

Methodology

The percent asphalt cement/binder provided by the source.

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

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

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

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

Material Screening and Conveying (AP-42 Section 11.19.2)

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

<table>
<thead>
<tr>
<th>Operation</th>
<th>Uncontrolled Emission Factor for PM (lbs/ton)*</th>
<th>Uncontrolled Emission Factor for PM10 (lbs/ton)*</th>
<th>Unlimited/Uncontrolled PTE of PM (tons/yr)</th>
<th>Unlimited/Uncontrolled PTE of PM10 (tons/yr)**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crushing</td>
<td>0.0054</td>
<td>0.0024</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Screening</td>
<td>0.025</td>
<td>0.0087</td>
<td>31.21</td>
<td>10.86</td>
</tr>
<tr>
<td>Conveying</td>
<td>0.003</td>
<td>0.0011</td>
<td>3.74</td>
<td>1.37</td>
</tr>
<tr>
<td><strong>Unlimited Potential to Emit (tons/yr)</strong></td>
<td><strong>34.95</strong></td>
<td><strong>12.23</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Methodology

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

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

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

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

**Assumes PM10 = PM2.5

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

#### Unpaved Roads

**Source Address:** 992 South County Road 800 East, Greensburg, Indiana 47240

**Reviewer:** Brian Wright

**Date Submitted:** 11/9/2020

**Unpaved Roads at Industrial Site**

The following calculations determine the amount of emissions created by unpaved roads, based on 8,780 hours of use and AP-42, Ch 13.2.2 (12/2003).

<table>
<thead>
<tr>
<th>Process</th>
<th>Vehicle Type</th>
<th>Maximum Weight of Vehicle (tons)</th>
<th>Maximum Weight of Load (tons)</th>
<th>Total Weight driven per year (kips/yr)</th>
<th>Maximum one-way distance (feet/yr)</th>
<th>Maximum one-way miles (miles/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate/RAP Truck Enter Full</td>
<td>Dump truck (36 CY)</td>
<td>11.0</td>
<td>22.4</td>
<td>39.4</td>
<td>1.16E+06</td>
<td>1.98E+05</td>
</tr>
<tr>
<td>Aggregate/RAP Truck Leave Empty</td>
<td>Dump truck (36 CY)</td>
<td>11.0</td>
<td>17.0</td>
<td>1.15E+05</td>
<td>1.95E+05</td>
<td></td>
</tr>
<tr>
<td>Asphalt Cement/Binder Truck Enter Full</td>
<td>Tanker truck (6000 gal)</td>
<td>12.0</td>
<td>36.0</td>
<td>48.0</td>
<td>3.76E+05</td>
<td>1.82E+05</td>
</tr>
<tr>
<td>Asphalt Cement/Binder Truck Leave Empty</td>
<td>Tanker truck (6000 gal)</td>
<td>12.0</td>
<td>9.0</td>
<td>1.76E+05</td>
<td>4.48E+04</td>
<td></td>
</tr>
<tr>
<td>Fuel Oil truck Enter Full</td>
<td>Tanker truck (8000 gal)</td>
<td>12.0</td>
<td>32.0</td>
<td>44.0</td>
<td>7.36E+05</td>
<td>3.26E+05</td>
</tr>
<tr>
<td>Fuel Oil truck Leave Empty</td>
<td>Tanker truck (8000 gal)</td>
<td>12.0</td>
<td>10.0</td>
<td>7.26E+05</td>
<td>9.41E+04</td>
<td></td>
</tr>
<tr>
<td>Aggregate/RAP Loader Enter Full</td>
<td>Front-end loader (3 CY)</td>
<td>15.0</td>
<td>4.2</td>
<td>19.2</td>
<td>5.90E+05</td>
<td>1.15E+05</td>
</tr>
<tr>
<td>Aggregate/RAP Loader Leave Full</td>
<td>Front-end loader (3 CY)</td>
<td>15.0</td>
<td>18.0</td>
<td>9.98E+05</td>
<td>8.98E+05</td>
<td></td>
</tr>
<tr>
<td>Asphalt Concrete Truck Enter Full</td>
<td>Dump truck (76 CY)</td>
<td>17.0</td>
<td>24.0</td>
<td>41.0</td>
<td>1.10E+06</td>
<td>4.26E+05</td>
</tr>
<tr>
<td>Asphalt Concrete Truck Leave Empty</td>
<td>Dump truck (76 CY)</td>
<td>17.0</td>
<td>9.0</td>
<td>17.0</td>
<td>1.12E+05</td>
<td>1.96E+04</td>
</tr>
</tbody>
</table>

**Total** | | | | | | |

- Average Vehicle Weight Per Trip = 20.3 tons/trip
- Average Miles Per Trip = 0.076 miles/trip

**Unmitigated Emission Factor, \( EF \) = \( k \times 10^{(2y/3)} \) (Equation 1a from AP-42 13.2.2)

\[
EF = \begin{cases} 
4.9 & \text{PM-10} \\
1.5 & \text{PM-2.5} \\
0.15 & \text{PM-2.5} 
\end{cases}
\]

- where \( k = \) constant (AP-42 Table 13.2.2-2)
- where \( y \) = years of rains greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

**Mitigated Emission Factor, \( E_{ext} \) = \( EF \times \left[ 1 - \frac{365 - P}{365} \right] \)

- Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, \( E_{ext} = EF \times \left[ 1 - \frac{365 - P}{365} \right] \)

**Dust Control Efficiency** = 50% (practically)

#### Methodology

Maximum Material Handling Throughput = \( \left[ \text{Annual Asphalt Production Limitation (tons/yr)} \right] \times \left[ 1 - \text{Percent Asphalt Cement/Binder (weight %)} \right] \)

Maximum Weight of Vehicle and Load (tons) = [Maximum Weight of Vehicle (tons)] + [Maximum Weight of Load (tons)]

Maximum trips per year (trip/yr) = [Throughput (tons/yr)] / [Maximum Weight of Load (tons/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 (mile/trip) = SUM[Total Weight driven per year (ton/yr) / SUM[Maximum Weight of Load (tons/yr)]

Maximum one-way distance (feet/yr) = \( \left[ \text{Maximum trips per year (trip/yr)} \right] \times \left[ \text{Average Vehicle Weight Per Trip (ton/trip)} \right] \times \left[ \text{Average Miles Per Trip (mile/trip)} \right] \times \left( \frac{5280}{1} \right) \)

Average No. 2 Fuel Oil Usage = \( \left[ \text{Annual Asphalt Production Limitation (tons/yr)} \right] \times \left[ \text{Percent Asphalt Cement/Binder (weight %)} \right] \times \left[ 1 - \text{Percent Asphalt Cement/Binder (weight %)} \right] \)

PTE = Potential to Emit

PM10 = Particulate Matter (<10 um)

PM2.5 = Particulate Matter (<2.5 um)

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

#### Methodology

Maximum Material Handling Throughput = [Annual Asphalt Production Limitation (tons/yr)] / [Maximum Weight of Load (tons/trip)]

Maximum Weight of Vehicle and Load (tons/yr) = [Maximum Weight of Vehicle (tons/trip)] + [Maximum Weight of Load (tons/trip)]

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

Maximum one-way distance (mi/trip) = [Average Miles Per Trip (mi/trip)] / [Average Miles Per Trip (mi/trip)]

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

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

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

Average Weight of Vehicle Per Trip = [Average Weight of Vehicle Per Trip (tons/yr)] / [Maximum trips per year (trip/yr)]

Average Weight of Load Per Trip = [Average Weight of Load Per Trip (tons/yr)] / [Maximum trips per year (trip/yr)]

Maximum asphalt cement/binder throughput = [Annual asphalt production limitation (tons/yr)] * [Percent asphalt cement/binder (weight %)]

Maximum material handling throughput = [Annual asphalt production limitation (tons/yr)] * [1 - Percent asphalt cement/binder (weight %)]

Unmitigated PTE of PM (tons/yr) = (Maximum one-way miles (miles/yr)) * (Unmitigated Emission Factor (lb/mile)) * (ton/2000 lbs)

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

Controlled PTE (tons/yr) = (Unmitigated PTE (tons/yr)) * (1 - Dust Control Efficiency)

### Process Summary

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Miles Per Trip</td>
<td>0.62</td>
<td>0.62</td>
<td>0.62</td>
<td>0.62</td>
</tr>
<tr>
<td>Maximum Weight of Vehicle (tons/yr)</td>
<td>20.5</td>
<td>20.5</td>
<td>20.5</td>
<td>20.5</td>
</tr>
<tr>
<td>Maximum Weight of Vehicle and Load (tons/yr)</td>
<td>20.5</td>
<td>20.5</td>
<td>20.5</td>
<td>20.5</td>
</tr>
<tr>
<td>Maximum Weight of Load (tons/yr)</td>
<td>20.5</td>
<td>20.5</td>
<td>20.5</td>
<td>20.5</td>
</tr>
<tr>
<td>Maximum one-way distance (mi/trip)</td>
<td>0.62</td>
<td>0.62</td>
<td>0.62</td>
<td>0.62</td>
</tr>
<tr>
<td>Average Weight of Vehicle Per Trip</td>
<td>0.62</td>
<td>0.62</td>
<td>0.62</td>
<td>0.62</td>
</tr>
<tr>
<td>Average Weight of Load Per Trip</td>
<td>0.62</td>
<td>0.62</td>
<td>0.62</td>
<td>0.62</td>
</tr>
<tr>
<td>Maximum trips per year (trip/yr)</td>
<td>0.62</td>
<td>0.62</td>
<td>0.62</td>
<td>0.62</td>
</tr>
<tr>
<td>Maximum one-way miles (miles/yr)</td>
<td>0.62</td>
<td>0.62</td>
<td>0.62</td>
<td>0.62</td>
</tr>
</tbody>
</table>

### Emission Calculations

#### Unmitigated PTE (tons/yr)

<table>
<thead>
<tr>
<th>Process/Type</th>
<th>Maximum Weight of Vehicle (tons/yr)</th>
<th>Maximum Weight of Vehicle and Load (tons/yr)</th>
<th>Maximum Weight of Load (tons/yr)</th>
<th>Average Weight of Vehicle Per Trip</th>
<th>Average Weight of Load Per Trip</th>
<th>Maximum one-way distance (mi/trip)</th>
<th>Maximum trips per year (trip/yr)</th>
<th>Maximum one-way miles (miles/yr)</th>
<th>Unmitigated PTE (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate/RAP Truck Enter Empty Dump truck (16 CY)</td>
<td>17.0</td>
<td>17.0</td>
<td>17.0</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
</tr>
<tr>
<td>Aggregate/RAP Truck Leave Empty Dump truck (16 CY)</td>
<td>17.0</td>
<td>17.0</td>
<td>17.0</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
</tr>
<tr>
<td>Asphalt Concrete Truck Leave Full Dump truck (16 CY)</td>
<td>17.0</td>
<td>17.0</td>
<td>17.0</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
</tr>
</tbody>
</table>

