



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

NOTICE OF 30-DAY PERIOD FOR PUBLIC COMMENT

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

for Building Materials Manufacturing Corporation in Posey County

Significant Permit Revision No.: 129-43012-00011

The Indiana Department of Environmental Management (IDEM) has received an application from Building Materials Manufacturing Corporation, located at 901 Givens Road, Mount Vernon, Indiana 47620, for a significant revision of its FESOP Renewal issued on November 5, 2018. If approved by IDEM's Office of Air Quality (OAQ), this proposed revision would allow Building Materials Manufacturing Corporation to make certain changes at its existing source. Building Materials Manufacturing Corporation has applied to correct inaccurate depictions of current emission units and to add one (1) new like-kind replacement of the existing asphalt blowstill (BS1). The replacement unit will be identical to the existing BS1 in terms of capacity (12,000 gallons) and emission control (fumes routed to Boiler No. 1 or Boiler No. 2). Emission unit description will include *before/after replacement* language in order to allow the existing BS1 to continue to operate until the unit is deconstructed and the one (1) new asphalt blowstill (BS1) is constructed. Emission unit ID has also been modified in order to distinguish between the existing blowstill and the new blowstill. The existing blowstill will be referred to as BS1a and the new blowstill will be referred to as BS1b.

The capacities of BS1b and BS3 are not identical. The capacity of BS1b is 12,000 gallons and the capacity of BS3 is 18,000 gallons. The asphalt blowing operation at the source is a batch process, not a continuous process. The source requested to modify the emission unit descriptions of the blowstills to incorporate batch size rather than pounds per hour.

The applicant intends to construct and operate new equipment that will emit air pollutants; therefore, the permit contains new or different permit conditions. In addition, 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). The potential to emit regulated air pollutants will continue to be limited to less than the Title V and PSD major threshold levels. IDEM has reviewed this application and has developed preliminary findings, consisting of a draft permit and several supporting documents, which would allow the applicant to make this change.

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

Alexandrian Library
115 W. 5th Street
Mt. Vernon, IN 47620

and

IDEM Southwest Regional Office
114 South 7th Street
P.O. Box 128
Petersburg, IN 47567-0128

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 SPR 129-43012-00011 in all correspondence.

Comments should be sent to:

Michaela Hecox
IDEM, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
(800) 451-6027, ask for Michaela Hecox or (317) 233-3031
Or dial directly: (317) 233-3031
Fax: (317) 232-6749 attn: Michaela Hecox
E-mail: MHecox@idem.IN.gov

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

For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Air Permits page on the Internet at: <http://www.in.gov/idem/airquality/2356.htm>; and the Citizens' Guide to IDEM on the Internet at: <http://www.in.gov/idem/6900.htm>.

What will happen after IDEM makes a decision?

Following the end of the public comment period, IDEM will issue a Notice of Decision stating whether the permit has been issued or denied. If the permit is issued, it may be different than the draft permit because of comments that were received during the public comment period. If comments are received

during the public notice period, the final decision will include a document that summarizes the comments and IDEM's response to those comments. If you have submitted comments or have asked to be added to the mailing list, you will receive a Notice of the Decision. The notice will provide details on how you may appeal IDEM's decision, if you disagree with that decision. The final decision will also be available on the Internet at the address indicated above 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 Michaela Hecox of my staff at the above address.

A handwritten signature in cursive script that reads "Brian Williams". The signature is written in black ink and is positioned above the printed name and title.

Brian Williams, Section Chief
Permits Branch
Office of Air Quality



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Eric J. Holcomb
Governor

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Bruno L. Pigott
Commissioner

Mr. Matt Mahrenholz
Building Materials Manufacturing Corporation
901 Givens Road
Mt. Vernon, IN 47620

Re: 129-43012-00011
Significant Revision to
F129-38119-00011

Dear Mr. Mahrenholz:

Building Materials Manufacturing Corporation was issued a Federally Enforceable State Operating Permit (FESOP) Renewal No. F129-38119-00011, on November 5, 2018, for a stationary asphalt roofing manufacturing plant located at 901 Givens Rd, Mt. Vernon, Indiana 47620. On July 1, 2020, the Office of Air Quality (OAQ) received an application from the source requesting the correction of inaccurate depiction of current emission units and the addition of one (1) new like-kind replacement of the existing asphalt blowstill (BS1). The replacement unit will be identical to the existing BS1 in terms of capacity (12,000 gallons) and emission control (fumes routed to Boiler No. 1 or Boiler No. 2). Emission unit description will include *before/after replacement* language in order to allow the existing BS1 to continue to operate until the unit is deconstructed and the one (1) new asphalt blowstill (BS1) is constructed. Emission unit ID has also been modified in order to distinguish between the existing blowstill and the new blowstill. The existing blowstill will be referred to as BS1a and the new blowstill will be referred to as BS1b. The capacities of BS1b and BS3 are not identical. The capacity of BS1b is 12,000 gallons and the capacity of BS3 is 18,000 gallons. The asphalt blowing operation at the source is a batch process, not a continuous process. The source requested to modify the emission unit descriptions of the blowstills to incorporate batch size rather than pounds per hour. Pursuant to the provisions of 326 IAC 2-8-11.1, these changes to the permit are required to be reviewed in accordance with the Significant Permit Revision (SPR) procedures of 326 IAC 2-8-11.1 (f). Pursuant to the provisions of 326 IAC 2-8-11.1, a Significant Permit Revision to this permit is hereby approved as described in the attached Technical Support Document (TSD).

Pursuant to 326 IAC 2-8-11.1, the following emission unit is approved for construction at the source:

After Replacement:

- (a) One (1) asphalt blowing operation, approved for modification in 2020, with a bottlenecked capacity of 32,625 pounds of asphalt per hour, consisting of:
 - (1) One (1) blowstill, identified as BS1b, approved for construction in 2020, with a maximum capacity of 12,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.

Under the NSPS, 40 CFR Part 60, Subpart UU, blowstill BS1b and BS3 are affected facilities.

Under the NESHAP, 40 CFR 63, Subpart AAAAAA, the blowstills, BS1b and BS3, are part of an existing affected source.

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The following construction conditions are applicable to the proposed project:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this permit revision approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
2. This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

Effective Date of the Permit

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

Commenced Construction

4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the Significant Permit Revision into the permit.

All other conditions of the permit shall remain unchanged and in effect. Please find attached the entire FESOP as revised. The permit references the below-listed attachment(s). Since these attachments have been provided in previously issued approvals for this source, IDEM OAQ has not included a copy of these attachments with this revision:

Attachment A: Fugitive Dust Control Plan

Attachment A.1: Fugitive Dust Control Plan Map

Attachment B: 40 CFR 60, Subpart UU, Asphalt Processing and Asphalt Roofing Manufacture

Attachment C: 40 CFR 60, Subpart IIII, Stationary Compression Ignition Internal Combustion Engines

Attachment D: 40 CFR 63, Subpart AAAAAAA, Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing

Attachment E: 40 CFR 63, Subpart ZZZZ, Stationary Reciprocating Internal Combustion Engines

Attachment F: 40 CFR 63, Subpart CCCCCC, Source Category: Gasoline Dispensing Facilities

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

Previously issued approvals for this source are 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.

Federal rules under Title 40 of United States Code of Federal Regulations may also be found on the U.S. Government Printing Office's Electronic Code of Federal Regulations (eCFR) website, located on the Internet at: http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40tab_02.tpl.

A copy of the permit is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>. A copy of the application and permit is also available via IDEM's Virtual File Cabinet (VFC). To access

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VFC, please go to: <http://www.in.gov/idem/> and enter VFC in the search box. You will then have the option to search for permit documents using a variety of criteria. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Air Permits page on the Internet at: <http://www.in.gov/idem/airquality/2356.htm>; and the Citizens' Guide to IDEM on the Internet at: <http://www.in.gov/idem/6900.htm>.

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

If you have any questions regarding this matter, please contact Michaela Hecox, 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) 233-3031 or (800) 451-6027, and ask for Michaela Hecox or (317) 233-3031.

Sincerely,

Brian Williams, Section Chief
Permits Branch
Office of Air Quality

Attachments: Revised permit and Technical Support Document.

cc: File - Posey County
Posey County Health Department
U.S. EPA, Region 5
Compliance and Enforcement Branch
IDEM Southwest Regional Office



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Commissioner

Federally Enforceable State Operating Permit Renewal OFFICE OF AIR QUALITY

**Building Materials Manufacturing Corporation
901 Givens Road
Mount Vernon, Indiana 47620**

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

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

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

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

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| Operation Permit No.: F129-38119-00011 | |
| Master Agency Interest ID.: 12594 | |
| Issued by: Original signed by Tripurari P. Sinha, Ph. D., Section Chief Permits Branch Office of Air Quality | Issuance Date: November 5, 2018 Expiration Date: November 5, 2028 |

Significant Permit Revision No. 129-41894-00011, issued on December 26, 2019

| | |
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| Significant Permit Revision No.: 129-43012-00011 | |
| Issued by: Brian Williams, Section Chief Permits Branch Office of Air Quality | Issuance Date: Expiration Date: November 5, 2028 |

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Attachment A.1 - Fugitive Dust Control Plan Map

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**Attachment C - Standards of Performance for Stationary Compression Ignition Internal
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**Attachment D - National Emission Standards for Hazardous Air Pollutants for Area Sources:
Asphalt Processing and Asphalt Roofing Manufacturing [40 CFR 63, Subpart
AAAAAAA]**

**Attachment E - National Emissions Standards for Hazardous Air Pollutants for Stationary
Reciprocating Internal Combustion Engines [40 CFR 63, Subpart ZZZZ]**

**Attachment F - National Emission Standards for Hazardous Air Pollutants for Source
Category: Gasoline Dispensing Facilities [40 CFR 63, Subpart CCCCCC]**

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SECTION A

SOURCE SUMMARY

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

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

The Permittee owns and operates a stationary asphalt roofing manufacturing plant.

| | |
|------------------------------|--|
| Source Address: | 901 Givens Road, Mount Vernon, Indiana 47620 |
| General Source Phone Number: | (813) 833-2309 |
| SIC Code: | 2952 (Asphalt Felts and Coatings) |
| County Location: | Posey |
| Source Location Status: | Attainment for all criteria pollutants |
| Source Status: | 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 |

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) modified bitumen production line, with a maximum production rate of 13.5 tons per hour, constructed in 1986, with a mist collector for particulate control, exhausting through Stack S3, and consisting of the following:

- (1) One (1) impregnator (saturator and coating tank).

Under the NSPS, 40 CFR 60, Subpart UU, the modified bitumen production line coater is an affected facility.

Under the NESHAP, 40 CFR 63, Subpart AAAAAAA, the modified bitumen production line coater is part of an existing affected source.

- (2) One (1) dry felt looper.
(3) One (1) cooling section.
(4) One (1) granule application process, with a maximum capacity of 10.0 tons of roofing granules per hour, controlled by a dust collector.

- (b) Storage and handling of bulk material operations, consisting of the following:

- (1) One (1) truck unloading pit and associated underground conveyor, identified as modified bitumen / granules truck unloading, constructed in 1972, with a maximum capacity of 30.60 tons per hour, with emissions controlled by a baghouse (S29), and exhausting to stack S30.

- (2) One (1) bucket elevator, identified as roofing granules incoming elevator, constructed in 1972, with a maximum capacity of 30.60 tons per hour, with emissions controlled by a baghouse (S29), and exhausting to stack S30. Only one of the twenty silos can be loaded at a time.

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- (3) Modified bitumen granules handling operation, constructed in 1986, with a maximum throughput of 10.0 tons per hour, and consisting of the following:
- (A) Two (2) storage silos, identified as S27 and S28, with emissions controlled by a baghouse (S29), and exhausting to stack S30.
 - (B) One (1) totally enclosed pneumatic transport system, identified as modified bitumen / granules transport system, with emissions uncontrolled. Only one of the two silos can be unloaded at a time.
 - (C) One (1) storage bin, identified as 29, with emissions controlled by a baghouse, and exhausting to stack S30.

Under the NSPS, 40 CFR Part 60, Subpart UU, the modified bitumen granules handling operation is an affected facility.

- (4) Shingle granules handling operation, constructed in 1972, with a maximum throughput of 30.60 tons per hour, and consisting of the following:
- (A) Eighteen (18) storage silos, identified as 1-18, with emissions uncontrolled.
 - (B) One (1) conveyor belt, identified as blending conveyor, with emissions uncontrolled. Only one of the eighteenth silos can be unloaded at a time.
 - (C) One (1) storage bin, identified as use bin, with emissions uncontrolled.
- (5) Shingle and modified bitumen filler (limestone) handling operations, constructed in 1986, with a maximum throughput of 32.00 tons per hour, and consisting of the following:
- (A) Two (2) pneumatic truck unloading operation, identified as shingle unloading and bitumen unloading, with emissions uncontrolled.
 - (B) Two (2) storage silos, identified as S8 and S9, constructed in 1986, with emissions controlled by baghouse S10, and exhausting to stack S8 and S9.
 - (C) One (1) pneumatic transport system, identified as S10, with emissions controlled by a baghouse, and exhausting to stack S10. Only one of the two silos can be unloaded at a time.
 - (D) One (1) storage bin, identified as S11, with emissions controlled by a baghouse, and exhausting to stack S11.

Under the NSPS, 40 CFR Part 60, Subpart UU, the shingle and modified bitumen filler (limestone) handling operations are affected facilities.

- (6) Talc handling operation, constructed in 1986, with a maximum throughput of 0.10 tons per hour, and consisting of the following:
- (A) One (1) totally enclosed pneumatic truck unloading operation, identified as talc unloading, with emissions controlled by baghouse S25, and exhausting to stack S25.
 - (B) One (1) storage silo, identified as S25, with emissions controlled by baghouse S25, and exhausting to stack S25.
 - (C) One (1) pneumatic transport system, identified as S18, with emissions controlled by baghouse S18, and exhausting to stack S18.
 - (D) One (1) storage bin, identified as S18, with emissions controlled by baghouse S18, and exhausting to stack S18.

Under the NSPS, 40 CFR Part 60, Subpart UU, the talc handling operation is an affected facility.

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- (7) Shingle and modified bitumen sand handling operations, constructed in 1986, with a maximum throughput of 4.63 tons per hour, and consisting of the following:
- (A) One (1) pneumatic truck unloading operation, identified as sand unloading, with emissions controlled by baghouse S26, and exhausting to stack S26.
 - (B) One (1) storage silo, identified as S26, with emissions controlled by baghouse S26, and exhausting to stack S26.
 - (C) One (1) pneumatic transport system, identified as S17, with emissions controlled by baghouse S17, and exhausting to stack S17.
 - (D) One (1) storage bin, identified as S17, with emissions controlled by baghouse S17, and exhausting to stack S17.

Under the NSPS, 40 CFR Part 60, Subpart UU, the shingle and modified bitumen sand handling operations are affected facilities.

Before Replacement:

- (c) One (1) asphalt blowing operation, approved for modification in 2020, with a bottlenecked capacity of 32,625 pounds of asphalt per hour, consisting of:
- (1) One (1) blowstill, identified as BS1a, constructed in 1972, with a maximum capacity of 12,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.
 - (2) One (1) blowstill, identified as BS1b, approved for construction in 2020, with a maximum capacity of 12,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.
 - (3) One (1) blowstill, identified as BS3, constructed in 2006, with a maximum capacity of 18,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.

Only one (1) blowstill can operate at a time because there are only enough blowers installed to charge one at a time.

Under the NSPS, 40 CFR Part 60, Subpart UU, blowstill BS1b and BS3, are affected facilities.

Under the NESHAP, 40 CFR 63, Subpart AAAAAA, the blowstills, BS1a, BS1b, and BS3, are part of an existing affected source.

After Replacement:

- (c) One (1) asphalt blowing operation, approved for modification in 2020, with a bottlenecked capacity of 32,625 pounds of asphalt per hour, consisting of:
- (1) One (1) blowstill, identified as BS1b, approved for construction in 2020, with a maximum capacity of 12,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.

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- (2) One (1) blowstill, identified as BS3, constructed in 2006, with a maximum capacity of 18,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.

Only one (1) blowstill can operate at a time because there are only enough blowers installed to charge one at a time.

Under the NSPS, 40 CFR Part 60, Subpart UU, blowstill BS1b and BS3 are affected facilities.

Under the NESHAP, 40 CFR 63, Subpart AAAAAA, the blowstills, BS1b and BS3, are part of an existing affected source.

- (d) One (1) shingles and rolls production line, constructed in 1972, with a maximum production rate of 75 tons per hour, with a mist collector for particulate control, exhausting through stacks S5 and S7, consisting of:

- (1) One (1) shingle coater dip pan, identified as S5.

Under the NESHAP, 40 CFR 63, Subpart AAAAAAA, the shingle coater dip pan is an existing affected facility.

- (2) One (1) dry felt looper.
(3) One (1) granule and sand application process, with a maximum capacity of 41.29 tons of sand and granules per hour, controlled by a dust collector, exhausting to stack S6.
(4) One (1) self-seal application process, with a maximum capacity of 1.50 tons/hr.
(5) One (1) cooling section.
(6) One (1) finished product looper.
(7) One (1) laminator, identified as S7 with a maximum capacity of 2,500 lbs/hr.
(8) One (1) shingle product cutting operation.
(9) One (1) shingle product packaging operation.

- (e) One (1) natural gas-fired boiler, identified as boiler No. 1, with a maximum heat input capacity of 29.15 MMBtu/hr, constructed in 1972, and exhausting through stack S32. Boiler No. 1 serves as a backup boiler.

- (f) One (1) natural gas-fired boiler, identified as boiler No. 2, with a maximum heat input capacity of 29.15 MMBtu/hr, constructed in 1972, and exhausting through stack S32. Boiler No. 2 serves as the primary unit.

- (g) One (1) natural gas-fired combustion unit, identified as S36 flux heater, constructed in 1972, approved in 2019 for modification, with a maximum heat input capacity of 7.0 MMBtu/hr, exhausting through Stacks S35 and S36.

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

This stationary source also includes the following insignificant activities:

- (a) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:
- (1) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour.

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- (A) One (1) natural gas fired combustion unit, identified as coating heater, constructed in 1972, modification permitted in 2012, with a maximum heat input capacity of 4.5 MMBtu/hr, exhausting through Stack S34.
 - (B) One (1) natural gas-fired combustion unit, identified as mod-bit hot oil heater, permitted in 2006, approved in 2019 for modification, with a maximum heat input capacity of 5.2 MMBtu/hr, exhausting through Stack S2.
 - (C) One (1) natural gas-fired combustion unit, identified as filler heater hot oil heater, constructed in 1987, approved in 2019 for modification, with a maximum heat input capacity of 6.0 MMBtu/hr, exhausting through Stack S4.
 - (D) One (1) natural gas-fired combustion unit, identified as liquid asphalt storage heater, permitted in 2006, with a maximum heat input capacity of 3.0 MMBtu/hr, exhausting through Stack S1.
 - (E) One (1) natural gas-fired combustion unit, identified as thermal fluid heater, with a maximum heat input capacity of 5.0 MMBtu/hr, approved for construction in 2007.
- (b) Two (2) storage tanks, identified as T-8 (self-seal asphalt) and T-16 (self-seal asphalt slate line), each constructed in 1989 and each with a maximum storage capacity of 14,000 gallons.

Under the NSPS, 40 CFR Part 60, Subpart UU, tanks T-8 and T-16 are affected facilities.

- (c) Two (2) storage tanks, identified as T-20 (liquid APP plasticizer) and T-18 (holding tank package asphalt), constructed in 1986 and 1985, respectively, and each with a maximum storage capacity of 30,000 gallons.

Under the NSPS, 40 CFR Part 60, Subpart UU, tanks T-20 and T-18 are affected facilities.

- (d) Activities associated with emergencies consisting of:

- (1) Emergency generators as follows:

- (A) One (1) diesel-fired emergency generator, identified as S-47, constructed in 2010, with a maximum rated capacity of 755 hp.

Under the NSPS, 40 CFR 60, Subpart IIII, emergency generator S-47 is an affected facility.

Under the NESHAP, 40 CFR 63, Subpart ZZZZ, emergency generator S-47 is a new affected source.

- (2) Stationary fire pump engines as follows:

- (A) One (1) diesel-fired emergency fire pump, constructed in 1972, with a maximum capacity of 255 HP.

Under the NESHAP, 40 CFR 63, Subpart ZZZZ, the emergency fire pump is an existing affected source.

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- (e) A gasoline fuel transfer dispensing operation handling less than or equal to one thousand three hundred (1,300) gallons per day and filling storage tanks having a capacity equal to or less than ten thousand five hundred (10,500) gallons. This operation handles less than 10,000 gallons per month.

Under the NESHAP, 40 CFR 63, Subpart CCCCC, the gasoline dispensing operation is an affected source.

- (f) Degreasing operations that do not exceed one hundred forty-five (145) gallons per twelve (12) months, except if subject to 326 IAC 20-6.

A.4 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities:

- (a) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:
 - (1) Propane or liquefied petroleum gas or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) British thermal units per hour.
 - (A) One (1) propane fired combustion unit, identified as flame bar, permitted in 2003, with a maximum heat input capacity of 1.0 MMBtu/hr.
- (b) One (1) storage tank, identified M-5 (mod-bit mixed material-hold tank), each constructed in 1985 and with maximum storage capacities of 6,500 gallons.
- (c) One (1) bulk asphalt flux main storage tank, identified as T-1, constructed in 1972 and with a maximum storage capacity of 1,000,000 gallons of asphalt.
- (d) Five (5) storage tanks, identified as T-3 (flux preheat tank), T-4 (SBS/AC-5/weather watch), T-5 (AC-5 asphalt), T-6 (coating asphalt) and T-7 (coating asphalt), each constructed in 1972 and each with a maximum storage capacity of 30,000 gallons of asphalt.
- (e) One (1) storage tank, identified as T-9 (steep asphalt), constructed in 1977, with a maximum storage capacity of 8,000 gallons.
- (f) Reserved.
- (g) A day tank for the storage of laminating adhesive, permitted in 2003, with a storage capacity of 1200 gallons, with emissions below exemption levels in 326 IAC 2-1.1-3(d)(1).
- (h) A petroleum fuel other than gasoline dispensing facility, having a storage tank capacity less than or equal to ten thousand five hundred (10,500) gallons, and dispensing three thousand five hundred (3,500) gallons per day or less, permitted in 2003.
- (i) Water related activities including:
 - (1) Production of hot water for on-site personal use not related to any industrial or production process;
 - (2) Steam traps, vents, leaks and safety relief valves;
 - (3) Laundry operations using only water solutions of bleach or detergents; and
 - (4) Boiler water treatment operations, not including cooling towers.

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- (p) Combustion activities including the following:
 - (1) Combustion emissions from propulsion of mobile sources;
 - (2) Tobacco smoking rooms and areas; and
 - (3) Indoor and outdoor kerosene heaters.
- (j) Ventilation and venting related equipment including the following:
 - (1) Ventilation exhaust, central chiller water systems, refrigeration and air conditioning equipment, not related to any industrial or production process, including natural draft hoods or ventilating systems that do not remove air pollutants;
 - (2) Stack and vents from plumbing traps used to prevent the discharge of sewer gases, handling domestic sewage only, excluding those at wastewater treatment plants or those handling any industrial waste; and
 - (3) Air vents from air compressors.
- (k) Activities related to routine fabrication, maintenance and repair of buildings, structures, equipment or vehicles at the source where air emissions from those activities would not be associated with any commercial production process including the following:
 - (1) Non-asbestos insulation installation or removal.
- (l) Housekeeping and janitorial activities and supplies including the following:
 - (1) Rest rooms and associated cleanup operations and supplies; and
 - (2) Mobile floor sweepers and floor scrubbers.
- (m) Office related activities including the following:
 - (1) Office supplies and equipment;
 - (2) Photocopying equipment and associated supplies; and
 - (3) Paper shredding.
- (n) Lawn care and landscape maintenance activities and equipment, including the storage, spraying or application of insecticides, pesticides and herbicides.
- (o) Storage equipment and activities including:
 - (1) Pressurized storage tanks and associated piping for the following:
 - (A) Acetylene;
 - (B) Liquid natural gas (LNG) (propane); and
 - (C) Liquid petroleum gas (LPG).

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- (2) Storage tanks, vessels, and containers holding or storing liquid substances that do not contain any VOCs or HAPs;
 - (3) Storage tanks, reservoirs, and pumping and handling equipment of any size containing soap, wax, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized; and
 - (4) Storage of drums containing maintenance raw materials.
- (p) Emergency and standby equipment including:
- (1) Safety and emergency equipment, except engine driven fire pumps, including fire suppression systems and emergency road flares; and
 - (2) Process safety relief devices installed solely for the purpose of minimizing injury to persons or damage to equipment which could result from abnormal process operating conditions, including the following: Safety relief valves.
- (q) Use of consumer products and equipment where the product or equipment is used at a source in the same manner as normal consumer use and is not associated with any production process.
- (r) Activities associated with production including the following:
- (1) Application equipment for hot melt adhesives with no VOC in the adhesive formulation;
 - (2) Air compressors and pneumatically operated equipment, including hand tools; and
 - (3) Compressor or pump lubrication and seal oil systems.
- (s) Miscellaneous equipment, but not emissions associated with the process for which the equipment is used, and activities including the following:
- (1) Manual loading and unloading operations.
- (t) The following VOC and HAP storage containers:
- (1) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons; and
 - (2) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
- (u) Noncontact cooling tower systems with either of the following:
- (1) Natural draft cooling towers not regulated under a NESHAP, constructed in 1997, with a maximum capacity of 403 tons.
- (v) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (w) Heat exchanger cleaning and repair.
- (x) Process vessel degassing and cleaning to prepare for internal repairs.

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- (y) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower.

A.5 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).

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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, F129-38119-00011, 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.

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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).

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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 (PMP) 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 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

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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 Southwest 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
Southwest Regional Office phone: (812) 380-2305; fax: (812) 380-2304.

- (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:

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- (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.

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

- (a) All terms and conditions of permits established prior to F129-38119-00011 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)]

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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
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- (b) A timely renewal application is one that is:
- (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, 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)]

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

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

- (5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15(b)(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.

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

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

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

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

- (a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

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

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

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

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

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

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

- (a) The Permittee shall pay annual fees to IDEM, OAQ no later than thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

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

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

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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,

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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 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using ambient air quality modeling pursuant to 326 IAC 1-7-4.

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

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

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- (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.10 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).

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

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

C.12 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.13 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)] [326 IAC 2-8-5(1)]

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

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

C.14 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.15 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.16 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.

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C.17 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.18 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

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

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

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Proper notice submittal under Section B -Emergency Provisions satisfies the reporting requirements of this paragraph. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported except that a deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. This report shall be submitted not later than thirty (30) days after the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.
- (b) The address for report submittal is:
- Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

Stratospheric Ozone Protection

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

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

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SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) One (1) modified bitumen production line, with a maximum production rate of 13.5 tons per hour, constructed in 1986, with a mist collector for particulate control, exhausting through Stack S3, and consisting of the following:
- (1) One (1) impregnator (saturator and coating tank).

Under the NSPS, 40 CFR 60, Subpart UU, the modified bitumen production line coater is an affected facility.

Under the NESHAP, 40 CFR 63, Subpart AAAAAAA, the modified bitumen production line coater is part of an existing affected source.
 - (2) One (1) dry felt looper.
 - (3) One (1) cooling section.
 - (4) One (1) granule application process, with a maximum capacity of 10.0 tons of roofing granules per hour, controlled by a dust collector.
- (b) Storage and handling of bulk material operations, consisting of the following:
- (1) One (1) truck unloading pit and associated underground conveyor, identified as modified bitumen / granules truck unloading, constructed in 1972, with a maximum capacity of 30.60 tons per hour, with emissions controlled by a baghouse (S29), and exhausting to stack S30.
 - (2) One (1) bucket elevator, identified as roofing granules incoming elevator, constructed in 1972, with a maximum capacity of 30.60 tons per hour, with emissions controlled by a baghouse (S29), and exhausting to stack S30. Only one of the twenty silos can be loaded at a time.
 - (3) Modified bitumen granules handling operation, constructed in 1986, with a maximum throughput of 10.0 tons per hour, and consisting of the following:
 - (A) Two (2) storage silos, identified as S27 and S28, with emissions controlled by a baghouse (S29), and exhausting to stack S30.
 - (B) One (1) totally enclosed pneumatic transport system, identified as modified bitumen / granules transport system, with emissions uncontrolled. Only one of the two silos can be unloaded at a time.
 - (C) One (1) storage bin, identified as 29, with emissions controlled by a baghouse, and exhausting to stack S30.
Under the NSPS, 40 CFR Part 60, Subpart UU, the modified bitumen granules handling operation is an affected facility.
 - (4) Shingle granules handling operation, constructed in 1972, with a maximum throughput of 30.60 tons per hour, and consisting of the following:
 - (A) Eighteen (18) storage silos, identified as 1-18, with emissions uncontrolled.
 - (B) One (1) conveyor belt, identified as blending conveyor, with emissions uncontrolled. Only one of the eighteenth silos can be unloaded at a time.
 - (C) One (1) storage bin, identified as use bin, with emissions uncontrolled.

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- (5) Shingle and modified bitumen filler (limestone) handling operations, constructed in 1986, with a maximum throughput of 32.00 tons per hour, and consisting of the following:

- (A) Two (2) pneumatic truck unloading operation, identified as shingle unloading and bitumen unloading, with emissions uncontrolled.
- (B) Two (2) storage silos, identified as S8 and S9, with emissions controlled by baghouse S10, and exhausting to stack S8 and S9.
- (C) One (1) pneumatic transport system, identified as S10, with emissions controlled by a baghouse, and exhausting to stack S10. Only one of the two silos can be unloaded at a time.
- (D) One (1) storage bin, identified as S11, with emissions controlled by a baghouse, and exhausting to stack S11.

Under the NSPS, 40 CFR Part 60, Subpart UU, the shingle and modified bitumen filler (limestone) handling operations are affected facilities.

- (6) Talc handling operation, constructed in 1986, with a maximum throughput of 0.10 tons per hour, and consisting of the following:

- (A) One (1) totally enclosed pneumatic truck unloading operation, identified as talc unloading, with emissions controlled by baghouse S25, and exhausting to stack S25.
- (B) One (1) storage silo, identified as S25, with emissions controlled by baghouse S25, and exhausting to stack S25.
- (C) One (1) pneumatic transport system, identified as S18, with emissions controlled by baghouse S18, and exhausting to stack S18.
- (D) One (1) storage bin, identified as S18, with emissions controlled by baghouse S18, and exhausting to stack S18.

Under the NSPS, 40 CFR Part 60, Subpart UU, the talc handling operation is an affected facility.

- (7) Shingle and modified bitumen sand handling operations, constructed in 1986, with a maximum throughput of 4.63 tons per hour, and consisting of the following:

- (A) One (1) pneumatic truck unloading operation, identified as sand unloading, with emissions controlled by baghouse S26, and exhausting to stack S26.
- (B) One (1) storage silo, identified as S26, with emissions controlled by baghouse S26, and exhausting to stack S26.
- (C) One (1) pneumatic transport system, identified as S17, with emissions controlled by baghouse S17, and exhausting to stack S17.
- (D) One (1) storage bin, identified as S17, with emissions controlled by baghouse S17, and exhausting to stack S17.

Under the NSPS, 40 CFR Part 60, Subpart UU, the shingle and modified bitumen sand handling operations are affected facilities.

[Under 40 CFR Part 60, Subpart UU, this is considered an affected facility.]

Before Replacement:

- (c) One (1) asphalt blowing operation, approved for modification in 2020, with a bottlenecked capacity of 32,625 pounds of asphalt per hour, consisting of:

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- (1) One (1) blowstill, identified as BS1a, constructed in 1972, with a maximum capacity of 12,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.
- (2) One (1) blowstill, identified as BS1b, approved for construction in 2020, with a maximum capacity of 12,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.
- (3) One (1) blowstill, identified as BS3, constructed in 2006, with a maximum capacity of 18,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.

Only one (1) blowstill can operate at a time because there are only enough blowers installed to charge one at a time.

Under the NSPS, 40 CFR Part 60, Subpart UU, blowstill BS1b and BS3, are affected facilities.

Under the NESHAP, 40 CFR 63, Subpart AAAAAA, the blowstills, BS1a, BS1b, and BS3, are part of an existing affected source.

After Replacement:

- (c) One (1) asphalt blowing operation, approved for modification in 2020, with a bottlenecked capacity of 32,625 pounds of asphalt per hour, consisting of:
 - (1) One (1) blowstill, identified as BS1b, approved for construction in 2020, with a maximum capacity of 12,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.
 - (2) One (1) blowstill, identified as BS3, constructed in 2006, with a maximum capacity of 18,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.

Only one (1) blowstill can operate at a time because there are only enough blowers installed to charge one at a time.

Under the NSPS, 40 CFR Part 60, Subpart UU, blowstill BS1b and BS3 are affected facilities.

Under the NESHAP, 40 CFR 63, Subpart AAAAAA, the blowstills, BS1b and BS3, are part of an existing affected source.
- (d) One (1) shingles and rolls production line, constructed in 1972, with a maximum production rate of 75 tons per hour, with a mist collector for particulate control, exhausting through stacks S5 and S7, consisting of:
 - (1) One (1) shingle coater dip pan, identified as S5.

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Under the NESHAP, 40 CFR 63, Subpart AAAAAAA, the shingle coater dip pan is an existing affected facility.