#### Mitigated PTE (tons/yr)

<table>
<thead>
<tr>
<th>Process/Type</th>
<th>Mitigated Weight of Vehicle and Load (tons/yr)</th>
<th>Mitigated Weight of Load (tons/yr)</th>
<th>Mitigated Weight of Vehicle (tons/yr)</th>
<th>Mitigated Weight of Load (tons/yr)</th>
<th>Maximum one-way distance (mi/trip)</th>
<th>Maximum trips per year (trip/yr)</th>
<th>Maximum one-way miles (miles/yr)</th>
<th>Mitigated PTE (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate/RAP Truck Enter Empty Dump truck (16 CY)</td>
<td>17.0</td>
<td>17.0</td>
<td>17.0</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
</tr>
<tr>
<td>Aggregate/RAP Truck Leave Empty Dump truck (16 CY)</td>
<td>17.0</td>
<td>17.0</td>
<td>17.0</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
</tr>
<tr>
<td>Asphalt Concrete Truck Leave Full Dump truck (16 CY)</td>
<td>17.0</td>
<td>17.0</td>
<td>17.0</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
</tr>
</tbody>
</table>

#### Controlled PTE (tons/yr)

<table>
<thead>
<tr>
<th>Process/Type</th>
<th>Controlled Weight of Vehicle and Load (tons/yr)</th>
<th>Controlled Weight of Load (tons/yr)</th>
<th>Controlled Weight of Vehicle (tons/yr)</th>
<th>Controlled Weight of Load (tons/yr)</th>
<th>Controlled PTE (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate/RAP Truck Enter Empty Dump truck (16 CY)</td>
<td>17.0</td>
<td>17.0</td>
<td>17.0</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
</tr>
<tr>
<td>Aggregate/RAP Truck Leave Empty Dump truck (16 CY)</td>
<td>17.0</td>
<td>17.0</td>
<td>17.0</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
</tr>
<tr>
<td>Asphalt Concrete Truck Leave Full Dump truck (16 CY)</td>
<td>17.0</td>
<td>17.0</td>
<td>17.0</td>
<td>1.1E+05</td>
<td>1.1E+05</td>
</tr>
</tbody>
</table>

### 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**

Source Address: 992 South County Road 800 East, Greensburg, Indiana 47240

Date Submitted: 11/9/2020

Company Name: Hot Mix, Inc.

Permit Number: F031-43689-00028

Reviewer: Brian Wright
## Cold Mix Asphalt Production and Stockpiles

### Company Name:
Hot Mix, Inc.

### Source Address:
992 South County Road 800 East, Greensburg, Indiana 47240

### Permit Number:
F031-43688-00028

### Reviewer:
Brian Wright

### Date Submitted:
11/9/2020

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 =
2,628,000 tons/yr

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

### Maximum Asphalt Cement/Binder Throughput =
131,400 tons/yr

### Volatile Organic Compounds

<table>
<thead>
<tr>
<th>Cut back asphalt rapid cure (assuming gasoline or naphtha solvent)</th>
<th>Maximum weight % of VOC solvent in binder</th>
<th>Weight % VOC solvent in binder that evaporates</th>
<th>Maximum VOC Solvent Usage (tons/yr)</th>
<th>PTE of VOC (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25.3%</td>
<td>95.0%</td>
<td>33,244.2</td>
<td>31,582.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cut back asphalt medium cure (assuming kerosene solvent)</th>
<th>Maximum weight % of VOC solvent in binder</th>
<th>Weight % VOC solvent in binder that evaporates</th>
<th>Maximum VOC Solvent Usage (tons/yr)</th>
<th>PTE of VOC (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>28.6%</td>
<td>70.0%</td>
<td>37,580.4</td>
<td>26,306.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cut back asphalt slow cure (assuming fuel oil solvent)</th>
<th>Maximum weight % of VOC solvent in binder</th>
<th>Weight % VOC solvent in binder that evaporates</th>
<th>Maximum VOC Solvent Usage (tons/yr)</th>
<th>PTE of VOC (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20.0%</td>
<td>25.0%</td>
<td>26,280.0</td>
<td>6,570.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)</th>
<th>Maximum weight % of VOC solvent in binder</th>
<th>Weight % VOC solvent in binder that evaporates</th>
<th>Maximum VOC Solvent Usage (tons/yr)</th>
<th>PTE of VOC (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15.0%</td>
<td>46.4%</td>
<td>19,710.0</td>
<td>850.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other asphalt with solvent binder</th>
<th>Maximum weight % of VOC solvent in binder</th>
<th>Weight % VOC solvent in binder that evaporates</th>
<th>Maximum VOC Solvent Usage (tons/yr)</th>
<th>PTE of VOC (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25.9%</td>
<td>2.5%</td>
<td>34,032.6</td>
<td>850.8</td>
</tr>
</tbody>
</table>

### Minimum EPA PTE of VOC =
31,582.0

### 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) =
8,237.75

### PTE of Single HAP (tons/yr) =
2,842.38

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

<table>
<thead>
<tr>
<th>Volatile Organic HAP</th>
<th>CAS#</th>
<th>Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents</th>
</tr>
</thead>
</table>
| 1,3-Butadiene        | 106-90-0 | Gasoline: 3.70E-5%
|                      |        | Kerosene: 2.40%
|                      |        | Diesel: 5.0E-5%
| 2,2,4-Trimethylpentane| 546-84-1 | Gasoline: 2.40%
|                      |        | Kerosene: 1.90%
|                      |        | Diesel: 1.20E-4%
| Aacenaphthene        | 93-32-9 | Gasoline: 4.70E-5%
|                      |        | Kerosene: 5.0E-5%
|                     |        | Diesel: 2.80E-5%
| Aacenaphthylene      | 208-06-8 | Gasoline: 4.50E-5%
|                      |        | Kerosene: 6.0E-5%
| Anthracene           | 120-12-7 | Gasoline: 1.20E-6%
|                      |        | Kerosene: 5.0E-5%
|                      |        | Diesel: 2.80E-6%
| Benzene              | 71-43-2 | Gasoline: 1.90%
|                      |        | Kerosene: 2.90E-4%
|                     |        | Diesel: 5.0E-5%
| Benzo(a)anthracene   | 56-55-3 | Gasoline: 9.60E-7%
|                      |        | Kerosene: 4.50E-7%
|                     |        | Diesel: 5.0E-5%
| Benzo(a)pyrene       | 50-32-8 | Gasoline: 2.20E-6%
|                      |        | Kerosene: 4.40E-5%
|                     |        | Diesel: 2.10E-6%
| Benzo(g,h,i)perylene | 191-24-2 | Gasoline: 1.20E-7%
|                      |        | Kerosene: 5.70E-8%
| Biphenyl             | 92-52-4 | Gasoline: 6.30E-4%
|                      |        | Kerosene: 7.20E-5%
| Chrysene             | 218-01-9 | Gasoline: 4.50E-5%
|                      |        | Kerosene: 4.0E-5%
| Ethylbenzene         | 100-41-4 | Gasoline: 1.70%
|                      |        | Kerosene: 0.07%
| Fluoranthene         | 206-44-0 | Gasoline: 7.10E-6%
|                      |        | Kerosene: 1.40E-5%
|                      |        | Diesel: 1.40E-5%
| Fluorene             | 86-73-7 | Gasoline: 4.20E-5%
|                      |        | Kerosene: 4.0E-5%
|                     |        | Diesel: 1.90E-4%
| Indeno(1,2,3-cd)pyrene| 163-38-5 | Gasoline: 1.0E-4%
|                      |        | Kerosene: 1.0E-4%
| Methyl-tert-butylether| 1634-04-4 | Gasoline: 0.33%
|                      |        | Kerosene: 0.33%
| Naphthalene          | 91-20-3 | Gasoline: 0.20%
|                      |        | Kerosene: 0.20%
|                      |        | Diesel: 0.22%
|                      |        | 2,4-Din: 4.20E-5%
| n-Hexane             | 110-54-3 | Gasoline: 2.60%
|                      |        | Kerosene: 1.0E-4%
| Phenanthrene         | 85-01-8 | Gasoline: 8.60E-6%
|                      |        | Kerosene: 7.90E-4%
|                      |        | Diesel: 2.10E-4%
| Pyrene               | 129-20-0 | Gasoline: 2.40E-6%
|                      |        | Kerosene: 2.90E-5%
|                      |        | Diesel: 2.30E-5%
| Toluene              | 108-88-3 | Gasoline: 8.10%
|                      |        | Kerosene: 0.18%
|                      |        | Diesel: 8.20E-4%
| Total Xylenes        | 1330-20-7 | Gasoline: 9.00%
|                      |        | Kerosene: 0.50%
|                      |        | Diesel: 0.23%

### Total Organic HAPs

<table>
<thead>
<tr>
<th>Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents</th>
</tr>
</thead>
<tbody>
<tr>
<td>26.08%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xylenes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naphthalene</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xylenes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xylenes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chrysene</td>
</tr>
</tbody>
</table>

### Methodology

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

Maximum VOC Solvent Usage (tons/yr) = [Maximum Asphalt Cement/Binder Throughput (tons/yr)] * [Maximum Weight % of VOC Solvent in Binder]

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

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

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


### Abbreviations

VOC = Volatile Organic Compounds

PTE = Potential to Emit
Appendix A.1: Unlimited Emissions Calculations

Gasoline Fuel Transfer and Dispensing Operation

Company Name: Hot Mix, Inc.
Source Address: 992 South County Road 800 East, Greensburg, Indiana 47240
Permit Number: F031-43698-00028
Reviewer: Brian Wright
Date Submitted: 11/9/2020

Gasoline Throughput = 0 gallons/day = 0 kgal/yr

Volatile Organic Compounds

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>Emission Factor (lb/kgal of throughput)</th>
<th>PTE of VOC (tons/yr)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filling storage tank (balanced submerged filling)</td>
<td>0.3</td>
<td>0</td>
</tr>
<tr>
<td>Tank breathing and emptying</td>
<td>1.0</td>
<td>0</td>
</tr>
<tr>
<td>Vehicle refueling (displaced losses - controlled)</td>
<td>1.1</td>
<td>0</td>
</tr>
<tr>
<td>Spillage</td>
<td>0.7</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>0</strong></td>
</tr>
</tbody>
</table>

Hazardous Air Pollutants

<table>
<thead>
<tr>
<th></th>
<th>Worst Case Total HAP Content of VOC solvent (weight %)* = 26.08%</th>
<th>Worst Case Single HAP Content of VOC solvent (weight %)* = 9.0% Xylenes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited PTE of Total HAPs (tons/yr) =</td>
<td>0</td>
<td>Xylenes</td>
</tr>
<tr>
<td>Limited PTE of Single HAP (tons/yr) =</td>
<td>0</td>
<td>Xylenes</td>
</tr>
</tbody>
</table>

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)]


Abbreviations

VOC = Volatile Organic Compounds
PTE = Potential to Emit
## Asbestos Plant Limitations - Drum Mix

<table>
<thead>
<tr>
<th>Maximum Hourly Asphalt Production</th>
<th>300 ton/hr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Asphalt Production Limitation</td>
<td>600,000 ton/yr</td>
</tr>
<tr>
<td>Blast Furnace Slag Usage Limitation</td>
<td>60,000 ton/yr</td>
</tr>
<tr>
<td>Steel Slag Usage Limitation</td>
<td>363 MNSO/yr</td>
</tr>
<tr>
<td>No. 2 Fuel Oil Limitation</td>
<td>1,800,419 gal/yr, and 0.50 % sulfur</td>
</tr>
<tr>
<td>No. 4 Fuel Oil Limitation</td>
<td>0 gal/yr, and 0 % sulfur</td>
</tr>
<tr>
<td>Residual (No. 5 or No. 6) Fuel Oil Limitation</td>
<td>0 gal/yr, and 0 gr/100 ft³ sulfur</td>
</tr>
<tr>
<td>Butane Limitation</td>
<td>0 gal/yr, and 0 gr/100 ft³ sulfur</td>
</tr>
<tr>
<td>Used/Waste Oil Limitation</td>
<td>1,159,453 gal/yr, and 1.00 % sulfur, 0.200 % chlorine, 0.010 % lead</td>
</tr>
<tr>
<td>PM Dryer/Mixer Limitation</td>
<td>0.282 lb/ton of asphalt production</td>
</tr>
<tr>
<td>PM10 Dryer/Mixer Limitation</td>
<td>0.123 lb/ton of asphalt production</td>
</tr>
<tr>
<td>PM2.5 Dryer/Mixer Limitation</td>
<td>0.148 lb/ton of asphalt production</td>
</tr>
<tr>
<td>VOC Dryer/Mixer Limitation</td>
<td>0.012 lb/ton of asphalt production</td>
</tr>
<tr>
<td>CO Dryer/Mixer Limitation</td>
<td>0.019 lb/ton of asphalt production</td>
</tr>
<tr>
<td>Blast Furnace Slag SO2 Dryer/Mixer Limitation</td>
<td>0.740 lb/ton of slag processed</td>
</tr>
<tr>
<td>Steel Slag SO2 Dryer/Mixer Limitation</td>
<td>0.0014 lb/ton of slag processed</td>
</tr>
<tr>
<td>Cold Mix Asphalt VOC Usage Limitation</td>
<td>13.79 tons/yr</td>
</tr>
</tbody>
</table>
| HCl Limitation | 13.2 lb/kgal

### Limited/Controlled Emissions

<table>
<thead>
<tr>
<th>Process Description</th>
<th>Limited/Controlled Potential Emissions (tons/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PM</td>
</tr>
<tr>
<td>Dryer Fuel Combustion (worst case)</td>
<td>37.10</td>
</tr>
<tr>
<td>Dryer/Mixer (Process)</td>
<td>84.63</td>
</tr>
<tr>
<td>Dryer/Mixer Slag Processing</td>
<td>-</td>
</tr>
<tr>
<td>Hot Oil Heater Fuel Combustion (worst case)</td>
<td>0.25</td>
</tr>
<tr>
<td>Worst Case Emissions</td>
<td>84.88</td>
</tr>
</tbody>
</table>

### Fugitive Emissions

<table>
<thead>
<tr>
<th>Process Description</th>
<th>Limited/Controlled Potential Emissions (tons/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PM</td>
</tr>
<tr>
<td>Asphalt Load-Out, Silo Filling, On-Site Yard</td>
<td>0.33</td>
</tr>
<tr>
<td>Material Storage Piles</td>
<td>0.96</td>
</tr>
<tr>
<td>Material Processing and Handling</td>
<td>1.94</td>
</tr>
<tr>
<td>Material Screening and Conveying</td>
<td>7.98</td>
</tr>
<tr>
<td>Unpaved and Paved Roads (worst case)</td>
<td>28.42</td>
</tr>
<tr>
<td>Used/Waste Oil</td>
<td>-</td>
</tr>
<tr>
<td>Gasoline Fuel Transfer and Dispensing</td>
<td>3.50</td>
</tr>
<tr>
<td>Volatile Organic Liquid Storage Vessels</td>
<td>-</td>
</tr>
<tr>
<td>Total Fugitive Emissions</td>
<td>39.62</td>
</tr>
</tbody>
</table>

### Totals Limited/Controlled Emissions

<table>
<thead>
<tr>
<th>Process Description</th>
<th>Limited/Controlled Potential Emissions (tons/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PM</td>
</tr>
<tr>
<td>Asphalt Plant Limitations - Drum Mix</td>
<td>124.50</td>
</tr>
</tbody>
</table>

*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.
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

- 2,000 tons/hr

#### Annual Asphalt Production Limitation

- 600,000 tons/yr

#### Natural Gas Limitation

- 363 MMCF/yr

#### No. 2 Fuel Oil Limitation

- 1,180,413 gal/yr, and 0.50% sulfur

#### No. 4 Fuel Oil Limitation

- 0 gal/yr, and 0% sulfur

#### Residual (No. 5 or No. 6) Fuel Oil Limitation

- 0 gal/yr, and 0% sulfur

#### Propane Limitation

- 0 gal/yr, and 0% sulfur

#### Butane Limitation

- 0 gal/yr, and 0% sulfur

#### Used/Waste Oil Limitation

- 1,159,453 gal/yr, and 0.75% sulfur

### Limited Emissions

#### Emission Factor (units)

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>Natural Gas (lb/MMCF)</th>
<th>No. 2 Fuel Oil (lb/gal)</th>
<th>No. 4 Fuel Oil (lb/gal)</th>
<th>Residual (No. 5 or No. 6) Fuel Oil (lb/gal)</th>
<th>Propane (lb/gal)</th>
<th>Butane (lb/gal)</th>
<th>Used/Waste Oil (lb/gal)</th>
<th>Worse Case Fuel (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO</td>
<td>0.50</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.60</td>
<td>0.85</td>
<td>0</td>
<td>0.010</td>
</tr>
<tr>
<td>NOx</td>
<td>0.064</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.85</td>
<td>0</td>
<td>0.010</td>
</tr>
<tr>
<td>SO2</td>
<td>0.064</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.85</td>
<td>0</td>
<td>0.010</td>
</tr>
<tr>
<td>PM10</td>
<td>1.13</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.85</td>
<td>0</td>
<td>0.010</td>
</tr>
<tr>
<td>PAH</td>
<td>0.010</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.85</td>
<td>0</td>
<td>0.010</td>
</tr>
<tr>
<td>VOC</td>
<td>0.010</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.85</td>
<td>0</td>
<td>0.010</td>
</tr>
<tr>
<td>PM10</td>
<td>1.13</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.85</td>
<td>0</td>
<td>0.020</td>
</tr>
<tr>
<td>PM10</td>
<td>1.13</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.85</td>
<td>0</td>
<td>0.020</td>
</tr>
</tbody>
</table>

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

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

#### Methodology

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

#### Abbreviations

- PM = Particulate Matter
- HAP = Hazardous Air Pollutant
- PM10 = Particulate Matter (<10 µm)
- HC = Hydrogen Chloride
- SO2 = Sulfur Dioxide
- PAH = Polyaromatic Hydrocarbon
- NOx = Nitrogen Oxides
- VOC = Volatile Organic Compounds
- CO = Carbon Monoxide

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*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.
### The following calculations determine the limited emissions from the aggregate drying/mixing process:

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

- **Maximum Hourly Asphalt Production**: 300 ton/hr
- **Annual Asphalt Production Limitation**: 600,000 ton/yr
- **PM Dryer/Mixer Limitation**: 0.282 lb/ton of asphalt production
- **PM10 Dryer/Mixer Limitation**: 0.123 lb/ton of asphalt production
- **PM2.5 Dryer/Mixer Limitation**: 0.148 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

#### 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.

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>Emission Factor or Limitation (lb/ton)</th>
<th>Natural Gas</th>
<th>No. 2 Fuel Oil</th>
<th>Waste Oil</th>
<th>Natural Gas</th>
<th>No. 2 Fuel Oil</th>
<th>Waste Oil</th>
<th>Worse Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM*</td>
<td>0.282</td>
<td>0.282</td>
<td>0.282</td>
<td>84.6</td>
<td>84.6</td>
<td>84.6</td>
<td>84.6</td>
<td>84.6</td>
</tr>
<tr>
<td>PM10*</td>
<td>0.123</td>
<td>0.123</td>
<td>0.123</td>
<td>37.0</td>
<td>37.0</td>
<td>37.0</td>
<td>37.0</td>
<td>37.0</td>
</tr>
<tr>
<td>PM2.5*</td>
<td>0.148</td>
<td>0.148</td>
<td>0.148</td>
<td>44.3</td>
<td>44.3</td>
<td>44.3</td>
<td>44.3</td>
<td>44.3</td>
</tr>
<tr>
<td>SO2**</td>
<td>0.003</td>
<td>0.011</td>
<td>0.058</td>
<td>1.0</td>
<td>3.3</td>
<td>17.4</td>
<td>17.4</td>
<td>**</td>
</tr>
<tr>
<td>NOx**</td>
<td>0.026</td>
<td>0.055</td>
<td>0.055</td>
<td>7.8</td>
<td>16.5</td>
<td>16.5</td>
<td>16.5</td>
<td>16.5</td>
</tr>
<tr>
<td>VOC**</td>
<td>0.032</td>
<td>0.032</td>
<td>0.032</td>
<td>9.6</td>
<td>9.6</td>
<td>9.6</td>
<td>9.6</td>
<td>9.6</td>
</tr>
<tr>
<td>CO***</td>
<td>0.130</td>
<td>0.130</td>
<td>0.130</td>
<td>39.0</td>
<td>39.0</td>
<td>39.0</td>
<td>39.0</td>
<td>39.0</td>
</tr>
</tbody>
</table>

#### Abstracted HAPs

**Abbreviations**
- **VOC**: Volatile Organic Compounds
- **HAP**: Hazardous Air Pollutant
- **HCl**: Hydrogen Chloride
- **PAH**: Polyaromatic Hydrocarbon
- **SO2**: Sulfur Dioxide

---

**Methodology**

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


- Natural gas, No. 2 fuel oil, and waste oil represent the worst possible emissions scenario. AP-42 did not provide emission factors for any other fuels.  
- **PM**, **PM10**, and **PM2.5** AP-42 emission factors are for 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.