- (2) One (1) dry felt looper.
- (3) One (1) granule and sand application process, with a maximum capacity of 41.29 tons of sand and granules per hour, controlled by a dust collector, exhausting to stack S6.
- (4) One (1) self-seal application process, with a maximum capacity of 1.50 tons/hr.
- (5) One (1) cooling section.
- (6) One (1) finished product looper.
- (7) One (1) laminator, identified as S7 with a maximum capacity of 2,500 lbs/hr.
- (8) One (1) shingle product cutting operation.
- (9) One (1) shingle product packaging operation.

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

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

D.1.1 VOC BACT [326 IAC 8-1-6]

- (a) Pursuant to 326 IAC 8-1-6 and FESOP Renewal No. 129-38119-00011, the Permittee shall comply with the following:
 - (1) VOC emissions from the blowstill BS3 shall be controlled by a boiler at all times the blowstill is in operation and generating VOC emissions.
 - (2) The boiler shall have a total THC destruction efficiency of at least 90%.
 - (3) VOC emissions from the blowstill BS3 shall not exceed 0.170 lb VOC/ton asphalt blown.
 - (4) Asphalt throughput shall not exceed 175,200 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) Pursuant to 326 IAC 8-1-6 and FESOP Significant Permit Revision No, 129-43012-00011, the Permittee shall comply with the following:
 - (1) VOC emissions from the blowstill BS1b shall be controlled by a boiler at all times the blowstill is in operation and generating VOC emissions.
 - (2) The boiler shall have a total THC destruction efficiency of at least 90%.
 - (3) VOC emissions from the blowstill BS1b shall not exceed 0.170 lb VOC/ton asphalt blown.
 - (4) Asphalt throughput shall not exceed 175,200 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

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D.1.2 PSD Minor Limits [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following:

- (a) The shingle and modified bitumen filler handling operations shall be limited as follows:

| Emission Unit(s) | Stack ID | PM Limit (lb/hr) |
|--------------------------------|----------|------------------|
| Silo S8 | S8 | 0.24 |
| Silo S9 | S9 | 0.24 |
| Pneumatic Transport System S10 | S10 | 0.24 |
| Bin S11 | S11 | 0.24 |

- (b) The asphalt blowing operation shall be limited as follows:

- (1) The asphalt throughput for blowstills BS1a, BS1b, and BS3 shall not exceed 90,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (2) The total blowstill BS1a, BS1b, and BS3 emissions shall be limited as follows:

| Emission Units | PM Limit (lb/ton of asphalt) |
|-----------------|------------------------------|
| BS1a, BS1b, BS3 | 0.30 |

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

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

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

- (a) The modified bitumen roofing production line shall be limited as follows:

- (1) PM₁₀ emissions from the modified bitumen roofing coater shall not exceed 0.12 pounds per ton of roofing produced.
- (2) PM_{2.5} emissions from the modified bitumen roofing coater shall not exceed 0.12 pounds per ton of roofing produced.
- (3) PM₁₀ emissions from the modified bitumen roofing granule application process shall not exceed 0.015 pounds per ton of roofing produced.
- (4) PM_{2.5} emissions from the modified bitumen roofing granule application process shall not exceed 0.015 pounds per ton of roofing produced.

- (b) The shingle and modified bitumen filler handling operations shall be limited as follows:

| Emission Unit(s) | Stack ID | PM ₁₀ Limit (lb/hr) | PM _{2.5} Limit (lb/hr) |
|------------------|----------|--------------------------------|---------------------------------|
| Silo S8 | S8 | 0.15 | 0.15 |

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| Emission Unit(s) | Stack ID | PM ₁₀ Limit (lb/hr) | PM _{2.5} Limit (lb/hr) |
|--------------------------------|----------|--------------------------------|---------------------------------|
| Silo S9 | S9 | 0.15 | 0.15 |
| Pneumatic Transport System S10 | S10 | 0.15 | 0.15 |
| Bin S11 | S11 | 0.15 | 0.15 |

(c) The asphalt blowing operation shall be limited as follows:

- (1) The asphalt throughput for blowstills BS1a, BS1b, and BS3 shall not exceed 90,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (2) The total blowstill BS1a, BS1b, and BS3 emissions shall be limited as follows:

| Emission Units | PM ₁₀ (lb/ton) | PM _{2.5} (lb/ton) | VOC (lb/ton) |
|-----------------|---------------------------|----------------------------|--------------|
| BS1a, BS1b, BS3 | 0.30 | 0.30 | 0.17 |

(d) The shingle and roll roofing production line shall be limited as follows:

- (1) The asphalt throughput for the shingle and roll roofing production line shall not exceed 110,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (2) PM₁₀ emissions from the shingle and roll roofing coater shall not exceed 0.12 pounds per ton of roofing produced.
- (3) PM_{2.5} emissions from the shingle and roll roofing coater shall not exceed 0.12 pounds per ton of roofing produced.
- (4) PM₁₀ emissions from the shingle and roll roofing granule application process shall not exceed 0.015 pounds per ton of roofing produced.
- (5) PM_{2.5} emissions from the shingle and roll roofing granule application process shall not exceed 0.015 pounds per ton of roofing produced.

Compliance with these limits, combined with the potential to emit PM₁₀, PM_{2.5}, and VOC from all other emission units at this source, shall limit the source-wide total potential to emit of PM₁₀, PM_{2.5}, and VOC to less than one-hundred (100) tons per twelve (12) consecutive month period, each, and shall render the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable

D.1.4 Hazardous Air Pollutants (HAP) Limitations

Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA), and render the requirements of 326 IAC 2-7 (Part 70 Permits) not applicable, the Permittee shall comply with the following:

(a) The asphalt blowing operation shall be limited as follows:

- (1) The throughput for blowstills BS1a, BS1b, and BS3 shall not exceed 90,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

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- (2) Ethylbenzene emissions from the asphalt blowing process shall not exceed 0.0065 lb/ton of asphalt.
- (b) The shingle and roll roofing coater shall be limited as follows
 - (1) The maximum throughput for the shingle and roll roofing production line shall not exceed 110,000 tons of asphalt per twelve (12) consecutive month period with compliance determined at the end of each month.
 - (2) n-Hexane emissions shall not exceed 0.082 pounds per ton of asphalt.

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

D.1.5 Particulate Emission Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions rate from the following operations shall not exceed the pound per hour limit (E) when operating at the associated process weight rate as listed in the table below:

| Process Description | Process Weight Rate (tons/hr) | E 326 IAC 6-3-2 Limit (lbs/hr) |
|--|-------------------------------|-----------------------------------|
| modified bitumen production line | 13.5 (total) | 23.45 |
| modified bitumen / granules truck unloading | 30.60 | 40.13 |
| roofing granules incoming elevator | 30.60 | 40.13 |
| Silos S27, S28 | 10 (each) | 19.18 (each) |
| modified bitumen / granules transport system & S29 | 10 | 19.18 (total) |
| Silos 1-18 | 30.60 (each) | 40.13 (each) |
| blending conveyor & use bin | 30.60 | 40.13 (total) |
| shingle unloading and bitumen unloading | 32.00 (each) | 40.52 (each) |
| Silos S8, S9 | 32.00 (each) | 40.52 (each) |
| S10 & S11 | 32.00 (total) | 40.52 (total) |
| Blowstills (BS1a, BS1b, BS3) | 16.31 | 26.62 (total) |

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

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

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

D.1.7 Particulate Control

- (a) In order to assure compliance with Conditions D.1.2(a) and D.1.3(b), the baghouses for particulate control shall be in operation and control emissions from the storage silos S8 and S9, pneumatic transport system S10, and storage bin S11 at all times the storage silos S8 and S9, pneumatic transport system S10, and storage bin S11 are in operation.
- (b) In order to assure compliance with Condition D.1.3(a)(1) and (2), the mist collector for

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particulate control shall be in operation and control emissions from the modified bitumen roofing line coater at all times the modified bitumen roofing line coater is in operation.

- (c) In order to assure compliance with Condition D.1.3(a)(3) and (4), the dust collector for particulate control shall be in operation and control emissions from the modified bitumen roofing granule application process at all times the modified bitumen roofing granule application process is in operation.
- (d) In order to assure compliance with Condition D.1.3(d)(1) and (2), the mist collector for particulate control shall be in operation and control emissions from the shingle and roll roofing line coater at all times the shingle and roll roofing line coater is in operation.
- (e) In order to assure compliance with Condition D.1.3(d)(3) and (4), the dust collector for particulate control shall be in operation and control emissions from the shingle and roll roofing granule application process at all times the shingle and roll roofing granule application process is in operation.

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

D.1.8 Asphalt Blowing Process Emissions Control

In order to assure compliance with Conditions D.1.1, D.1.2(b), D.1.3(c), and D.1.4, the boiler (Boiler 1 of Boiler 2) for particulate, VOC, CO, and HAP control shall be in operation and control emissions from the asphalt blowing process at all times the asphalt blowing process is in operation.

D.1.9 Testing Requirements [326 IAC 2-1.1-11]

- (a) Not later than 180 days after the startup of the asphalt blowing process (BS1b) or no later than five (5) years from the most recent test, and to assure with Conditions D.1.2(b)(2) and D.1.3(c)(2), the Permittee shall perform PM, PM₁₀, and PM_{2.5} testing of Boiler 2, controlling the asphalt blowing operation (BS1a, BS1b, and BS3) utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Testing shall be performed using the particulate source (blowstill) that was not used in the most recent test that demonstrated compliance with the limits in Condition D.1.2(b)(2) and/or Condition D.1.3(c)(2). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM₁₀ and PM_{2.5} includes filterable and condensable PM.
- (b) Not later than 180 days after the startup of the asphalt blowing process (BS1a, BS1b, and/or BS3) or not later than five (5) years from the most recent test, and to assure compliance with Conditions D.1.2(b)(2) and D.1.3(c)(2), the Permittee shall perform PM, PM₁₀, and PM_{2.5} testing of Boiler 1 controlling the asphalt blowing operation BS1a, BS1b, and BS3 utilizing methods approved by the commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Testing shall be performed using the particulate source (blowstill) that was not used in the most recent test that demonstrated compliance with the limits in Condition D.1.2(b)(2) and/or Condition D.1.3(c)(2). Section C - Performance Testing contains the

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Permittee's obligation with regard to the performance testing required by this condition. PM₁₀ and PM_{2.5} includes filterable and condensable PM.

- (c) Not later than 180 days after the issuance date of this permit, Permit No F129-38119-00011, and to assure compliance with Conditions D.1.2(a) and D.1.3(b), the Permittee shall perform PM, PM₁₀, and PM_{2.5} testing of the storage bin S11 utilizing methods approved by the commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM₁₀ and PM_{2.5} includes filterable and condensable PM.
- (d) Not later than 180 days after the startup of the asphalt blowing process (BS1b) or not later than five (5) years from the most recent test, and to assure compliance with Conditions D.1.1 and D.1.3(c)(2), the Permittee shall perform VOC testing of Boiler 2, controlling the asphalt blowing operation (BS1a, BS1b, and BS3), utilizing methods approved by the commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. VOC testing shall include emission rate and overall control efficiency. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Testing shall be performed using the VOC source (blowstill) that was not used in the most recent test that demonstrated compliance with the limits in Condition D.1.1 and/or Condition D.1.3(c). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.
- (e) Not later than 180 days after the startup of Boiler 1 as a control device for the asphalt blowing process (BS1a, BS1b, and/or BS3) or not later than five (5) years from the most recent test, and to assure compliance with Conditions D.1.1 and D.1.3(c)(2), the Permittee shall perform VOC testing of Boiler 1 controlling the asphalt blowing operation BS1a, BS1b, and BS3 utilizing methods approved by the commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. VOC testing shall include emission rate and overall control efficiency. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Testing shall be performed using the VOC source (blowstill) that was not used in the most recent test that demonstrated compliance with the limits in Condition D.1.1 and/or Condition D.1.3(c). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.
- (f) Not later than 180 days after a stack test of a boiler (Boiler 1 or 2) controlling emissions from the asphalt blowing process (BS1a, BS1b, or BS3) with a VOC result greater than or equal to 0.005 lb/ton of asphalt, and to assure compliance with Condition D.1.4(a)(2), the Permittee shall perform ethylbenzene testing of a boiler (Boiler 1 or 2) controlling emissions from the asphalt blowing operation (BS1a, BS1b, or BS3) utilizing methods approved by the commissioner. 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.
- (g) Not later than 180 days after the issuance date of this permit, Permit No 129-41984-00011, and to assure compliance with Condition D.1.3(a)(1) and (2), the Permittee shall perform PM₁₀ and PM_{2.5} testing of the modified bitumen roofing coater utilizing methods approved by the commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C –

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Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

- (h) Not later than 180 days after the issuance date of this permit, Permit No 129-41984-00011, and to assure compliance with Condition D.1.3(a)(3) and (4), the Permittee shall perform PM₁₀ and PM_{2.5} testing of the modified bitumen granule application process utilizing methods approved by the commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.
- (i) Not later than 180 days after the issuance date of this permit, Permit No 129-41984-00011, and to assure compliance with Condition D.1.3(d)(1) and (2), the Permittee shall perform PM₁₀ and PM_{2.5} testing of the shingle and roll roofing coater utilizing methods approved by the commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.
- (j) Not later than 180 days after the issuance date of this permit, Permit No 129-41984-00011, and to assure compliance with Condition D.1.3(d)(3) and (4), the Permittee shall perform PM₁₀ and PM_{2.5} testing of the shingle and roll roofing granule application process utilizing methods approved by the commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.
- (k) Not later than 180 days after the issuance date of this permit, Permit No 129-41894-00011, and to assure compliance with Condition D.1.4(b)(2) the Permittee shall perform n-hexane testing of the shingle and roll roofing coater utilizing methods approved by the commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

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

D.1.10 Visible Emissions Notations

- (a) Visible emission notations of the S8, S9, S10, S11, and S32 exhausts shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) Visible emission notations of the boiler controlling emissions from the asphalt blowing process stack shall be performed once per day during normal daylight operations while the asphalt blowing process is in operation. A trained employee shall record whether emissions are normal or abnormal.
- (c) 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.

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- (d) 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.
- (e) 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.
- (f) If abnormal emissions are observed, the Permittee shall take a reasonable response. Section C - Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.1.11 Boiler Temperature

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on Boiler 1 and Boiler 2 for measuring operating temperature when controlling emissions from the asphalt blowing process. For the purpose of this condition, continuous means no less often than once per fifteen (15) minutes. The output of this system shall be recorded as 3-hour average.
- (b) The Permittee shall determine the 3-hour average temperature from the latest valid stack test that demonstrates compliance with limits in Conditions D.1.1 and D.1.3(c).
- (c) On and after the date the stack test results are available, the Permittee shall operate the boilers at or above the 3-hour average temperature as observed during the latest compliant stack test.
- (d) If the 3-hour average temperature falls below the above mentioned 3-hour average temperature, the Permittee shall take a reasonable response. Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A 3-hour average temperature reading below the above mentioned 3-hour average temperature is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

D.1.12 Broken or Failed Bag Detection

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

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

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

D.1.13 Record Keeping Requirements

- (a) To document the compliance status with Condition D.1.1, the Permittee shall maintain monthly records of the throughput for blowstills BS1b and BS3.
- (b) To document the compliance status with Conditions D.1.2(b), D.1.3(c)(1), and D.1.4(a)(1), the Permittee shall maintain monthly records of the throughput for blowstills BS1a, BS1b, and BS3.
- (c) To document the compliance status with Conditions D.1.3(d)(1) and D.1.4(b)(1), the Permittee shall maintain monthly records of the throughput for shingles and rolls production line.
- (d) To document the compliance status with Condition D.1.10, the Permittee shall maintain records of daily visible emission notations of the stack exhausts. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the process did not operate that day).
- (e) To document the compliance status with Condition D.1.11, the Permittee shall maintain continuous temperature records for Boiler 1 or Boiler 2 while the asphalt blowing process is in operation and the 3-hour average temperature used to demonstrate compliance during the most recent compliant stack test.
- (f) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the records required by this condition.

D.1.14 Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.1.1 (d), D.1.2(b) and D1.3(d)(1) shall be submitted not later than thirty (30) days after the end of the quarter being reported. Section C - General Reporting contains the Permittee's obligation with regard to the reporting required by this condition. The report does require a certification that meets the requirements of 326 IAC 2-8-5(a)(1) by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (e) One (1) natural gas-fired boiler, identified as boiler No. 1, with a maximum heat input capacity of 29.15 MMBtu/hr, constructed in 1972, and exhausting through stack S32. Boiler No. 1 serves as a backup boiler.
- (f) One (1) natural gas-fired boiler, identified as boiler No. 2, with a maximum heat input capacity of 29.15 MMBtu/hr, constructed in 1972, and exhausting through stack S32. Boiler No. 2 serves as the primary unit.
- (g) One (1) natural gas-fired combustion unit, identified as S36 flux heater, constructed in 1972, approved in 2019 for modification, with a maximum heat input capacity of 7.0 MMBtu/hr, exhausting through Stacks S35 and S36.

Insignificant Activities:

- (a) Space heaters, process heaters, heat treat furnaces, or boilers using the following fuels:
 - (1) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour.
 - (A) One (1) natural gas fired combustion unit, identified as coating heater, constructed in 1972, modification permitted in 2012, with a maximum heat input capacity of 4.5 MMBtu/hr, exhausting through Stack S34.
 - (B) One (1) natural gas-fired combustion unit, identified as mod-bit hot oil heater, permitted in 2006, approved in 2019 for modification, with a maximum heat input capacity of 5.2 MMBtu/hr, exhausting through Stack S2.
 - (C) One (1) natural gas-fired combustion unit, identified as filler heater hot oil heater, constructed in 1987, approved in 2019 for modification, with a maximum heat input capacity of 6.0 MMBtu/hr, exhausting through Stack S4.
 - (D) One (1) natural gas-fired combustion unit, identified as liquid asphalt storage heater, permitted in 2006, with a maximum heat input capacity of 3.0 MMBtu/hr, exhausting through Stack S1.
 - (E) One (1) natural gas-fired combustion unit, identified as thermal fluid heater, with a maximum heat input capacity of 5.0 MMBtu/hr, approved for construction in 2007.

(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 Particulate [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3 (Particulate Emission Limitations for Sources of Indirect Heating), the PM emissions from the following units shall be limited to Pt pounds per MMBtu heat input, as follows:

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| Emission Unit | Pt (lb/MMBtu) |
|----------------|---------------|
| Boiler 1 | 0.8 |
| Boiler 2 | 0.8 |
| Flux heater | 0.8 |
| Coating heater | 0.8 |

D.2.2 Particulate [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the PM emissions from the following units shall be limited to Pt pounds per MMBtu heat input, as follows:

| Emission Unit | Pt (lb/MMBtu) |
|-------------------------------|---------------|
| Mod-bit hot oil heater | 0.34 |
| Filler heater | 0.33 |
| Liquid asphalt storage heater | 0.33 |
| Thermal fluid heater | 0.33 |

D.2.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

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SECTION D.3

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Insignificant Activities:

- (f) Degreasing operations that do not exceed one hundred forty-five (145) gallons per twelve (12) months, except if subject to 326 IAC 20-6.

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

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

D.3.1 Cold Cleaner Degreaser Control Equipment and Operating Requirements [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Degreaser Control Equipment and Operating Requirements), the Permittee shall:

- (a) Ensure the following control equipment and operating requirements are met:
- (1) Equip the degreaser with a cover.
 - (2) Equip the degreaser with a device for draining cleaned parts.
 - (3) Close the degreaser cover whenever parts are not being handled in the degreaser.
 - (4) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
 - (5) Provide a permanent, conspicuous label that lists the operating requirements in subdivisions (3), (4), (6), and (7).
 - (6) Store waste solvent only in closed containers.
 - (7) Prohibit the disposal or transfer of waste solvent in such a manner that could allow greater than twenty percent (20%) of the waste solvent (by weight) to evaporate into the atmosphere.
- (b) Ensure the following additional control equipment and operating requirements are met:
- (1) Equip the degreaser with one (1) of the following control devices if the solvent is heated to a temperature of greater than forty-eight and nine-tenths (48.9) degrees Celsius (one hundred twenty (120) degrees Fahrenheit):
 - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
 - (B) A water cover when solvent used is insoluble in, and heavier than, water.
 - (C) A refrigerated chiller.
 - (D) Carbon adsorption.
 - (E) An alternative system of demonstrated equivalent or better control as those outlined in clauses (A) through (D) that is approved by the department. An alternative system shall be submitted to the U.S. EPA as a SIP revision.

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- (2) Ensure the degreaser cover is designed so that it can be easily operated with one (1) hand if the solvent is agitated or heated.
- (3) If used, solvent spray:
 - (A) must be a solid, fluid stream; and
 - (B) shall be applied at a pressure that does not cause excessive splashing.

D.3.2 Material Requirements for Cold Cleaner Degreasers [326 IAC 8-3-8]

Pursuant to 326 IAC 8-3-8 (Material Requirements for Cold Cleaner Degreasers), the Permittee shall not operate a cold cleaning degreaser with a solvent that has a VOC composite partial vapor pressure that exceeds one (1) millimeter of mercury (nineteen-thousandths (0.019) pound per square inch) measured at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

D.3.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

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

D.3.4 Record Keeping Requirements

- (a) To document the compliance status with Condition D.3.2, the Permittee shall maintain the following records for each purchase of solvent used in the cold cleaner degreasing operations. These records shall be retained on-site or accessible electronically for the most recent three (3) year period and shall be reasonably accessible for an additional two (2) year period.
 - (1) The name and address of the solvent supplier.
 - (2) The date of purchase (or invoice/bill dates of contract servicer indicating service date).
 - (3) The type of solvent purchased.
 - (4) The total volume of the solvent purchased.
 - (5) The true vapor pressure of the solvent measured in millimeters of mercury at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).
- (b) Section C - General Record Keeping Requirements contains the Permittee's obligations with regard to the records required by this condition.

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SECTION E.1

Emissions Unit Description:

(a) One (1) modified bitumen production line, with a maximum production rate of 13.5 tons per hour, constructed in 1986, with a mist collector for particulate control, exhausting through Stack S3, and consisting of the following:

(1) One (1) impregnator (saturator and coating tank).

Under the NSPS, 40 CFR 60, Subpart UU, the modified bitumen production line coater is an affected facility.

Under the NESHAP, 40 CFR 63, Subpart AAAAAAA, the modified bitumen production line coater is part of an existing affected source.

(2) One (1) dry felt looper.

(3) One (1) cooling section.

(4) One (1) granule application process, with a maximum capacity of 10.0 tons of roofing granules per hour, controlled by a dust collector.

(b) Storage and handling of bulk material operations, consisting of the following:

(3) Modified bitumen granules handling operation, constructed in 1986, with a maximum throughput of 10.0 tons per hour, and consisting of the following:

(A) Two (2) storage silos, identified as S27 and S28, with emissions controlled by a baghouse (S29), and exhausting to stack S30.

(B) One (1) totally enclosed pneumatic transport system, identified as modified bitumen / granules transport system, with emissions uncontrolled. Only one of the two silos can be unloaded at a time.

(C) One (1) storage bin, identified as 29, with emissions controlled by a baghouse, and exhausting to stack S30.

Under the NSPS, 40 CFR Part 60, Subpart UU, the modified bitumen granules handling operation is an affected facility.

(5) Shingle and modified bitumen filler (limestone) handling operations, constructed in 1986, with a maximum throughput of 32.00 tons per hour, and consisting of the following:

(A) Two (2) pneumatic truck unloading operation, identified as shingle unloading and bitumen unloading, with emissions uncontrolled.

(B) Two (2) storage silos, identified as S8 and S9, with emissions controlled by baghouse S10, and exhausting to stack S8 and S9.

(C) One (1) pneumatic transport system, identified as S10, with emissions controlled by a baghouse, and exhausting to stack S10. Only one of the two silos can be unloaded at a time.

(D) One (1) storage bin, identified as S11, with emissions controlled by a baghouse, and exhausting to stack S11.

Under the NSPS, 40 CFR Part 60, Subpart UU, the shingle and modified bitumen filler (limestone) handling operations are affected facilities.

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- (6) Talc handling operation, constructed in 1986, with a maximum throughput of 0.10 tons per hour, and consisting of the following:
- (A) One (1) totally enclosed pneumatic truck unloading operation, identified as talc unloading, with emissions controlled by baghouse S25, and exhausting to stack S25.
 - (B) One (1) storage silo, identified as S25, with emissions controlled by baghouse S25, and exhausting to stack S25.
 - (C) One (1) pneumatic transport system, identified as S18, with emissions controlled by baghouse S18, and exhausting to stack S18.
 - (D) One (1) storage bin, identified as S18, with emissions controlled by baghouse S18, and exhausting to stack S18.

Under the NSPS, 40 CFR Part 60, Subpart UU, the shingle and modified bitumen filler (limestone) handling operations are affected facilities.

- (7) Shingle and modified bitumen sand handling operations, constructed in 1986, with a maximum throughput of 4.63 tons per hour, and consisting of the following:
- (A) One (1) pneumatic truck unloading operation, identified as sand unloading, with emissions controlled by baghouse S26, and exhausting to stack S26.
 - (B) One (1) storage silo, identified as S26, with emissions controlled by baghouse S26, and exhausting to stack S26.
 - (C) One (1) pneumatic transport system, identified as S17, with emissions controlled by baghouse S17, and exhausting to stack S17.
 - (D) One (1) storage bin, identified as S17, with emissions controlled by baghouse S17, and exhausting to stack S17.

Under the NSPS, 40 CFR Part 60, Subpart UU, the shingle and modified bitumen sand handling operations are affected facilities.

Before Replacement:

- (c) One (1) asphalt blowing operation, approved for modification in 2020, with a bottlenecked capacity of 32,625 pounds of asphalt per hour, consisting of:
- (2) One (1) blowstill, identified as BS1b, approved for construction in 2020, with a maximum capacity of 12,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.
 - (3) One (1) blowstill, identified as BS3, constructed in 2006, with a maximum capacity of 18,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.

Only one (1) blowstill can operate at a time because there are only enough blowers installed to charge one at a time.

Under the NSPS, 40 CFR Part 60, Subpart UU, blowstill BS1b and BS3, are affected facilities.

Under the NESHAP, 40 CFR 63, Subpart AAAAAA, the blowstills, BS1a, BS1b, and BS3, are part of an existing affected source.

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After Replacement:

- (c) One (1) asphalt blowing operation, approved for modification in 2020, with a bottlenecked capacity of 32,625 pounds of asphalt per hour, consisting of:
- (1) One (1) blowstill, identified as BS1b, approved for construction in 2020, with a maximum capacity of 12,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.
 - (2) One (1) blowstill, identified as BS3, constructed in 2006, with a maximum capacity of 18,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.

Only one (1) blowstill can operate at a time because there are only enough blowers installed to charge one at a time.

Under the NSPS, 40 CFR Part 60, Subpart UU, blowstill BS1b and BS3 are affected facilities.

Under the NESHAP, 40 CFR 63, Subpart AAAAAA, the blowstills, BS1b and BS3, are part of an existing affected source.

Insignificant Activities:

- (b) Two (2) storage tanks, identified as T-8 (self-seal asphalt) and T-16 (self-seal asphalt slate line), each constructed in 1989 and each with a maximum storage capacity of 14,000 gallons.
- Under the NSPS, 40 CFR Part 60, Subpart UU, tanks T-8 and T-16 are affected facilities.
- (c) Two (2) storage tanks, identified as T-20 (liquid APP plasticizer) and T-18 (holding tank package asphalt), constructed in 1986 and 1985, respectively, and each with a maximum storage capacity of 30,000 gallons.

Under the NSPS, 40 CFR Part 60, Subpart UU, tanks T-20 and T-18 are affected facilities.

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

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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 Asphalt Processing and Asphalt Roofing Manufacture NSPS [326 IAC 12] [40 CFR Part 60, Subpart UU]

The Permittee shall comply with the following provisions of 40 CFR Part 60, Subpart UU (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 60.470
- (2) 40 CFR 60.471
- (3) 40 CFR 60.472
- (4) 40 CFR 60.473 (b), (d)
- (5) 40 CFR 60.474 (a)(1-2), (b), (c), (d), (e), (f), (g)

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

E.1.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan is required for T-8, T-16, T-18, and T-20. 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)]

E.1.4 Testing Requirements [326 IAC 2-1.1-11] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

In order to demonstrate compliance with Condition E.1.2, the Permittee shall perform the testing required under 40 CFR 60, Subpart UU, excluding opacity testing for mineral handling and storage facilities, 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.

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SECTION E.2

Emissions Unit Description:

Insignificant Activities:

(d) Activities associated with emergencies consisting of:

(1) Emergency generators as follows:

(A) One (1) diesel-fired emergency generator, identified as S-47, with a maximum rated capacity of 755 hp, constructed in 2010.

Under the NSPS, 40 CFR 60, Subpart IIII, emergency generator S-47 is an affected facility.

Under the NESHAP, 40 CFR 63, Subpart ZZZZ, emergency generator S-47 is a new affected source.

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

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

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

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

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

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

E.2.2 Stationary Compression Ignition Internal Combustion Engines NSPS [326 IAC 12] [40 CFR Part 60, Subpart IIII]

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

- (1) 40 CFR 60.4200 (a)(2)(i), (a)(4), (c)
- (2) 40 CFR 60.4205 (b)
- (3) 40 CFR 60.4206
- (4) 40 CFR 60.4207 (a), (b)
- (5) 40 CFR 60.4208
- (6) 40 CFR 60.4209 (a)
- (7) 40 CFR 60.4211 (a), (c), (f)(1), (f)(2)(i), (g)(3)
- (8) 40 CFR 60.4212

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- (9) 40 CFR 60.4218
- (10) 40 CFR 60.4219
- (11) Table 1
- (12) Table 8

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SECTION E.3

Emissions Unit Description:

- (a) One (1) modified bitumen production line, with a maximum production rate of 13.5 tons per hour, constructed in 1986, with a mist collector for particulate control, exhausting through Stack S3, and consisting of the following:

- (1) One (1) impregnator (saturator and coating tank).

Under the NSPS, 40 CFR 60, Subpart UU, the modified bitumen production line coater is an affected facility.

Under the NESHAP, 40 CFR 63, Subpart AAAAAA, the modified bitumen production line coater is part of an existing affected source.

- (2) One (1) dry felt looper.
(3) One (1) cooling section.
(4) One (1) granule application process, with a maximum capacity of 10.0 tons of roofing granules per hour, controlled by a dust collector.

Before Replacement:

- (c) One (1) asphalt blowing operation, approved for modification in 2020, with a bottlenecked capacity of 32,625 pounds of asphalt per hour, consisting of:

- (1) One (1) blowstill, identified as BS1a, constructed in 1972, with a maximum capacity of 12,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.

- (2) One (1) blowstill, identified as BS1b, approved for construction in 2020, with a maximum capacity of 12,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.

- (3) One (1) blowstill, identified as BS3, constructed in 2006, with a maximum capacity of 18,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.

Only one (1) blowstill can operate at a time because there are only enough blowers installed to charge one at a time.

Under the NSPS, 40 CFR Part 60, Subpart UU, blowstill BS1b and BS3, are affected facilities.

Under the NESHAP, 40 CFR 63, Subpart AAAAAA, the blowstills, BS1a, BS1b, and BS3, are part of an existing affected source.

After Replacement:

- (c) One (1) asphalt blowing operation, approved for modification in 2020, with a bottlenecked capacity of 32,625 pounds of asphalt per hour, consisting of:

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- (1) One (1) blowstill, identified as BS1b, approved for construction in 2020, with a maximum capacity of 12,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.
 - (2) One (1) blowstill, identified as BS3, constructed in 2006, with a maximum capacity of 18,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.

Only one (1) blowstill can operate at a time because there are only enough blowers installed to charge one at a time.

Under the NSPS, 40 CFR Part 60, Subpart UU, blowstill BS1b and BS3 are affected facilities.

Under the NESHAP, 40 CFR 63, Subpart AAAAAA, the blowstills, BS1b and BS3, are part of an existing affected source.
- (d) One (1) shingles and rolls production line, constructed in 1972, with a maximum production rate of 75 tons per hour, with a mist collector for particulate control, exhausting through stacks S5 and S7, consisting of:
- (1) One (1) shingle coater dip pan, identified as S5.

Under the NESHAP, 40 CFR 63, Subpart AAAAAA, the shingle coater dip pan is an existing affected facility.
 - (2) One (1) dry felt looper.
 - (3) One (1) granule and sand application process, with a maximum capacity of 41.29 tons of sand and granules per hour, controlled by a dust collector, exhausting to stack S6.
 - (4) One (1) self-seal application process, with a maximum capacity of 1.50 tons/hr.
 - (5) One (1) cooling section.
 - (6) One (1) finished product looper.
 - (7) One (1) laminator, identified as S7 with a maximum capacity of 2,500 lbs/hr.
 - (8) One (1) shingle product cutting operation.
 - (9) One (1) shingle product packaging operation.

(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)]

E.3.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]

- (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 AAAAAA.
- (b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

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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.3.2 Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing NESHAP [40 CFR Part 63, Subpart AAAAAAA]

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

- (1) 40 CFR 63.11559 (a), (b), (f), (h)
- (2) 40 CFR 63.11560 (a)
- (3) 40 CFR 63.11561 (b), (c)
- (4) 40 CFR 63.11562 (c-g), (i)
- (5) 40 CFR 63.11563 (a), (g-i)
- (6) 40 CFR 63.11564 (a)(1), (a)(2), (a)(4-6), (b), (c)
- (7) 40 CFR 63.11565
- (8) 40 CFR 63.11566
- (9) 40 CFR 63.11567
- (10) Table 1
- (11) Table 2
- (12) Table 3
- (13) Table 4
- (14) Table 5

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

E.3.3 Testing Requirements [326 IAC 2-1.1-11] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

In order to with Condition E.4.2, the Permittee shall perform the testing required under 40 CFR 63, Subpart AAAAAAA, 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.

DRAFT
NESHAP

SECTION E.4

Emissions Unit Description:

Insignificant Activities:

(d) Activities associated with emergencies consisting of:

(1) Emergency generators as follows:

(A) One (1) diesel-fired emergency generator, identified as S-47, constructed in 2010, with a maximum rated capacity of 755 hp.

Under the NSPS, 40 CFR 60, Subpart IIII, emergency generator S-47 is an affected facility.

Under the NESHAP, 40 CFR 63, Subpart ZZZZ, emergency generator S-47 is a new affected source.

(2) Stationary fire pump engines as follows:

(A) One (1) diesel-fired emergency fire pump, constructed in 1972, with a maximum capacity of 255 HP.

Under the NESHAP, 40 CFR 63, Subpart ZZZZ, the emergency fire pump is an existing affected source.

(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)]

E.4.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]

(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 ZZZZ.

(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.4.2 Stationary Reciprocating Internal Combustion Engines NESHAP [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart ZZZZ (included as Attachment E to the operating permit), which are incorporated by reference as 326 IAC 20-82, for the emission unit(s) listed above:

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- (1) 40 CFR 63.6580
- (2) 40 CFR 63.6585
- (3) 40 CFR 63.6590 (a)(1)(iii) and (iv), (a)(2)(iii), (c)(1)
- (4) 40 CFR 63.6595 (a)(1), (a)(7), (b), and (c)
- (5) 40 CFR 63.6603 (a)
- (6) 40 CFR 63.6604 (b)
- (7) 40 CFR 63.6605
- (8) 40 CFR 63.6625 (e)(3), (f), (h), and (i)
- (9) 40 CFR 63.6635
- (10) 40 CFR 63.6640 (a), (b), (e), (f)(1)
- (11) 40 CFR 63.6645 (a)(5)
- (12) 40 CFR 63.6650
- (13) 40 CFR 63.6655
- (14) 40 CFR 63.6660
- (15) 40 CFR 63.6665
- (16) 40 CFR 63.6670
- (17) 40 CFR 63.6675
- (18) Table 2d (item 4)
- (19) Table 6 (item 9)
- (20) Table 8

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

E.4.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

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NESHAP

SECTION E.5

Emissions Unit Description:

Insignificant Activities:

- (e) A gasoline fuel transfer dispensing operation handling less than or equal to one thousand three hundred (1,300) gallons per day and filling storage tanks having a capacity equal to or less than ten thousand five hundred (10,500) gallons, permitted in 2003. This operation handles less than 10,000 gallons per month.

Under the NESHAP, 40 CFR 63, Subpart CCCCCC, the gasoline dispensing operation is an affected source.

(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)]

E.5.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]

- (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 CCCCCC.

- (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.5.2 Source Category: Gasoline Dispensing Facilities NESHAP [40 CFR Part 63, Subpart CCCCCC]

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

- (1) 40 CFR 63.11110
- (2) 40 CFR 63.11111 (a), (b), (e), (f), (h), (i), (j)
- (3) 40 CFR 63.11112 (a), (b)
- (4) 40 CFR 63.11113 (a)(1)
- (5) 40 CFR 63.11115
- (6) 40 CFR 63.11116
- (7) 40 CFR 63.11125 (d)
- (8) 40 CFR 63.11126 (b)
- (9) 40 CFR 63.11130
- (10) 40 CFR 63.11131
- (11) 40 CFR 63.11132
- (12) Table 3

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

E.5.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

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

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
CERTIFICATION**

Source Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mount Vernon, Indiana 47620
FESOP Permit No.: F129-38119-00011

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:

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

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT**

Source Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mount Vernon, Indiana 47620
FESOP Permit No.: F129-38119-00011

This form consists of 2 pages

Page 1 of 2

- | |
|--|
| <p><input type="checkbox"/> This is an emergency as defined in 326 IAC 2-7-1(12)</p> <ul style="list-style-type: none">• The Permittee must notify the Office of Air Quality (OAQ), within four (4) 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: |

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

Page 2 of 2

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

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

FESOP Quarterly Report

Source Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mount Vernon, Indiana 47620
FESOP Permit No.: F129-38119-00011
Facility: blowstills BS1a, BS1b, and BS3
Parameter: asphalt throughput
Limit: The asphalt throughput for blowstills BS1a, BS1b, and BS3 shall not exceed 90,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month. Compliance with this limit demonstrates compliance with the BACT limits in Condition D.1.1.

QUARTER: _____ YEAR: _____

| Month | Column 1 | Column 2 | Column 1 + Column 2 |
|-------|----------------------|------------------------------|--------------------------|
| | This Month (tons) | Previous 11 Months (tons) | 12 Month Total (tons) |
| | | | |
| | | | |
| | | | |

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

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

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

FESOP Quarterly Report

Source Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mount Vernon, Indiana 47620
FESOP Permit No.: F129-38119-00011
Facility: shingles and rolls production line
Parameter: asphalt throughput
Limit: The asphalt throughput for the shingle and roll roofing production line shall not exceed 110,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ YEAR: _____

| Month | Column 1 | Column 2 | Column 1 + Column 2 |
|-------|----------------------|------------------------------|--------------------------|
| | This Month (tons) | Previous 11 Months (tons) | 12 Month Total (tons) |
| | | | |
| | | | |
| | | | |

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

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

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

Source Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mount Vernon, Indiana 47620
FESOP Permit No.: F129-38119-00011

Months: _____ to _____ Year: _____

Page 1 of 2

| | |
|--|-------------------------------|
| <p>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".</p> | |
| <input type="checkbox"/> NO DEVIATIONS OCCURRED THIS REPORTING PERIOD. | |
| <input type="checkbox"/> THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD | |
| Permit Requirement (specify permit condition #) | |
| Date of Deviation: | Duration of Deviation: |
| Number of Deviations: | |
| Probable Cause of Deviation: | |
| Response Steps Taken: | |
| Permit Requirement (specify permit condition #) | |
| Date of Deviation: | Duration of Deviation: |
| Number of Deviations: | |
| Probable Cause of Deviation: | |
| Response Steps Taken: | |

DRAFT

Page 2 of 2

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

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

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

Source Description and Location

| | |
|---|---|
| Source Name: | Building Materials Manufacturing Corporation |
| Source Location: | 901 Givens Road, Mount Vernon, IN 47620 |
| County: | Posey |
| SIC Code: | 2952 (Asphalt Felts and Coatings) |
| Operating Permit No.: | F129-38119-00011 |
| Operating Permit Issuance Date: | November 5, 2018 |
| Significant Permit Revision No.: | F129-43012-00011 |
| Permit Reviewer: | Michaela Hecox |

Existing Approvals

The source was issued FESOP Renewal No. 129-38119-00011 on November 5, 2018. The source has since received the following approvals:

- (a) FESOP SPR No. 129-41894, issued on December 26, 2019

County Attainment Status

The source is located in Posey County.

| Pollutant | Designation |
|-------------------|--|
| SO ₂ | Better than national standards. |
| CO | Unclassifiable or attainment effective November 15, 1990. |
| O ₃ | Unclassifiable or attainment effective January 16, 2018, for the 2015 8-hour ozone standard. |
| PM _{2.5} | Unclassifiable or attainment effective April 15, 2015, for the 2012 annual PM _{2.5} standard. |
| PM _{2.5} | Unclassifiable or attainment effective December 13, 2009, for the 2006 24-hour PM _{2.5} standard. |
| PM ₁₀ | Unclassifiable effective November 15, 1990. |
| NO ₂ | Unclassifiable or attainment effective January 29, 2012, for the 2010 NO ₂ standard. |
| Pb | Unclassifiable or attainment effective December 31, 2011, for the 2008 lead standard. |

- (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. Posey 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}**
Posey County has been classified as attainment for PM_{2.5}. Therefore, direct PM_{2.5}, SO₂, and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

- (c) Other Criteria Pollutants
 Posey 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

Since 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), and there is no applicable New Source Performance Standard or National Emission Standard for Hazardous Air Pollutants that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

The fugitive emissions of hazardous air pollutants (HAP) are counted toward the determination of Part 70 Permit applicability and source status under Section 112 of the Clean Air Act (CAA).

Greenhouse Gas (GHG) Emissions

On June 23, 2014, in the case of *Utility Air Regulatory Group v. EPA*, cause no. 12-1146, (available at http://www.supremecourt.gov/opinions/13pdf/12-1146_4g18.pdf) the United States Supreme Court ruled that the U.S. EPA does not have the authority to treat greenhouse gases (GHGs) as an air pollutant for the purpose of determining operating permit applicability or PSD Major source status. On July 24, 2014, the U.S. EPA issued a memorandum to the Regional Administrators outlining next steps in permitting decisions in light of the Supreme Court's decision. U.S. EPA's guidance states that U.S. EPA will no longer require PSD or Title V permits for sources "previously classified as 'Major' based solely on greenhouse gas emissions."

The Indiana Environmental Rules Board adopted the GHG regulations required by U.S. EPA at 326 IAC 2-2-1(zz), pursuant to Ind. Code § 13-14-9-8(h) (Section 8 rulemaking). A rule, or part of a rule, adopted under Section 8 is automatically invalidated when the corresponding federal rule, or part of the rule, is invalidated. Due to the United States Supreme Court Ruling, IDEM, OAQ cannot consider GHG emissions to determine operating permit applicability or PSD applicability to a source or modification.

Source Status - Existing Source

The table below summarizes the potential to emit of the entire source, prior to the proposed revision, after consideration of all enforceable limits established in the effective permits. If the control equipment has been determined to be integral, the table reflects the potential to emit (PTE) after consideration of the integral control device.

| | Source-Wide Emissions Prior to Revision (ton/year) | | | | | | | | | |
|---|--|-------------------------------|-----------------------------------|-----------------|-----------------|-------|-------|------------------|-------------------------|------------|
| | PM ¹ | PM ₁₀ ¹ | PM _{2.5} ^{1, 2} | SO ₂ | NO _x | VOC | CO | H ₂ S | Single HAP ³ | Total HAPs |
| Total PTE of Entire Source Excluding Fugitive Emissions* | 174.17 | 96.93 | 96.93 | 83.39 | 50.34 | 62.00 | 98.56 | 50.72 | 9.33 | 22.36 |

| | Source-Wide Emissions Prior to Revision (ton/year) | | | | | | | | | |
|---|--|-------------------------------|----------------------------------|-----------------|-----------------|-----|-----|------------------|-------------------------|------------|
| | PM ¹ | PM ₁₀ ¹ | PM _{2.5} ^{1,2} | SO ₂ | NO _x | VOC | CO | H ₂ S | Single HAP ³ | Total HAPs |
| Title V Major Source Thresholds | NA | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 10 | 25 |
| PSD Major Source Thresholds | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | -- | -- |
| Emission Offset Major Source Thresholds | --- | NA | NA | NA | NA | NA | NA | NA | -- | -- |
| ¹ Under the Part 70 Permit program (40 CFR 70), PM ₁₀ and PM _{2.5} , not particulate matter (PM), are each considered as a "regulated air pollutant." ² PM _{2.5} listed is direct PM _{2.5} . ³ Single highest source-wide HAP *Fugitive HAP emissions are always included in the source-wide emissions. | | | | | | | | | | |

- (a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no PSD regulated pollutant is emitted at a rate of two hundred fifty (250) tons per year or more and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).
- (b) This existing source is not a major 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.
- (c) These emissions are based on the TSD of FESOP SPR No. 129-41894-00011, issued on December 26, 2019.

Description of Proposed Revision

The Office of Air Quality (OAQ) has reviewed an application, submitted by Building Materials Manufacturing Corporation on July 1, 2020, relating to the correction of inaccurate depiction of current emission units and the addition of one (1) new like-kind replacement of the existing asphalt blowstill (BS1). The replacement unit will be identical to the existing BS1 in terms of capacity (12,000 gallons) and emission control (fumes routed to Boiler No. 1 or Boiler No. 2). Emission unit description will include *before/after replacement* language in order to allow the existing BS1 to continue to operate until the unit is deconstructed and the one (1) new asphalt blowstill (BS1) is constructed. Emission unit ID has also been modified in order to distinguish between the existing blowstill and the new blowstill. The existing blowstill will be referred to as BS1a and the new blowstill will be referred to as BS1b.

The capacities of BS1b and BS3 are not identical. The capacity of BS1b is 12,000 gallons and the capacity of BS3 is 18,000 gallons. The asphalt blowing operation at the source is a batch process, not a continuous process. The source requested to modify the emission unit descriptions of the blowstills to incorporate batch size rather than pounds per hour.

The following is a list of the new emission unit and pollution control device(s):

After Replacement:

- (a) One (1) asphalt blowing operation, approved in 2020 for modification, with a bottlenecked capacity of 32,625 pounds of asphalt per hour, consisting of:
 - (1) One (1) blowstill, identified as BS1b, approved for construction in 2020, with a maximum capacity of 12,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.

Enforcement Issues

There are no pending enforcement actions related to this revision.

Emission Calculations

See Appendix A of this Technical Support Document for detailed emission calculations.

Permit Level Determination – FESOP Significant Permit Revision

Pursuant to 326 IAC 2-1.1-1(12), Potential to Emit is defined as “the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency.”

The following table is used to determine the appropriate permit level under 326 IAC 2-8-11.1 (Permit Revisions). This table reflects the PTE before controls of the proposed revision. If the control equipment has been determined to be integral, the table reflects the potential to emit (PTE) after consideration of the integral control device.

| Process / Emission Unit | PTE Before Controls of the New Emission Units (ton/year) | | | | | | | | | |
|---|--|------------------|--------------------------------|-----------------|-----------------|---------------|--------------|------------------|-------------------------|-------------|
| | PM | PM ₁₀ | PM _{2.5} ¹ | SO ₂ | NO _x | VOC | CO | H ₂ S | Single HAP ² | Total HAPs |
| Blowstill (BS1b) | 1,143.18 | 1,143.18 | 1,143.18 | 41.92 | 2.72 | 161.95 | 31.44 | 24.74 | 6.19 | 9.77 |
| Total PTE Before Controls of the New Emission Units: | 1,143.18 | 1,143.18 | 1,143.18 | 41.92 | 2.72 | 161.95 | 31.44 | 24.74 | 6.19 | 9.77 |

¹PM_{2.5} listed is direct PM_{2.5}.
²Single highest HAP is ethylbenzene.

Appendix A of this TSD reflects the detailed potential emissions of the proposed revision.

Pursuant to 326 IAC 2-8-11.1(f)(1)(C), this FESOP is being revised through a FESOP Significant Permit Revision because the proposed revision is not an Administrative Amendment or Minor Permit revision and the proposed revision is subject to 326 IAC 8-1-6.

PTE of the Entire Source After Issuance of the FESOP Revision

The table below summarizes the after issuance source-wide potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of the revision, and only to the extent that the effect of the control equipment is made practically enforceable in the permit. If the control equipment has been determined to be integral, the table reflects the potential to emit (PTE) after consideration of the integral control device.

| | Source-Wide Emissions After Issuance (ton/year) | | | | | | | | | |
|--|---|-------------------------------|----------------------------------|-----------------|-----------------|-------------|--------------|------------------|-------------------------|-------------|
| | PM ¹ | PM ₁₀ ¹ | PM _{2.5} ^{1,2} | SO ₂ | NO _x | VOC | CO | H ₂ S | Single HAP ³ | Total HAPs |
| Total PTE of Entire Source Excluding Fugitives* | 13.50 | 13.50 | 13.50 | 62.87 | 4.07 | 7.65 | 47.16 | 37.11 | 4.72 | 5.48 |

| | Source-Wide Emissions After Issuance (ton/year) | | | | | | | | | |
|---|---|-------------------------------|----------------------------------|-----------------|-----------------|-----|-----|------------------|-------------------------|------------|
| | PM ¹ | PM ₁₀ ¹ | PM _{2.5} ^{1,2} | SO ₂ | NO _x | VOC | CO | H ₂ S | Single HAP ³ | Total HAPs |
| Title V Major Source Thresholds | NA | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 10 | 25 |
| PSD Major Source Thresholds | 250 | 250 | 250 | 250 | 250 | 250 | 250 | 250 | -- | -- |
| Emission Offset Major Source Thresholds | --- | NA | NA | NA | NA | NA | NA | NA | -- | -- |
| 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 is benzene. *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 PM, PM₁₀, PM_{2.5}, VOC, and HAP limit(s) 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 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 2-2 (PSD) and 326 IAC 2-3 (Emission Offset), 326 IAC 2-8 (FESOP), and 326 IAC 20 (Hazardous Air Pollutants) for more information regarding the limit(s).

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

Federal Rule Applicability Determination

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

New Source Performance Standards (NSPS):

- (a) The requirements of the New Source Performance Standard for Hot Mix Facilities, 40 CFR 60, Subpart I and 326 IAC 12, are not included in the permit for this source, because this source is not a hot mix asphalt facility as defined in 40 CFR 60.91.
- (b) The one (1) new blowstill, identified as BS1b, is subject to the New Source Performance Standards for Asphalt Processing and Asphalt Roofing Manufacture, 40 CFR 60, Subpart UU and 326 IAC 12, because it is a blowing still located at an asphalt roofing plant and will be constructed after November 18, 1980. The facility subject to this rule includes the following:

After Replacement:

- (a) One (1) asphalt blowing operation, approved in 2020 for modification, with a bottlenecked capacity of 32,625 pounds of asphalt per hour, consisting of:

- (1) One (1) blowstill, identified as BS1b, approved for construction in 2020, with a maximum capacity of 12,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.

The facility is subject to the following portions of Subpart UU.

- (1) 40 CFR 60.470
- (2) 40 CFR 60.471
- (3) 40 CFR 60.472
- (4) 40 CFR 60.473 (b), (d)
- (5) 40 CFR 60.474 (a)(1-2), (b), (c), (d), (e), (f), (g)

The requirements of 40 CFR Part 60, Subpart A – General Provisions, which are incorporated as 326 IAC 12-1, apply to the source except as otherwise specified in 40 CFR 60, Subpart UU.

- (c) There are no other New Source Performance Standards (40 CFR Part 60) and 326 IAC 12 included for this proposed revision.

National Emission Standards for Hazardous Air Pollutants (NESHAP):

- (a) The one (1) new blowstill, identified as BS1b, is subject to the National Emission Standards for Hazardous Air Pollutants for Area Source: Asphalt Processing and Asphalt Roofing Manufacturing, 40 CFR 63, Subpart AAAAAAA, because this source is considered a roofing manufacturing operation that is an area source of HAPs. The facility subject to this rule include the following:

After Replacement:

- (a) One (1) asphalt blowing operation, approved in 2020 for modification, with a bottlenecked capacity of 32,625 pounds of asphalt per hour, consisting of:
 - (1) One (1) blowstill, identified as BS1b, approved for construction in 2020, with a maximum capacity of 12,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.

This source is subject to the following portions of Subpart AAAAAAA:

- (1) 40 CFR 63.11559 (a), (b), (f), (h)
- (2) 40 CFR 63.11560 (a)
- (3) 40 CFR 63.11561 (b), (c)
- (4) 40 CFR 63.11562 (c-g), (i)
- (5) 40 CFR 63.11563 (a), (g-i)
- (6) 40 CFR 63.11564 (a)(1), (a)(2), (a)(4-6), (b), (c)
- (7) 40 CFR 63.11565
- (8) 40 CFR 63.11566
- (9) 40 CFR 63.11567
- (10) Table 1
- (11) Table 2
- (12) Table 3
- (13) Table 4
- (14) Table 5

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1, apply to the source except as otherwise specified in 40 CFR 63, Subpart AAAAAA.

- (b) There are no other National Emission Standards for Hazardous Air Pollutants under 40 CFR 63, 326 IAC 14 and 326 IAC 20 included for this proposed revision.

Compliance Assurance Monitoring (CAM):

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

State Rule Applicability - Entire Source

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

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

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

PSD Minor Source Limit(s)

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the Permittee shall comply with the following:

- (a) The asphalt blowing operation shall be limited as follows:
- (1) The throughput for blowstill BS1b shall not exceed 90,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
 - (2) The total blowstill BS1b emissions shall be limited as follows:

| Emission Units | PM (lb/ton) | PM ₁₀ (lb/ton) | PM _{2.5} (lb/ton) | VOC (lb/ton) |
|----------------|-------------|---------------------------|----------------------------|--------------|
| BS1b | 0.30 | 0.30 | 0.30 | 0.17 |

Compliance with these limits, combined with the potential to emit PM, PM₁₀, PM_{2.5}, and VOC from all other emission units at this source, shall limit the source-wide total potential to emit of PM, PM₁₀, PM_{2.5}, and VOC to less than 250 tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

These are new limits for BS1b and the source will continue to comply with all other PSD minor limits.

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

The new emission unit(s) 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 2-8-4 (FESOP) and 326 IAC 20 (Hazardous Air Pollutants)

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

FESOP PM₁₀, PM_{2.5}, and VOC Limit(s)

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

- (a) The asphalt blowing operation shall be limited as follows:
 - (1) The asphalt throughput for blowstills BS1b shall not exceed 90,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
 - (2) The total blowstill BS1b emissions shall be limited as follows:

| Emission Units | PM ₁₀ (lb/ton) | PM _{2.5} (lb/ton) | VOC (lb/ton) |
|----------------|---------------------------|----------------------------|--------------|
| BS1b | 0.30 | 0.30 | 0.17 |

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

These are new limits for BS1b and the source will continue to comply with all other FESOP limits.

FESOP HAP Limit(s)

Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA), and render the requirements of 326 IAC 2-7 (Part 70 Permits) not applicable, the Permittee shall comply with the following:

- (a) The asphalt blowing operation shall be limited as follows:
 - (1) The throughput for blowstill BS1b shall not exceed 90,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
 - (2) Ethylbenzene emissions from the asphalt blowing process shall not exceed 0.0065 lb/ton of asphalt.

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

These are new limits for BS1b and the source will continue to comply with all other FESOP HAP limits.

326 IAC 5-1 (Opacity Limitations)

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

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

Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability – Individual Facilities

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

Blowstill (BS1b)

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 one (1) blowstill, identified as BS1b, 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).

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the one (1) blowstill, identified as BS1b, shall not exceed 26.62 pounds per hour when operating at a process weight rate of 16.31 tons per hour. The pound per hour limitation was calculated with the following equation:

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

$$E = 4.10 P^{0.67} \quad \text{where} \quad \begin{array}{l} E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour} \end{array}$$

| Summary of Process Weight Rate Limits | | | |
|---------------------------------------|------------|-----------|---------------|
| Process / Emission Unit | P (ton/hr) | E (lb/hr) | Equation Used |
| Blowstills (BS1a, BS1b, BS3) | 16.31 | 26.62 | (a) |

Either one of two (2) afterburners (Boiler No. 1 or Boiler No. 2) shall be in operation at all times the blowstills are in operation, in order to comply with this limit.

326 IAC 7-1.1 Sulfur Dioxide Emission Limitations

This emission unit is subject to 326 IAC 7-1.1 because it has a potential to emit sulfur dioxide (SO₂) equal to or greater than 25 tons per year or 10 pounds per hour. The asphalt blowing operation and its control devices (Boiler 1 and Boiler 2) no longer have any capacity to burn a fuel that is subject to the limitations in 326 IAC 7-1.1-2. None of the compliance test methods in 326 IAC 7-1.1-2 are applicable to the asphalt blowing operation. The asphalt blowing operation is not subject to sulfur dioxide emission limitations and other requirements under 326 IAC 2, 326 IAC 7-4, 326 IAC 7-4.1, and 326 IAC 12. Therefore, no requirements of 326 IAC 7-1.1 are included in the permit for the asphalt blowing operation.

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)

The one (1) new blowstill (BS1b) is subject to the requirements of 326 IAC 8-1-6, because it was constructed after January 1, 1980, and its unlimited VOC potential emissions are equal to or greater than twenty-five (25) tons per year, and the one (1) blowstill (BS1b) is not regulated by other rules in 326 IAC 8. Therefore, a Best Available Control Technology (BACT) analysis was required for the one (1) blowstill (BS1b) (see Appendix B of this TSD).

According to the BACT analysis contained in Appendix B of this TSD, IDEM, OAQ has determined that the following requirements represent BACT for the Blowstill 1 (BS1b):

- (1) VOC emissions from the blowstill BS1b shall be controlled by a boiler at all times the blowstill is in operation and generating VOC emissions.
- (2) The boiler shall have a total THC destruction efficiency of at least 90%.

- (3) VOC emissions from the blowstill BS1b shall not exceed 0.170 lb VOC/ton asphalt blown.
- (4) Asphalt throughput shall not exceed 175,200 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

326 IAC 9-1 (Carbon Monoxide Emission Limits)

The requirements of 326 IAC 9-1 do not apply to the one (1) new blowstill (BS1b), because this source does not operate a catalyst regeneration petroleum cracking system or a petroleum fluid coker, grey iron cupola, blast furnace, basic oxygen steel furnace, or other ferrous metal smelting equipment.

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

The requirements of 326 IAC 10-3 do not apply to the one (1) new blowstill (BS1b), since this unit is not a blast furnace gas-fired boiler, a Portland cement kiln, or a facility specifically listed under 326 IAC 10-3-1(a)(2).

Compliance Determination and Monitoring Requirements

- (a) The Compliance Determination Requirements applicable to this revision are as follows:
 - (1) The boiler (Boiler 1 of Boiler 2) for particulate, VOC, CO, and HAP control shall be in operation and control emissions from the asphalt blowing process at all times the asphalt blowing process is in operation.

Testing Requirements:

| Summary of Testing Requirements | | | | | |
|----------------------------------|-----------------------|---|--------------------------|----------------------|------------------|
| Emission Unit | Control Device | Timeframe for Testing or Date of Initial Valid Demonstration | Pollutant/Parameter | Frequency of Testing | Authority |
| Asphalt blowing operation (BS1b) | Boiler 1 and Boiler 2 | 180 days after initial startup or not later than 5 years from the last valid compliance demonstration, whichever occurs first | PM, PM10, PM2.5, VOC, CO | Every 5 years | 326 IAC 2-8-4(1) |

The Asphalt blowing operation (BS1a and BS3) last performed testing on June 18, 2020.

These testing requirements are necessary because the boiler serving as an afterburner for the asphalt blowing process must operate properly to assure compliance with 326 IAC 2-2 (PSD), 326 IAC 2-8 (FESOP), and 326 IAC 8-1-6 (BACT).

- (b) The Compliance Monitoring Requirements applicable to this proposed revision are as follows:

| Control Device | Type of Parametric Monitoring | Frequency | Range or Specification |
|-----------------|-------------------------------|-------------------------|---|
| Boiler (1 or 2) | Visible emission notations | Daily ¹ | Verify whether emissions are normal or abnormal |
| | Temperature | Continuous ¹ | At or above the value established in the most recent compliant stack test.. |

Notes:

- 1. Compliance monitoring is required when a boiler is operating as a control device for the asphalt blowing operation

These monitoring conditions are necessary because the boiler serving as an afterburner for the asphalt blowing process must operate properly to assure compliance with 326 IAC 2-2 (PSD), 326 IAC 2-8 (FESOP), and 326 IAC 8-1-6 (BACT).

Proposed Changes

The following changes listed below are due to the proposed revision. Deleted language appears as ~~strike through~~ text and new language appears as **bold** text:

- (1) Section A.2, D.1, E.1, and E.3 have been modified to include accurate emission unit descriptions.
- (2) A BACT analysis has been included for emission unit BS1b.
- (3) The quarterly reporting that shows compliance with the BACT limit for unit BS3 has been removed and language has been added to the quarterly reporting form

...

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:

Before Replacement:

- (c) One (1) asphalt blowing operation, ~~approved in 2019 for modification~~ **approved for modification in 2020**, with a bottlenecked capacity of 32,625 pounds of asphalt per hour, consisting of:

- (1) One (1) blowstill, identified as BS1a, constructed in 1972, ~~with a maximum capacity of 40,000 pounds of asphalt per hour~~ **with a maximum capacity of 12,000 gallons of asphalt per batch and a blow duration of 4 hours per batch**, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.
- (2) **One (1) blowstill, identified as BS1b, approved for construction in 2020, with a maximum capacity of 12,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.**
- ~~(2)~~(3) One (1) blowstill, identified as BS3, constructed in 2006, ~~with a maximum capacity of 40,000 pounds of asphalt per hour~~ **with a maximum capacity of 18,000 gallons of asphalt per batch and a blow duration of 4 hours per batch**, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.

~~Under the NSPS, 40 CFR Part 60, Subpart UU, blowstill BS3 is an affected facility.~~

Only one (1) blowstill can operate at a time because there are only enough blowers installed to charge one at a time.

Under the NSPS, 40 CFR Part 60, Subpart UU, blowstill BS1b and BS3, are affected facilities.

Under the NESHAP, 40 CFR 63, Subpart AAAAAA, the blowstills, BS1a, **BS1b**, and BS3, are part of an existing affected source.

After Replacement:

- (c) **One (1) asphalt blowing operation, approved for modification in 2020, with a bottlenecked capacity of 32,625 pounds of asphalt per hour, consisting of:**
- (1) **One (1) blowstill, identified as BS1b, approved for construction in 2020, with a maximum capacity of 12,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.**
 - (2) **One (1) blowstill, identified as BS3, constructed in 2006, with a maximum capacity of 18,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.**

Only one (1) blowstill can operate at a time because there are only enough blowers installed to charge one at a time.

Under the NSPS, 40 CFR Part 60, Subpart UU, blowstill BS1b and BS3 are affected facilities.

Under the NESHAP, 40 CFR 63, Subpart AAAAAA, the blowstills, BS1b and BS3, are part of an existing affected source.

...

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

...

- ~~(c) One (1) asphalt blowing operation, approved in 2019 for modification, with a bottlenecked capacity of 40,000 pounds of asphalt per hour, consisting of:~~
- ~~(1) One (1) blowstill, identified as BS1, constructed in 1972, with a maximum capacity of 40,000 pounds of asphalt per hour, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.~~
 - ~~(2) One (1) blowstill, identified as BS3, constructed in 2006, with a maximum capacity of 40,000 pounds of asphalt per hour, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.~~

~~Under the NSPS, 40 CFR Part 60, Subpart UU, blowstill BS3 is an affected facility.~~

~~Only one (1) blowstill can operate at a time because there are only enough blowers installed to charge one at a time.~~

~~Under the NESHAP, 40 CFR 63, Subpart AAAAAA, the blowstills, BS1 and BS3, are part of an existing affected source.~~

Before Replacement:

- (c) **One (1) asphalt blowing operation, approved for modification in 2020, with a bottlenecked capacity of 32,625 pounds of asphalt per hour, consisting of:**
- (1) **One (1) blowstill, identified as BS1a, constructed in 1972, with a maximum capacity of 12,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.**

(2) One (1) blowstill, identified as BS1b, approved for construction in 2020, with a maximum capacity of 12,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.

(3) One (1) blowstill, identified as BS3, constructed in 2006, with a maximum capacity of 18,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.

Only one (1) blowstill can operate at a time because there are only enough blowers installed to charge one at a time.

Under the NSPS, 40 CFR Part 60, Subpart UU, blowstill BS1b and BS3, are affected facilities.

Under the NESHAP, 40 CFR 63, Subpart AAAAAA, the blowstills, BS1a, BS1b, and BS3, are part of an existing affected source.

After Replacement:

(c) One (1) asphalt blowing operation, approved for modification in 2020, with a bottlenecked capacity of 32,625 pounds of asphalt per hour, consisting of:

(1) One (1) blowstill, identified as BS1b, approved for construction in 2020, with a maximum capacity of 12,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.

(2) One (1) blowstill, identified as BS3, constructed in 2006, with a maximum capacity of 18,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.

Only one (1) blowstill can operate at a time because there are only enough blowers installed to charge one at a time.

Under the NSPS, 40 CFR Part 60, Subpart UU, blowstill BS1b and BS3 are affected facilities.

Under the NESHAP, 40 CFR 63, Subpart AAAAAA, the blowstills, BS1b and BS3, are part of an existing affected source.

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

D.1.1 VOC BACT [326 IAC 8-1-6]

(a) Pursuant to 326 IAC 8-1-6 and FESOP Renewal No. 129-38119-00011, the Permittee shall comply with the following:

(1) VOC emissions from the blowstill BS3 shall be controlled by a boiler at all times the blowstill is in operation and generating VOC emissions.

(2) The boiler shall have a total THC destruction efficiency of at least 90%.

- (3) VOC emissions from the blowstill BS3 shall not exceed 0.170 lb VOC/ton asphalt blown.
 - (4) Asphalt throughput shall not exceed 175,200 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
- (b) Pursuant to 326 IAC 8-1-6 and FESOP Significant Permit Revision No, 129-43012-00011, the Permittee shall comply with the following:**
- (1) VOC emissions from the blowstill BS1b shall be controlled by a boiler at all times the blowstill is in operation and generating VOC emissions.**
 - (2) The boiler shall have a total THC destruction efficiency of at least 90%.**
 - (3) VOC emissions from the blowstill BS1b shall not exceed 0.170 lb VOC/ton asphalt blown.**
 - (4) Asphalt throughput shall not exceed 175,200 tons per twelve (12) consecutive month period with compliance determined at the end of each month.**

D.1.2 PSD Minor Limits [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, the Permittee shall comply with the following:

- ...
- (b) The asphalt blowing operation shall be limited as follows:
 - (1) The asphalt throughput for blowstills BS1a, **BS1b**, and BS3 shall not exceed 90,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
 - (2) The total blowstill BS1a, **BS1b**, and BS3 emissions shall be limited as follows:

| Emission Units | PM Limit (lb/ton of asphalt) |
|-----------------------------|---------------------------------|
| BS1a, BS1b , and BS3 | 0.30 |

...