**Abbreviations**
- **VOC**: Volatile Organic Compounds
- **HAP**: Hazardous Air Pollutant
- **HCl**: Hydrogen Chloride
- **PAH**: Polyaromatic Hydrocarbon
- **SO2**: Sulfur Dioxide

---

**Total HAPs**: 3.20

**Worst Single HAP**: 0.93 (formaldehyde)
Appendix A.2: Limited Emissions Calculations
Dryer/Mixer Slag Processing

Company Name: Hot Mix, Inc.
Source Address: 992 South County Road 800 East, Greensburg, Indiana 47240
Permit Number: F031-43698-00028
Reviewer: Brian Wright
Date Submitted: 11/9/2020

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

Limited Blast Furnace Slag Usage = 60,000 ton/yr  1.50 % sulfur
Limited Annual Steel Slag Usage = 600,000 ton/yr  1.50 % sulfur

<table>
<thead>
<tr>
<th>Type of Slag</th>
<th>SO2 Emission Factor (lb/ton)*</th>
<th>Limited Potential to Emit SO2 (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blast Furnace Slag</td>
<td>0.7400</td>
<td>22.20</td>
</tr>
<tr>
<td>Steel Slag</td>
<td>0.0014</td>
<td>0.42</td>
</tr>
</tbody>
</table>

Methodology

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

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

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

Abbreviations

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

### Hot Oil Heater

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

**Company Name:** Hot Mix, Inc.  
**Source Address:** 992 South County Road 800 East, Greensburg, Indiana 47240  
**Permit Number:** F031-43698-00028  
**Reviewer:** Brian Wright  
**Date Submitted:** 11/9/2020

Maximum Hot Oil Heater Fuel Input Rate = 4.00 MMBtu/hr  
Natural Gas Usage = 35 MMCF/yr  
No. 2 Fuel Oil Usage = 250,296 gal/yr, and 0.50% sulfur

### Unlimited/Uncontrolled Emissions

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>Natural Gas (lb/MMCF)</th>
<th>No. 2 Fuel Oil (lb/kgal)</th>
<th>Unlimited/Uncontrolled Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM</td>
<td>1.9</td>
<td>2.0</td>
<td>0.033</td>
</tr>
<tr>
<td>PM2.5</td>
<td>7.6</td>
<td>3.3</td>
<td>0.133</td>
</tr>
<tr>
<td>SO2</td>
<td>0.6</td>
<td>71.0</td>
<td>0.011</td>
</tr>
<tr>
<td>NOx</td>
<td>100</td>
<td>20.0</td>
<td>1.752</td>
</tr>
<tr>
<td>VOC</td>
<td>5.5</td>
<td>0.20</td>
<td>0.096</td>
</tr>
<tr>
<td>CO</td>
<td>84</td>
<td>5.0</td>
<td>1.472</td>
</tr>
</tbody>
</table>

#### Hazardous Air Pollutant

<table>
<thead>
<tr>
<th>Criteria Pollutant</th>
<th>Emission Factor (units)</th>
<th>Unlimited/Uncontrolled Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic</td>
<td>2.0E-04</td>
<td>3.6E-04</td>
</tr>
<tr>
<td>Beryllium</td>
<td>1.2E-04</td>
<td>4.2E-04</td>
</tr>
<tr>
<td>Cadmium</td>
<td>1.1E-03</td>
<td>4.2E-04</td>
</tr>
<tr>
<td>Chromium</td>
<td>1.4E-03</td>
<td>4.2E-04</td>
</tr>
<tr>
<td>Cobalt</td>
<td>8.4E-05</td>
<td>1.5E-06</td>
</tr>
<tr>
<td>Lead</td>
<td>5.0E-04</td>
<td>1.3E-03</td>
</tr>
<tr>
<td>Manganese</td>
<td>3.8E-04</td>
<td>8.4E-04</td>
</tr>
<tr>
<td>Mercury</td>
<td>2.6E-04</td>
<td>4.2E-04</td>
</tr>
<tr>
<td>Nickel</td>
<td>2.1E-03</td>
<td>4.2E-04</td>
</tr>
<tr>
<td>Selenium</td>
<td>2.4E-05</td>
<td>2.1E-03</td>
</tr>
<tr>
<td>Benzene</td>
<td>2.1E-03</td>
<td>3.1E-05</td>
</tr>
<tr>
<td>Dichlorobenzene</td>
<td>1.2E-03</td>
<td>2.1E-05</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>7.5E-02</td>
<td>6.1E-02</td>
</tr>
<tr>
<td>Hexane</td>
<td>1.8E+00</td>
<td>0.03</td>
</tr>
<tr>
<td>Phenol</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Toluene</td>
<td>3.4E-03</td>
<td>6.0E-05</td>
</tr>
<tr>
<td>Total HAPs</td>
<td></td>
<td>negl</td>
</tr>
<tr>
<td>Polycyclic Organic Matter</td>
<td>3.30E-03</td>
<td>4.13E-04</td>
</tr>
</tbody>
</table>

**Total HAPs** = 3.3E-02 8.9E-03 0.041

### 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 lb]

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
- **CO** = Carbon Monoxide
- **PM10** = Particulate Matter (<10 um)
- **HAP** = Hazardous Air Pollutant
- **SO2** = Sulfur Dioxide
- **HCl** = Hydrogen Chloride
- **NOx** = Nitrous Oxides
- **PAH** = Polycromatic Hydrocarbon
- **VOC** = Volatile Organic Compounds

---

**Note:** The above calculations and data are based on provided information and are subject to verification and updates.
Appendix A.2: Limited Emissions Calculations
Asphalt Load-Out, Silo Filling, and Yard Emissions

Company Name: Hot Mix, Inc.
Source Address: 992 South County Road 800 East, Greensburg, Indiana 47240
Permit Number: F031-43698-00028
Reviewer: Brian Wright
Date Submitted: 11/9/2020

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.

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

**Emission Factor (lb/ton asphalt)**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Load-Out</th>
<th>Silo Filling</th>
<th>On-Site Yard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total PM*</td>
<td>0.000181</td>
<td>0.00141(-V)e^((0.0251)(T+460)-20.43)</td>
<td></td>
</tr>
<tr>
<td>Organic PM</td>
<td>0.00141(-V)e^((0.0251)(T+460)-20.43)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOC</td>
<td>0.0172(-V)e^((0.0251)(T+460)-20.43)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CO</td>
<td>0.00558(-V)e^((0.0251)(T+460)-20.43)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Load-Out</th>
<th>Silo Filling</th>
<th>On-Site Yard</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total PM*</td>
<td>0.16</td>
<td>0.18</td>
<td>NA</td>
<td>0.33</td>
</tr>
<tr>
<td>Organic PM</td>
<td>0.10</td>
<td>0.076</td>
<td>NA</td>
<td>0.18</td>
</tr>
<tr>
<td>TOC</td>
<td>1.25</td>
<td>3.66</td>
<td>0.330</td>
<td>5.2</td>
</tr>
</tbody>
</table>

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

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

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


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

Total PM/PM10 EF = 0.000181 + 0.00141(-V)e^((0.0251)(T+460)-20.43)
Organic PM EF = 0.00141(-V)e^((0.0251)(T+460)-20.43)
TOC EF = 0.0172(-V)e^((0.0251)(T+460)-20.43)
CO EF = 0.00558(-V)e^((0.0251)(T+460)-20.43)

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

PM/PM10 EF = 0.000332 + 0.00105(-V)e^((0.0251)(T+460)-20.43)
Organic PM EF = 0.00105(-V)e^((0.0251)(T+460)-20.43)
TOC EF = 0.0504(-V)e^((0.0251)(T+460)-20.43)
CO EF = 0.00488(-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
## Organic Particulate-Based Compounds (Table 11.1-15)

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>CASRN</th>
<th>Category</th>
<th>HAP Type</th>
<th>Source</th>
<th>Speciation Profile</th>
<th>Limited Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Load-out and Onsite Yard (% by weight of Total Organic PM)</td>
<td>Silo Filling and Asphalt Storage Tank (% by weight of Total Organic PM)</td>
</tr>
<tr>
<td>PAH HAPs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acenaphthene</td>
<td>83-32-9</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.26%</td>
<td>0.47%</td>
</tr>
<tr>
<td>Acenaphthylene</td>
<td>208-96-8</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.028%</td>
<td>0.014%</td>
</tr>
<tr>
<td>Anthracene</td>
<td>120-12-7</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.07%</td>
<td>0.13%</td>
</tr>
<tr>
<td>Benzo(a)anthracene</td>
<td>56-55-3</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.019%</td>
<td>0.056%</td>
</tr>
<tr>
<td>Benzo(b)fluoranthene</td>
<td>205-99-2</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.0076%</td>
<td>0</td>
</tr>
<tr>
<td>Benzo(k)fluoranthene</td>
<td>207-08-9</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.0022%</td>
<td>0</td>
</tr>
<tr>
<td>Benzo(g,h,i)perylene</td>
<td>191-24-2</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.0019%</td>
<td>0</td>
</tr>
<tr>
<td>Benzo(a)pyrene</td>
<td>50-32-6</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.0025%</td>
<td>0</td>
</tr>
<tr>
<td>Benzo(b)pyrene</td>
<td>192-97-2</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.0078%</td>
<td>0.0095%</td>
</tr>
<tr>
<td>Chrysene</td>
<td>218-01-9</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.103%</td>
<td>0.21%</td>
</tr>
<tr>
<td>Dibenzo(a,h)anthracene</td>
<td>53-70-3</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.00037%</td>
<td>0</td>
</tr>
<tr>
<td>Fluoranthene</td>
<td>206-44-0</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.03%</td>
<td>0.15%</td>
</tr>
<tr>
<td>Fluorene</td>
<td>96-73-7</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.077%</td>
<td>1.01%</td>
</tr>
<tr>
<td>Indeno(1,2,3-cd)pyrene</td>
<td>193-39-5</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.00047%</td>
<td>0</td>
</tr>
<tr>
<td>2-Methylnaphthalene</td>
<td>91-57-6</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.00047%</td>
<td>0</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>2.8%</td>
<td>5.27%</td>
</tr>
<tr>
<td>Phenanthrene</td>
<td>85-01-8</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.0022%</td>
<td>0.003%</td>
</tr>
<tr>
<td>Pyrene</td>
<td>129-00-0</td>
<td>PM/HAP</td>
<td>POM</td>
<td>Organic PM</td>
<td>0.015%</td>
<td>0.44%</td>
</tr>
<tr>
<td>Total PAH HAPs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.006</td>
<td>0.009</td>
</tr>
<tr>
<td>Other semi-volatile HAPs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phenol</td>
<td></td>
<td>PM/HAP</td>
<td>---</td>
<td>Organic PM</td>
<td>1.18%</td>
<td>0</td>
</tr>
</tbody>
</table>

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

**Methodology**

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


**Abbreviations**

PM = Particulate Matter

HAP = Hazardous Air Pollutant

POM = Polycyclic Organic Matter
### Appendix A.2: Limited Emissions Calculations

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

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>CASRN</th>
<th>Category</th>
<th>HAP Type</th>
<th>Source</th>
<th>Speciation Profile</th>
<th>Limited Potential to Emit (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Load-out and Onsite Yard (% by weight of TOC)</td>
<td>Silo Filling and Asphalt Storage Tank (% by weight of TOC)</td>
</tr>
<tr>
<td><strong>VOC</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>94%</td>
<td>100%</td>
</tr>
<tr>
<td>non-VOC/non-HAPS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Methane</td>
<td>74-82-8</td>
<td>non-VOC/non-HAP</td>
<td></td>
<td>TOC</td>
<td>6.50%</td>
<td>0.26%</td>
</tr>
<tr>
<td>Acetone</td>
<td>67-64-1</td>
<td>non-VOC/non-HAP</td>
<td></td>
<td>TOC</td>
<td>0.046%</td>
<td>0.055%</td>
</tr>
<tr>
<td>Ethylene</td>
<td>74-85-1</td>
<td>non-VOC/non-HAP</td>
<td></td>
<td>TOC</td>
<td>0.71%</td>
<td>1.10%</td>
</tr>
<tr>
<td><strong>Total non-VOC/non-HAPS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7.30%</td>
<td>1.40%</td>
</tr>
<tr>
<td>Volatile organic HAPs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Benzene</td>
<td>71-43-2</td>
<td>VOC/HAP</td>
<td></td>
<td>TOC</td>
<td>0.052%</td>
<td>0.032%</td>
</tr>
<tr>
<td>Bromomethane</td>
<td>74-83-9</td>
<td>VOC/HAP</td>
<td></td>
<td>TOC</td>
<td>0.0096%</td>
<td>0.049%</td>
</tr>
<tr>
<td>2-Butanone</td>
<td>78-93-3</td>
<td>VOC/HAP</td>
<td></td>
<td>TOC</td>
<td>0.049%</td>
<td>0.039%</td>
</tr>
<tr>
<td>Carbon Disulfide</td>
<td>75-15-0</td>
<td>VOC/HAP</td>
<td></td>
<td>TOC</td>
<td>0.013%</td>
<td>0.016%</td>
</tr>
<tr>
<td>Chloroethene</td>
<td>75-00-3</td>
<td>VOC/HAP</td>
<td></td>
<td>TOC</td>
<td>0.0001%</td>
<td>0.004%</td>
</tr>
<tr>
<td>Chloromethane</td>
<td>74-87-3</td>
<td>VOC/HAP</td>
<td></td>
<td>TOC</td>
<td>0.015%</td>
<td>0.023%</td>
</tr>
<tr>
<td>Cumene</td>
<td>92-82-8</td>
<td>VOC/HAP</td>
<td></td>
<td>TOC</td>
<td>0.11%</td>
<td>0</td>
</tr>
<tr>
<td>Ethybenzene</td>
<td>100-41-4</td>
<td>VOC/HAP</td>
<td></td>
<td>TOC</td>
<td>0.28%</td>
<td>0.038%</td>
</tr>
<tr>
<td>Formaldehyde</td>
<td>50-00-0</td>
<td>VOC/HAP</td>
<td></td>
<td>TOC</td>
<td>0.088%</td>
<td>0.69%</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>100-54-3</td>
<td>VOC/HAP</td>
<td></td>
<td>TOC</td>
<td>0.15%</td>
<td>0.10%</td>
</tr>
<tr>
<td>Isocetane</td>
<td>540-84-1</td>
<td>VOC/HAP</td>
<td></td>
<td>TOC</td>
<td>0.0018%</td>
<td>0.00031%</td>
</tr>
<tr>
<td>Methylene Chloride</td>
<td>75-09-2</td>
<td>non-VOC/HAP</td>
<td></td>
<td>TOC</td>
<td>0</td>
<td>0.00027%</td>
</tr>
<tr>
<td>MTBE</td>
<td>1634-04-4</td>
<td>VOC/HAP</td>
<td></td>
<td>TOC</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Styrene</td>
<td>100-42-5</td>
<td>VOC/HAP</td>
<td></td>
<td>TOC</td>
<td>0.0073%</td>
<td>0.0054%</td>
</tr>
<tr>
<td>Tetrachloroethene</td>
<td>127-18-4</td>
<td>non-VOC/HAP</td>
<td></td>
<td>TOC</td>
<td>0.0077%</td>
<td>0</td>
</tr>
<tr>
<td>Toluene</td>
<td>100-88-3</td>
<td>VOC/HAP</td>
<td></td>
<td>TOC</td>
<td>0.21%</td>
<td>0.062%</td>
</tr>
<tr>
<td>1,1,1-Trichloroethane</td>
<td>71-55-6</td>
<td>VOC/HAP</td>
<td></td>
<td>TOC</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Trichloroethene</td>
<td>79-01-6</td>
<td>VOC/HAP</td>
<td></td>
<td>TOC</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Trichlorofluoromethane</td>
<td>75-69-4</td>
<td>VOC/HAP</td>
<td></td>
<td>TOC</td>
<td>0.0013%</td>
<td>0</td>
</tr>
<tr>
<td>m/p-Xylene</td>
<td>1330-20-7</td>
<td>VOC/HAP</td>
<td></td>
<td>TOC</td>
<td>0.41%</td>
<td>0.20%</td>
</tr>
<tr>
<td>o-Xylene</td>
<td>95-47-6</td>
<td>VOC/HAP</td>
<td></td>
<td>TOC</td>
<td>0.08%</td>
<td>0.057%</td>
</tr>
<tr>
<td><strong>Total volatile organic HAPs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.50%</td>
<td>1.30%</td>
</tr>
</tbody>
</table>

**Methodology**

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


**Abbreviations**

TOC = Total Organic Compounds

HAP = Hazardous Air Pollutant

VOC = Volatile Organic Compound

MTBE = Methyl tert butyl ether
Note: Since the emissions from the storage piles are minimal, the limited emissions are equal to the unlimited emissions.

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

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

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

### Material Storage Piles

<table>
<thead>
<tr>
<th>Material</th>
<th>Silt Content (wt %)*</th>
<th>Emission Factor (lb/acre/day)</th>
<th>Maximum Anticipated Pile Size (acres)**</th>
<th>PTE of PM (tons/yr)</th>
<th>PTE of PM10/PM2.5 (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand</td>
<td>2.6</td>
<td>3.01</td>
<td>0.50</td>
<td>0.275</td>
<td>0.096</td>
</tr>
<tr>
<td>Limestone</td>
<td>1.6</td>
<td>1.85</td>
<td>1.00</td>
<td>0.338</td>
<td>0.118</td>
</tr>
<tr>
<td>RAP</td>
<td>0.5</td>
<td>0.58</td>
<td>0.90</td>
<td>0.095</td>
<td>0.033</td>
</tr>
<tr>
<td>Gravel</td>
<td>1.6</td>
<td>1.85</td>
<td>0.50</td>
<td>0.169</td>
<td>0.059</td>
</tr>
<tr>
<td>Slag</td>
<td>3.8</td>
<td>4.40</td>
<td>0.05</td>
<td>0.040</td>
<td>0.014</td>
</tr>
<tr>
<td>Shingles</td>
<td>3.8</td>
<td>4.40</td>
<td>0.05</td>
<td>0.040</td>
<td>0.014</td>
</tr>
</tbody>
</table>

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

PM2.5 = PM10

**Abbreviations**

PM = Particulate Matter

PM10 = Particulate Matter (<10 um)

PM2.5 = Particulate Matter (<2.5 um)

PTE = Potential to Emit

RAP = recycled asphalt pavement
Appendix A.2: Limited Emissions Calculations

Material Processing, Handling, Crushing, Screening, and Conveying

Company Name: Hot Mix, Inc.
Source Address: 992 South County Road 800 East, Greensburg, Indiana 47240
Permit Number: F031-43698-00028
Reviewer: Brian Wright
Date Submitted: 11/9/2020

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

\[
Ef = k*(0.0032)*[(U/5)^1.3 / (M/2)^1.4]
\]
where:
- \(Ef\) = Emission factor (lb/ton)
- \(k\) (PM) = 0.74 = particle size multiplier (0.74 assumed for aerodynamic diameter <=100 um)
- \(k\) (PM10) = 0.35 = particle size multiplier (0.35 assumed for aerodynamic diameter <=10 um)
- \(k\) (PM2.5) = 0.053 = particle size multiplier (0.053 assumed for aerodynamic diameter <=2.5 um)
- \(U\) = 10.2 = worst case annual mean wind speed (Source: NOAA, 2006*)
- \(M\) = 4.0 = material % moisture content of aggregate (Source: AP-42 Section 11.1.1.1)

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

Annual Asphalt Production Limitation = 600,000 tons/yr
Percent Asphalt Cement/Binder (weight %) = 5.0%
Maximum Material Handling Throughput = 570,000 tons/yr

<table>
<thead>
<tr>
<th>Type of Activity</th>
<th>Limited PTE of PM (tons/yr)</th>
<th>Limited PTE of PM10 (tons/yr)</th>
<th>Limited PTE of PM2.5 (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Truck unloading of materials into storage piles</td>
<td>0.65</td>
<td>0.31</td>
<td>0.05</td>
</tr>
<tr>
<td>Front-end loader dumping of materials into feeder bins</td>
<td>0.65</td>
<td>0.31</td>
<td>0.05</td>
</tr>
<tr>
<td>Conveyor dropping material into dryer/mixer or batch tower</td>
<td>0.65</td>
<td>0.31</td>
<td>0.05</td>
</tr>
<tr>
<td>Total (tons/yr)</td>
<td>1.94</td>
<td>0.92</td>
<td>0.14</td>
</tr>
</tbody>
</table>

Methodology
The percent asphalt cement/binder provided by the source.