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

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

- ...
- (c) The asphalt blowing operation shall be limited as follows:
 - (1) The asphalt throughput for blowstills BS1a, **BS1b**, and BS3 shall not exceed 90,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
 - (2) The total blowstill BS1a, **BS1b**, and BS3 emissions shall be limited as follows:

| Emission Units | PM ₁₀ (lb/ton) | PM _{2.5} (lb/ton) | VOC (lb/ton) |
|----------------|------------------------------|-------------------------------|-----------------|
| | | | |

| | | | |
|---------------------------|------|------|------|
| BS1a, BS1b, and BS3 | 0.30 | 0.30 | 0.17 |
|---------------------------|------|------|------|

...
D.1.4 Hazardous Air Pollutants (HAP) Limitations

Pursuant to 326 IAC 2-8-4 (FESOP), and in order to render the source an area source of HAP emissions under Section 112 of the Clean Air Act (CAA), and render the requirements of 326 IAC 2-7 (Part 70 Permits) not applicable, the Permittee shall comply with the following:

- (a) The asphalt blowing operation shall be limited as follows:
 - (1) The throughput for blowstills BS1a, BS1b, and BS3 shall not exceed 90,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.
 - (2) Ethylbenzene emissions from the asphalt blowing process shall not exceed 0.0065 lb/ton of asphalt.

...
D.1.5 Particulate Emission Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions rate from the following operations shall not exceed the pound per hour limit (E) when operating at the associated process weight rate as listed in the table below:

| Process Description | Process Weight Rate (tons/hr) | E 326 IAC 6-3-2 Limit (lbs/hr) |
|--|-------------------------------|-----------------------------------|
| modified bitumen production line | 13.5 (total) | 23.45 |
| modified bitumen / granules truck unloading | 30.60 | 40.13 |
| roofing granules incoming elevator | 30.60 | 40.13 |
| Silos S27, S28 | 10 (each) | 19.18 (each) |
| modified bitumen / granules transport system & S29 | 10 | 19.18 (total) |
| Silos 1-18 | 30.60 (each) | 40.13 (each) |
| blending conveyor & use bin | 30.60 | 40.13 (total) |
| shingle unloading and bitumen unloading | 32.00 (each) | 40.52 (each) |
| Silos S8, S9 | 32.00 (each) | 40.52 (each) |
| S10 & S11 | 32.00 (total) | 40.52 (total) |
| blowstills 4-(BS1a, BS1b, BS3) | 20-16.31 | 30.51-26.62 (total) |
| blowstill 2 | 20 | 30.51 |

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

...
D.1.9 Testing Requirements [326 IAC 2-1.1-11]

- (a) **Not later than 180 days after the startup of the asphalt blowing process (BS1b) or no later than five (5) years from the most recent test, and to assure** ~~In order to demonstrate compliance~~ compliance with Conditions D.1.2(b)(2) and D.1.3(c)(2), the Permittee shall perform PM, PM₁₀, and PM_{2.5} testing of Boiler 2, controlling the asphalt blowing operation (BS1a, BS1b, and BS3) utilizing methods as approved by the Commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Testing shall be performed using the

particulate source (blowstill) that was not used in the most recent test that demonstrated compliance with the limits in Condition D.1.2(b)(2) and/or Condition D.1.3(c)(2). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM₁₀ and PM_{2.5} includes filterable and condensable PM.

- (b) Not later than 180 days after the startup of Boiler 1 as a control device for the asphalt blowing process (BS1a, **BS1b**, and/or BS3), and to assure compliance with Conditions D.1.2(b)(2) and D.1.3(c)(2), the Permittee shall perform PM, PM₁₀, and PM_{2.5} testing of Boiler 1 controlling the asphalt blowing operation BS1a, **BS1b**, and BS3 utilizing methods approved by the commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Testing shall be performed using the particulate source (blowstill) that was not used in the most recent test that demonstrated compliance with the limits in Condition D.1.2(b)(2) and/or Condition D.1.3(c)(2). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition. PM₁₀ and PM_{2.5} includes filterable and condensable PM.

...

- (d) **Not later than 180 days after the startup of the asphalt blowing process (BS1b) or not later than five (5) years form the most recent test, and to assure compliance** ~~To assure compliance~~ with Conditions D.1.1 and D.1.3(c)(2), the Permittee shall perform VOC testing of Boiler 2, controlling the asphalt blowing operation (BS1a, **BS1b**, and BS3), utilizing methods approved by the commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. VOC testing shall include emission rate and overall control efficiency. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Testing shall be performed using the VOC source (blowstill) that was not used in the most recent test that demonstrated compliance with the limits in Condition D.1.1 and/or Condition D.1.3(c). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

- (e) Not later than 180 days after the startup of Boiler 1 as a control device for the asphalt blowing process (BS1a, **BS1b**, and/or BS3), and to assure compliance with Conditions D.1.1 and D.1.3(c)(2), the Permittee shall perform VOC testing of Boiler 1 controlling the asphalt blowing operation BS1a, **BS1b**, and BS3 utilizing methods approved by the commissioner at least once every five (5) years from the date of the most recent valid compliance demonstration. VOC testing shall include emission rate and overall control efficiency. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Testing shall be performed using the VOC source (blowstill) that was not used in the most recent test that demonstrated compliance with the limits in Condition D.1.1 and/or Condition D.1.3(c). Section C - Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

- (f) Not later than 180 days after a stack test of a boiler (Boiler 1 or 2) controlling emissions from the asphalt blowing process (BS1a, **BS1b**, or BS3) with a VOC result greater than or equal to 0.005 lb/ton of asphalt, and to assure compliance with Condition D.1.4(a)(2), the Permittee shall perform ethylbenzene testing of a boiler (Boiler 1 or 2) controlling emissions from the asphalt blowing operation (BS1a, **BS1b**, or BS3) utilizing methods approved by the commissioner. 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.

...

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

D.1.13 Record Keeping Requirements

- (a) To document the compliance status with Condition D.1.1(~~e~~), the Permittee shall maintain monthly records of the throughput for blowstills **BS1b** and BS3.
- (b) To document the compliance status with Conditions D.1.2(b), D.1.3(c)(1), and D.1.4(a)(1), the Permittee shall maintain monthly records of the throughput for blowstills BS1a, **BS1b**, and BS3.

...

SECTION E.1

NSPS

Emissions Unit Description:

...

- ~~(c) One (1) asphalt blowing operation, approved in 2019 for modification, with a bottlenecked capacity of 40,000 pounds of asphalt per hour, consisting of:
 - ~~(1) One (1) blowstill, identified as BS1, constructed in 1972, with a maximum capacity of 40,000 pounds of asphalt per hour, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.~~
 - ~~(2) One (1) blowstill, identified as BS3, constructed in 2006, with a maximum capacity of 40,000 pounds of asphalt per hour, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.~~~~

~~Under the NSPS, 40 CFR Part 60, Subpart UU, blowstill BS3 is an affected facility.~~

~~Only one (1) blowstill can operate at a time because there are only enough blowers installed to charge one at a time.~~

~~Under the NESHAP, 40 CFR 63, Subpart AAAAAA, the blowstills, BS1 and BS3, are part of an existing affected source.~~

Before Replacement:

- (c) One (1) asphalt blowing operation, approved for modification in 2020, with a bottlenecked capacity of 32,625 pounds of asphalt per hour, consisting of:
 - (2) One (1) blowstill, identified as BS1b, approved for construction in 2020, with a maximum capacity of 12,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.**
 - (3) One (1) blowstill, identified as BS3, constructed in 2006, with a maximum capacity of 18,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.****

Only one (1) blowstill can operate at a time because there are only enough blowers installed to charge one at a time.

Under the NSPS, 40 CFR Part 60, Subpart UU, blowstill BS1b and BS3, are affected facilities.

Under the NESHAP, 40 CFR 63, Subpart AAAAAA, the blowstills, BS1a, BS1b, and BS3, are part of an existing affected source.

After Replacement:

(c) One (1) asphalt blowing operation, approved for modification in 2020, with a bottlenecked capacity of 32,625 pounds of asphalt per hour, consisting of:

(1) One (1) blowstill, identified as BS1b, approved for construction in 2020, with a maximum capacity of 12,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.

(2) One (1) blowstill, identified as BS3, constructed in 2006, with a maximum capacity of 18,000 gallons of asphalt per batch and a blow duration of 4 hours per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.

Only one (1) blowstill can operate at a time because there are only enough blowers installed to charge one at a time.

Under the NSPS, 40 CFR Part 60, Subpart UU, blowstill BS1b and BS3 are affected facilities.

Under the NESHAP, 40 CFR 63, Subpart AAAAAA, the blowstills, BS1b and BS3, are part of an existing affected source.

...

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

...
SECTION E.3

NESHAP

Emissions Unit Description:

...

~~(c) One (1) asphalt blowing operation, approved in 2019 for modification, with a bottlenecked capacity of 40,000 pounds of asphalt per hour, consisting of:~~

~~(1) One (1) blowstill, identified as BS1, constructed in 1972, with a maximum capacity of 40,000 pounds of asphalt per hour, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.~~

~~(2) One (1) blowstill, identified as BS3, constructed in 2006, with a maximum capacity of 40,000 pounds of asphalt per hour, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.~~

~~Under the NSPS, 40 CFR Part 60, Subpart UU, blowstill BS3 is an affected facility.~~

~~Only one (1) blowstill can operate at a time because there are only enough blowers installed to charge one at a time.~~

~~Under the NESHAP, 40 CFR 63, Subpart AAAAAA, the blowstills, BS1 and BS3, are part of an existing affected source.~~

...

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

~~FESOP Quarterly Report~~

Source Name: ~~Building Materials Manufacturing Corporation~~
Source Address: ~~901 Givens Road, Mount Vernon, Indiana 47620~~
FESOP Permit No.: ~~F129-38119-00011~~
Facility: ~~blowstill BS3~~
Parameter: ~~asphalt throughput~~
Limit: ~~Asphalt throughput shall not exceed 175,200 tons per twelve (12) consecutive month period with compliance determined at the end of each month.~~

QUARTER: _____ YEAR: _____

| Month | Column 1 | Column 2 | Column 1 + Column 2 |
|-------|----------------------|------------------------------|--------------------------|
| | This Month (tons) | Previous 11 Months (tons) | 12 Month Total (tons) |
| | | | |
| | | | |
| | | | |

_____ ~~No deviation occurred in this quarter.~~

_____ ~~Deviation/s occurred in this quarter.~~

_____ ~~Deviation has been reported on: _____~~

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

FESOP Quarterly Report

Source Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mount Vernon, Indiana 47620
FESOP Permit No.: F129-38119-00011
Facility: blowstills BS1a, **BS1b**, and BS3
Parameter: asphalt throughput
Limit: The asphalt throughput for blowstills BS1a, **BS1b**, and BS3 shall not exceed 90,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month. **Compliance with this limit demonstrates compliance with the BACT limits in Condition D.1.1.**

...

Additional Changes

IDEM, OAQ made additional changes to the permit as described below in order to update the language to match the most current version of the applicable rule, to eliminate redundancy within the permit, and to provide clarification regarding the requirements of these conditions.

- (1) Effective June 8, 2019, the requirements of 326 IAC 14-10 (Emission Standards for Asbestos Demolition and Renovation Operations) were amended. Based on the amended rule, Section C.9 - Asbestos Abatement Projects of the permit has been revised.

...

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

...

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

...

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 July 1, 2020.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed FESOP Significant Permit Revision No. 129-43012-00011. The staff recommends to the Commissioner that the FESOP Significant Permit Revision be approved.

| |
|---------------------|
| IDEM Contact |
|---------------------|

- (a) If you have any questions regarding this permit, please contact Michaela Hecox, Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCM 1003, Indianapolis, Indiana 46204-2251, or by telephone at (317) 233-3031 or (800) 451-6027, and ask for Michaela Hecox or (317) 233-3031.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Air Permits page on the Internet at: <http://www.in.gov/idem/airquality/2356.htm>; and the Citizens' Guide to IDEM on the Internet at: <http://www.in.gov/idem/6900.htm>.

**Appendix A: Emission Calculations
PTE Summary**

Company Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mount Vernon, IN 47620
FESOP SPR No.: 129-43012-00011
Reviewer: Michaela Hecox
Date: 8/12/2020

| Emission Unit | Uncontrolled Potential to Emit (tons/yr) | | | | | | | |
|--|--|------------------|--------------------------------|-----------------|-----------------|---------------|--------------|------------------|
| | PM | PM ₁₀ | PM _{2.5} ¹ | SO ₂ | NO _x | VOC | CO | H ₂ S |
| Modified Bitumen Production Line | 36.04 | 40.09 | 40.09 | 1.06 | - | 5.56 | 0.11 | 0.29 |
| Granule Handling | 7.77 | 1.72 | 1.72 | - | - | - | - | - |
| Modified Bitumen Granule Handling | 1.27 | 0.28 | 0.28 | - | - | - | - | - |
| Shingle Granule Handling Operation | 3.89 | 0.86 | 0.86 | - | - | - | - | - |
| Pneumatic Truck Unloading Operation to Storage Silo (S8) | 102.32 | 65.88 | 65.88 | - | - | - | - | - |
| Pneumatic Truck Unloading Operation to Storage Silo (S9) | 102.32 | 65.88 | 65.88 | - | - | - | - | - |
| One Pneumatic Transport System (S10) | 102.32 | 65.88 | 65.88 | - | - | - | - | - |
| One Storage Bin (S11) | 102.32 | 65.88 | 65.88 | - | - | - | - | - |
| Talc Handling Operations | 7.88E-08 | 7.88E-08 | 7.88E-08 | - | - | - | - | - |
| Shingle and Modified Bitumen Sand Handling Operations | 8.52E-02 | 4.02E-02 | 4.02E-02 | - | - | - | - | - |
| Blow Stills | 1,714.77 | 1,714.77 | 1,714.77 | 62.87 | 4.07 | 242.93 | 47.16 | 37.11 |
| Shingle and Rolls Production Line | 81.62 | 104.12 | 104.12 | 2.62 | - | 31.98 | 0.75 | 1.92 |
| Boiler No. 1 | 0.24 | 0.95 | 0.95 | 0.08 | 12.52 | 0.69 | 10.51 | - |
| Boiler No. 2 | 0.24 | 0.95 | 0.95 | 0.08 | 12.52 | 0.69 | 10.51 | - |
| Flux Heater | 0.06 | 0.23 | 0.23 | 0.02 | 3.01 | 0.17 | 2.52 | - |
| Coating Heater | 0.04 | 0.15 | 0.15 | 0.01 | 1.93 | 0.11 | 1.62 | - |
| Mod-Bit Hot Oil Heater | 0.04 | 0.17 | 0.17 | 0.01 | 2.23 | 0.12 | 1.88 | - |
| Filler Heater Hot Oil Heater | 0.05 | 0.20 | 0.20 | 0.02 | 2.58 | 0.14 | 2.16 | - |
| Liquid Asphalt Storage Heater | 0.02 | 0.10 | 0.10 | 0.01 | 1.29 | 0.07 | 1.08 | - |
| Thermal Fluid Heater | 0.04 | 0.16 | 0.16 | 0.01 | 2.15 | 0.12 | 1.80 | - |
| Flame Bar | 9.57E-03 | 3.35E-02 | 3.35E-02 | 2.25E-03 | 0.62 | 4.79E-02 | 0.36 | - |
| Tanks | 23.78 | 23.78 | 23.78 | 2.17 | - | 11.89 | 5.96 | 3.01 |
| Fire Pump | 0.14 | 0.14 | 0.14 | 0.13 | 1.98 | 0.16 | 0.43 | - |
| Emergency Generator | 0.13 | 0.08 | 0.08 | 0.08 | 4.53 | 0.13 | 1.04 | - |
| Degreaser | - | - | - | - | - | 0.49 | - | - |
| Other Insignificant Activities ² | 1.00 | 1.00 | 1.00 | - | - | 2.00 | - | - |
| Total | 2,280.50 | 2,153.31 | 2,153.31 | 69.18 | 49.42 | 297.28 | 87.90 | 42.33 |
| <i>Fugitive Emissions</i> | | | | | | | | |
| Unpaved Roads | 57.95 | 15.44 | 1.54 | - | - | - | - | - |
| Total Fugitive | 57.95 | 15.44 | 1.54 | - | - | - | - | - |

Notes:

1. PM_{2.5} listed is direct PM_{2.5}
2. Conservative estimate.

**Appendix A: Emission Calculations
PTE Summary**

Company Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mount Vernon, IN 47620
FESOP SPR No.: 129-43012-00011
Reviewer: Michaela Hecox
Date: 8/12/2020

| Emission Unit | Potential to Emit After Issuance ¹ (tons/yr) | | | | | | | |
|--|---|------------------|--------------------------------|-----------------|-----------------|--------------|--------------|------------------|
| | PM | PM ₁₀ | PM _{2.5} ² | SO ₂ | NO _x | VOC | CO | H ₂ S |
| Modified Bitumen Production Line | 36.04 | 7.98 | 7.98 | 1.06 | - | 5.56 | 0.11 | 0.29 |
| Granule Handling | 7.77 | 1.72 | 1.72 | - | - | - | - | - |
| Modified Bitumen Granule Handling | 1.27 | 0.28 | 0.28 | - | - | - | - | - |
| Shingle Granule Handling Operation | 3.89 | 0.86 | 0.86 | - | - | - | - | - |
| Pneumatic Truck Unloading Operation to Storage Silo (S8) | 1.05 | 0.66 | 0.66 | - | - | - | - | - |
| Pneumatic Truck Unloading Operation to Storage Silo (S9) | 1.05 | 0.66 | 0.66 | - | - | - | - | - |
| One Pneumatic Transport System (S10) | 1.05 | 0.66 | 0.66 | - | - | - | - | - |
| One Storage Bin (S11) | 1.05 | 0.66 | 0.66 | - | - | - | - | - |
| Talc Handling Operations | 7.88E-08 | 7.88E-08 | 7.88E-08 | - | - | - | - | - |
| Shingle and Modified Bitumen Sand Handling Operations | 8.52E-02 | 4.02E-02 | 4.02E-02 | - | - | - | - | - |
| Blow Stills | 13.50 | 13.50 | 13.50 | 62.87 | 4.07 | 7.65 | 47.16 | 37.11 |
| Shingle and Rolls Production Line | 81.62 | 42.00 | 42.00 | 2.62 | - | 31.98 | 0.75 | 1.92 |
| Boiler No. 1 | 0.24 | 0.95 | 0.95 | 7.51E-02 | 12.52 | 0.69 | 10.51 | - |
| Boiler No. 2 | 0.24 | 0.95 | 0.95 | 7.51E-02 | 12.52 | 0.69 | 10.51 | - |
| Flux Heater | 5.71E-02 | 0.23 | 0.23 | 1.80E-02 | 3.01 | 0.17 | 2.52 | - |
| Coating Heater | 3.67E-02 | 0.15 | 0.15 | 1.16E-02 | 1.93 | 0.11 | 1.62 | - |
| Mod-Bit Hot Oil Heater | 4.24E-02 | 0.17 | 0.17 | 1.34E-02 | 2.23 | 0.12 | 1.88 | - |
| Filler Heater Hot Oil Heater | 4.90E-02 | 0.20 | 0.20 | 1.55E-02 | 2.58 | 0.14 | 2.16 | - |
| Liquid Asphalt Storage Heater | 2.45E-02 | 0.10 | 0.10 | 7.73E-03 | 1.29 | 0.07 | 1.08 | - |
| Thermal Fluid Heater | 4.08E-02 | 0.16 | 0.16 | 1.29E-02 | 2.15 | 0.12 | 1.80 | - |
| Flame Bar | 9.57E-03 | 3.35E-02 | 3.35E-02 | 2.25E-03 | 0.62 | 0.05 | 0.36 | - |
| Tanks | 23.78 | 23.78 | 23.78 | 2.17 | - | 11.89 | 5.96 | 3.01 |
| Fire Pump | 0.14 | 0.14 | 0.14 | 0.13 | 1.98 | 0.16 | 0.43 | - |
| Emergency Generator | 0.13 | 7.57E-02 | 7.57E-02 | 7.63E-02 | 4.53 | 0.13 | 1.04 | - |
| Degreaser | - | - | - | - | - | 0.49 | - | - |
| Other Insignificant Activities ³ | 1.00 | 1.00 | 1.00 | - | - | 2.00 | - | - |
| Total | 174.17 | 96.93 | 96.93 | 69.18 | 49.42 | 62.00 | 87.90 | 42.33 |

Notes:

1. The shaded cells indicate where limits are included.
2. PM_{2.5} listed is direct PM_{2.5}
3. Conservative estimate.

**Appendix A: Emission Calculations
HAP Summary**

Company Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mount Vernon, IN 47620
FESOP SPR No.: 129-43012-00011
Reviewer: Michaela Hecox
Date: 8/12/2020

| Uncontrolled Potential to Emit (tons/yr) | | | | | | | | | |
|--|----------------------------------|--------------|-----------------------------------|---------------|-------------|-----------------|---------------------|-----------------|--------------|
| Pollutant | Modified Bitumen Production Line | Blowstills | Shingle and Rolls Production Line | NG Combustion | Tanks | Fire Pump | Emergency Generator | Degreaser | Total |
| Organics | | | | | | | | | |
| Acenaphthene | 5.44E-04 | 1.86E-03 | 1.11E-03 | - | - | - | - | - | 3.51E-03 |
| Acenaphthylene | 2.31E-05 | 9.15E-05 | 1.28E-04 | - | - | - | - | - | 2.43E-04 |
| Acetaldehyde | - | - | - | - | - | 3.42E-04 | 3.33E-05 | - | 3.76E-04 |
| Acrolein | - | - | - | - | - | 4.13E-05 | 1.04E-05 | - | 5.17E-05 |
| Anthracene | 5.72E-02 | 1.09E-04 | 0.12 | - | - | - | - | - | 0.17 |
| Benzo(a)anthracene | 5.55E-05 | 1.86E-05 | 3.08E-04 | - | - | - | - | - | 3.82E-04 |
| Benzene | 5.44E-04 | 4.72 | 1.11E-03 | 8.03E-04 | - | 4.16E-04 | 1.03E-03 | - | 4.72 |
| Benzo(b)fluoranthene | 3.07E-05 | 1.71E-05 | 1.71E-04 | - | - | - | - | - | 2.19E-04 |
| Benzo(k)fluoranthene | 2.31E-05 | - | 1.28E-04 | - | - | - | - | - | 1.51E-04 |
| Benzo(g,h,i)perylene | 9.99E-06 | - | 5.55E-05 | - | - | - | - | - | 6.55E-05 |
| Benzo(a)pyrene | 2.31E-05 | - | 1.28E-04 | - | - | - | - | - | 1.51E-04 |
| Benzo(e)pyrene | 2.57E-05 | 2.14E-05 | 1.43E-04 | - | - | - | - | - | 1.90E-04 |
| 1,3-Butadiene | 9.45E-02 | - | 0.19 | - | - | 1.74E-05 | - | - | 0.29 |
| Carbonyl Sulfide | 3.15E-01 | - | 0.64 | - | - | - | - | - | 0.96 |
| Chrysene | 5.44E-04 | 8.29E-05 | 1.11E-03 | - | - | - | - | - | 1.74E-03 |
| Dibenzo(a,h)anthracene | 2.31E-05 | - | 1.28E-04 | - | - | - | - | - | 1.51E-04 |
| Di-n-Butylphthalate | 5.44E-04 | 4.43E-03 | 1.11E-03 | - | - | - | - | - | 6.08E-03 |
| Dichlorobenzene | - | - | - | 4.59E-04 | - | - | - | - | 4.59E-04 |
| Diethylphthalate | 5.44E-04 | - | 1.11E-03 | - | - | - | - | - | 1.66E-03 |
| Dimethylphthalate | 5.44E-04 | - | 1.11E-03 | - | - | - | - | - | 1.66E-03 |
| Ethylbenzene | 2.52E-01 | 9.29 | 0.51 | - | - | - | - | - | 10.05 |
| bis(2-Ethylhexyl)phthalate | - | 0.01 | - | - | - | - | - | - | 9.00E-03 |
| Fluoranthene | 2.31E-05 | 1.26E-03 | 1.28E-04 | - | - | - | - | - | 1.41E-03 |
| Fluorene | 2.75E-03 | 4.86E-03 | 5.62E-03 | - | - | - | - | - | 1.32E-02 |
| Formaldehyde | 6.58E-01 | - | 1.35 | 2.87E-02 | - | 5.27E-04 | 1.04E-04 | - | 2.03 |
| n-Hexane | 2.35 | - | 4.80 | 0.69 | 1.78 | - | - | - | 9.61 |
| Indo(1,2,3-c,d)pyrene | 5.52E-04 | - | 3.06E-03 | - | - | - | - | - | 3.62E-03 |
| 2-Methylnaphthalene | 6.30E-03 | 5.43E-03 | 1.29E-02 | - | - | - | - | - | 2.46E-02 |
| 2-Methyl phenol | 3.15E-03 | 3.43E-03 | 6.43E-03 | - | - | - | - | - | 1.30E-02 |
| 4-Methyl phenol | 5.44E-04 | 5.72E-03 | 1.11E-03 | - | - | - | - | - | 7.37E-03 |
| Naphthalene | 3.43E-03 | 1.57E-02 | 7.02E-03 | - | - | - | - | - | 2.62E-02 |
| Perylene | 2.31E-05 | - | 1.28E-04 | - | - | - | - | - | 1.51E-04 |
| Phenanthrene | 3.72E-03 | 4.29E-03 | 7.60E-03 | - | - | - | - | - | 1.56E-02 |
| Phenol | 2.60E-03 | 7.29E-03 | 5.32E-03 | - | - | - | - | - | 1.52E-02 |
| Pyrene | 1.92E-03 | 1.71E-03 | 3.92E-03 | - | - | - | - | - | 7.55E-03 |
| Styrene | 1.98E-02 | - | 4.04E-02 | - | - | - | - | - | 6.01E-02 |
| 1,1,2,2-Tetrachloroethane | 9.45E-03 | - | 1.93E-02 | - | - | - | - | - | 2.87E-02 |
| Tetrachloroethylene | - | - | - | - | - | - | - | 9.72E-04 | 9.72E-04 |
| Toluene | 8.01E-02 | 1.71E-03 | 0.16 | 1.30E-03 | - | 1.83E-04 | 3.71E-04 | - | 0.25 |
| Total PAH | - | - | - | - | - | 7.50E-05 | 2.80E-04 | - | 3.55E-04 |
| 1,1,1-Trichloroethane | 1.79E-02 | - | 0.10 | - | - | - | - | - | 0.12 |
| Xylenes | 5.15E-02 | - | 0.11 | - | - | 1.27E-04 | 2.55E-04 | - | 0.16 |
| Inorganics | | | | | | | | | |
| Antimony | 1.77E-05 | - | 9.86E-05 | - | - | - | - | - | 1.16E-04 |
| Arsenic | 2.37E-05 | - | 1.31E-04 | - | - | - | - | - | 1.55E-04 |
| Beryllium | 1.18E-05 | - | 6.57E-05 | - | - | - | - | - | 7.75E-05 |
| Cadmium | 1.18E-05 | - | 6.57E-05 | 4.20E-04 | - | - | - | - | 4.98E-04 |
| Chromium | 1.36E-04 | - | 7.56E-04 | 5.35E-04 | - | - | - | - | 1.43E-03 |
| Cobalt | 1.30E-04 | - | 7.23E-04 | - | - | - | - | - | 8.53E-04 |
| Hydrogen chloride | - | 0.40 | - | - | - | - | - | - | 0.40 |
| Lead | 1.24E-04 | - | 6.90E-04 | 1.91E-04 | - | - | - | - | 1.01E-03 |
| Manganese | 1.30E-04 | - | 7.23E-04 | 1.45E-04 | - | - | - | - | 9.98E-04 |
| Nickel | 1.95E-04 | - | 1.08E-03 | 8.03E-04 | - | - | - | - | 2.08E-03 |
| Selenium | 2.37E-05 | - | 1.31E-04 | - | - | - | - | - | 1.55E-04 |
| Total | 3.93 | 14.47 | 8.10 | 0.72 | 3.01 | 1.73E-03 | 2.08E-03 | 9.72E-04 | 29.02 |

**Appendix A: Emission Calculations
HAP Summary**

Company Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mount Vernon, IN 47620
FESOP SPR No.: 129-43012-00011
Reviewer: Michaela Hecox
Date: 8/12/2020

| Potential to Emit After Issuance ¹ (tons/yr) | | | | | | | | | |
|---|----------------------------------|-------------|-----------------------------------|---------------|-------------|-----------------|---------------------|-----------------|--------------|
| Pollutant | Modified Bitumen Production Line | Blowstills | Shingle and Rolls Production Line | NG Combustion | Tanks | Fire Pump | Emergency Generator | Degreaser | Total |
| Organic | | | | | | | | | |
| Acenaphthene | 5.44E-04 | 1.86E-03 | 1.11E-03 | - | - | - | - | - | 3.51E-03 |
| Acenaphthylene | 2.31E-05 | 9.15E-05 | 1.28E-04 | - | - | - | - | - | 2.43E-04 |
| Acetaldehyde | - | - | - | - | - | 3.42E-04 | 3.33E-05 | - | 3.76E-04 |
| Acrolein | - | - | - | - | - | 4.13E-05 | 1.04E-05 | - | 5.17E-05 |
| Anthracene | 5.72E-02 | 1.09E-04 | 0.12 | - | - | - | - | - | 0.17 |
| Benz(a)anthracene | 5.55E-05 | 1.86E-05 | 3.08E-04 | - | - | - | - | - | 3.82E-04 |
| Benzene | 5.44E-04 | 4.72 | 1.11E-03 | 8.03E-04 | - | 4.16E-04 | 1.03E-03 | - | 4.72 |
| Benzo(b)fluoranthene | 3.07E-05 | 1.71E-05 | 1.71E-04 | - | - | - | - | - | 2.19E-04 |
| Benzo(k)fluoranthene | 2.31E-05 | - | 1.28E-04 | - | - | - | - | - | 1.51E-04 |
| Benzo(g,h,i)perylene | 9.99E-06 | - | 5.55E-05 | - | - | - | - | - | 6.55E-05 |
| Benzo(a)pyrene | 2.31E-05 | - | 1.28E-04 | - | - | - | - | - | 1.51E-04 |
| Benzo(e)pyrene | 2.57E-05 | 2.14E-05 | 1.43E-04 | - | - | - | - | - | 1.90E-04 |
| 1,3-Butadiene | 9.45E-02 | - | 0.19 | - | - | 1.74E-05 | - | - | 0.29 |
| Carbonyl Sulfide | 3.15E-01 | - | 0.64 | - | - | - | - | - | 0.96 |
| Chrysene | 5.44E-04 | 8.29E-05 | 1.11E-03 | - | - | - | - | - | 1.74E-03 |
| Dichlorobenzene | - | - | - | 4.59E-04 | - | - | - | - | 4.59E-04 |
| Dibenzo(a,h)anthracene | 2.31E-05 | 4.43E-03 | 1.28E-04 | - | - | - | - | - | 4.58E-03 |
| Di-n-Butylphthalate | 5.44E-04 | - | 1.11E-03 | - | - | - | - | - | 1.66E-03 |
| Diethylphthalate | 5.44E-04 | - | 1.11E-03 | - | - | - | - | - | 1.66E-03 |
| Dimethylphthalate | 5.44E-04 | - | 1.11E-03 | - | - | - | - | - | 1.66E-03 |
| Ethylbenzene | 0.25 | 2.93E-01 | 0.51 | - | - | - | - | - | 1.06 |
| bis(2-Ethylhexyl)phthalate | - | 9.00E-03 | - | - | - | - | - | - | 9.00E-03 |
| Fluoranthene | 2.31E-05 | 1.26E-03 | 1.28E-04 | - | - | - | - | - | 1.41E-03 |
| Fluorene | 2.75E-03 | 4.86E-03 | 5.62E-03 | - | - | - | - | - | 1.32E-02 |
| Formaldehyde | 6.58E-01 | - | 1.35 | 2.87E-02 | - | 5.27E-04 | 1.04E-04 | - | 2.03 |
| n-Hexane | 2.35E+00 | - | 4.51 | 0.69 | 1.78 | - | - | - | 9.33 |
| Indo(1,2,3-c,d)pyrene | 5.52E-04 | - | 3.06E-03 | - | - | - | - | - | 3.62E-03 |
| 2-Methylnaphthalene | 6.30E-03 | 5.43E-03 | 1.29E-02 | - | - | - | - | - | 2.46E-02 |
| 2-Methyl phenol | 3.15E-03 | 3.43E-03 | 6.43E-03 | - | - | - | - | - | 1.30E-02 |
| 4-Methyl phenol | 5.44E-04 | 5.72E-03 | 1.11E-03 | - | - | - | - | - | 7.37E-03 |
| Naphthalene | 3.43E-03 | 1.57E-02 | 7.02E-03 | - | - | - | - | - | 2.62E-02 |
| Perylene | 2.31E-05 | - | 1.28E-04 | - | - | - | - | - | 1.51E-04 |
| Phenanthrene | 3.72E-03 | 4.29E-03 | 7.60E-03 | - | - | - | - | - | 1.56E-02 |
| Phenol | 2.60E-03 | 7.29E-03 | 5.32E-03 | - | - | - | - | - | 1.52E-02 |
| Pyrene | 1.92E-03 | 1.71E-03 | 3.92E-03 | - | - | - | - | - | 7.55E-03 |
| Styrene | 1.98E-02 | - | 4.04E-02 | - | - | - | - | - | 6.01E-02 |
| 1,1,2,2-Tetrachloroethane | 9.45E-03 | - | 1.93E-02 | - | - | - | - | - | 2.87E-02 |
| Tetrachloroethylene | - | - | - | - | - | - | - | 9.72E-04 | 9.72E-04 |
| Toluene | 8.01E-02 | 1.71E-03 | 0.16 | 1.30E-03 | - | 1.83E-04 | 3.71E-04 | - | 0.25 |
| Total PAH | - | - | - | - | - | 7.50E-05 | 2.80E-04 | - | 3.55E-04 |
| 1,1,1-Trichloroethane | 1.79E-02 | - | 9.95E-02 | - | - | - | - | - | 0.12 |
| Xylenes | 5.15E-02 | - | 1.05E-01 | - | - | 1.27E-04 | 2.55E-04 | - | 0.16 |
| Inorganic | | | | | | | | | |
| Antimony | 1.77E-05 | - | 9.86E-05 | - | - | - | - | - | 1.16E-04 |
| Arsenic | 2.37E-05 | - | 1.31E-04 | - | - | - | - | - | 1.55E-04 |
| Beryllium | 1.18E-05 | - | 6.57E-05 | - | - | - | - | - | 7.75E-05 |
| Cadmium | 1.18E-05 | - | 6.57E-05 | 4.20E-04 | - | - | - | - | 4.98E-04 |
| Chromium | 1.36E-04 | - | 7.56E-04 | 5.35E-04 | - | - | - | - | 1.43E-03 |
| Cobalt | 1.30E-04 | - | 7.23E-04 | - | - | - | - | - | 8.53E-04 |
| Hydrogen chloride | - | 4.00E-01 | - | - | - | - | - | - | 0.40 |
| Lead | 1.24E-04 | - | 6.90E-04 | 1.91E-04 | - | - | - | - | 1.01E-03 |
| Manganese | 1.30E-04 | - | 7.23E-04 | 1.45E-04 | - | - | - | - | 9.98E-04 |
| Nickel | 1.95E-04 | - | 1.08E-03 | 8.03E-04 | - | - | - | - | 2.08E-03 |
| Selenium | 2.37E-05 | - | 1.31E-04 | - | - | - | - | - | 1.55E-04 |
| Total | 3.93 | 5.48 | 7.82 | 0.72 | 3.01 | 1.73E-03 | 2.08E-03 | 9.72E-04 | 20.96 |