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

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

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

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

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

<table>
<thead>
<tr>
<th>Operation</th>
<th>Uncontrolled Emission Factor for PM (lbs/ton)*</th>
<th>Uncontrolled Emission Factor for PM10 (lbs/ton)*</th>
<th>Limited PTE of PM (tons/yr)</th>
<th>Limited PTE of PM10/PM2.5 (tons/yr)**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crushing</td>
<td>0.0054</td>
<td>0.0024</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Screening</td>
<td>0.025</td>
<td>0.0067</td>
<td>7.13</td>
<td>2.48</td>
</tr>
<tr>
<td>Conveying</td>
<td>0.002</td>
<td>0.0011</td>
<td>0.86</td>
<td>0.31</td>
</tr>
<tr>
<td>Limited Potential to Emit (tons/yr)</td>
<td>7.98</td>
<td>2.79</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

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

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

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

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

**Assumes PM10 = PM2.5

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particulate Matter (<2.5 um)
PTE = Potential to Emit
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
- **Unmitigated:** 800,000 tons/yr
- **Mitigated:** 570,000 tons/yr

### Maximum Asphalt Cement/Binder Throughput
- No. 2 Fuel Oil Limitation:
  - 30,000 tons/yr

### Methodology

- **Maximum Material Handling Throughput** = [Annual Asphalt Production Limitation (tons/yr)] * [% Asphalt Cement/Binder (weight %)]
- **Maximum Weight of Vehicle and Load** = [Maximum Weight of Vehicle + Maximum Weight of Load (tons/trip)]
- **Maximum one-way distance (miles/trip)** = [Maximum trips per year (trip/yr)] * [Maximum one-way distance (mi/trip)]
- **Average Vehicle Weight Per Trip** = [Maximum Weight of Load (tons)] / [Maximum one-way distance (mi/trip)]
- **Unmitigated Emission Factor** = [Maximum one-way distance (mi/trip)] * [Unmitigated Emission Factor (lb/mile)]
- **Controlled Emission Factor** = [Mitigated Emission Factor (lb/mile)]

### Emissions Calculations

<table>
<thead>
<tr>
<th>Process</th>
<th>Vehicle Type</th>
<th>Maximum Weight of Load (tons)</th>
<th>Total Weight driven per year (tons/yr)</th>
<th>Maximum one-way distance (miles/trip)</th>
<th>Maximum one-way distance (mi/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt Concrete Truck Leave Full</td>
<td>Dump truck (16 CY)</td>
<td>17.0</td>
<td>20.26</td>
<td>19.65</td>
<td>14.6</td>
</tr>
<tr>
<td>Asphalt Concrete Truck Leave Empty</td>
<td>Dump truck (16 CY)</td>
<td>18.0</td>
<td>24.9</td>
<td>21.83</td>
<td>16.6</td>
</tr>
<tr>
<td>Asphalt Cement/Binder Truck Leave Full</td>
<td>Tanker truck (6000 gal)</td>
<td>9.0</td>
<td>10.89</td>
<td>9.90</td>
<td>7.5</td>
</tr>
<tr>
<td>Asphalt Cement/Binder Truck Leave Empty</td>
<td>Tanker truck (6000 gal)</td>
<td>9.5</td>
<td>11.21</td>
<td>10.23</td>
<td>7.9</td>
</tr>
<tr>
<td>Fuel Oil Truck Leave Full</td>
<td>Tanker truck (6000 gal)</td>
<td>10.0</td>
<td>12.0</td>
<td>10.83</td>
<td>8.13</td>
</tr>
<tr>
<td>Fuel Oil Truck Leave Empty</td>
<td>Tanker truck (6000 gal)</td>
<td>10.5</td>
<td>12.6</td>
<td>11.46</td>
<td>8.7</td>
</tr>
<tr>
<td>Aggregate/RAP Loader Full</td>
<td>Front-end loader (3 CY)</td>
<td>9.0</td>
<td>10.89</td>
<td>9.90</td>
<td>7.5</td>
</tr>
<tr>
<td>Aggregate/RAP Loader Empty</td>
<td>Front-end loader (3 CY)</td>
<td>9.5</td>
<td>11.21</td>
<td>10.23</td>
<td>7.9</td>
</tr>
<tr>
<td>Asphalt Concrete Truck Loaded Full</td>
<td>Dump truck (16 CY)</td>
<td>17.0</td>
<td>24.0</td>
<td>21.83</td>
<td>16.6</td>
</tr>
<tr>
<td>Asphalt Concrete Truck Loaded Empty</td>
<td>Dump truck (16 CY)</td>
<td>18.0</td>
<td>24.9</td>
<td>21.83</td>
<td>16.6</td>
</tr>
<tr>
<td>Aggregate/RAP Truck Leave Full</td>
<td>Dump truck (16 CY)</td>
<td>17.0</td>
<td>20.26</td>
<td>19.65</td>
<td>14.6</td>
</tr>
<tr>
<td>Aggregate/RAP Truck Leave Empty</td>
<td>Dump truck (16 CY)</td>
<td>18.0</td>
<td>24.9</td>
<td>21.83</td>
<td>16.6</td>
</tr>
<tr>
<td>Asphalt Cement/Binder Truck Leave Full</td>
<td>Tanker truck (6000 gal)</td>
<td>9.0</td>
<td>10.89</td>
<td>9.90</td>
<td>7.5</td>
</tr>
<tr>
<td>Asphalt Cement/Binder Truck Leave Empty</td>
<td>Tanker truck (6000 gal)</td>
<td>9.5</td>
<td>11.21</td>
<td>10.23</td>
<td>7.9</td>
</tr>
<tr>
<td>Fuel Oil Truck Leave Full</td>
<td>Tanker truck (6000 gal)</td>
<td>10.0</td>
<td>12.0</td>
<td>10.83</td>
<td>8.13</td>
</tr>
<tr>
<td>Fuel Oil Truck Leave Empty</td>
<td>Tanker truck (6000 gal)</td>
<td>10.5</td>
<td>12.6</td>
<td>11.46</td>
<td>8.7</td>
</tr>
<tr>
<td>Aggregate/RAP Loader Full</td>
<td>Front-end loader (3 CY)</td>
<td>9.0</td>
<td>10.89</td>
<td>9.90</td>
<td>7.5</td>
</tr>
<tr>
<td>Aggregate/RAP Loader Empty</td>
<td>Front-end loader (3 CY)</td>
<td>9.5</td>
<td>11.21</td>
<td>10.23</td>
<td>7.9</td>
</tr>
<tr>
<td>Asphalt Concrete Truck Loaded Full</td>
<td>Dump truck (16 CY)</td>
<td>17.0</td>
<td>24.0</td>
<td>21.83</td>
<td>16.6</td>
</tr>
<tr>
<td>Asphalt Concrete Truck Loaded Empty</td>
<td>Dump truck (16 CY)</td>
<td>18.0</td>
<td>24.9</td>
<td>21.83</td>
<td>16.6</td>
</tr>
</tbody>
</table>

**Total**

| | | | | | |
|---|---|---|---|---|
| | 3.7E+10 | 7.6E+10 | 2.8E+04 |

**Average Vehicle Weight Per Trip** = 20.3 tons/trip

**Average Miles Per Trip** = 8.3E+02 miles/trip

**Unmitigated Emission Factor, Ef** = k*(s/12)^a*(W/3)^b

\[ Ef = 20.3 \times 8.3E+02 \times 2.8E+04 \]

where:
- \( k = 4.5 \) (Equation 1a from AP-42 Table 13.2.2-2 for Industrial Roads)
- \( s = 4.5 \)
- \( a = 4.5 \)
- \( W = 8.3E+02 \)
- \( b = 4.5 \)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, E = E* [1 - Dust Control Efficiency]

<table>
<thead>
<tr>
<th>Process</th>
<th>Vehicle Type</th>
<th>Unmitigated PTE of PM (tons/yr)</th>
<th>Mitigated PTE of PM (tons/yr)</th>
<th>Controlled PTE of PM (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asphalt Concrete Truck Leave Full</td>
<td>Dump truck (16 CY)</td>
<td>5.88</td>
<td>0.15</td>
<td>0.09</td>
</tr>
<tr>
<td>Asphalt Concrete Truck Leave Empty</td>
<td>Dump truck (16 CY)</td>
<td>5.88</td>
<td>0.15</td>
<td>0.09</td>
</tr>
<tr>
<td>Asphalt Cement/Binder Truck Leave Full</td>
<td>Tanker truck (6000 gal)</td>
<td>0.19</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Asphalt Cement/Binder Truck Leave Empty</td>
<td>Tanker truck (6000 gal)</td>
<td>0.19</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Fuel Oil Truck Leave Full</td>
<td>Tanker truck (6000 gal)</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Fuel Oil Truck Leave Empty</td>
<td>Tanker truck (6000 gal)</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Aggregate/RAP Loader Full</td>
<td>Front-end loader (3 CY)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Aggregate/RAP Loader Empty</td>
<td>Front-end loader (3 CY)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Asphalt Concrete Truck Loaded Full</td>
<td>Dump truck (16 CY)</td>
<td>5.77</td>
<td>0.15</td>
<td>0.10</td>
</tr>
<tr>
<td>Asphalt Concrete Truck Loaded Empty</td>
<td>Dump truck (16 CY)</td>
<td>5.77</td>
<td>0.15</td>
<td>0.10</td>
</tr>
</tbody>
</table>

**Total**

| | | | | |
|---|---|---|---|
| | 88.43 | 22.03 | 2.20 |

**Mitigated PTE** = (Mitigated Emission Factor) * ( annual throughput) * (1 - Dust Control Efficiency)

**Controlled PTE** = (Mitigated Emission Factor) * ( annual throughput) * (1 - Dust Control Efficiency)

**Unmitigated PTE** = (Emission Factor) * ( annual throughput) * (1 - Dust Control Efficiency)

**Average Miles Per Trip** = 8.3E+02 miles/trip

**Mitigated Emission Factor** = (1 - Dust Control Efficiency)

**Unmitigated PTE of PM** = (Emission Factor) * ( annual throughput) * (1 - Dust Control Efficiency)

**Controlled PTE of PM** = (Mitigated Emission Factor) * ( annual throughput) * (1 - Dust Control Efficiency)

**Unmitigated Emission Factor** = (Emission Factor) * ( annual throughput) * (1 - Dust Control Efficiency)

**Controlled Emission Factor** = (Mitigated Emission Factor) * ( annual throughput) * (1 - Dust Control Efficiency)

**Methodology**

- **Maximum Material Handling Throughput** = [Annual Asphalt Production Limitation (tons/yr)] * [% Asphalt Cement/Binder (weight %)]
- **Maximum Weight of Vehicle and Load** = [Maximum Weight of Vehicle + Maximum Weight of Load (tons/trip)]
- **Maximum one-way distance (miles/trip)** = [Maximum trips per year (trip/yr)] * [Maximum one-way distance (mi/trip)]
- **Average Vehicle Weight Per Trip** = [Maximum Weight of Load (tons)] / [Maximum one-way distance (mi/trip)]
- **Unmitigated Emission Factor** = [Maximum one-way distance (mi/trip)] * [Unmitigated Emission Factor (lb/mile)]
- **Mitigated Emission Factor** = [Mitigated one-way distance (mi/trip)] * [Mitigated Emission Factor (lb/mile)]
- **Controlled Emission Factor** = [Controlled one-way distance (mi/trip)] * [Controlled Emission Factor (lb/mile)]

**Abbreviations**

- PM = Particulate Matter
- PM10 = Particulate Matter (>10 um)
- PM2.5 = Particulate Matter (<2.5 um)
- PTE = Potential to Emit
- PM = Particulate Matter
- PM2.5 = Particulate Matter (<2.5 um)
- PM10 = Particulate Matter (>10 um)
- PTE = Potential to Emit
## Paved Roads at Industrial Site

The following calculations determine the amount of emissions created by paved roads, based on the U.S. EPA’s Methodology (Ch 13.2.1-2003).

### Methodology

- **Maximum Material Handling Throughput**:
  
  \[ \text{Maximum Material Handling Throughput} = \text{Annual Asphalt Production Limitation} \times (1 - \text{Percent Asphalt Cement/Binder (weight %)}) \]

- **Maximum Weight of Vehicle and Load**:
  
  \[ \text{Maximum Weight of Vehicle and Load} = \text{Maximum Weight of Vehicle (tons/trip)} + \text{Maximum Weight of Load (tons/trip)} \]

- **Total Weight driven per year**:
  
  \[ \text{Total Weight driven per year} = \text{Maximum trips per year} \times \text{Maximum one-way distance (mi/trip)} \]

- **Maximum one-way distance**:
  
  \[ \text{Maximum one-way distance} = \text{Maximum one-way distance (feet/trip)} / 5280 \text{ ft/mile} \]

- **Maximum trips per year**:
  
  \[ \text{Maximum trips per year} = \text{Throughput (tons/yr)} / \text{Maximum Weight of Load (tons/trip)} \]

- **Maximum Weight of Vehicle (tons/trip)**:
  
  \[ \text{Maximum Weight of Vehicle (tons/trip)} = \text{Maximum Material Handling Throughput} / \text{Maximum trips per year} \]

- **Mitigated PTE of PM (tons/yr)**:
  
  \[ \text{Mitigated PTE of PM (tons/yr)} = \text{Maximum one-way distance (miles/trip)} \times \text{Mitigated Emission Factor} (\text{lb/mile}) \times \text{ton/2000 lbs} \]

- **Unmitigated PTE of PM (tons/yr)**:
  
  \[ \text{Unmitigated PTE of PM (tons/yr)} = \text{Maximum one-way distance (miles/trip)} \times \text{Unmitigated Emission Factor (lb/mile)} \times \text{ton/2000 lbs} \]

- **Mitigated Emission Factor**:
  
  \[ \text{Mitigated Emission Factor} = \text{PTE of PM (tons/yr)} / \text{Maximum one-way distance (miles/trip)} \]

- **Unmitigated Emission Factor**:
  
  \[ \text{Unmitigated Emission Factor} = \text{PTE of PM (tons/yr)} / \text{Maximum one-way distance (miles/trip)} \]

### Calculations

**Table A.2: Limited Emissions Calculations**

<table>
<thead>
<tr>
<th>Process</th>
<th>Vehicle Type</th>
<th>Maximum Weight of Vehicle (tons/trip)</th>
<th>Maximum Weight of Load (tons/trip)</th>
<th>Maximum Weight of Vehicle and Load (tons)</th>
<th>Mitigated Emission Factor (lb/mile)</th>
<th>Mitigated PTE of PM (tons/yr)</th>
<th>Unmitigated Emission Factor (lb/mile)</th>
<th>Unmitigated PTE of PM (tons/yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggregate/RAP Truck Enter Full</td>
<td>Dump truck (16 CY)</td>
<td>17.0</td>
<td>17.0</td>
<td>17.0</td>
<td>0.002</td>
<td>0.056</td>
<td>0.002</td>
<td>0.002</td>
</tr>
<tr>
<td>Aggregate/RAP Truck Load Empty</td>
<td>Tanker truck (6000 gal)</td>
<td>19.0</td>
<td>19.0</td>
<td>19.0</td>
<td>0.002</td>
<td>0.056</td>
<td>0.002</td>
<td>0.002</td>
</tr>
<tr>
<td>Aggregate/RAP Truck Leave Empty</td>
<td>Tanker truck (6000 gal)</td>
<td>19.0</td>
<td>19.0</td>
<td>19.0</td>
<td>0.002</td>
<td>0.056</td>
<td>0.002</td>
<td>0.002</td>
</tr>
<tr>
<td>Aggregate/RAP Loader Empty</td>
<td>Front-end loader (3 CY)</td>
<td>10.0</td>
<td>10.0</td>
<td>10.0</td>
<td>0.002</td>
<td>0.056</td>
<td>0.002</td>
<td>0.002</td>
</tr>
<tr>
<td>Aggregate/RAP Loader Full</td>
<td>Dump truck (16 CY)</td>
<td>17.0</td>
<td>17.0</td>
<td>17.0</td>
<td>0.002</td>
<td>0.056</td>
<td>0.002</td>
<td>0.002</td>
</tr>
<tr>
<td>Asphalt Concrete Truck Load Empty</td>
<td>Dump truck (16 CY)</td>
<td>17.0</td>
<td>17.0</td>
<td>17.0</td>
<td>0.002</td>
<td>0.056</td>
<td>0.002</td>
<td>0.002</td>
</tr>
<tr>
<td>Asphalt Concrete Truck Leave Empty</td>
<td>Dump truck (16 CY)</td>
<td>17.0</td>
<td>17.0</td>
<td>17.0</td>
<td>0.002</td>
<td>0.056</td>
<td>0.002</td>
<td>0.002</td>
</tr>
</tbody>
</table>

**Total**

- **Mitigated PTE of PM**: 0.011
- **Unmitigated PTE of PM**: 0.011

**Methodology**

- **Average Vehicle Weight Per Trip**: 26.3 tons/trip
- **Average Miles Per Trip**: 0.076 miles/trip
- **Unmitigated Emission Factor**: 1.54 * (VW) / (VW^2) (Equation 1 from AP-42 13.2.1)
- **Mitigated Emission Factor**: Eext = EF * [1 - (p/4N)]

**Equation 1 from AP-42 13.2.1**

\[ \text{EF} = k \times \text{PM2.5} / \text{VW} \]

**Equation 1 from AP-42 13.2.1**

\[ \text{PM2.5} = \text{PM10} \]

**Abbreviations**

- PM = Particulate Matter
- PM10 = Particulate Matter (weight %)
- PM2.5 = PM10
- PTE = Potential to Emit
- PM = Particulate Matter
- PM2.5 = Particulate Matter
- PM10 = Particulate Matter

### Paved Roads

<table>
<thead>
<tr>
<th>Company Name: Hot Mix, Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source Address: 992 South County Road 800 East, Greensburg, Indiana 47240</td>
</tr>
<tr>
<td>Permit Number: 1011-43088-00028</td>
</tr>
<tr>
<td>Reviewer: Brian Wright</td>
</tr>
<tr>
<td>Date Submitted: 11/9/2020</td>
</tr>
</tbody>
</table>

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

**Page 12 of 14 TSD App A.2**
### Cold Mix Asphalt Production and Stockpiles

**Company Name:** Hot Mix, Inc.  
**Source Address:** 992 South County Road 800 East, Greensburg, Indiana 47240  
**Permit Number:** F031-43698-00028  
**Reviewer:** Brian Wright  
**Date Submitted:** 11/9/2020

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

\[ \text{Cold Mix Asphalt VOC Usage Limitation} = 13.79 \text{ tons/yr} \]

#### Volatile Organic Compounds

<table>
<thead>
<tr>
<th>Compound Description</th>
<th>Maximum weight % of VOC solvent in binder</th>
<th>Weight % VOC solvent in binder that evaporates</th>
<th>VOC Solvent Usage Limitation (tons/yr)</th>
<th>Limited PTE of VOC (tons/yr)</th>
<th>Liquid Binder Adjustment Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cut back asphalt rapid cure (assuming gasoline or naphtha solvent)</td>
<td>25.3%</td>
<td>95.0%</td>
<td>14.52</td>
<td>13.79</td>
<td>1.053</td>
</tr>
<tr>
<td>Cut back asphalt medium cure (assuming kerosene solvent)</td>
<td>28.6%</td>
<td>70.0%</td>
<td>19.70</td>
<td>13.79</td>
<td>1.429</td>
</tr>
<tr>
<td>Cut back asphalt slow cure (assuming fuel oil solvent)</td>
<td>20.0%</td>
<td>25.0%</td>
<td>55.16</td>
<td>13.79</td>
<td>4.000</td>
</tr>
<tr>
<td>Emulsified asphalt with solvent (assuming water, emulsifying agent, and 15% fuel oil solvent)</td>
<td>15.0%</td>
<td>46.4%</td>
<td>29.72</td>
<td>13.79</td>
<td>2.155</td>
</tr>
<tr>
<td>Other asphalt with solvent binder</td>
<td>25.9%</td>
<td>2.5%</td>
<td>551.63</td>
<td>13.79</td>
<td>40.0</td>
</tr>
</tbody>
</table>

**Worst Case Limited PTE of VOC = 13.79**

#### 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) = 3.60**  
**Limited PTE of Single HAP (tons/yr) = 1.24 Xylenes**

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

<table>
<thead>
<tr>
<th>Volatile Organic HAP</th>
<th>CAS#</th>
<th>Hazardous Air Pollutant (HAP) Content (% by weight)* For Various Petroleum Solvents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3-Butadiene</td>
<td>106-99-0</td>
<td>Gasoline Kerosene Diesel (#2) Fuel Oil No. 2 Fuel Oil No. 6 Fuel Oil</td>
</tr>
<tr>
<td>Acenaphthene</td>
<td>63-32-9</td>
<td>4.70E-5% 1.90% 1.90E-4%</td>
</tr>
<tr>
<td>Acenaphthylene</td>
<td>208-96-8</td>
<td>4.50E-5% 1.90E-4%</td>
</tr>
<tr>
<td>Anthracene</td>
<td>120-12-7</td>
<td>1.20E-6% 2.00E-6% 5.00E-6%</td>
</tr>
<tr>
<td>Benzene</td>
<td>71-43-2</td>
<td>2.90E-4%</td>
</tr>
<tr>
<td>Benzo(a)anthracene</td>
<td>96-55-3</td>
<td>9.60E-7% 4.50E-7% 5.50E-4%</td>
</tr>
<tr>
<td>Benzo(a)pyrene</td>
<td>50-32-8</td>
<td>2.20E-6% 2.10E-7% 4.40E-5%</td>
</tr>
<tr>
<td>Benzo(g,h,i)perylene</td>
<td>191-39-2</td>
<td>1.20E-7% 7.00E-8% 5.00E-5%</td>
</tr>
<tr>
<td>Biphenyl</td>
<td>92-52-4</td>
<td>6.30E-4% 7.20E-5%</td>
</tr>
<tr>
<td>Chrysene</td>
<td>218-01-9</td>
<td>4.50E-7%</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>0.07% 3.04E-4%</td>
</tr>
<tr>
<td>Fluoranthene</td>
<td>208-44-0</td>
<td>7.10E-6% 1.40E-5% 2.40E-4%</td>
</tr>
<tr>
<td>Fluorene</td>
<td>96-73-7</td>
<td>4.20E-5% 8.60E-4% 1.90E-4%</td>
</tr>
<tr>
<td>Indeno(1,2,3-cd)pyrene</td>
<td>193-39-5</td>
<td>1.60E-7% 1.00E-4%</td>
</tr>
<tr>
<td>Methyl-fert-butylether</td>
<td>1634-04-4</td>
<td>0.33%</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>91-20-3</td>
<td>0.25%</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>110-54-3</td>
<td>2.40%</td>
</tr>
<tr>
<td>Phenanthrene</td>
<td>85-01-8</td>
<td>8.60E-6% 8.80E-4% 7.90E-4% 2.10E-4%</td>
</tr>
<tr>
<td>Pyrene</td>
<td>129-00-0</td>
<td>2.40E-6% 4.60E-5% 2.30E-5% 2.30E-5%</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>8.10% 0.18% 6.20E-4%</td>
</tr>
<tr>
<td>Total Xylenes</td>
<td>1330-20-7</td>
<td>9.00% 0.50% 0.23%</td>
</tr>
</tbody>
</table>