Notes:

1. The shaded cells indicate where limits are included.

**Appendix A: Emission Calculations
Modification Summary**

Company Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mount Vernon, IN 47620
FESOP SPR No.: 129-43012-00011
Reviewer: Michaela Hecox
Date: 8/12/2020

| PTE of New Emission Unit (tons/yr) | | | | | | | | |
|------------------------------------|----------|----------|----------|-----------------|------|--------|-------|------------|
| Emission Unit | PM | PM10 | PM2.5 * | SO ₂ | NOx | VOC | CO | Total HAPs |
| Blowstill (BS1b) | 1,143.18 | 1,143.18 | 1,143.18 | 41.92 | 2.72 | 161.95 | 31.44 | 9.77 |
| Total PTE: | 1,143.18 | 1,143.18 | 1,143.18 | 41.92 | 2.72 | 161.95 | 31.44 | 9.77 |

**Appendix A: Emission Calculations
Modified Bitumen Roofing Production Line**

Company Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mount Vernon, IN 47620
FESOP SPR No.: 129-43012-00011
Reviewer: Michaela Hecox
Date: 8/12/2020

Modified Bitumen Roofing Production Line

Maximum Throughput = 6.54 tons asphalt/hr 13.50 tons shingles/hr
 57,247 tons asphalt/yr 118,260 tons shingles/yr
 10.00 tons granules/hr

1. Criteria Pollutants

Coater/Surge Tank

| Pollutant | Shingle-Basis Factor (lb/ton) | Asphalt-Basis Factor (lb/ton) | Control Efficiency | Potential to Emit | | | | | Note |
|-------------------|-------------------------------|-------------------------------|--------------------|-------------------|-----------|----------------|---------|-----------|--------|
| | | | | Unrestricted | | After Issuance | | | |
| | | | | (lb/hr) | (tons/yr) | (lb/ton) | (lb/hr) | (tons/yr) | |
| PM | - | 1.18 | 90% | 7.71 | 33.78 | - | 7.71 | 33.78 | [1, 2] |
| PM ₁₀ | - | 1.18 | 90% | 7.71 | 33.78 | 0.12 | 1.62 | 7.10 | [1, 2] |
| PM _{2.5} | - | 1.18 | 90% | 7.71 | 33.78 | 0.12 | 1.62 | 7.10 | [1, 2] |
| SO ₂ | - | 3.72E-02 | 0% | 0.24 | 1.06 | - | 0.24 | 1.06 | [3] |
| VOC | 0.091 | 0.19 | 0% | 1.23 | 5.38 | - | 1.23 | 5.38 | [4] |
| CO | 1.90E-03 | 3.93E-03 | 0% | 2.57E-02 | 0.11 | - | 0.03 | 0.11 | [4] |
| H ₂ S | 4.84E-03 | 1.00E-02 | 0% | 6.53E-02 | 0.29 | - | 0.07 | 0.29 | [5] |

Notes:

1. PM/PM₁₀/PM_{2.5} emission factor from Table 1, A.L. Jankousky, *Proposed Emission Factors for Criteria Pollutants and Hazardous Air Pollutants from Asphalt Roofing Manufacturing*, Asphalt Roofing Manufacturers Association, May 12, 2003 (ARMA), multiplied by 2 to incorporate emissions from the mixer.
2. After Issuance lb/ton factor is PM limit from line 1, Table 2 to subpart AAAAAAA of 40 CFR 63, multiplied by 2 for condensable PM
3. SO₂ emission factor from Table 10, ARMA, multiplied by 2 to incorporate emissions from the mixer.
4. Emission factors are from AP-42 Table 11.2-4 (SCC 3-05-001-16 and SCC 3-05-001-17, shingle saturation: dip saturator, drying-in drum section, and coater
5. H₂S emission factor multiplied by 2 to account for emissions from the mixer.

Methodology

Asphalt-Basis Factor (lb/ton asphalt) = Shingle-Basis Factor (lb/ton shingle) x Maximum Throughput (tons shingles/yr) / Maximum Throughput (tons asphalt/yr)
 Unrestricted PTE (tons/yr) = Asphalt Factor (lb/ton asphalt) x Maximum Throughput (tons asphalt/yr) / 2,000 (lb/ton)
 PTE After Control (tons/yr) = Unrestricted PTE (tons/yr) x (1 - Control Efficiency (%)/100)
 PTE After Issuance (tons/yr) = Asphalt-Basis Factor (lb/ton asphalt) x Maximum Throughput (tons asphalt/yr) / 2,000 (lb/ton)

Granule Application

| Pollutant | Emission Factor (lb/ton shingles) | | Control Efficiency | Potential to Emit | | | | | Note |
|-------------------|-----------------------------------|------------|--------------------|-------------------|-----------|-------------------------|---------|-----------|------|
| | Uncontrolled | Controlled | | Uncontrolled | | After Issuance | | | |
| | | | | (lb/hr) | (tons/yr) | Limit (lb/ton shingles) | (lb/hr) | (tons/yr) | |
| PM | 0.04 | 1.92E-03 | 95% | 0.52 | 2.27 | - | 0.52 | 2.27 | [1] |
| PM ₁₀ | 0.11 | 5.34E-03 | 95% | 1.44 | 6.32 | 0.015 | 0.20 | 0.89 | [1] |
| PM _{2.5} | 0.11 | 5.34E-03 | 95% | 1.44 | 6.32 | 0.015 | 0.20 | 0.89 | [1] |
| VOC | 3.00E-03 | 3.00E-03 | 0% | 0.04 | 0.18 | - | 0.04 | 0.18 | [2] |

Notes:

1. PM and PM₁₀ emission factors are from an IDEM approved stack test performed on March 22, 2005 at the shingle line, assumed representative of the mod-bit line. The average operating rate for the surfacing section during the test was 73 tons per hour. Assumes all PM₁₀ is PM_{2.5} as a worst case.
2. VOC Emission Factor based on stack testing at Owens Corning Roofing & Asphalt, LLC, Brookville and at representative facilities. See SPR No. 047-32917-00005 for more information.

Potential to Emit Summary (tons/year)

| Pollutant | PM | PM ₁₀ | PM _{2.5} | SO ₂ | NOx | VOC | CO | H ₂ S |
|--------------------|-------|------------------|-------------------|-----------------|-----|------|------|------------------|
| Uncontrolled PTE | 36.04 | 40.09 | 40.09 | 1.06 | - | 5.56 | 0.11 | 0.29 |
| PTE After Issuance | 36.04 | 7.98 | 7.98 | 1.06 | - | 5.56 | 0.11 | 0.29 |

**Appendix A: Emission Calculations
Modified Bitumen Roofing Production Line**

Company Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mount Vernon, IN 47620
FESOP SPR No.: 129-43012-00011
Reviewer: Michaela Hecox
Date: 8/12/2020

2. Hazardous Air Pollutants

| Pollutant | Shingle Factor (lb/ton) | Asphalt Factor (lb/ton) | PTE Uncontrolled (tons/yr) | Note |
|---------------------------|-------------------------|-------------------------|----------------------------|------|
| Organic HAP | | | | |
| Acenaphthene | - | 1.90E-05 | 5.44E-04 | [1] |
| Acenaphthylene | 3.90E-07 | 8.06E-07 | 2.31E-05 | [2] |
| Anthracene | - | 2.00E-03 | 5.72E-02 | [1] |
| Benz(a)anthracene | 9.38E-07 | 1.94E-06 | 5.55E-05 | [2] |
| Benzene | - | 1.90E-05 | 5.44E-04 | [1] |
| Benzo(b)fluoranthene | 5.20E-07 | 1.07E-06 | 3.07E-05 | [2] |
| Benzo(k)fluoranthene | 3.90E-07 | 8.06E-07 | 2.31E-05 | [2] |
| Benzo(g,h,i)perylene | 1.69E-07 | 3.49E-07 | 9.99E-06 | [2] |
| Benzo(a)pyrene | 3.90E-07 | 8.06E-07 | 2.31E-05 | [2] |
| Benzo(e)pyrene | 4.35E-07 | 8.99E-07 | 2.57E-05 | [2] |
| 1,3-Butadiene | - | 3.30E-03 | 9.45E-02 | [1] |
| Carbonyl Sulfide | - | 1.10E-02 | 0.31 | [1] |
| Chrysene | - | 1.90E-05 | 5.44E-04 | [1] |
| Dibenzo(a,h)anthracene | 3.90E-07 | 8.06E-07 | 2.31E-05 | [2] |
| Di-n-butylphthalate | - | 1.90E-05 | 5.44E-04 | [1] |
| Diethylphthalate | - | 1.90E-05 | 5.44E-04 | [1] |
| Dimethylphthalate | - | 1.90E-05 | 5.44E-04 | [1] |
| Ethylbenzene | - | 8.80E-03 | 0.25 | [1] |
| Fluoranthene | 3.90E-07 | 8.06E-07 | 2.31E-05 | [2] |
| Fluorene | - | 9.60E-05 | 2.75E-03 | [1] |
| Formaldehyde | - | 2.30E-02 | 0.66 | [1] |
| n-Hexane | - | 8.20E-02 | 2.35 | [1] |
| Indo(1,2,3-c,d)pyrene | 9.33E-06 | 1.93E-05 | 5.52E-04 | [2] |
| 2-Methylnaphthalene | - | 2.20E-04 | 6.30E-03 | [1] |
| 2-Methyl phenol | - | 1.10E-04 | 3.15E-03 | [1] |
| 4-Methyl phenol | - | 1.90E-05 | 5.44E-04 | [1] |
| Naphthylene | - | 1.20E-04 | 3.43E-03 | [1] |
| Perylene | 3.90E-07 | 8.06E-07 | 2.31E-05 | [2] |
| Phenanthrene | - | 1.30E-04 | 3.72E-03 | [1] |
| Phenol | - | 9.10E-05 | 2.60E-03 | [1] |
| Pyrene | - | 6.70E-05 | 1.92E-03 | [1] |
| Styrene | - | 6.90E-04 | 1.98E-02 | [1] |
| 1,1,2,2-Tetrachloroethane | - | 3.30E-04 | 9.45E-03 | [1] |
| Toluene | - | 2.80E-03 | 8.01E-02 | [1] |
| 1,1,1-Trichloroethane | 3.03E-04 | 6.26E-04 | 1.79E-02 | [2] |
| Xylenes | - | 1.80E-03 | 5.15E-02 | [1] |
| Inorganic HAP | | | | |
| Antimony | 3.00E-07 | 6.20E-07 | 1.77E-05 | [2] |
| Arsenic | 4.00E-07 | 8.26E-07 | 2.37E-05 | [2] |
| Beryllium | 2.00E-07 | 4.13E-07 | 1.18E-05 | [2] |
| Cadmium | 2.00E-07 | 4.13E-07 | 1.18E-05 | [2] |
| Chromium | 2.30E-06 | 4.75E-06 | 1.36E-04 | [2] |
| Cobalt | 2.20E-06 | 4.54E-06 | 1.30E-04 | [2] |
| Lead | 2.10E-06 | 4.34E-06 | 1.24E-04 | [2] |
| Manganese | 2.20E-06 | 4.54E-06 | 1.30E-04 | [2] |
| Nickel | 3.30E-06 | 6.82E-06 | 1.95E-04 | [2] |
| Selenium | 4.00E-07 | 8.26E-07 | 2.37E-05 | [2] |
| Total HAP | | | 3.93 | |

Notes:

- HAP emissions from ARMA data for coater, mixer, and surge tank.
- Emission Factor based on stack testing at Owens Corning Roofing & Asphalt, LLC, Brookville and at representative facilities. See SPR No. 047-32917-00005 for more information.

**Appendix A: Emission Calculations
Potential to Emit Summary - Mineral Handling Operations**

Company Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mount Vernon, IN 47620
FESOP SPR No.: 129-43012-00011
Reviewer: Michaela Hecox
Date: 8/12/2020

| Emission Unit ID | Emission Unit Description | Material | Throughput (TPH) | Control Efficiency | Emission Factor (lb/ton) | | | PTE (TPY) | | | Controlled Emissions (TPY) | | | Limited Emissions (TPY) | | | Emission Factor Source |
|--|---|----------|------------------|--------------------|--------------------------|----------|----------|---------------|---------------|---------------|----------------------------|-------------|-------------|-------------------------|-------------|-------------|---|
| | | | | | PM | PM10 | PM2.5 | PM | PM10 | PM2.5 | PM | PM10 | PM2.5 | PM | PM10 | PM2.5 | |
| Granule Handling | Pit & Underground Conveyor | Granule | 30.60 | 99% | 0.0290 | 0.00640 | 0.00640 | 3.89 | 0.86 | 0.86 | 0.04 | 0.01 | 0.01 | 3.89 | 0.86 | 0.86 | FIRE SCC# 3-05-025-03 |
| | Bucket Elevator to one of Twenty Storage Silos | Granule | 30.60 | 99% | 0.0290 | 0.00640 | 0.00640 | 3.89 | 0.86 | 0.86 | 0.04 | 0.01 | 0.01 | 3.89 | 0.86 | 0.86 | FIRE SCC# 3-05-025-03 |
| Modified Bitnum Granule Handling | One Pneumatic Transport System to one Storage Bin | Granule | 10.00 | 99% | 0.0290 | 0.00640 | 0.00640 | 1.27 | 0.28 | 0.28 | 0.01 | 2.80E-03 | 2.80E-03 | 1.27 | 0.28 | 0.28 | FIRE SCC# 3-05-025-03 |
| Shingle Granule Handling Operation | One Conveyor Belt to One Storage Bin | Granule | 30.60 | 0% | 0.0290 | 0.00640 | 0.00640 | 3.89 | 0.86 | 0.86 | 3.89 | 0.86 | 0.86 | 3.89 | 0.86 | 0.86 | FIRE SCC# 3-05-025-03 |
| Shingle and Modified Bitumen Filler Handling Operation | Pneumatic Truck Unloading Operation to Storage Silo (S8)* | Filler | 32.00 | 99% | 0.73 | 0.47 | 0.47 | 102.32 | 65.88 | 65.88 | 1.02 | 0.66 | 0.66 | 1.05 | 0.66 | 0.66 | AP-42 Ch. 11, Table 11.12-2, SCC# 3-05-011-07 |
| | Pneumatic Truck Unloading Operation to Storage Silo (S9)* | Filler | 32.00 | 99% | 0.73 | 0.47 | 0.47 | 102.32 | 65.88 | 65.88 | 1.02 | 0.66 | 0.66 | 1.05 | 0.66 | 0.66 | AP-42 Ch. 11, Table 11.12-2, SCC# 3-05-011-07 |
| | One Pneumatic Transport System (S10) | Filler | 32.00 | 99% | 0.73 | 0.47 | 0.47 | 102.32 | 65.88 | 65.88 | 1.02 | 0.66 | 0.66 | 1.05 | 0.66 | 0.66 | AP-42 Ch. 11, Table 11.12-2, SCC# 3-05-011-07 |
| | One Storage Bin (S11) | Filler | 32.00 | 99% | 0.73 | 0.47 | 0.47 | 102.32 | 65.88 | 65.88 | 1.02 | 0.66 | 0.66 | 1.05 | 0.66 | 0.66 | AP-42 Ch. 11, Table 11.12-2, SCC# 3-05-011-07 |
| Talc Handling Operation | One Pneumatic Truck Unloading Operation to One Storage Silo (S25) | Talc | 0.10 | 99% | 9.00E-08 | 9.00E-08 | 9.00E-08 | 3.94E-08 | 3.94E-08 | 3.94E-08 | 3.94E-10 | 3.94E-10 | 3.94E-10 | 3.94E-08 | 3.94E-08 | 3.94E-08 | AP-42 Ch. 11, Table 11.26-1, SCC# 3-05-089-058 Converted to (lb/ton) and assuming 99% control to get uncontrolled value |
| | One Pneumatic Transport System to One Storage Bin (S18) | Talc | 0.10 | 99% | 9.00E-08 | 9.00E-08 | 9.00E-08 | 3.94E-08 | 3.94E-08 | 3.94E-08 | 3.94E-10 | 3.94E-10 | 3.94E-10 | 3.94E-08 | 3.94E-08 | 3.94E-08 | |
| Shingle and Modified Bitumen Sand Handling Operation | One Pneumatic Truck Unloading Operation to One Storage Silo (S26) | Sand | 4.63 | 99% | 0.0021 | 0.00099 | 0.00099 | 0.04 | 0.02 | 0.02 | 4.26E-04 | 2.01E-04 | 2.01E-04 | 0.04 | 0.02 | 0.02 | AP-42 Ch. 11, Table 11.12-2, SCC# 3-05-011-05,22,24 |
| | One Pneumatic Transport System to One Storage Bin (S17) | Sand | 4.63 | 99% | 0.0021 | 0.00099 | 0.00099 | 0.04 | 0.02 | 0.02 | 4.26E-04 | 2.01E-04 | 2.01E-04 | 0.04 | 0.02 | 0.02 | AP-42 Ch. 11, Table 11.12-2, SCC# 3-05-011-05,22,24 |
| Total | | | | | | | | 422.28 | 266.39 | 266.39 | 8.07 | 3.51 | 3.51 | 17.22 | 5.52 | 5.52 | |

Methodology

PTE (TPY) = Throughput (TPH) x Emission Factor (lb/ton) x 8760 (hr/yr) / 2000 (lb/ton)

*Both unloading operations can operate at the same time.

Appendix A: Emission Calculations
New Blowstill (BS 1b)

Company Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mount Vernon, IN 47620
FESOP SPR No.: 129-43012-00011
Reviewer: Michaela Hecox
Date: 8/12/2020

| A. PROCESS INFORMATION | | | |
|--|--------|------------|---|
| Asphalt Density | 7.25 | lbs/gal | [7] |
| Blow Duration | 4 | hrs/batch | [2] |
| Maximum Number of Batches Per Year | 2,190 | batch/yr | (8,760 hrs/yr / 4 hrs/batch) |
| | 12,000 | gal/batch | [14] |
| BS 1b Maximum Operational Capacity | 43.50 | tons/batch | (12,000 gal/batch * 7.25 lbs/gal / 2,000 lbs/ton) |
| | 95,265 | tons/yr | (43.50 tons/batch * 2,190 batch/yr) |
| Maximum Asphalt Blowing Operating Capacity | 95,265 | tons/yr | [3] |
| Limited Asphalt Blowing Operational Capacity | 90,000 | tons/yr | |
| Control Efficiency | 90% | | |

| B. CRITERIA POLLUTANT EMISSION CALCULATIONS | | | | | |
|---|------------------------------------|---------|--|---|----------|
| Pollutant | Emission Factors (lbs/ton asphalt) | | Blow Still ⁽³⁾ | | Notes |
| | Uncontrolled | Limited | Uncontrolled PTE (TPY) ^(M1) | PTE After Issuance (TPY) ^(M2,M3) | |
| PM | 24.00 | 0.30 | 1,143.18 | 13.50 | [4] |
| PM ₁₀ | 24.00 | 0.30 | 1,143.18 | 13.50 | [4] |
| PM _{2.5} | 24.00 | 0.30 | 1,143.18 | 13.50 | [4] |
| SO ₂ | 0.88 | -- | 41.92 | 39.60 | [5] |
| H ₂ S | 0.52 | -- | 24.74 | 23.38 | [6], [8] |
| VOC | 3.40 | 0.170 | 161.95 | 7.65 | [7] |
| CO | 0.66 | 0.660 | 31.44 | 29.70 | [5] |
| NO _x | 0.057 | -- | 2.72 | 2.57 | [5] |

Continued on next page

| C. BLOWSTILL VOC BACT @ 85% ^b | | | | |
|--|--------|---------|--|-----------|
| BACT Limited Throughput | 90,000 | tons/yr | | (9), (10) |
| BACT Required THC Destruction Efficiency | 90% | | | (9) |
| Limited VOC Emission Factor | 0.170 | lbs/ton | | (9) |
| Potential to Emit | 7,650 | tons/yr | | (MS) |

| D. HAP EMISSION CALCULATIONS | | | | | |
|------------------------------|------------------------------------|------------|---------------------------|-----------------------------------|------------|
| Pollutant | Emission Factors (lbs/ton asphalt) | | Blow Still ^(a) | | Notes |
| | Uncontrolled ^(M) | Controlled | Uncontrolled | PTE After | |
| | | | PTE (TPY) ^(M) | Issuance (TPY) ^{(M),(N)} | |
| Organic | | | | | |
| Acenaphthalene | 1.28E-06 | 6.40E-08 | 6.10E-05 | 6.10E-05 | (11) |
| Acenaphthene | 2.60E-05 | 1.30E-06 | 1.24E-03 | 1.24E-03 | (11), (12) |
| Anthracene | 1.52E-06 | 7.60E-08 | 7.24E-05 | 7.24E-05 | (11) |
| Benzo(a)anthracene | 2.60E-07 | 1.30E-08 | 1.24E-05 | 1.24E-05 | (11), (12) |
| Benzene | 6.60E-02 | 3.30E-03 | 3.14 | 3.14 | (11) |
| Benzofluoranthene | 2.40E-07 | 1.20E-08 | 1.14E-05 | 1.14E-05 | (11), (12) |
| Benzolelycene | 3.00E-07 | 1.50E-08 | 1.43E-05 | 1.43E-05 | (11), (12) |
| Chrysene | 1.16E-06 | 5.80E-08 | 5.53E-05 | 5.53E-05 | (11), (12) |
| Di-n-butylphthalate | 6.20E-05 | 3.10E-06 | 2.95E-03 | 2.95E-03 | (11) |
| Ethylbenzene | 0.15 | 6.50E-03 | 6.19 | 0.69 | (11) |
| Di(2-Ethylhexyl)phthalate | 1.26E-04 | 6.30E-06 | 6.00E-03 | 6.00E-03 | (11) |
| Fluoranthene | 1.76E-05 | 8.80E-07 | 8.35E-04 | 8.35E-04 | (11), (12) |
| Fluorene | 6.92E-06 | 3.46E-06 | 3.24E-03 | 3.24E-03 | (11), (12) |
| 2-Methylnaphthalene | 7.60E-05 | 3.80E-06 | 3.62E-03 | 3.62E-03 | (11), (12) |
| 2-Methyl phenol | 4.80E-05 | 2.40E-06 | 2.29E-03 | 2.29E-03 | (11) |
| 4-Methyl phenol | 6.00E-05 | 4.00E-06 | 3.81E-03 | 3.81E-03 | (11) |
| Naphthalene | 2.20E-04 | 1.10E-05 | 1.05E-02 | 1.05E-02 | (11), (12) |
| Phenanthrene | 6.00E-05 | 3.00E-06 | 2.86E-03 | 2.86E-03 | (11), (12) |
| Phenol | 1.02E-04 | 5.10E-06 | 4.86E-03 | 4.86E-03 | (11) |
| Pyrene | 2.40E-05 | 1.20E-06 | 1.14E-03 | 1.14E-03 | (11), (12) |
| Toluene | 2.60E-03 | 1.30E-04 | 0.12 | 0.12 | |
| Inorganic | | | | | |
| Hydrogen chloride | 5.60E-03 | 5.60E-03 | 0.27 | 0.27 | (11), (13) |
| Total HAP | | | 9.77 | 3.87 | |

Continued on next page

| E. NOTES |
|--|
| [1] This is a typical value for asphalt density. The actual density may vary. |
| [2] Includes a 3 hr blow, 30 minutes for charging, and 30 minutes for unloading. The total blow cycle is typically longer than 4 hours, but 4 hours has been used in this calculation for conservatism. |
| [3] Only 1 blowstill can be used at a time due to the number of blowers installed. However, the maximum capacity of the asphalt blowing process is calculated based on the new blowstill (BS1b) for purposes of evaluating this modification 12c. |
| [4] AP-42 Table 11.2-2 (SCC 3-05-001-02). |
| [5] Table 1, A.L. Jankovsky, <i>Proposed Emission Factors for Criteria Pollutants and Hazardous Air Pollutants from Asphalt Roofing Manufacturing</i> , Asphalt Roofing Manufacturers Association, May 12, 2003 (ARMA). |
| [6] Back calculated from SC2 EF & 90% CD efficiency. |
| [7] AP-42 Table 11.2-2 (SCC 3-05-001-02). ARMA points out an apparent typo in AP-42. The corrected controlled emission factor is from <i>Emission Factor Documentation for AP-42 Section 11.2: Asphalt Roofing</i> , Final Report, US EPA, OAQPS, May 20, 1994 applied as FESOP and BACT limits. |
| [8] Methodology for H2S is considered conservative. D. C. Trumbore, <i>The Magnitude and Source of Air Emissions from Asphalt Blowing Operations</i> , Environmental Progress, 17(1), Spring 1998, suggests that H2S is the source of 70-80% of the sulfur oxides from blowing with most of the remainder from other sulfur-containing species in the feedstock. A typical assumption in combustion processes is that 95% or more of sulfur is converted to SO2 (ref. AP-42 Chapter 1). |
| [9] BACT for BS3 determined in FESOP Renewal No. 129-38119-00011, issued November 5, 2018. As discussed in this application, BACT for BS1a and BS1b are identical to BACT for BS3. |
| [10] The previous Operating Permit includes multiple throughput limits for the asphalt blowing operation. The BACT limit is 175,200 tons/yr, but there is a more stringent limit of 90,000 tons/yr. The throughputs have been set equal to the 90,000 tons/yr since it is the more stringent limitation. |
| [11] Table 5, A. L. Jankovsky, <i>Proposed Emission Factors for Criteria Pollutants and Hazardous Air Pollutants from Asphalt Roofing Manufacturing</i> , ARMA, May 12, 2003. Controlled factors calculated using 95% control efficiency to generate a conservative result. |
| [12] AP-42 notes that POM emissions are 0.3% of filterable PM for asphalt blowing (not a to Table 11.2-2). The AP-42 factor is less than the total of named POM compounds in the ARMA document, so the ARMA factors are used as the more conservative choice. |
| [13] Thermal destruction is not a control technology for HCL, so the uncontrolled emission factor is taken as the same as the controlled factor. |
| [14] Emission unit ID has also been modified in order to distinguish between the existing blowstill and the new blowstill added in FESOP SPR No. 129-43012-00011. The existing blowstill will be referred to as BS1a and the new blowstill will be referred to as BS1b. Emission unit description in the permit will include before/after replacement language in order to allow the existing BS1a to continue to operate until the unit is deconstructed and the one (1) new asphalt blowstill (BS1b) is constructed. |
| F. METHODOLOGY |
| [M1] Uncontrolled PTE (tons/yr) = Uncontrolled Emission Factor (lb/ton) * Maximum Asphalt Blowing Operational Capacity (tons/yr) / 2,000 |
| [M2] PTE After Issuance (tons/yr) = Uncontrolled Emission Factor (lb/ton) * Limited Asphalt Blowing Operational Capacity (tons/yr) / 2,000 |
| [M3] PTE After Issuance (tons/yr) = Limited Emission Factor (lb/ton) * Limited Asphalt Blowing Operational Capacity (tons/yr) / 2,000 |
| [M4] Uncontrolled Emission Factor (lb/ton) = Controlled Emission Factor (lb/ton) / (1-0.95) |
| [M5] Uncontrolled PTE (tons/yr) = Uncontrolled Emission Factor (lb/ton) * Maximum Asphalt Blowing Operational Capacity (tons/yr) / 2,000 |
| [M6] PTE After Issuance (tons/yr) = Uncontrolled Emission Factor (lb/ton) * Limited Asphalt Blowing Operational Capacity (tons/yr) / 2,000 |
| [M7] PTE After Issuance (tons/yr) = Uncontrolled PTE - All other HAPs |

Appendix A: Emission Calculations
Blowfills (BS1a and BS3)

Company Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mount Vernon, IN 47620
FESOP SPR No.: 129-43012-00011
Reviewer: Michaela Hecox
Date: 8/12/2020

| A. PROCESS INFORMATION | | |
|--|---------|--|
| Asphalt Density | 7.25 | lbs/gal [7] |
| Blow Duration | 4 | hrs/batch [2] |
| Maximum Number of Batches Per Year | 2,190 | batch/yr (8,760 hrs/yr / 4 hrs/batch) |
| | 12,000 | gal/batch [14] |
| BS1a Maximum Operational Capacity | 43.50 | tons/batch (12,000 gal/batch * 7.25 lbs/gal / 2,000 lbs/ton) |
| | 95,250 | tons/yr (43.50 tons/batch * 2,190 batch/yr) |
| | 18,000 | gal/batch |
| BS3 Maximum Operational Capacity | 65 | tons/batch (18,000 gal/batch * 7.25 lbs/gal / 2,000 lbs/ton) |
| | 142,898 | tons/yr (65 tons/batch * 2,190 batch/yr) |
| Maximum Asphalt Blowing Operating Capacity | 142,898 | tons/yr [9] |
| Limited Asphalt Blowing Operational Capacity | 90,000 | tons/yr |
| Control Efficiency | 90% | |

| B. CRITERIA POLLUTANT EMISSION CALCULATIONS | | | | | |
|---|--------------------------------------|---------|---|--|----------|
| Pollutant | Emission Factors (lb/ton asphalt) | | Blow Still ⁽¹⁾ | | Notes |
| | Uncontrolled | Limited | Uncontrolled PTE (TPY) ⁽²⁾ | PTE After Issuance (TPY) ⁽²⁾⁽³⁾ | |
| PM | 24.00 | 0.30 | 1,714.77 | 13.50 | [4] |
| PM ₁₀ | 24.00 | 0.30 | 1,714.77 | 13.50 | [4] |
| PM _{2.5} | 24.00 | 0.30 | 1,714.77 | 13.50 | [4] |
| SO ₂ | 0.88 | -- | 62.87 | 39.60 | [5] |
| H ₂ S | 0.52 | -- | 37.11 | 23.38 | [5], [8] |
| VOC | 3.40 | 0.170 | 242.93 | 7.65 | [7] |
| CO | 0.66 | 0.669 | 47.16 | 29.70 | [5] |
| NO _x | 0.057 | -- | 4.07 | 2.57 | [5] |