**Total Organic HAPs = 26.08%**  
**Worst Single HAP**  
- Xylenes: 0.33%  
- Naphthalene: 0.31%  
- Xylenes: 0.50%  
- Xylenes: 0.23%  
- Xylenes: 0.07%

#### Methodology

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

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

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


#### Abbreviations

- **VOC** = Volatile Organic Compounds  
- **PTE** = Potential to Emit
Gasoline Fuel Transfer and Dispensing Operation

Company Name: Hot Mix, Inc.
Source Address: 992 South County Road 800 East, Greensburg, Indiana 47240
Permit Number: F031-43698-00028
Reviewer: Brian Wright
Date Submitted: 11/9/2020

Note: Since the emissions from the gasoline fuel transfer and dispensing operation are minimal, the limited emissions are equal to the unlimited emissions.

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

Gasoline Throughput = 0 gallons/day
= 0 kgal/yr

Volatile Organic Compounds

<table>
<thead>
<tr>
<th>Emission Source</th>
<th>Emission Factor (lb/kgal of throughput)</th>
<th>PTE of VOC (tons/yr)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filling storage tank (balanced submerged filling)</td>
<td>0.3</td>
<td>0</td>
</tr>
<tr>
<td>Tank breathing and emptying</td>
<td>1.0</td>
<td>0</td>
</tr>
<tr>
<td>Vehicle refueling (displaced losses - controlled)</td>
<td>1.1</td>
<td>0</td>
</tr>
<tr>
<td>Spillage</td>
<td>0.7</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>0</strong></td>
</tr>
</tbody>
</table>

Hazardous Air Pollutants

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

Limited PTE of Total HAPs (tons/yr) = 0
Limited PTE of Single HAP (tons/yr) = 0 Xylenes

Methodology

The gasoline throughput was provided by the source.
Gasoline Throughput (kgal/yr) = [Gasoline Throughput (lbs/day)] * [365 days/yr] * [kgal/1000 gal]
PTE of VOC (tons/yr) = [Gasoline Throughput (kgal/yr)] * [Emission Factor (lb/kgal)] * [ton/2000 lb]
PTE of Total HAPs (tons/yr) = [Worst Case Total HAP Content of VOC solvent (weight %)] * [PTE of VOC (tons/yr)]
PTE of Single HAP (tons/yr) = [Worst Case Single HAP Content of VOC solvent (weight %)] * [PTE of VOC (tons/yr)]


Abbreviations

VOC = Volatile Organic Compounds
PTE = Potential to Emit
May 11, 2021

Daniel Crago
Hot Mix, Inc.
11641 Mosteller Rd
Cincinnati, OH 45241

Re: Public Notice
Hot Mix, Inc.
Permit Level: FESOP Renewal
Permit Number: 031-43698-00028

Dear Mr. Crago:

Enclosed is the Notice of 30-Day Period for Public Comment for your draft air permit.

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. The Notice of 30-Day Period for Public Comment has also been sent to the OAQ Permits Branch Interested Parties List and, if applicable, your Consultant/Agent and/or Responsible Official/Authorized Individual.

The preliminary findings, including the draft permit, technical support document, emission calculations, and other supporting documents, are available electronically at:

**IDEM's online searchable database:** [http://www.in.gov/apps/idem/caats/](http://www.in.gov/apps/idem/caats/) . Choose Search Option by Permit Number, then enter permit 43698

and

**IDEM's Virtual File Cabinet (VFC):** [https://www.IN.gov/idem](https://www.IN.gov/idem). Enter VFC in the search box, then search for permit documents using a variety of criteria, such as Program area, date range, permit #, Agency Interest Number, or Source ID.

The Public Notice period will begin the date the Notice is published on the IDEM Official Public Notice website. Publication has been requested and is expected within 2-3 business days. You may check the exact Public Notice begins and ends date here: [https://www.in.gov/idem/public-notices/](https://www.in.gov/idem/public-notices/)

Please note that as of April 17, 2019, IDEM is no longer required to publish the notice in a newspaper.

OAQ has submitted the draft permit package to the Greensburg-Decatur County Contractual Public Library, 1110 East Main Street in Greensburg, IN. As a reminder, you are obligated by 326 IAC 2-1.1-6(c) to place a copy of the complete permit application at this library no later than ten (10) days after submittal of the application or additional information to our department. We highly recommend that even if you have already placed these materials at the library, that you confirm with the library that these materials are available for review and request that the library keep the materials available for review during the entire permitting process.
Please review the draft permit documents carefully. This is your opportunity to comment on the draft permit and notify the OAQ of any corrections that are needed before the final decision. Questions or comments about the enclosed documents should be directed to Brian Wright, Indiana Department of Environmental Management, Office of Air Quality, 100 N. Senate Avenue, Indianapolis, Indiana, 46204 or call (800) 451-6027, and ask for extension 4-6544 or dial (317) 234-6544.

Sincerely,

Theresa Weaver

Theresa Weaver
Permits Branch
Office of Air Quality

Enclosures

PN Applicant Cover Letter access via website 8/10/2020
May 11, 2021

To: Greensburg-Decatur County Contractual Public Library

From: Jenny Acker, Branch Chief
Permits Branch
Office of Air Quality

Subject: Important Information to Display Regarding a Public Notice for an Air Permit

Applicant Name: Hot Mix, Inc.
Permit Number: 031-43698-00028

Enclosed is a copy of important information to make available to the public. This proposed project is regarding a source that may have the potential to significantly impact air quality. Librarians are encouraged to educate the public to make them aware of the availability of this information. The following information is enclosed for public reference at your library:

- Notice of a 30-day Period for Public Comment
- Draft Permit and Technical Support Document

You will not be responsible for collecting any comments from the citizens. Please refer all questions and request for the copies of any pertinent information to the person named below.

Members of your community could be very concerned in how these projects might affect them and their families. Please make this information readily available until you receive a copy of the final package.

If you have any questions concerning this public review process, please contact Joanne Smiddle-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185. Questions pertaining to the permit itself should be directed to the contact listed on the notice.

Enclosures
PN Library updated 4/2019
Notice of Public Comment

May 11, 2021
Hot Mix, Inc.
031-43698-00028

Dear Concerned Citizen(s):

You have been identified as someone who could potentially be affected by this proposed air permit. The Indiana Department of Environmental Management, in our ongoing efforts to better communicate with concerned citizens, invites your comment on the draft permit.

Enclosed is a Notice of Public Comment, which has posted on IDEM’s Public Notice website at https://www.in.gov/idem/public-notices/.

The application and supporting documentation for this proposed permit have been placed at the library indicated in the Notice. These documents more fully describe the project, the applicable air pollution control requirements and how the applicant will comply with these requirements.

If you would like to comment on this draft permit, please contact the person named in the enclosed Public Notice. Thank you for your interest in the Indiana’s Air Permitting Program.

Please Note: If you feel you have received this Notice in error, or would like to be removed from the Air Permits mailing list, please contact Joanne Smiddie-Brush with the Air Permits Administration Section at 1-800-451-6027, ext. 3-0185 or via e-mail at JBRUSH@IDEM.IN.GOV. If you have recently moved and this Notice has been forwarded to you, please notify us of your new address and if you wish to remain on the mailing list. Mail that is returned to IDEM by the Post Office with a forwarding address in a different county will be removed from our list unless otherwise requested.

Enclosure
PN AAA Cover Letter 2/28/2020
## Mail Code 61-53

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<tr>
<th>Line</th>
<th>Article Number</th>
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<th>Handing Charges</th>
<th>Act. Value (If Registered)</th>
<th>Insured Value</th>
<th>Due Send if COD</th>
<th>R.R. Fee</th>
<th>S.D. Fee</th>
<th>S.H. Fee</th>
<th>Rest. Del. Fee</th>
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<tbody>
<tr>
<td>1</td>
<td></td>
<td>Daniel Crago Hot Mix Inc 11641 Mosteller Rd Cincinnati OH 45241 (Source CAATS)</td>
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<td></td>
<td></td>
<td></td>
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<td>2</td>
<td></td>
<td>Greensburg-Decatur Co Contractual Public Library 1110 E Main St Greensburg IN 47240 (Library)</td>
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<td>3</td>
<td></td>
<td>Decatur County Commissioners 150 Courthouse Square Greensburg IN 47240 (Local Official)</td>
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<td>4</td>
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<td>Greensburg City Council &amp; Mayors office 314 W Washington Street Greensburg IN 47240 (Local Official)</td>
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<td>5</td>
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<td>Decatur County Health Department 801 N. Lincoln St Greensburg IN 47240-1397 (Health Department)</td>
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<tr>
<td>6</td>
<td></td>
<td>Mr. Leonard Rohls 1170 Summer Set Dr Versailles IN 47042 (Affected Party)</td>
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<td>7</td>
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<td>Kevin Green Greensburg Daily News 135 S Franklin St Greensburg IN 47240 (Affected Party)</td>
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### Total number of pieces Listed by Sender
- Total number of Pieces Received at Post Office

### Postmaster, Per (Name of Receiving employee)

The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50,000 per occurrence. The maximum indemnity payable on Express mail merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See Domestic Mail Manual R900, S913, and S921 for limitations of coverage on insured and COD mail. See International Mail Manual for limitations of coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.