Continued on next page

| C. BLOWSTILL VOC BACT - BS1a & BS3 | | | | |
|--|--------|---------|--|-----------|
| BACT Limited Throughput | 90,000 | tons/yr | | (9), (10) |
| BACT Required THC Destruction Efficiency | 90% | | | (9) |
| Limited VOC Emission Factor | 0.170 | lbs/ton | | (9) |
| Potential to Emit | 7,650 | tons/yr | | (MS) |

| D. HAP EMISSION CALCULATIONS | | | | | |
|------------------------------|------------------------------------|------------|---------------------------|-------------------------------------|------------|
| Pollutant | Emission Factors (lbs/ton asphalt) | | Blow Still ^{MS} | | Notes |
| | Uncontrolled ^(MS) | Controlled | Uncontrolled | PTE After | |
| | | | PTE (TPY) ^(MS) | Issuance (TPY) ^{(MS),(M7)} | |
| Organic | | | | | |
| Acenaphthalene | 1.28E-06 | 6.40E-08 | 9.15E-05 | 9.15E-05 | (11) |
| Acenaphthene | 2.60E-05 | 1.30E-06 | 1.86E-03 | 1.86E-03 | (11), (12) |
| Anthracene | 1.52E-06 | 7.60E-08 | 1.09E-04 | 1.09E-04 | (11) |
| Benzo(a)anthracene | 2.60E-07 | 1.30E-08 | 1.86E-05 | 1.86E-05 | (11), (12) |
| Benzene | 6.60E-02 | 3.30E-03 | 4.72 | 4.72 | (11) |
| Benzofluoranthene | 2.40E-07 | 1.20E-08 | 1.71E-05 | 1.71E-05 | (11), (12) |
| Benzoleloxyrene | 3.00E-07 | 1.50E-08 | 2.14E-05 | 2.14E-05 | (11), (12) |
| Chrysene | 1.16E-06 | 5.80E-08 | 8.29E-05 | 8.29E-05 | (11), (12) |
| Dim-hydroxyphthalate | 6.20E-05 | 3.10E-06 | 4.43E-03 | 4.43E-03 | (11) |
| Ethylbenzene | 0.15 | 6.50E-03 | 9.29 | 0.99 | (11) |
| Di(2-Ethylhexyl)phthalate | 1.26E-04 | 6.30E-06 | 9.00E-03 | 9.00E-03 | (11) |
| Fluoranthene | 1.76E-05 | 8.80E-07 | 1.26E-03 | 1.26E-03 | (11), (12) |
| Fluorene | 6.90E-05 | 3.40E-06 | 4.86E-03 | 4.86E-03 | (11), (12) |
| 2-Methylnaphthalene | 7.60E-05 | 3.80E-06 | 5.43E-03 | 5.43E-03 | (11), (12) |
| 2-Methyl phenol | 4.80E-05 | 2.40E-06 | 3.43E-03 | 3.43E-03 | (11) |
| 4-Methyl phenol | 8.00E-05 | 4.00E-06 | 5.73E-03 | 5.73E-03 | (11) |
| Naphthalene | 2.20E-04 | 1.10E-05 | 1.57E-02 | 1.57E-02 | (11), (12) |
| Phenanthrene | 6.00E-05 | 3.00E-06 | 4.29E-03 | 4.29E-03 | (11), (12) |
| Phenol | 1.02E-04 | 5.10E-06 | 7.29E-03 | 7.29E-03 | (11) |
| Pyrene | 2.40E-05 | 1.20E-06 | 1.71E-03 | 1.71E-03 | (11), (12) |
| Toluene | 2.60E-03 | 1.30E-04 | 0.19 | 0.19 | |
| Inorganic | | | | | |
| Hydrogen chloride | 5.60E-03 | 5.60E-03 | 0.40 | 0.40 | (11), (13) |
| Total HAP | | | 14.66 | 5.66 | |

Continued on next page

| E. NOTES |
|--|
| [1] This is a typical value for asphalt density. The actual density may vary. |
| [2] Includes a 3 hr blow, 30 minutes for charging, and 30 minutes for unloading. The total blow cycle is typically longer than 4 hours, but 4 hours has been used in this calculation for conservatism. |
| [3] Only 1 blowstill can be used at a time due to the number of blowers installed. Therefore, the maximum capacity of the asphalt blowing process is calculated assuming continuous use of the largest blowstill. |
| [4] AP-42 Table 11.2-2 (SCC 3-05-001-02). |
| [5] Table 1, A.L. Jankovsky, Proposed Emission Factors for Criteria Pollutants and Hazardous Air Pollutants from Asphalt Roofing Manufacturing, Asphalt Roofing Manufacturers Association, May 12, 2003 (ARMA). |
| [6] Back calculated from SC2 EF & 90% CD efficiency. |
| [7] AP-42 Table 11.2-2 (SCC 3-05-001-02). ARMA points out an apparent typo in AP-42. The corrected controlled emission factor is from Emission Factor Documentation for AP-42 Section 11.2: Asphalt Roofing, Final Report, US EPA, OAQPS, May 20, 1994 applied as FESOP and BACT limits. |
| [8] Methodology for H2S is considered conservative. D. C. Trumbore, The Magnitude and Source of Air Emissions from Asphalt Blowing Operations, Environmental Progress, 17(1), Spring 1998, suggests that H2S is the source of 70-80% of the sulfur oxides from blowing with most of the remainder from other sulfur-containing species in the feedstock. A typical assumption in combustion processes is that 95% or more of sulfur is converted to SO2 (ref. AP-42 Chapter 1). |
| [9] BACT for BS3 determined in FESOP Renewal No. 129-38119-00011, issued November 5, 2018. As discussed in this application, BACT for BS1a and BS1b are identical to BACT for BS3. |
| [10] The previous Operating Permit includes multiple throughput limits for the asphalt blowing operation. The BACT limit is 175,200 tons/yr, but there is a more stringent limit of 90,000 tons/yr. The throughputs have been set equal to the 90,000 tons/yr since it is the more stringent limitation. |
| [11] Table 5, A.L. Jankovsky, Proposed Emission Factors for Criteria Pollutants and Hazardous Air Pollutants from Asphalt Roofing Manufacturing, ARMA, May 12, 2003. Controlled factors calculated using 95% control efficiency to generate a conservative result. |
| [12] AP-42 notes that POM emissions are 0.3% of filterable PM for asphalt blowing (not a to Table 11.2-2). The AP-42 factor is less than the total of named POM compounds in the ARMA document, so the ARMA factors are used as the more conservative choice. |
| [13] Thermal destruction is not a control technology for HCL, so the uncontrolled emission factor is taken as the same as the controlled factor. |
| [14] Emission unit ID has also been modified in order to distinguish between the existing blowstill and the new blowstill added in FESOP SPR No. 129-43012-00011. The existing blowstill will be referred to as BS1a and the new blowstill will be referred to as BS1b. Emission unit description in the permit will include before/after replacement language in order to allow the existing BS1a to continue to operate until the unit is deconstructed and the one (1) new asphalt blowstill (BS1b) is constructed. |
| F. METHODOLOGY |
| [M1] Uncontrolled PTE (tons/yr) = Uncontrolled Emission Factor (lbs/ton) x Maximum Asphalt Blowing Operational Capacity (tons/yr) / 2,000 lb |
| [M2] PTE After Issuance (tons/yr) = Uncontrolled Emission Factor (lbs/ton) x Limited Asphalt Blowing Operational Capacity (tons/yr) / 2,000 |
| [M3] PTE After Issuance (tons/yr) = Limited Emission Factor (lbs/ton) x Limited Asphalt Blowing Operational Capacity (tons/yr) / 2,000 |
| [M4] Uncontrolled Emission Factor (lbs/ton) = Controlled Emission Factor (lbs/ton) / (1-0.95) |
| [M5] Uncontrolled PTE (tons/yr) = Uncontrolled Emission Factor (lbs/ton) x Maximum Asphalt Blowing Operational Capacity (tons/yr) / 2,000 |
| [M6] PTE After Issuance (tons/yr) = Uncontrolled Emission Factor (lbs/ton) x Limited Asphalt Blowing Operational Capacity (tons/yr) / 2,000 |
| [M7] PTE After Issuance (tons/yr) = Uncontrolled PTE - All other HAPs |

**Appendix A: Emission Calculations
Shingle Line**

Company Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mount Vernon, IN 47620
FESOP SPR No.: 129-43012-00011
Reviewer: Michaela Hecox
Date: 8/12/2020

Shingle Line

| | | | | |
|----------------------|---------|------------------|-------|-----------------------------|
| Maximum Throughputs: | 13.35 | tons asphalt/hr | 41.29 | tons granules/hr |
| | 116,977 | tons asphalt/yr | 1.50 | tons self-seal adhesive/hr |
| | 75.00 | tons/shingles/hr | 1.25 | tons laminating adhesive/hr |
| | 657,000 | tons shingles/yr | | |

Limited Throughput = 110,000 tons asphalt/yr

A. Criteria Pollutants

Coater/Surge Tank

| Pollutant | Shingle-Basis Factor (lb/ton) | Asphalt-Basis Factor (lb/ton) | Control Efficiency | Potential to Emit | | | | | Note |
|-------------------|-------------------------------|-------------------------------|--------------------|-------------------|-----------|------------------------|------------------------|-----------|--------|
| | | | | Unrestricted | | After Issuance | | | |
| | | | | (lb/hr) | (tons/yr) | Shingle-Basis (lb/ton) | Asphalt-Basis (lb/ton) | (tons/yr) | |
| PM | - | 1.18 | 95% | 15.76 | 69.02 | - | - | 64.90 | [1] |
| PM ₁₀ | - | 1.18 | 95% | 15.76 | 69.02 | 0.12 | 0.67 | 37.07 | [1, 2] |
| PM _{2.5} | - | 1.18 | 95% | 15.76 | 69.02 | 0.12 | 0.67 | 37.07 | [1, 2] |
| SO ₂ | - | 3.72E-02 | 0% | 0.50 | 2.18 | - | - | 2.05 | [3] |
| VOC | 0.091 | 0.51 | 0% | 6.83 | 29.89 | - | - | 28.11 | [4] |
| CO | 1.90E-03 | 1.07E-02 | 0% | 0.14 | 0.62 | - | - | 0.59 | [4] |
| H ₂ S | 4.84E-03 | 2.72E-02 | 0% | 0.36 | 1.59 | - | - | 1.50 | [5] |

Notes:

1. PM/PM₁₀/PM_{2.5} emission factor from Table 1, A.L. Jankowsky, *Proposed Emission Factors for Criteria Pollutants and Hazardous Air Pollutants from Asphalt Roofing Manufacturing*, Asphalt Roofing Manufacturers Association, May 12, 2003 (ARMA), multiplied by 2 to incorporate emissions from the mixer.
2. After Issuance lb/ton factor is PM limit from line 1, Table 2 to subpart AAAAAA of 40 CFR 63, multiplied by 2 for condensable PM
3. SO₂ emission factor from Table 10, ARMA, multiplied by 2 to incorporate emissions from the mixer.
4. Emission factors are from AP-42 Table 11.2-4 (SCC 3-05-001-16 and SCC 3-05-001-17, shingle saturation: dip saturator, drying-in drum section, and coater
5. H₂S emission factor multiplied by 2 to account for emissions from the mixer.

Methodology

Asphalt Factor (lb/ton asphalt) = Shingle Factor (lb/ton shingle) x Maximum Throughput (tons shingles/yr) / Maximum Throughput (tons asphalt/yr)
 Unrestricted PTE (tons/yr) = Asphalt Factor (lb/ton asphalt) x Maximum Throughput (tons asphalt/yr) / 2,000 (lb/ton)
 PTE After Control (tons/yr) = Unrestricted PTE (tons/yr) x (1 - Control Efficiency (%)/100)
 PTE After Issuance (tons/yr) = Asphalt Factor (lb/ton asphalt) x Limited Throughput (tons asphalt/yr) / 2,000 (lb/ton)

Granule Application

| Pollutant | Emission Factor (lb/ton shingles) | | Control Efficiency | Potential to Emit | | | | | Note |
|-------------------|-----------------------------------|------------|--------------------|-------------------|-----------|-------------------------|---------|-----------|------|
| | Uncontrolled | Controlled | | Uncontrolled | | After Issuance | | | |
| | | | | (lb/hr) | (tons/yr) | Limit (lb/ton shingles) | (lb/hr) | (tons/yr) | |
| PM | 0.04 | 1.92E-03 | 95% | 2.88 | 12.60 | - | 2.88 | 12.60 | [1] |
| PM ₁₀ | 0.11 | 5.34E-03 | 95% | 8.01 | 35.10 | 0.015 | 1.13 | 4.93 | [1] |
| PM _{2.5} | 0.11 | 5.34E-03 | 95% | 8.01 | 35.10 | 0.015 | 1.13 | 4.93 | [1] |
| VOC | 3.00E-03 | 3.00E-03 | 0% | 0.23 | 0.99 | - | 0.23 | 0.99 | [2] |

Notes:

1. PM and PM-10 emission factors are from an IDEM approved stack test performed on March 22, 2005. The average operating rate for the surfacing section during the test was 73 tons per hour. Assumes all PM₁₀ is PM_{2.5} as a worst case
2. VOC Emission Factor based on stack testing at Owens Corning Roofing & Asphalt, LLC, Brookville and at representative facilities. See SPR No. 047-32917-00005 for more information.

Self-Seal Application and Cooling Section

| Pollutant | Emission Factor (basis) (lb/ton) | Potential to Emit | | | Emission Factor Source |
|------------------|----------------------------------|----------------------|--------------------------|-----------|--------------------------------|
| | | Uncontrolled (lb/hr) | After Issuance (tons/yr) | | |
| | | | (tons/yr) | (tons/yr) | |
| SO ₂ | 0.0372 (Adhesive) | 5.58E-02 | 0.24 | 0.24 | Coater EF, applied to adhesive |
| VOC | 0.091 (Adhesive) | 0.14 | 0.60 | 0.60 | Coater EF, applied to adhesive |
| CO | 8.62E-04 (asphalt) | 1.15E-02 | 5.04E-02 | 4.74E-02 | ARMA, Table B-4 |
| H ₂ S | 0.0272 (Adhesive) | 4.08E-02 | 0.18 | 0.18 | Coater EF, applied to adhesive |

Laminate Adhesive Application

| Pollutant | Emission Factor (basis) (lb/ton) | Potential to Emit | | | Emission Factor Source |
|------------------|----------------------------------|----------------------|--------------------------|-----------|--------------------------------|
| | | Uncontrolled (lb/hr) | After Issuance (tons/yr) | | |
| | | | (tons/yr) | (tons/yr) | |
| SO ₂ | 0.0372 (Adhesive) | 4.65E-02 | 0.20 | 0.20 | Coater EF, applied to adhesive |
| VOC | 0.091 (Adhesive) | 0.11 | 0.50 | 0.50 | Coater EF, applied to adhesive |
| CO | 1.23E-03 (asphalt) | 1.64E-02 | 7.19E-02 | 6.77E-02 | ARMA, Table B-3 |
| H ₂ S | 0.0272 (Adhesive) | 3.40E-02 | 0.15 | 0.15 | Coater EF, applied to adhesive |

Potential to Emit Summary (tons/year)

| Pollutant | PM | PM ₁₀ | PM _{2.5} | SO ₂ | NOx | VOC | CO | H ₂ S |
|--------------------|-------|------------------|-------------------|-----------------|-----|-------|------|------------------|
| Uncontrolled PTE | 81.62 | 104.12 | 104.12 | 2.62 | - | 31.98 | 0.75 | 1.92 |
| PTE After Issuance | 77.50 | 42.00 | 42.00 | 2.49 | - | 29.21 | 0.70 | 1.82 |

**Appendix A: Emission Calculations
Shingle Line**

Company Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mount Vernon, IN 47620
FESOP SPR No.: 129-43012-00011
Reviewer: Michaela Hecox
Date: 8/12/2020

2. Hazardous Air Pollutants

| Pollutant | Shingle Factor (lb/ton) | Asphalt Factor (lb/ton) | Potential to Emit (tons/yr) | | | | | | | | Note |
|---------------------------|-------------------------|-------------------------|-----------------------------|-----------|----------|----------|----------------|-----------|----------|----------|------|
| | | | Unrestricted | | | | After Issuance | | | | |
| | | | Coater | Self-seal | Laminite | Total | Coater | Self-seal | Laminite | Total | |
| Organic HAP | | | | | | | | | | | |
| Acenaphthene | - | 1.90E-05 | 1.11E-03 | 1.43E-08 | 1.19E-08 | 1.11E-03 | 1.11E-03 | 1.43E-08 | 1.19E-08 | 1.11E-03 | [1] |
| Acenaphthylene | 3.90E-07 | 2.19E-06 | 1.28E-04 | 1.64E-09 | 1.37E-09 | 1.28E-04 | 1.28E-04 | 1.64E-09 | 1.37E-09 | 1.28E-04 | [2] |
| Anthracene | - | 2.00E-03 | 0.12 | 1.50E-06 | 1.25E-06 | 0.12 | 0.12 | 1.50E-06 | 1.25E-06 | 0.12 | [1] |
| Benz(a)anthracene | 9.38E-07 | 5.27E-06 | 3.08E-04 | 3.95E-09 | 3.29E-09 | 3.08E-04 | 3.08E-04 | 3.95E-09 | 3.29E-09 | 3.08E-04 | [2] |
| Benzene | - | 1.90E-05 | 1.11E-03 | 1.43E-08 | 1.19E-08 | 1.11E-03 | 1.11E-03 | 1.43E-08 | 1.19E-08 | 1.11E-03 | [1] |
| Benzo(b)fluoranthene | 5.20E-07 | 2.92E-06 | 1.71E-04 | 2.19E-09 | 1.83E-09 | 1.71E-04 | 1.71E-04 | 2.19E-09 | 1.83E-09 | 1.71E-04 | [2] |
| Benzo(k)fluoranthene | 3.90E-07 | 2.19E-06 | 1.28E-04 | 1.64E-09 | 1.37E-09 | 1.28E-04 | 1.28E-04 | 1.64E-09 | 1.37E-09 | 1.28E-04 | [2] |
| Benzo(g,h,i)perylene | 1.69E-07 | 9.49E-07 | 5.55E-05 | 7.12E-10 | 5.93E-10 | 5.55E-05 | 5.55E-05 | 7.12E-10 | 5.93E-10 | 5.55E-05 | [2] |
| Benzo(a)pyrene | 3.90E-07 | 2.19E-06 | 1.28E-04 | 1.64E-09 | 1.37E-09 | 1.28E-04 | 1.28E-04 | 1.64E-09 | 1.37E-09 | 1.28E-04 | [2] |
| Benzo(e)pyrene | 4.35E-07 | 2.44E-06 | 1.43E-04 | 1.83E-09 | 1.53E-09 | 1.43E-04 | 1.43E-04 | 1.83E-09 | 1.53E-09 | 1.43E-04 | [2] |
| 1,3-Butadiene | - | 3.30E-03 | 0.19 | 2.48E-06 | 2.06E-06 | 0.19 | 0.19 | 2.48E-06 | 2.06E-06 | 0.19 | [1] |
| Carbonyl Sulfide | - | 1.10E-02 | 0.64 | 8.25E-06 | 6.88E-06 | 0.64 | 0.64 | 8.25E-06 | 6.88E-06 | 0.64 | [1] |
| Chrysene | - | 1.90E-05 | 1.11E-03 | 1.43E-08 | 1.19E-08 | 1.11E-03 | 1.11E-03 | 1.43E-08 | 1.19E-08 | 1.11E-03 | [1] |
| Dibenzo(a,h)anthracene | 3.90E-07 | 2.19E-06 | 1.28E-04 | 1.64E-09 | 1.37E-09 | 1.28E-04 | 1.28E-04 | 1.64E-09 | 1.37E-09 | 1.28E-04 | [2] |
| Di-n-butylphthalate | - | 1.90E-05 | 1.11E-03 | 1.43E-08 | 1.19E-08 | 1.11E-03 | 1.11E-03 | 1.43E-08 | 1.19E-08 | 1.11E-03 | [1] |
| Diethylphthalate | - | 1.90E-05 | 1.11E-03 | 1.43E-08 | 1.19E-08 | 1.11E-03 | 1.11E-03 | 1.43E-08 | 1.19E-08 | 1.11E-03 | [1] |
| Dimethylphthalate | - | 1.90E-05 | 1.11E-03 | 1.43E-08 | 1.19E-08 | 1.11E-03 | 1.11E-03 | 1.43E-08 | 1.19E-08 | 1.11E-03 | [1] |
| Ethylbenzene | - | 8.80E-03 | 0.51 | 6.60E-06 | 5.50E-06 | 0.51 | 0.51 | 6.60E-06 | 5.50E-06 | 0.51 | [1] |
| Fluoranthene | 3.90E-07 | 2.19E-06 | 1.28E-04 | 1.64E-09 | 1.37E-09 | 1.28E-04 | 1.28E-04 | 1.64E-09 | 1.37E-09 | 1.28E-04 | [2] |
| Fluorene | - | 9.60E-05 | 5.61E-03 | 7.20E-08 | 6.00E-08 | 5.61E-03 | 5.61E-03 | 7.20E-08 | 6.00E-08 | 5.61E-03 | [1] |
| Formaldehyde | - | 2.30E-02 | 1.35 | 1.73E-05 | 1.44E-05 | 1.35 | 1.35 | 1.73E-05 | 1.44E-05 | 1.35 | [1] |
| n-Hexane | - | 8.20E-02 | 4.80 | 6.15E-05 | 5.13E-05 | 4.80 | 4.80 | 6.15E-05 | 5.13E-05 | 4.80 | [1] |
| Indo(1,2,3-c,d)pyrene | 9.33E-06 | 5.24E-05 | 3.06E-03 | 3.93E-08 | 3.28E-08 | 3.06E-03 | 3.06E-03 | 3.93E-08 | 3.28E-08 | 3.06E-03 | [2] |
| 2-Methylnaphthalene | - | 2.20E-04 | 1.29E-02 | 1.65E-07 | 1.38E-07 | 1.29E-02 | 1.29E-02 | 1.65E-07 | 1.38E-07 | 1.29E-02 | [1] |
| 2-Methyl phenol | - | 1.10E-04 | 6.43E-03 | 8.25E-08 | 6.88E-08 | 6.43E-03 | 6.43E-03 | 8.25E-08 | 6.88E-08 | 6.43E-03 | [1] |
| 4-Methyl phenol | - | 1.90E-05 | 1.11E-03 | 1.43E-08 | 1.19E-08 | 1.11E-03 | 1.11E-03 | 1.43E-08 | 1.19E-08 | 1.11E-03 | [1] |
| Naphthylene | - | 1.20E-04 | 7.02E-03 | 9.00E-08 | 7.50E-08 | 7.02E-03 | 7.02E-03 | 9.00E-08 | 7.50E-08 | 7.02E-03 | [1] |
| Perylene | 3.90E-07 | 2.19E-06 | 1.28E-04 | 1.64E-09 | 1.37E-09 | 1.28E-04 | 1.28E-04 | 1.64E-09 | 1.37E-09 | 1.28E-04 | [2] |
| Phenanthrene | - | 1.30E-04 | 7.60E-03 | 9.75E-08 | 8.13E-08 | 7.60E-03 | 7.60E-03 | 9.75E-08 | 8.13E-08 | 7.60E-03 | [1] |
| Phenol | - | 9.10E-05 | 5.32E-03 | 6.83E-08 | 5.69E-08 | 5.32E-03 | 5.32E-03 | 6.83E-08 | 5.69E-08 | 5.32E-03 | [1] |
| Pyrene | - | 6.70E-05 | 3.92E-03 | 5.03E-08 | 4.19E-08 | 3.92E-03 | 3.92E-03 | 5.03E-08 | 4.19E-08 | 3.92E-03 | [1] |
| Styrene | - | 6.90E-04 | 4.04E-02 | 5.18E-07 | 4.31E-07 | 4.04E-02 | 4.04E-02 | 5.18E-07 | 4.31E-07 | 4.04E-02 | [1] |
| 1,1,2,2-Tetrachloroethane | - | 3.30E-04 | 1.93E-02 | 2.48E-07 | 2.06E-07 | 1.93E-02 | 1.93E-02 | 2.48E-07 | 2.06E-07 | 1.93E-02 | [1] |
| Toluene | - | 2.80E-03 | 0.16 | 2.10E-06 | 1.75E-06 | 0.16 | 0.16 | 2.10E-06 | 1.75E-06 | 0.16 | [1] |
| 1,1,1-Trichloroethane | 3.03E-04 | 1.70E-03 | 9.95E-02 | 1.28E-06 | 1.06E-06 | 9.95E-02 | 9.95E-02 | 1.28E-06 | 1.06E-06 | 9.95E-02 | [2] |
| Xylenes | - | 1.80E-03 | 0.11 | 1.35E-06 | 1.13E-06 | 0.11 | 0.11 | 1.35E-06 | 1.13E-06 | 0.11 | [1] |
| Inorganic HAP | | | | | | | | | | | |
| Antimony | 3.00E-07 | 1.68E-06 | 9.86E-05 | 1.26E-09 | 1.05E-09 | 9.86E-05 | 9.86E-05 | 1.26E-09 | 1.05E-09 | 9.86E-05 | [2] |
| Arsenic | 4.00E-07 | 2.25E-06 | 1.31E-04 | 1.68E-09 | 1.40E-09 | 1.31E-04 | 1.31E-04 | 1.68E-09 | 1.40E-09 | 1.31E-04 | [2] |
| Beryllium | 2.00E-07 | 1.12E-06 | 6.57E-05 | 8.42E-10 | 7.02E-10 | 6.57E-05 | 6.57E-05 | 8.42E-10 | 7.02E-10 | 6.57E-05 | [2] |
| Cadmium | 2.00E-07 | 1.12E-06 | 6.57E-05 | 8.42E-10 | 7.02E-10 | 6.57E-05 | 6.57E-05 | 8.42E-10 | 7.02E-10 | 6.57E-05 | [2] |
| Chromium | 2.30E-06 | 1.29E-05 | 7.56E-04 | 9.69E-09 | 8.07E-09 | 7.56E-04 | 7.56E-04 | 9.69E-09 | 8.07E-09 | 7.56E-04 | [2] |
| Cobalt | 2.20E-06 | 1.24E-05 | 7.23E-04 | 9.27E-09 | 7.72E-09 | 7.23E-04 | 7.23E-04 | 9.27E-09 | 7.72E-09 | 7.23E-04 | [2] |
| Lead | 2.10E-06 | 1.18E-05 | 6.90E-04 | 8.85E-09 | 7.37E-09 | 6.90E-04 | 6.90E-04 | 8.85E-09 | 7.37E-09 | 6.90E-04 | [2] |
| Manganese | 2.20E-06 | 1.24E-05 | 7.23E-04 | 9.27E-09 | 7.72E-09 | 7.23E-04 | 7.23E-04 | 9.27E-09 | 7.72E-09 | 7.23E-04 | [2] |
| Nickel | 3.30E-06 | 1.85E-05 | 1.08E-03 | 1.39E-08 | 1.16E-08 | 1.08E-03 | 1.08E-03 | 1.39E-08 | 1.16E-08 | 1.08E-03 | [2] |
| Selenium | 4.00E-07 | 2.25E-06 | 1.31E-04 | 1.68E-09 | 1.40E-09 | 1.31E-04 | 1.31E-04 | 1.68E-09 | 1.40E-09 | 1.31E-04 | [2] |
| Total HAP | | | | | | 8.10 | | | | 7.82 | |

Notes:

- HAP emissions from ARMA data for coater, mixer, and surge tank.
- Emission Factor based on stack testing at Owens Corning Roofing & Asphalt, LLC, Brookville and at representative facilities. See SPR No. 047-32917-00005 for more information.

**Appendix A: Emissions Calculations
Natural Gas Combustion Only
Manufacturing Natural Gas Combustion Emissions**

Company Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mount Vernon, IN 47620
FESOP SPR No.: 129-43012-00011
Reviewer: Michaela Hecox
Date: 8/12/2020

| Emission Factor in lb/MMCF | | | Pollutant | | | | | | |
|---------------------------------|--------------------------------|--------------------------------|---------------------------|--------------------|----------------------------|-----------------|---------------------------|-------------|--------------|
| | | | PM* | PM ₁₀ * | direct PM _{2.5} * | SO ₂ | NOx 100 **see below | VOC | CO |
| | | | 1.9 | 7.6 | 7.6 | 0.6 | | 5.5 | 84 |
| Emission Unit / Unit ID | Heat Input Capacity (MMBtu/hr) | Potential Throughput (MMCF/yr) | Potential Emissions (TPY) | | | | | | |
| Boiler No. 1 | 29.15 | 250.35 | 0.24 | 0.95 | 0.95 | 7.51E-02 | 12.52 | 0.69 | 10.51 |
| Boiler No. 2 | 29.15 | 250.35 | 0.24 | 0.95 | 0.95 | 7.51E-02 | 12.52 | 0.69 | 10.51 |
| S36 Flux Heater | 7.00 | 60.12 | 5.71E-02 | 0.23 | 0.23 | 1.80E-02 | 3.01 | 0.17 | 2.52 |
| Coating Heater | 4.50 | 38.65 | 3.67E-02 | 0.15 | 0.15 | 1.16E-02 | 1.93 | 0.11 | 1.62 |
| Mod-Bit Hot Oil Heater | 5.20 | 44.66 | 4.24E-02 | 0.17 | 0.17 | 1.34E-02 | 2.23 | 0.12 | 1.88 |
| Filler Heater Hot Oil Heater | 6.00 | 51.53 | 4.90E-02 | 0.20 | 0.20 | 1.55E-02 | 2.58 | 0.14 | 2.16 |
| Liquid Asphalt Storage Heater | 3.00 | 25.76 | 2.45E-02 | 0.10 | 0.10 | 7.73E-03 | 1.29 | 0.07 | 1.08 |
| Thermal Fluid Heater | 5.00 | 42.94 | 4.08E-02 | 0.16 | 0.16 | 1.29E-02 | 2.15 | 0.12 | 1.80 |
| Total Potential Emission | | | 0.73 | 2.90 | 2.90 | 0.23 | 38.22 | 2.10 | 32.10 |

*PM emission factor is filterable PM only. PM₁₀ emission factor is filterable and condensable PM₁₀ combined.

PM_{2.5} emission factor is filterable and condensable PM_{2.5} combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
1020 MMBtu/MMCF

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Hazardous Air Pollutants (HAPs)

| Emission Factor in lb/MMCF | | | HAPs - Organics | | | | |
|-------------------------------|--------------------------------|--------------------------------|---------------------------|-----------------|-----------------|-------------|-----------------|
| | | | Benzene | Dichlorobenze | Formaldehyde | n-Hexane | Toluene |
| | | | 2.1E-03 | 1.2E-03 | 7.5E-02 | 1.8E+00 | 3.4E-03 |
| Emission Unit | Heat Input Capacity (MMBtu/hr) | Potential Throughput (MMCF/yr) | Potential Emissions (TPY) | | | | |
| Boiler No. 1 | 29.15 | 250.35 | 2.63E-04 | 1.50E-04 | 9.39E-03 | 0.23 | 4.26E-04 |
| Boiler No. 2 | 29.15 | 250.35 | 2.63E-04 | 1.50E-04 | 9.39E-03 | 0.23 | 4.26E-04 |
| S36 Flux Heater | 7.00 | 60.12 | 6.31E-05 | 3.61E-05 | 2.25E-03 | 5.41E-02 | 1.02E-04 |
| Coating Heater | 4.50 | 38.65 | 4.06E-05 | 2.32E-05 | 1.45E-03 | 3.48E-02 | 6.57E-05 |
| Mod-Bit Hot Oil Heater | 5.20 | 44.66 | 4.69E-05 | 2.68E-05 | 1.67E-03 | 4.02E-02 | 7.59E-05 |
| Filler Heater Hot Oil Heater | 6.00 | 51.53 | 5.41E-05 | 3.09E-05 | 1.93E-03 | 4.64E-02 | 8.76E-05 |
| Liquid Asphalt Storage Heater | 3.00 | 25.76 | 2.71E-05 | 1.55E-05 | 9.66E-04 | 2.32E-02 | 4.38E-05 |
| Thermal Fluid Heater | 5.00 | 42.94 | 4.51E-05 | 2.58E-05 | 1.61E-03 | 3.86E-02 | 7.30E-05 |
| Total - Organics | | | 8.03E-04 | 4.59E-04 | 2.87E-02 | 0.69 | 1.30E-03 |

| Emission Factor in lb/MMCF | | | HAPs - Metals | | | | | Combined |
|-------------------------------|--------------------------------|--------------------------------|---------------------------|-----------------|-----------------|-----------------|-----------------|-------------|
| | | | Lead | Cadmium | Chromium | Manganese | Nickel | |
| | | | 5.0E-04 | 1.1E-03 | 1.4E-03 | 3.8E-04 | 2.1E-03 | |
| Emission Unit | Heat Input Capacity (MMBtu/hr) | Potential Throughput (MMCF/yr) | Potential Emissions (TPY) | | | | | Combined |
| Boiler No. 1 | 29.15 | 250.35 | 6.26E-05 | 1.38E-04 | 1.75E-04 | 4.76E-05 | 2.63E-04 | |
| Boiler No. 2 | 29.15 | 250.35 | 6.26E-05 | 1.38E-04 | 1.75E-04 | 4.76E-05 | 2.63E-04 | 0.24 |
| S36 Flux Heater | 7.00 | 60.12 | 1.50E-05 | 3.31E-05 | 4.21E-05 | 1.14E-05 | 6.31E-05 | 5.67E-02 |
| Coating Heater | 4.50 | 38.65 | 9.66E-06 | 2.13E-05 | 2.71E-05 | 7.34E-06 | 4.06E-05 | 3.65E-02 |
| Mod-Bit Hot Oil Heater | 5.20 | 44.66 | 1.12E-05 | 2.46E-05 | 3.13E-05 | 8.49E-06 | 4.69E-05 | 4.21E-02 |
| Filler Heater Hot Oil Heater | 6.00 | 51.53 | 1.29E-05 | 2.83E-05 | 3.61E-05 | 9.79E-06 | 5.41E-05 | 4.86E-02 |
| Liquid Asphalt Storage Heater | 3.00 | 25.76 | 6.44E-06 | 1.42E-05 | 1.80E-05 | 4.90E-06 | 2.71E-05 | 2.43E-02 |
| Thermal Fluid Heater | 5.00 | 42.94 | 1.07E-05 | 2.36E-05 | 3.01E-05 | 8.16E-06 | 4.51E-05 | 4.05E-02 |
| Total - Metals | | | 1.91E-04 | 4.20E-04 | 5.35E-04 | 1.45E-04 | 8.03E-04 | 0.72 |

Methodology is the same as above.

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

| | |
|----------------------|-------------|
| Combined HAPs | 0.72 |
| Worst HAP | 0.69 |

Appendix A: Emissions Calculations
LPG-Propane - Liquid
(Heat input capacity: > 10 MMBtu/hr and < 100 MMBtu/hr)

Company Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mount Vernon, IN 47620
FESOP SPR No.: 129-43012-00011
Reviewer: Michaela Hecox
Date: 8/12/2020

SO₂ Emission factor = 0.10 x S
 S = Sulfur Content = 0.47 grains/100ft³

| Emission Factor in lb/kgal | | | Pollutant | | | | | | |
|----------------------------|--------------------------------|--------------------------------|---------------------------|-------|----------------|-----------------|-----------------|--------------------|------|
| | | | PM* | PM10* | direct PM2.5** | SO ₂ | NO _x | VOC | CO |
| | | | 0.2 | 0.7 | 0.7 | 0.0 (0.10S) | 13.0 | 1.0 **TOC value | 7.5 |
| Emission Unit / Unit ID | Heat Input Capacity (MMBtu/hr) | Potential Throughput (kgal/yr) | Potential Emissions (TPY) | | | | | | |
| Flame Bar | 1.00 | 95.74 | 0.01 | 0.03 | 0.03 | 2.25E-03 | 0.62 | 0.05 | 0.36 |

*PM emission factor is filterable PM only. PM emissions are stated to be all less than 10 microns in aerodynamic equivalent diameter, footnote in Table 1.5-1, therefore PM10 is based on the filterable and condensable PM emission factors.

** No direct PM2.5 emission factor was given. Direct PM2.5 is a subset of PM10. If one assumes all PM10 to be all direct PM2.5, then a worst case assumption of direct PM2.5 can be made.

**The VOC value given is TOC. The methane emission factor is 0.2 lb/kgal.

Methodology

1 gallon of LPG has a heating value of 94,000 Btu

1 gallon of propane has a heating value of 91,500 Btu (use this to convert emission factors to an energy basis for propane)

(Source - AP-42 (Supplement B 10/96) page 1.5-1)

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.0915 MMBtu

Emission Factors are from AP42 (7/08), Table 1.5-1 (SCC #1-02-010-02)

Propane Emission Factors shown. Please see AP-42 for butane.

Emission (tons/yr) = Throughput (kgals/yr) x Emission Factor (lb/kgal) / 2,000 lb/ton

Appendix A: Emissions Calculations
Miscellaneous Storage Tanks Summary

Company Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mount Vernon, IN 47620
FESOP SPR No.: 129-43012-00011
Reviewer: Michaela Hecox
Date: 8/12/2020

| TANKS 4.0.9d - Entry Data | | | | | | | | | | | | | |
|---------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|----------|------------|
| Tank / Property | T-1 | T-3 | T-4 | T-5 | T-6 | T-7 | T-8 | T-9 | T-16 | T-18 | T-20 | T-22 | M5 |
| Type of Tank | Vertical | Horizontal | Vertical | Horizontal |

| Identification Tab | | | | | | | | | | | | | |
|--------------------|-------------------|--------------|---------------------------|---------------------------|----------------------|----------------------|-------------------|--------------|-------------------|--------------|-----------------|----------------|------------------|
| Description | Asphalt Receiving | Asphalt Flux | Asphalt Flux and AC5 Flux | Asphalt Flux and AC5 Flux | Coating Asphalt Tank | Coating Asphalt Tank | Laminate Adhesive | asphalt flux | Laminate Adhesive | Asphalt Flux | APP Plasticizer | Out of Service | Modified Bitumen |

| Physical Characteristics Tab | | | | | | | | | | | | | |
|---|---------------|--------------|--------------|--------------|--------------|--------------|------------|-----------|------------|--------------|------------|---|--------------|
| Shell Height (ft) | 38.50 | 36.00 | 36.00 | 36.00 | 36.00 | 36.00 | 22.00 | 15.00 | 22.00 | 36.00 | 46.00 | - | 14.00 |
| Shell Diameter (ft) | 68.30 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 8.00 | 10.50 | 12.00 | 12.00 | - | 8.00 |
| Max Liquid Height | 36.50 | 34.00 | 34.00 | 34.00 | 34.00 | 34.00 | 20.00 | 13.00 | 20.00 | 34.00 | 44.00 | - | 12.00 |
| Avg Liquid Height | 22.34 | 25.07 | 20.93 | 22.99 | 20.49 | 20.67 | 8.81 | 13.25 | 3.13 | 25.07 | 5.04 | - | 5.25 |
| Tank Maximum Liquid Volume (ft ³) | 133,728.87 | 3,845.32 | 3,845.32 | 3,845.32 | 3,845.32 | 3,845.32 | 2,261.95 | 653.45 | 1,731.81 | 3,845.32 | 4,976.29 | - | 603.19 |
| Turnovers / Year | 19.99 | 347.52 | 147.19 | 147.19 | 200.33 | 200.33 | 25.54 | 18.57 | 33.35 | 347.52 | 8.19 | - | 1,876.65 |
| Throughput (gal/yr) | 19,991,515.00 | 9,995,757.50 | 4,233,568.00 | 4,233,568.00 | 5,762,187.00 | 5,762,187.00 | 432,046.66 | 90,786.69 | 432,046.66 | 9,995,757.50 | 305,000.00 | - | 8,467,136.00 |
| Heated | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | yes | - | yes |
| Storage Temperature (°F) | 268.00 | 408.00 | 371.00 | 378.00 | 478.00 | 472.00 | 315.00 | 285.00 | 290.00 | 290.00 | 309.00 | - | 50.00 |
| Shell Color | Aluminum | Aluminum | Aluminum | Aluminum | Aluminum | Aluminum | Aluminum | Aluminum | Aluminum | Aluminum | Aluminum | - | Aluminum |
| Shell Condition | good | good | good | good | good | good | good | good | good | good | good | - | good |
| Roof Color | black | black | black | black | black | black | black | black | black | black | black | - | black |
| Roof Condition | good | good | good | good | good | good | good | good | good | good | good | - | good |
| Roof Type | flat | flat | flat | flat | flat | flat | flat | flat | flat | flat | flat | - | flat |
| Roof Height (ft) | na | na | na | na | na | na | na | na | na | na | na | - | na |
| Roof Radius (ft) | na | na | na | na | na | na | na | na | na | na | na | - | na |
| Slope (ft/ft) | na | na | na | na | na | na | na | na | na | na | na | - | na |
| Vent Vacuum Setting (psig) | na | na | na | na | na | na | na | na | na | na | na | - | na |
| Vent Pressure Setting (psig) | na | na | na | na | na | na | na | na | na | na | na | - | na |

| Emissions Summary | | | | | | | | | | | | | |
|--|--------------|------------|------------|------------|------------|------------|------------|-----------|------------|------------|------------|---|------------|
| Stock Vapor Density | 0.0004 | 0.0069 | 0.0037 | 0.0042 | 0.0148 | 0.0136 | 0.0011 | 0.0006 | 0.0007 | 0.0007 | 0.0009 | - | 0.0000 |
| Working Losses | 2,593.53 | 3,863.64 | 1,221.95 | 1,394.99 | 6,455.64 | 5,904.79 | 123.18 | 19.46 | 62.66 | 344.00 | 216.62 | - | 0.00 |
| Standing Losses | 516 | 169 | 102 | 113 | 296 | 277 | 23 | 5 | 12 | 24 | 39 | - | 0 |
| Total Losses (lb/yr) | 3,109.95 | 4,032.65 | 1,324.41 | 1,508.30 | 6,751.59 | 6,181.86 | 146.24 | 23.96 | 74.77 | 368.44 | 255.39 | - | 0.00 |
| Total Losses | 1.55 | 2.02 | 0.66 | 0.75 | 3.38 | 3.09 | 0.07 | 0.01 | 0.04 | 0.18 | 0.13 | - | 0.00 |
| VOC (ton/yr, note 1) | 1.55 | 2.02 | 0.66 | 0.75 | 3.38 | 3.09 | 0.07 | 0.01 | 0.04 | 0.18 | 0.13 | - | 0.00 |
| PM/PM ₁₀ /PM _{2.5} (tons/yr, note 3) | 3.11 | 4.03 | 1.32 | 1.51 | 6.75 | 6.18 | 0.15 | 0.02 | 0.07 | 0.37 | 0.26 | - | 0.00 |
| Tank Air Flow (ft ³ /yr) | 7,437,495.21 | 585,409.75 | 360,983.15 | 363,143.51 | 457,034.54 | 454,579.25 | 136,274.89 | 37,934.15 | 105,332.47 | 519,058.87 | 270,497.46 | - | 211,229.11 |
| CO (ppm, note 11) | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | 15,000 | - | 15,000 |
| CO (lb/yr, note 2) | 8.106 | 638 | 393 | 396 | 498 | 495 | 149 | 41 | 115 | 566 | 295 | - | 230 |
| CO (ton/yr) | 4.05 | 0.32 | 0.20 | 0.20 | 0.25 | 0.25 | 0.07 | 0.02 | 0.06 | 0.28 | 0.15 | - | 0.12 |
| H ₂ S (ppm, note 10) | 1,644 | 1,644 | 1,644 | 1,644 | 1,644 | 1,644 | 1,644 | 1,644 | 1,644 | 1,644 | 1,644 | - | 1,644 |
| H ₂ S (lbs/yr, note 4) | 2,161 | 170 | 105 | 106 | 133 | 132 | 40 | 11 | 31 | 151 | 79 | - | 61 |
| H ₂ S (ton/yr) | 1.081 | 0.085 | 0.052 | 0.053 | 0.066 | 0.066 | 0.020 | 0.006 | 0.015 | 0.075 | 0.039 | - | 0.031 |
| VOC (lb/hr) | 0.36 | 0.46 | 0.15 | 0.17 | 0.77 | 0.71 | 0.02 | 0.00 | 0.01 | 0.04 | 0.03 | - | 0.00 |
| SO ₂ (tons/yr, note) | 1.48 | 0.12 | 0.07 | 0.07 | 0.09 | 0.09 | 0.03 | 0.01 | 0.02 | 0.10 | 0.05 | - | 0.04 |
| n-Hexane (tons/yr) | 0.23 | 0.30 | 0.10 | 0.11 | 0.51 | 0.46 | 0.01 | 0.00 | 0.01 | 0.03 | 0.02 | - | 0.00 |
| HAPs (tons/yr, note) | 0.39 | 0.51 | 0.17 | 0.19 | 0.86 | 0.78 | 0.02 | 0.00 | 0.01 | 0.05 | 0.03 | - | 0.00 |

| Total | |
|--|-------|
| VOC (tons/yr) | 11.89 |
| CO (tons/yr) | 5.96 |
| PM/PM ₁₀ /PM _{2.5} | 23.78 |
| SO ₂ (tons/yr) | 2.17 |
| H ₂ S (tons/yr) | 3.01 |
| Hexane (tons/yr) | 1.78 |
| HAPs (tons/yr) | 3.01 |

Notes:

- 1) All tank losses are assumed to be VOC, worst case
- 2) CO was calculated using the ratio of CO/VOC from AP-42, Ch. 11.1, Table 11.1-14 (3/2004), silo filling.
- 3) PM was calculated assuming VOC = PM/PM₁₀/PM_{2.5} and a factor of 2 to account for variability.
- 4) H₂S emissions were estimated using the ppm concentration, molar volume of 385.5 ft³/lb-mol, the calculated air flows, and a factor of 2 to account for variability.
- 5) Tank capacities were taken from issued permits and past applications. The dimensions of the tanks were adjusted in some cases to make the final tank volumes correct.
- 6) SO₂ emissions (TPY) = H₂S emissions (TPY) x Molecular weight of SO₂ (64 lb/lbmol) / Molecular weight of H₂S (34 lb/lbmol)
- 7) D.C. Trumbore, "Estimates of Air Emissions from Asphalt Storage Tanks and Truck Loading", Environmental Progress, 18(4), Winter 1999, was reviewed for site specific speciation of particulate and VOC emissions. However, the testing methodology was not determined to be acceptable.
- 8) Detailed VOC calculations for all tanks are on the following pages.
- 9) Tank Air Flow (ft³/yr) calculated based on the working losses (lbs/yr) and stock vapor density (lbs/ft³). Under normal operations, the tanks only vent during loading operations.
- 10) H₂S concentration (ppm) estimated using the Trumbore (1999) equation (12.43 * %LEL + 400.5) assuming worst case LEL (100%).
- 11) CO concentration (ppm) estimated using the Trumbore (1999) equation (142 * %LEL + 800) assuming worst case LEL (100%).
- 12) Estimate of SO₂ emissions generated due to oxidation of sulfur compounds based on the estimated H₂S emission rate and the ratio of SO₂:H₂S emissions from the coater.
- 13) HAP/Hexane emissions from tanks estimated as a fraction of the VOC emissions based on the total HAP to VOC ratio from the coater.

*Calculations were done using TANKS 4.0.9d

**Appendix A: Emissions Calculations
Miscellaneous Storage Tanks Calculations**

Company Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mount Vernon, IN 47620
FESOP SPR No.: 129-43012-00011
Reviewer: Michaela Hecox
Date: 8/12/2020

| TANK AND LOCAL INFORMATION | T-1 | T-3 | T-4 | T-5 | T-6 | T-7 | T-8 | T-9 | T-16 | T-18 | T-20 | M5 | Basis |
|--|-------------------|----------------|---------------------------|---------------------------|----------------------|----------------------|-------------------|----------------|-------------------|----------------|-----------------|------------------|---|
| Tank Name | Asphalt Receiving | Asphalt Flux | Asphalt Flux and ACS Flux | Asphalt Flux and ACS Flux | Coating Asphalt Tank | Coating Asphalt Tank | Laminate Adhesive | asphalt flux | Laminate Adhesive | Asphalt Flux | APP Plasticizer | Modified Bitumen | |
| Shell Color | Aluminum black | Aluminum black | Aluminum black | Aluminum black | Aluminum black | Aluminum black | Aluminum black | Aluminum black | Aluminum black | Aluminum black | Aluminum black | Aluminum black | see Tanks Summary |
| Roof Color | black | black | black | black | black | black | black | black | black | black | black | black | see Tanks Summary |
| Tank Height, Hs (ft) | 38.50 | 36.00 | 36.00 | 36.00 | 36.00 | 36.00 | 22.00 | 15.00 | 22.00 | 36.00 | 46.00 | 14.00 | Calculated = Pi * Radius ² * Height |
| Tank Diameter, D (ft) | 68.30 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 8.00 | 10.50 | 12.00 | 12.00 | 8.00 | Calculated (7.48 gal/ft3) |
| Tank Volume, V (ft ³) | 141,056 | 4,072 | 4,072 | 4,072 | 4,072 | 4,072 | 2,498 | 754 | 1,905 | 4,072 | 5,202 | 704 | |
| Tank Volume, V (gal) | 1,055,100 | 30,455 | 30,455 | 30,455 | 30,455 | 30,455 | 18,611 | 5,640 | 14,249 | 30,455 | 38,915 | 5,264 | |
| Roof Type (Cone/Dome) | flat | flat | flat | flat | flat | flat | flat | flat | flat | flat | flat | flat | |
| Other Tank Parameters | | | | | | | | | | | | | |
| Average Ambient Temp., T _{aa} (°F) | 52.26 | 52.26 | 52.26 | 52.26 | 52.26 | 52.26 | 52.26 | 52.26 | 52.26 | 52.26 | 52.26 | 52.26 | Updated with TANKS 4.0.9d for Indianapolis, Indiana |
| Storage Temp., T _s (°F) | 268 | 408 | 371 | 378 | 478 | 315 | 472 | 285 | 290 | 290 | 309 | 50 | see Tanks Summary |
| Storage Temp., T _g (°F) | 728.0 | 868.0 | 831.0 | 838.0 | 938.0 | 932.0 | 775.0 | 745.0 | 750.0 | 750.0 | 769.0 | 510.0 | Calculated T (°R) = T (°F) + 460 |
| Local Atmospheric Pressure, P _A (psia) | 14.3 | 14.3 | 14.3 | 14.3 | 14.3 | 14.3 | 14.3 | 14.3 | 14.3 | 14.3 | 14.3 | 14.3 | Updated with TANKS 4.0.9d for Indianapolis, Indiana |
| Vapor Molecular Weight, (M _v) (lb/lb-mol) | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | 84 | (Trumbore, 1999) |
| Throughput, Q (gal/yr) | 19,991,515 | 9,995,758 | 4,233,568 | 4,233,568 | 5,762,187 | 5,762,187 | 432,047 | 90,787 | 432,047 | 9,995,758 | 305,000 | 8,467,136 | see Tanks Summary |
| Throughput, Q (bbl/yr) | 476,001 | 238,001 | 100,802 | 100,802 | 137,199 | 137,199 | 10,287 | 2,162 | 10,287 | 238,001 | 7,262 | 201,604 | Conversion of gallons to barrels |
| % of Year Used | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | Worst case |
| Paint Solar Absorbance, α (dimensionless) Table 7.1-6 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | AP-42 Table 7.1-6 |
| Daily Total Solar Insolation, I (Btu/ft ² /day) | 1,298 | 1,298 | 1,298 | 1,298 | 1,298 | 1,298 | 1,298 | 1,298 | 1,298 | 1,298 | 1,298 | 1,298 | Updated with TANKS 4.0.9d for Indianapolis, Indiana |
| Is Tank Welded? (Y/N) | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | |
| Breather Vent Pressure (default = 0.03), P _{br} (psig) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Default value of 0.03 cannot be used for heated tanks |
| Breather Vent Vacuum (default = -0.03), P _{bv} (psig) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Default value of 0.03 cannot be used for heated tanks |
| Diurnal Temperature Swing (°F) | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | Not used for heated tanks |
| Liquid Height, H _L (ft) | 18.25 | 17.00 | 17.00 | 17.00 | 17.00 | 17.00 | 10.00 | 6.50 | 10.00 | 17.00 | 22.00 | 6.00 | Updated, assumed 50% of total height (0.50H _L). |
| Maximum Liquid Height, H _L (ft) | 36.50 | 34.00 | 34.00 | 34.00 | 34.00 | 34.00 | 20.00 | 13.00 | 20.00 | 34.00 | 44.00 | 12.00 | Provided by source |
| Tank Maximum Liquid Volume V _L (ft ³) | 133,728.56 | 3,645.31 | 3,645.31 | 3,645.31 | 3,645.31 | 3,645.31 | 2,261.95 | 653.45 | 1,731.80 | 3,645.31 | 4,976.28 | 603.19 | AP-42, Ch. 7.1, Eqn. 1-31. |
| TANK TEMPERATURE AND TURNOVER | | | | | | | | | | | | | |
| Roof Outage, H _{ro} (ft) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | AP-42, Ch. 7.1, Eqn. 1-16. |
| Vapor Space Outage, H _{vo} (ft) | 20.25 | 19.00 | 19.00 | 19.00 | 19.00 | 19.00 | 12.00 | 8.50 | 12.00 | 19.00 | 24.00 | 8.00 | AP-42, Ch. 7.1, Eqn. 1-15. |
| Average Liquid Surface Temperature, T _{LS} (°R) | 728 | 868 | 831 | 838 | 938 | 932 | 775 | 745 | 750 | 750 | 769 | 510 | AP-42, Ch. 7.1. For insulated tanks, T _{LS} is based on T _g |
| Average Liquid Surface Temperature, T _{LS} (°F) | 268.00 | 408.00 | 371.00 | 378.00 | 478.00 | 472.00 | 315.00 | 285.00 | 290.00 | 290.00 | 309.00 | 50.00 | Calculated T (°F) = T (°R) - 460 |
| Daily Ambient Temperature Range, ΔT _a (°R) | 19.8 | 19.8 | 19.8 | 19.8 | 19.8 | 19.8 | 19.8 | 19.8 | 19.8 | 19.8 | 19.8 | 19.8 | AP-42, Ch. 7.1, Eqn. 1-12 and Figure 7.1-7 for Indianapolis |
| Vapor Temperature Range, ΔT _v (°R) | 33.70 | 33.70 | 33.70 | 33.70 | 33.70 | 33.70 | 33.70 | 33.70 | 33.70 | 33.70 | 33.70 | 33.70 | Calculated, AP-42, Ch. 7.1, Eqn. 1-8 |
| Maximum Liquid Surface Temperature, T _{LX} (°R) | 736.43 | 876.43 | 839.43 | 846.43 | 946.43 | 940.43 | 783.43 | 753.43 | 758.43 | 758.43 | 777.43 | 518.43 | Calculated, AP-42, Ch. 7.1, Figure 7.1-17 |
| Maximum Liquid Surface Temperature, T _{LX} (°F) | 276.43 | 416.43 | 379.43 | 386.43 | 486.43 | 480.43 | 323.43 | 293.43 | 298.43 | 298.43 | 317.43 | 58.43 | Calculated T (°F) = T (°R) - 460 |
| Minimum Liquid Surface Temperature, T _{LN} (°R) | 719.57 | 859.57 | 822.57 | 829.57 | 929.57 | 923.57 | 766.57 | 736.57 | 741.57 | 741.57 | 760.57 | 501.57 | Calculated, AP-42, Ch. 7.1, Figure 7.1-17 |
| Minimum Liquid Surface Temperature, T _{LN} (°F) | 259.57 | 399.57 | 362.57 | 369.57 | 469.57 | 463.57 | 306.57 | 276.57 | 281.57 | 281.57 | 300.57 | 41.57 | Calculated T (°F) = T (°R) - 460 |
| Stock Turnover Rate, N (turnovers/yr) | 19.98 | 347.47 | 147.17 | 147.17 | 200.30 | 200.30 | 25.53 | 18.57 | 33.35 | 347.47 | 8.19 | 1,876.38 | Calculated, AP-42, Ch. 7.1, Eqns. 1-30 and 1-31 |
| VAPOR PRESSURE - Log-Log Method | | | | | | | | | | | | | |
| Vapor Pressure Equation Constant -- alpha | 7.085 | 7.085 | 7.085 | 7.085 | 7.0607 | 7.0607 | 7.0607 | 7.085 | 7.085 | 7.085 | 7.0607 | 7.085 | From Table 2 (Trumbore) for Flux (adhesive, sealant, receiving) or Oxidized Asphalt (coating) |
| Vapor Pressure Equation Constant -- beta | -16.8999 | -16.8999 | -16.8999 | -16.8999 | -16.957 | -16.957 | -16.8999 | -16.8999 | -16.8999 | -16.8999 | -16.8999 | -16.8999 | From Table 2 (Trumbore) for Flux (adhesive, sealant, receiving) or Oxidized Asphalt (coating) |
| Vapor Pressure at Maximum Liquid Surface Temperature, P _{VX} (psia) | 0.048 | 0.883 | 0.457 | 0.520 | 2.003 | 1.835 | 0.128 | 0.074 | 0.083 | 0.083 | 0.112 | 8.00E-07 | (Trumbore): log P _{VX} (mmHg) = alpha * log T _{LX} (°F) + beta |
| Vapor Pressure at Average Liquid Surface Temperature, P _{VA} (psia) | 0.039 | 0.764 | 0.389 | 0.445 | 1.770 | 1.619 | 0.106 | 0.060 | 0.068 | 0.068 | 0.093 | 2.65E-07 | (Trumbore): log P _{VA} (mmHg) = alpha * log T _{LS} (°F) + beta |
| Vapor Pressure at Minimum Liquid Surface Temperature, P _{VN} (psia) | 0.031 | 0.659 | 0.331 | 0.379 | 1.561 | 1.426 | 0.088 | 0.049 | 0.055 | 0.055 | 0.076 | 7.18E-08 | (Trumbore): log P _{VN} (mmHg) = alpha * log T _{LN} (°F) + beta |
| VAPOR PRESSURE - Clausius Clapeyron Equation Method | | | | | | | | | | | | | |
| Vapor Pressure Equation Constant -- alpha | 18.2891 | 18.2891 | 18.2891 | 18.2891 | 18.8642 | 18.8642 | 18.2891 | 18.2891 | 18.2891 | 18.2891 | 18.2891 | 18.2891 | From Table 2 (Trumbore) for Flux (adhesive, sealant, receiving) or Oxidized Asphalt (coating) |
| Vapor Pressure Equation Constant -- beta | 12,725.60 | 12,725.60 | 12,725.60 | 12,725.60 | 13,458.56 | 13,458.56 | 12,725.60 | 12,725.60 | 12,725.60 | 12,725.60 | 12,725.60 | 12,725.60 | From Table 2 (Trumbore) for Flux (adhesive, sealant, receiving) or Oxidized Asphalt (coating) |
| Vapor Pressure at Maximum Liquid Surface Temperature, P _{VX} (psia) | 0.053 | 0.838 | 0.442 | 0.501 | 2.010 | 1.835 | 0.150 | 0.078 | 0.088 | 0.088 | 0.132 | 3.70E-05 | (Trumbore): ln P _{VN} (mmHg) = alpha - beta / T _{LX} (°R) |
| Vapor Pressure at Average Liquid Surface Temperature, P _{VA} (psia) | 0.043 | 0.728 | 0.379 | 0.431 | 1.769 | 1.613 | 0.125 | 0.065 | 0.073 | 0.073 | 0.110 | 2.47E-05 | (Trumbore): ln P _{VA} (mmHg) = alpha - beta / T _{LS} (°R) |
| Vapor Pressure at Minimum Liquid Surface Temperature, P _{VN} (psia) | 0.035 | 0.631 | 0.324 | 0.369 | 1.553 | 1.414 | 0.105 | 0.053 | 0.060 | 0.060 | 0.092 | 1.62E-05 | (Trumbore): ln P _{VN} (mmHg) = alpha - beta / T _{LN} (°R) |
| Log-Log Method Used for Conservatism | | | | | | | | | | | | | |
| STANDING STORAGE LOSSES | | | | | | | | | | | | | |
| Tank Vapor Space Volume, V _v (ft ³) | 74,191.9 | 2,148.8 | 2,148.8 | 2,148.8 | 2,148.8 | 2,148.8 | 1,357.2 | 427.3 | 1,039.1 | 2,148.8 | 2,714.3 | 402.1 | Calculated, AP-42, Ch. 7.1, Eqn. 1-3 |
| Stock Vapor Density, W _v (lb/ft ³) | 0.0004 | 0.0069 | 0.0037 | 0.0042 | 0.0148 | 0.0136 | 0.0011 | 0.0006 | 0.0007 | 0.0007 | 0.0009 | 0.0009 | Calculated, AP-42, Ch. 7.1, Eqn. 1-21 |
| Daily Vapor Pressure Range, ΔP _v (psi) | 0.017 | 0.224 | 0.126 | 0.141 | 0.409 | 0.409 | 0.040 | 0.025 | 0.028 | 0.028 | 0.036 | 0.036 | Calculated, AP-42, Ch. 7.1, Eqn. 1-9 |
| Vapor Expansion Factor, K _c (dimensionless) | 0.048 | 0.055 | 0.050 | 0.050 | 0.071 | 0.068 | 0.046 | 0.047 | 0.047 | 0.047 | 0.046 | 0.066 | Calculated, AP-42, Ch. 7.1, Eqn. 1-7 |
| Vapor Saturation Factor, K _s (dimensionless) | 0.960 | 0.565 | 0.718 | 0.691 | 0.359 | 0.380 | 0.937 | 0.974 | 0.959 | 0.936 | 0.894 | 1.000 | Calculated, AP-42, Ch. 7.1, Eqn. 1-20 |
| Total Standing Losses, L _s (lb/yr) | 516.42 | 169.01 | 102.46 | 113.31 | 295.95 | 277.07 | 23.06 | 4.51 | 12.10 | 24.44 | 38.77 | 3.95E-05 | Calculated, AP-42, Ch. 7.1, Eqn. 1-2 |
| WORKING LOSS | | | | | | | | | | | | | |
| Working Loss Turnover Factor, K _w (dimensionless) | 1.668 | 0.253 | 0.371 | 0.371 | 0.316 | 0.316 | 1.342 | 1.782 | 1.066 | 0.253 | 3.828 | 0.183 | Calculated, AP-42, Ch. 7.1, Eqn. 1-29; K _w = (180+N)/6N, for N>36 |
| Working Loss Product Factor, K _p (dimensionless) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | K _p = 1 for organic liquids other than crude oils (AP-42, 7.1-19) |
| Total Working Losses, L _w (lb/yr) | 2,593.53 | 3,863.64 | 1,221.95 | 1,394.99 | 6,455.64 | 5,904.79 | 123.18 | 19.46 | 62.66 | 344.00 | 216.62 | 8.21E-04 | Calculated, AP-42, Ch. 7.1, Eqn. 1-29 |

Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<=600 HP)
Emergency Fire Pump

Company Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mount Vernon, IN 47620
FESOP SPR No.: 129-43012-00011
Reviewer: Michaela Hecox
Date: 8/12/2020

Emissions calculated based on output rating (hp)

| | |
|---------------------------------|---------|
| Output Horsepower Rating (hp) | 255.0 |
| Maximum Hours Operated per Year | 500 |
| Potential Throughput (hp-hr/yr) | 127,500 |

| | Pollutant | | | | | | |
|-------------------------------|-----------|--------|---------------|--------|--------|--------|--------|
| | PM* | PM10* | direct PM2.5* | SO2 | NOx | VOC | CO |
| Emission Factor in lb/hp-hr | 0.0022 | 0.0022 | 0.0022 | 0.0021 | 0.0310 | 0.0025 | 0.0067 |
| Potential Emission in tons/yr | 0.14 | 0.14 | 0.14 | 0.13 | 1.98 | 0.16 | 0.43 |

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

Hazardous Air Pollutants (HAPs)

| | Pollutant | | | | | | | Total PAH HAPs*** |
|---------------------------------|-----------|----------|----------|---------------|--------------|--------------|----------|-------------------|
| | Benzene | Toluene | Xylene | 1,3-Butadiene | Formaldehyde | Acetaldehyde | Acrolein | |
| Emission Factor in lb/hp-hr**** | 6.53E-06 | 2.86E-06 | 2.00E-06 | 2.74E-07 | 8.26E-06 | 5.37E-06 | 6.48E-07 | 1.18E-06 |
| Potential Emission in tons/yr | 4.16E-04 | 1.83E-04 | 1.27E-04 | 1.74E-05 | 5.27E-04 | 3.42E-04 | 4.13E-05 | 7.50E-05 |

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

| | |
|---|-----------------|
| Potential Emission of Total HAPs (tons/yr) | 1.73E-03 |
|---|-----------------|

Methodology

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4.

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

Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Appendix A: Emission Calculations
Large Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (>600 HP)
Emergency Generator S-47

Company Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mount Vernon, IN 47620
FESOP SPR No.: 129-43012-00011
Reviewer: Michaela Hecox
Date: 8/12/2020

Emissions calculated based on output rating (hp)

| | |
|--|---------|
| Output Horsepower Rating (hp) | 755.0 |
| Maximum Hours Operated per Year | 500 |
| Potential Throughput (hp-hr/yr) | 377,500 |
| Sulfur Content (S) of Fuel (% by weight) | 0.050 |

| | Pollutant | | | | | | |
|-------------------------------|-----------|----------|---------------|-----------------------|-------------------------|----------|----------|
| | PM* | PM10* | direct PM2.5* | SO2 | NOx | VOC | CO |
| Emission Factor in lb/hp-hr | 7.00E-04 | 4.01E-04 | 4.01E-04 | 4.05E-04 (.00809S) | 2.40E-02 **see below | 7.05E-04 | 5.50E-03 |
| Potential Emission in tons/yr | 0.13 | 0.08 | 0.08 | 0.08 | 4.53 | 0.13 | 1.04 |

*PM10 emission factor in lb/hp-hr was calculated using the emission factor in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

**NOx emission factor: uncontrolled = 0.024 lb/hp-hr, controlled by ignition timing retard = 0.013 lb/hp-hr

Hazardous Air Pollutants (HAPs)

| | Pollutant | | | | | | |
|---------------------------------|-----------|----------|----------|--------------|--------------|----------|-------------------|
| | Benzene | Toluene | Xylene | Formaldehyde | Acetaldehyde | Acrolein | Total PAH HAPs*** |
| Emission Factor in lb/hp-hr**** | 5.43E-06 | 1.97E-06 | 1.35E-06 | 5.52E-07 | 1.76E-07 | 5.52E-08 | 1.48E-06 |
| Potential Emission in tons/yr | 1.03E-03 | 3.71E-04 | 2.55E-04 | 1.04E-04 | 3.33E-05 | 1.04E-05 | 2.80E-04 |

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

****Emission factors in lb/hp-hr were calculated using emission factors in lb/MMBtu and a brake specific fuel consumption of 7,000 Btu / hp-hr (AP-42 Table 3.3-1).

Methodology

Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4.

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

Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

**Appendix A: Emissions Calculations
Insignificant Degreaser**

Company Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mount Vernon, IN 47620
FESOP SPR No.: 129-43012-00011
Reviewer: Michaela Hecox
Date: 8/12/2020

In order for the degreaser to qualify as an insignificant activity under the listing in 326 IAC 2-7-1(21)(J)(vi)(DD), the source shall use solvents "the use of which, for all cleaners and solvents combined, does not exceed one hundred forty-five (145) gallons per twelve (12) months".

Based on a review of the solvents most widely supplied for the industry by Crystal Clean and Safety-Kleen, the following PTE is based on the following conservative estimates:

The solvent has a maximum density of 6.7 lb/gal.

The solvent used in the degreaser contains 100% VOC and up to 0.2% HAP (tetrachloroethylene).

Utilized MSDS for Safety-Kleen 105 Recycled Solvent as worse case HAP content: <http://www.safety-kleen.com/msds/82310rev8-21-09.pdf>

Uncontrolled Potential Emissions (per each degreaser)

| | | | | | | | | | |
|-----|----------|-----|---------|------|-----------|------|----------|-------|-------------------|
| 6.7 | lb/gal x | 100 | % VOC x | 145 | gal/yr ÷ | 2000 | lb/ton = | 0.49 | tons VOC per year |
| | | | | 0.49 | tpy VOC x | 0.2 | % HAP = | 0.001 | tons HAP per year |

Appendix A: Emission Calculations
Fugitive Dust Emissions - Unpaved Roads

Company Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mount Vernon, IN 47620
FESOP SPR No.: 129-43012-00011
Reviewer: Michaela Hecox
Date: 8/12/2020

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 (11/2006).

Vehicle Information (provided by source)

| Type | Maximum number of vehicles | Number of one-way trips per day per vehicle | Maximum trips per day (trip/day) | Maximum Weight Loaded (tons/trip) | Total Weight driven per day (ton/day) | Maximum one-way distance (feet/trip) | Maximum one-way distance (mi/trip) | Maximum one-way miles (miles/day) | Maximum one-way miles (miles/yr) |
|---|----------------------------|---|----------------------------------|-----------------------------------|---------------------------------------|--------------------------------------|------------------------------------|-----------------------------------|----------------------------------|
| Vehicle (entering plant) (one-way trip) | 120.0 | 1.0 | 120.0 | 17.5 | 2100.0 | 1500 | 0.284 | 34.1 | 12443.2 |
| Vehicle (leaving plant) (one-way trip) | 120.0 | 1.0 | 120.0 | 22.5 | 2700.0 | 1500 | 0.284 | 34.1 | 12443.2 |
| Totals | | | 240.0 | | 4800.0 | | | 68.2 | 24886.4 |

Average Vehicle Weight Per Trip =

| | |
|------|-----------|
| 20.0 | tons/trip |
|------|-----------|

 Average Miles Per Trip =

| | |
|------|------------|
| 0.28 | miles/trip |
|------|------------|

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

| | PM | PM10 | PM2.5 | |
|-----------|------|------|-------|---|
| where k = | 4.9 | 1.5 | 0.15 | lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads) |
| s = | 6.0 | 6.0 | 6.0 | % = mean % silt content of unpaved roads (AP-42 Table 13.2.2-1 Iron and Steel Production) |
| a = | 0.7 | 0.9 | 0.9 | = constant (AP-42 Table 13.2.2-2 for Industrial Roads) |
| W = | 20.0 | 20.0 | 20.0 | tons = average vehicle weight (provided by source) |
| b = | 0.45 | 0.45 | 0.45 | = constant (AP-42 Table 13.2.2-2 for Industrial Roads) |

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, $E_{ext} = E_f \cdot [(365 - P)/365]$ (Equation 2 from AP-42 13.2.2)

Mitigated Emission Factor, $E_{ext} = E_f \cdot [(365 - P)/365]$
 where P =

| |
|-----|
| 125 |
|-----|

 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

| | PM | PM10 | PM2.5 | |
|--|------|------|-------|---|
| Unmitigated Emission Factor, $E_f =$ | 7.08 | 1.89 | 0.19 | lb/mile |
| Mitigated Emission Factor, $E_{ext} =$ | 4.66 | 1.24 | 0.12 | lb/mile |
| Dust Control Efficiency = | 50% | 50% | 50% | (pursuant to control measures outlined in fugitive dust control plan) |

| Process | Mitigated PTE of PM (Before Control) (tons/yr) | Mitigated PTE of PM10 (Before Control) (tons/yr) | Mitigated PTE of PM2.5 (Before Control) (tons/yr) | Mitigated PTE of PM (After Control) (tons/yr) | Mitigated PTE of PM10 (After Control) (tons/yr) | Mitigated PTE of PM2.5 (After Control) (tons/yr) |
|---|--|--|---|---|---|--|
| Vehicle (entering plant) (one-way trip) | 28.98 | 7.72 | 0.77 | 14.49 | 3.86 | 0.39 |
| Vehicle (leaving plant) (one-way trip) | 28.98 | 7.72 | 0.77 | 14.49 | 3.86 | 0.39 |
| Totals | 57.95 | 15.44 | 1.54 | 28.98 | 7.72 | 0.77 |

Methodology

Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
 Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]
 Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
 Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
 Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
 Mitigated PTE (Before Control) (tons/yr) = (Maximum one-way miles (miles/yr)) * (Mitigated Emission Factor (lb/mile)) * (ton/2000 lbs)
 Mitigated PTE (After Control) (tons/yr) = (Mitigated PTE (Before Control) (tons/yr)) * (1 - Dust Control Efficiency)

Abbreviations

PM = Particulate Matter
 PM10 = Particulate Matter (<10 um)
 PM2.5 = Particulate Matter (<2.5 um)
 PTE = Potential to Emit

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

**Appendix B
Best Available Control Technology (BACT) Determination**

Source Description and Location

| | |
|---|---|
| Source Name: | Building Materials Manufacturing Corporation |
| Source Location: | 901 Givens Road, Mount Vernon, IN 47620 |
| County: | Posey |
| SIC Code: | 2952 (Asphalt Felts and Coatings) |
| Operating Permit No.: | F129-38119-00011 |
| Significant Permit Revision No.: | F129-43012-00011 |
| Permit Reviewer: | Michaela Hecox |

Background Information

The Office of Air Quality (OAQ) has reviewed a FESOP Significant Permit Revision, submitted by Building Materials Manufacturing Corporation, on July 1, 2020, requesting to replace the one (1) existing asphalt blowstill (BS1a). The new Blowstill (BS1b) has a potential to emit VOC greater than or equal to 25 tons per year. Therefore, BS1b is subject to 326 IAC 8-1-6 (BACT).

IDEM OAQ has performed the following Best Available Control Technology (BACT) review for the new Blowstill (BS1b) at an existing stationary asphalt roofing manufacturing plant.

Description of Processes

The following emission unit will be included in this 326 IAC 8-1-6 (VOC) BACT analysis for VOC:

- (a) One (1) asphalt blowing operation, approved in 2020 for modification, with a bottlenecked capacity of 40,000 pounds of asphalt per hour, consisting of:
 - (1) One (1) blowstill, identified as BS1b, approved for construction in 2020, with a maximum blow duration of 4 hours per batch and a maximum capacity of 12,000 gallons per batch, with emissions controlled by one of two (2) afterburners (Boiler No. 1 or Boiler No. 2), exhausting through Stack S32.

Summary of the Best Available Control Technology (BACT) Process

BACT is a mass emission limitation based on the maximum degree of pollution reduction of emissions, which is achievable on a case-by-case basis. BACT analysis takes into account the energy, environmental, and economic impacts on the source. These reductions may be determined through the application of available control techniques, process design, work practices, and operational limitations.

Federal guidance on BACT requires an evaluation that follows a "top down" process. In this approach, the applicant identifies the best-controlled similar source on the basis of controls required by regulation or controls achieved in practice. The highest level of control is then evaluated for technical and economic feasibility.

The five (5) basic steps of a top-down BACT analysis are listed below:

Step 1: Identify Potential Control Technologies

The first step is to identify potentially “available” control options for each emission unit and for each pollutant under review. Available options should consist of a list of those technologies with a potentially practical application to the emissions unit in question. The list should include lowest achievable emission rate (LAER) technologies and controls applied to similar source categories.

Step 2: Eliminate Technically Infeasible Options

The second step is to eliminate technically infeasible options from further consideration. To be considered feasible, a technology must be both available and applicable. It is important in this step that any presentation of a technical argument for eliminating a technology from further consideration be documented based on physical, chemical, engineering, and source-specific factors related to safe and successful use of the controls. Innovative control means a control that has not been demonstrated in a commercial application on similar units. Only available and proven control technologies are evaluated. A control technology is considered available when there are sufficient data indicating that the technology results in confirmed reductions in emissions of regulated pollutants.

Step 3: Rank the Remaining Control Technologies by Control Effectiveness

The third step is to rank the technologies not eliminated in Step 2 in order of descending control effectiveness for each pollutant of concern. The ranked alternatives are reviewed in terms of environmental, energy, and economic impacts specific to the proposed modification. If the analysis determines that the evaluated alternative is not appropriate as BACT due to any of the impacts, then the next most effective is evaluated. This process is repeated until a control alternative is chosen as BACT. If the highest ranked technology is proposed as BACT, it is not necessary to perform any further technical or economic evaluation.

Step 4: Evaluate the Most Effective Controls and Document the Results

The fourth step entails an evaluation of energy, environmental, and economic impacts for determining a final level of control. The evaluation begins with the most stringent control option and continues until a technology under consideration cannot be eliminated based on adverse energy, environmental, or economic impacts.

Step 5: Select BACT

The fifth and final step is to select as BACT the most effective of the remaining technologies under consideration for each pollutant of concern. For the technologies determined to be feasible, there may be several different limits that have been set as BACT for the same control technology. The final BACT determination would be the technology with the most stringent corresponding limit that is economically feasible. BACT must be no less stringent than the level of control required by any applicable New Source Performance Standard (NSPS) and National Emissions Standard for Hazardous Air Pollutants (NESHAP) or state regulatory standards applicable to the emission units included in the permits.

The Office of Air Quality (OAQ) makes BACT determinations by following the five steps identified above.

A summary of the BACT review for the one (1) blowstill (BS1b) is provided below. This BACT determination is based on the following information:

- (1) The BACT analysis information submitted by Building Materials Manufacturing Corporation on July 1, 2020;
- (2) The EPA RACT/BACT/LAER (RBLCL) Clearinghouse; and
- (3) State and local air quality permits.

Volatile Organic Compounds (VOC) BACT

Step 1: Identify Potential Control Options

The volatile organic compounds (VOC) emissions can be controlled by the following emission control systems:

- (1) Thermal Oxidizer;
- (2) Catalytic Oxidizer;
- (3) Thermal Oxidation in a Boiler or Process Heater

Destruction technologies reduce VOC concentration by high temperature oxidation into carbon dioxide and water vapor. Reclamation is the capture of VOCs for reuse or disposal. A further description of these types of control technologies follows:

Destruction Control Methods

The destruction of organic compounds usually requires temperatures ranging from 1,200°F to 2,000°F for direct thermal incinerators or 600°F to 1,200°F for catalytic systems. Combustion temperature depends on the chemical composition and the desired destruction efficiency. Carbon dioxide and water vapor are the typical products of complete combustion. Turbulent mixing and combustion chamber retention times of 0.5 to 1.0 seconds are needed to obtain high destruction efficiencies.

Control technologies include direct incineration, recuperative thermal incineration, regenerative thermal incineration, recuperative catalytic incineration, regenerative catalytic incineration, and flares.

Direct Incineration: Direct incineration is the most simple and direct form of incineration. It involves burning the VOC-laden fumes directly in a combustion chamber without reheating or post-combustion heat recover. Direct incineration typically requires supplemental fuel. Concentrated VOC streams with high heat contents obviously require less supplementary fuel than more dilute streams. VOC streams sometimes have a heat content high enough to be self-sustaining, but a supplemental fuel firing rate equal to about 5% of the total incinerator heat input is usually needed to stabilize the burner flame. Natural gas is the most common fuel for VOC incinerators, but fuel oil is an option in some circumstances.

Recuperative Thermal Oxidation: Recuperative thermal incinerators are add-on control devices used to control VOC emissions by introducing solvent-laden fumes to the oxidizer. The stream is pre-heated by exiting flue gas from the same system in a heat exchanger or recuperator, a burner then heats the air to the required temperature. The air is then passed through an oxidation chamber where the solvent-laden air is converted to carbon dioxide and water. These are then passed through the heat exchanger where incoming fume is

preheated by the heat of the exiting flue gas. Finally the clean flue gas is discharged to the atmosphere. The recuperative thermal oxidizer is appropriate for waste streams with a relatively high solvent content and/or consistent pollutant loading. Variation in pollutant loading will require a longer retention time in the oxidizer in order to properly destroy VOC emissions.

Regenerative Thermal Oxidation: Regenerative thermal oxidizers (RTOs) are add-on control devices used to control VOC emissions by simple reaction of the harmful air pollutants with oxygen and heat. An RTO uses a direct contact heat exchanger. These direct contact heat exchangers consist of a bed of porous ceramic packing or other structured, high heat capacity media. These systems can handle variable and low concentration VOC waste streams.

The inlet gas first passes through a hot ceramic bed thereby heating the stream (and cooling the bed) to its ignition temperature. The hot gases then react (releasing energy) in the combustion chamber and while passing through another ceramic bed, thereby heating it to the combustion chamber outlet temperature. The process flows are then switched, now feeding the inlet stream to the hot bed. This cyclic process affords very high energy recovery (up to 95%). The higher capital costs associated with these high performance heat exchangers and combustion chambers may be offset by the increased auxiliary fuel savings to make such a system economical.

Recuperative and Regenerative Catalytic Oxidation: Catalytic incinerators are add-on control devices used to control VOC emissions by using a bed of catalyst that facilitates the oxidation of the combustible gases. The catalyst increases the reaction rate and allows the conversion of VOC at lower temperatures than thermal incinerators. Catalytic oxidation can be used for low-concentration VOC waste streams; however, certain compounds present in waste stream gas may foul the catalyst. It may also be necessary to remove particulate prior to catalytic oxidation as well.

Reclamation Control Methods

Organic compounds may be reclaimed by one of three possible methods; adsorption, absorption, or condensation. In general, the organic compounds are separated from the emission stream and reclaimed for reuse or disposal. Depending on the nature of the contaminant and the inlet concentration of the emission stream, recovery technologies can reach efficiencies of 98%.

Adsorption: Adsorption is a surface phenomenon where attraction between the carbon and VOC molecules binds the pollutants to the carbon surface. Both carbon and VOC are chemically intact after adsorption. The VOCs may be removed, or desorbed, from the carbon bed reclaimed and destroyed. Adsorption can be used for relatively low VOC exhaust streams. Pollutants present in the gas streams can reduce adsorber efficiency, increase pressure drop and eventually plug the bed. Adsorption processes can be used to capture VOCs in low concentration exhaust; however, it is typically only used for exhaust that is not loaded with other pollutants which can plug the bed.

Absorption: Absorption is a unit operation where components of a gas phase mixture (Pollutants) are selectively transferred to a relatively nonvolatile liquid, usually water. Sometimes, organic liquids, such as mineral oil or nonvolatile hydrocarbons, are suitable absorption solvents. The choice of solvent depends on cost and solubility of the pollutant in the solvent. Absorption is commonly used to recover products or purify gas streams that have high concentrations of organic compounds. Absorption processes are typically used to recover products or purify gas streams with high concentrations of organic compounds such as in the ethanol production and soybean oil refinery industries.

Condensation: Condensation is the separation of VOCs from an emission stream through a phase change, by increasing the system pressure or, more commonly, lowering the system temperature below the dew point of the VOC vapor. When condensers are used for air pollution control, they usually operate at the pressure of the emission stream, and typically require a refrigeration unit to obtain the temperature necessary to condense the VOCs from the emission stream. These systems are frequently used prior to other control devices (e.g., oxidizers or absorbers) to remove components that may be corrosive or damaging to other parts of the system. Refrigerated condensers are used as air pollution control devices for treating emission streams with high VOC concentrations (usually > 5,000 ppmv). Condensers may be used to control VOC emissions with high VOC concentrations (usually greater than 5,000 ppmv).

Combinations of Reclamation and Destruction Control Methods

In some cases, a combination of control technologies offers the most efficient and cost-effective VOC control.

The combination of carbon adsorption with recuperative thermal incineration is available commercially. This system concentrates the VOC stream by using carbon adsorption to remove low concentration VOCs in an emission stream and then uses a lower volume of hot air, commonly one-tenth the original flow, to desorb the pollutants. A recuperative incinerator for destroying pollutants in the concentrated stream is much smaller and has lower supplemental fuel requirement than an incinerator sized for the full emission stream volume.

Absorption systems can also be used to concentrate emission streams to reduce the size of destruction equipment. The concentration effect is not as extreme as with carbon adsorption, a concentrated exhaust stream one quarter the volume of the inlet stream seems to be the practical limit. Absorption concentrators are typically suited for batch processes or to equalize pollutant concentrations in a variable stream. The physical characteristics that drive the absorption of pollutants into a liquid also limit the opportunity to remove those pollutants from the liquid stream. Fume incinerators typically need supplemental fuel. Concentrated VOC streams with high heat contents obviously require less supplementary fuel than more dilute streams. VOC streams sometimes have a heat content high enough to be self-sustaining, but a supplemental fuel firing rate equal to about 5% of the total incinerator heat input is usually needed to stabilize the burner flame. Natural gas is the most common fuel for VOC incinerators, but fuel oil is an option in some circumstances.

Step 2: Eliminate Technically Infeasible Control Options

The test for technical feasibility of any control option is whether it is both available and applicable to reducing VOC emissions from emissions units at the BS1b. The control technologies listed in the previous section are discussed and evaluated below for their technical feasibility.

Destruction Control Methods

Recuperative and Regenerative Catalytic Oxidation: The use of the catalyst is not appropriate for use in controlling emissions from a blowstill in that the catalyst bed may quickly foul due to the presence of particulate matter, the physical properties of the asphalt material, and the potential to foul the active catalyst sites. IDEM, OAQ has determined that the use of a Recuperative and Regenerative Catalytic Oxidation is not a technically feasible option for the Blowstill (BS1b) at this source.

Thermal Oxidation: IDEM, OAQ has determined that the use of thermal oxidation is a technically feasible option for the Blowstill (BS1b) at this source. See further evaluation of this control option in Step 3.

Direct Incineration (Boilers): This method of control is usually cost effective where a boiler is existing or proposed and can be modified to function as a control device. Variation in flow rates, heat content, and the presence of corrosive compounds may require operational changes in the use of the boiler but do not exclude its use as a control device. These variations can change the heat transfer characteristics of the boiler or process heater and could result in additional fuel usage.

IDEM, OAQ has determined that the use of boilers as thermal oxidizers is a technically feasible option for the Blowstill (BS1b) at this source. The source is currently controlling VOCs from the blowstills utilizing the existing boilers as thermal incinerators. See further evaluation of this control option in Step 3.

Reclamation Control Methods

Adsorption: Based on a review of the RBLC, this type of control has been used in the printing and petroleum refinery industries. This type of control is not typically used for blowstills. Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of Adsorption is not a technically feasible option for the Blowstill (BS1b) at this source.

Absorption: Based on a review of the RBLC, this type of control has been used in the ethanol production and soybean oil refinery industries. This type of control is not typically used for blowstills. Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of Adsorption is not a technically feasible option for the Blowstill (BS1b) at this source.

Condensation: Two-Stage Electrostatic Precipitator (ESP) or Electronic Air Filter

The two stage electrostatic precipitator is typically used for particulate control and the removal of finely divided liquid particles and not VOC control. However, some reduction in VOC can be achieved if the liquid droplets suspended in the waste gas are condensing VOC. A two-stage ESP differs from a single stage ESP in that the two stage unit has separate charging and collection stages. The charging stage contains equally spaced, positively charged wires perpendicular to the flow of waste gas suspended by grounded tubes. A corona discharge between the wire and grounded tube ionizes the suspended particles as they pass. The second stage contains negatively charged plates that are parallel to the flow of the waste gas. The positively charged particles and droplets are attracted to the plates and fall to the bottom of the unit where they are collected in a pan. Controlling sticky materials are usually difficult because they physically attach to the plates and must be manually removed. The two stage ESP is used almost exclusively to collect liquid aerosols and are common in controlling emissions from meat smokehouses, pipe-coating machines, asphalt paper saturators, high speed grinding machines, welding machines, and metal-coating operations. This type of control is not typically used for blowstills. Based on the information reviewed for this BACT determination, IDEM, OAQ has determined that the use of Condensation is not a technically feasible option for the Blowstill (BS1b) at this source.

Step 3: Rank the Remaining Control Technologies by Control Effectiveness

IDEM, OAQ has ranked the technically feasible control technologies and combinations of control technologies as follows:

| Control Technology | Control Efficiency (%) |
|------------------------------|-------------------------------|
| Thermal Oxidizer | 95% - 98% |
| Direct Incineration (Boiler) | 90% |

Step 4: Evaluate the Most Effective Controls and Document Results

The following table lists the proposed BACT determination for this facility along with the existing BACT determinations for similar emission units. All data in the table is based on the information obtained from the permit application submitted by the Applicant, the U.S. EPA RACT/BACT/LAER Clearinghouse (RBLC), Indiana issued permits, and electronic versions of permits available at the websites of other permitting agencies.

Table 1. Existing VOC RACT/BACT/LAER Determinations for Blowstills

| Company | RBLC ID or Permit # | Facility | Date Issued / State | Control Technology | VOC Limit(s) |
|--|-----------------------------|------------------|---------------------|-------------------------------|---|
| Building Materials Manufacturing Corporation (Mt. Vernon, IN) | Proposed 129-43012-00011 | Blowstill (BS1b) | Pending | boiler (thermal incineration) | <u>THC</u> 90% destruction efficiency <u>VOC</u> 0.170 lb/ton <u>Throughput</u> 175,200 ton /12 month rolling |
| Existing BACT Determinations | | | | | |
| Building Materials Manufacturing Corporation (Mt. Vernon, IN) | 129-38119-00011 | Blowstill (BS3) | 11/5/2018 | boiler (thermal incineration) | <u>THC</u> 90% destruction efficiency <u>VOC</u> 0.170 lb/ton <u>Throughput</u> 175,200 ton /12 month rolling |
| Building Materials Manufacturing Corporation (Michigan City, IN) | IN-0191 | 2 blowstills | 07/07/2014 | thermal oxidizer | <u>THC</u> 95% destruction efficiency or 20 ppmv dry @ 3% O ₂ <u>VOC</u> 0.127 lb/ton combined asphalt <u>Throughput</u> 262,800 ton /12 month rolling for the 2 units |
| Building Materials Manufacturing Corporation (Mt. Vernon, IN) | 129-32376-00011 | Blowstill | 10/15/2012 | boiler (thermal incineration) | <u>THC</u> 90% destruction efficiency |
| Owens Corning (Medina, OH) | OH-0288 16-02347 | 3 blow stills | 06/14/04 | thermal oxidizer | <u>Throughput</u> combined 395,312 ton asphalt per 12 month rolling for all 3 units <u>VOC for each of the 2</u> 17.9 <u>tph units</u> 2.02 lb/hr 8.85 TPY |

| Company | RBLC ID or Permit # | Facility | Date Issued / State | Control Technology | VOC Limit(s) |
|---|---------------------|----------|---------------------|--------------------|---|
| | | | | | <u>VOC for the 15.4 tph unit</u> 1.74 lb/hr 7.61 TPY <u>THC</u> 20 ppmv dry @ 3% O2 or 95% reduction |
| The calculated lb/ton limit for Owens Corning is 0.113 lb/ton of asphalt. | | | | | |

A review of the RBLC entries for similar units produced four permits for blowstills. The Building Materials Manufacturing Corporation in Mt. Vernon, IN emits VOC at a rate of 0.170 lb VOC per ton of asphalt blown. The Building Materials Manufacturing Corporation facility in Michigan City, IN emits VOC at a rate of 0.127 lb VOC per ton of asphalt blown. The Owens-Corning facility in Medina, OH emits VOC at a rate of 0.113 lb VOC per ton of asphalt blown. All if the emission rates anticipate a 95% reduction in mass emissions. Therefore, the emission rates are similar.

Thermal Oxidation: As outlined in the 2018 BACT analysis, the source submitted a proposal for a regenerative thermal oxidizer (RTO) from Dürr Clean Technology for their Minneapolis, MN facility in November of 2017. An RTO is a type of thermal oxidizer that uses a bed of ceramic material to absorb heat from the exhaust gas. The RTO is comparative in size and cost to a thermal oxidizer that could control emissions from the asphalt blowing operation at the source. As such, the cost information from the Dürr proposal was considered representative and was used to prepare the cost analysis contained in Appendix C of the TSD.

The cost effectiveness of a control option is the cost required to remove one ton of pollutant (\$/ton). Generally, the pollutant reduction is evaluated by comparing a baseline uncontrolled emissions scenario to the controlled emission rate associated with the control device being considered. However, as previously mentioned, the asphalt blowing operation at the source is already controlled via the existing boilers, which have a minimum control efficiency of 90%. As such, the economic impact evaluation should focus on the incremental cost effectiveness (i.e., the cost to achieve the additional VOC emission reduction that would be achievable using a thermal oxidizer).

The exhaust from the blowstills is used to supplement fuel to the boilers. Although the boilers are natural gas-fired, the consumption of natural gas is reduced when the blowstill exhaust fumes combine with natural gas as the fuel source for the boilers. Based on records from the source, if the blowstill fumes were to be routed to a new thermal oxidizer rather than the existing boilers, the cost of natural gas demand at the boilers would increase by approximately \$29,800 per year (see Appendix C of the TSD). Accounting for this increase natural gas cost, the incremental cost effectiveness associated with use of a new thermal oxidizer instead of the existing boilers is \$86,346.70 per ton of VOC removed.

The use of a thermal oxidizer would result in a VOC emission decrease from the asphalt blowing operation. However, it would also result in an emissions increase for several other pollutants that are associated with natural gas combustion. This increase would be attributable to the additional natural gas demand at the existing boilers as well as natural gas needed as auxiliary fuel in the thermal oxidizer. Based on the economic, environmental, and energy impacts discussed above, the source proposes to eliminate the thermal oxidizer control option from further consideration in this BACT analysis.

Thermal Incineration via Existing Boilers: Since the boilers are already in place and being used to

control the blowstill emissions, there are no additional direct, indirect or operational costs for this option. The boilers are a necessary component of the overall process. Therefore, they will remain in place and continue to operate as is even if not used as the control device for blowstill emissions.

Summary: Installation of a separate thermal oxidizer would result in a significant capital expenditure as well as increased operating costs. Since the boilers are currently reducing VOC emissions by 90%, the incremental increase in control efficiency associated with a thermal oxidizer would only be 5%, resulting in an incremental cost effectiveness of \$86,346.70. This cost effectiveness value is considered economically infeasible for the source. In addition, the use of a thermal oxidizer would result in unfavorable environmental and energy impacts. As such, Building Materials Manufacturing Corporation maintains that the existing boilers qualify as BACT for the blowstill operation at the Mt. Vernon facility. This is based upon the following:

1. **Comparative Control Efficiencies.** There is very little net emission benefit achieved by installing a thermal oxidizer. The thermal oxidizer would only provide an additional 5% in VOC emission reductions over the current control system.
2. **Economic Benefit.** The boilers are a necessary component of the overall plant processes. As such, there is no increase in direct cost, indirect cost, cost of operation, maintenance, or replacement parts cost with this option. As shown in the incremental cost effectiveness calculation, the cost to remove an additional 8.10 tons of VOC per year is cost prohibitive and therefore, economically infeasible in comparison to maintaining the existing system.
3. **Increase in natural gas combustion and associated emissions.** The reduction in VOC emissions would be offset by an increase of emissions from natural gas combustion needed to fuel the thermal oxidizer and the additional natural gas needed for boiler operation.

The applicant proposes the following for VOC BACT for the asphalt blowing operations:

- (1) The VOC emissions from the blowstill BS1b shall be controlled by a boiler.
- (2) The total THC destruction efficiency for the boiler shall be at least 90%.

Step 5: Select BACT

IDEM, OAQ has established VOC BACT as:

- (1) VOC emissions from the blowstill BS1b shall be controlled by a boiler at all times the blowstill is in operation and generating VOC emissions.
- (2) The boiler shall have a total THC destruction efficiency of at least 90%.
- (3) VOC emissions from the blowstill BS1b shall not exceed 0.170 lb VOC/ton asphalt blown.
- (4) Asphalt throughput shall not exceed 175,200 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

**Appendix C: Cost Analysis
Cost Analyses for RTO**

Company Name: Building Materials Manufacturing Corporation
Address City IN Zip: 901 Givens Road, Mount Vernon, IN 47620
FESOP SPR No.: F129-43012-00011
Reviewer: Michaela Hecox

| Per Regenerative Thermal Oxidizer Quote to GAF of 11/15/17 (DURR Model: Ecopure RL30) | | |
|---|----------------------------------|--------------------|
| DIRECT COST (Pollution Control Equipment) | Unit Cost | TOTAL (\$) |
| Direct Purchased Equipment | | |
| Equipment Total (*see notes for full description) | A = | \$1,025,279 |
| Instrumentation ¹ | 0.10 A | \$0 |
| Sales Taxes | 0.07 A | \$71,770 |
| Freight ² | 0.05 A | \$335,000 |
| Total Equipment Costs | B = | \$1,432,049 |
| Direct Installation Cost | | |
| Foundation and Support | 0.08 B | \$114,564 |
| Handling and Erection | 0.14 B | \$200,487 |
| Piping | 0.02 B | \$28,641 |
| Insulation | 0.01 B | \$28,641 |
| Painting | 0.01 B | \$28,641 |
| Electrical | 0.04 B | \$57,282 |
| Site Preparation | contractor quote | |
| Other (duct work, fittings,) | | |
| Total Direct Installation Costs | | \$458,256 |
| TOTAL Direct Investment (TDI) = (Total Equipment Cost + Total Direct Installation Cost) | TDI = | \$1,890,304 |
| Indirect Installation Costs | | |
| Engineering and Supervision | 0.10 B | \$143,205 |
| Construction and Field Expenses | 0.05 B | \$71,602 |
| Contractor Fees | 0.10 B | \$143,205 |
| Start-up | 0.02 B | \$28,641 |
| Performance Tests | 0.03 B | \$42,961 |
| Overall Contingencies | 0.03 B | \$42,961 |
| Working Capital | | \$0 |
| Total Indirect Installation Costs (TIC) | TIC = | \$472,576 |
| TOTAL CAPITAL INVESTMENT (TCI) = (TDI + TIC) | TCI = | \$2,362,880 |
| ANNUAL OPERATION & MAINTENANCE | | |
| Direct Operating Costs (DA) | | |
| Operating Labor - Operator (0.5 hr/shift) ³ | \$32.15/HR | \$17,602 |
| Operating Labor - Supervisor (0.5 hr/shift) ³ | \$36.06/HR | \$19,743 |
| Maintenance Labor (0.5 hr/shift) ³ | \$34.27/HR | \$18,763 |
| Maintenance Material | same as maintenance labor | \$18,763 |
| Replacement Parts | | \$5,000 |
| Thermal Oxidizer Natural Gas (2.56 MMBtu/hr) ⁴ | \$3.9995/1000 ft3 | \$87,933 |
| Additional Natural Gas to Existing Boilers | | \$29,800 |
| Electricity (21.1 kW/h) ⁵ | \$0.0821/kWh | \$22,727 |
| Total Direct Operating Costs (DA) | DA = | \$220,330 |
| Indirect Operating Costs (IC) | | |
| Overhead | 60% of total labor and materials | \$47,922 |
| Administrative Charges | 0.02 TCI | \$47,258 |
| Property Tax | 0.01 TCI | \$23,629 |
| Insurance | 0.01 TCI | \$23,629 |
| Capital Recovery Cost (Assumes 7% interest over 10 years) | 0.14238 TCI | \$336,427 |
| Total Indirect Operating Costs (IA) | IA = | \$142,438 |
| Heat Recovery Credits | | \$0 |
| Total Operating Costs (DA + IA - Heat Recovery Credits) | TOC = | \$362,767 |
| Total Annualized Cost (Capital Recovery Cost + TOC) | TAC = | \$699,194 |
| PTE Uncontrolled | | 162 |
| Controlled VOC if this equipment installed (95% destruction eff) | | 8.10 |
| Difference (Current Control Eff - RTO Control Eff) TPY | | 153.90 |
| Cost per Ton VOC Removed (TAC / Tons VOC Removed) = | | \$4,543 |
| Incremental VOC control (after 90% control by boiler) | | 8.10 |
| Incremental Cost per Ton VOC Removed (TAC / Tons VOC Removed) = | | \$86,320 |
| SINCE 90% OF VOC EMITTED FROM THE BLOWSTILL IS CURRENTLY CONTROLLED BY THE EXISTING BOILERS, THE ACTUAL TONS OF VOC REMOVED BY THIS ADD ON CONTROL DEVICE IS LOWER. | | |

NOTES:¹ Instrumentation Included with Equipment Total² Used freight cost provided by vendor rather than formula³ Assume three shifts per day, 365 days per year⁴ Cost of Natural Gas Burned:

$$2.56 \text{ mmBTU/hour} \times 1 \text{ mmft}^3/1020 \text{ mmBTU} \times 1000000 \text{ ft}^3/\text{mmft}^3 \times \$3.9995/1000 \text{ ft}^3 \times 8760 \text{ hour/year} = \mathbf{\$87,932.54}$$

⁵ Estimated Cost of Electricity (Equation 2.7 Control Cost Manual)

$$\text{Power} = (1.17 \times 10^{-4} \times 27,000 \text{ acfm} \times 6 \text{ inches of water})/60\% \text{ efficiency} = 31.6 \text{ kWh}$$

$$31.6 \text{ kWh} \times 8760 \text{ hour/year} \times 0.0821/\text{kWh} = \mathbf{\$22,726.59}$$

⁶ This cost analysis is based on the unlimited throughput of the blowstill. The source has taken limits to be a FESOP that limit the amount of asphalt blown. If the limited throughput was used the cost per ton would be higher than it is.



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

October 1, 2020

Matthew Mahrenholz
Building Materials Manufacturing Corporation
901 Givens Rd
Mount Vernon, IN 47620

Re: Public Notice
Building Materials Manufacturing Corporation
Permit Level: FESOP Sig Permit Rev Minor PSD
Permit Number: 129-43012-00011

Dear Mr. Mahrenholz:

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/> . Choose Search Option by **Permit Number**, then enter permit 43012

and

IDEM's Virtual File Cabinet (VFC): <http://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/5474.htm>

Please note that as of April 17, 2019, IDEM is no longer required to publish the notice in a newspaper.

OAQ has submitted the draft permit package to the Alexandrian Public Library, 115 West 5th Street in Mount Vernon, 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 Michaela Hecox, 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 3-3031 or dial (317) 233-3031.

Sincerely,

Theresa Weaver

Theresa Weaver
Permits Branch
Office of Air Quality

Enclosures

PN Applicant Cover Letter access via website 8/10/2020



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October 1, 2020

To: Alexandrian 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: Building Materials Manufacturing Corporation
Permit Number: 129-43012-00011

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 Smiddie-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



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Governor

Bruno L. Pigott
Commissioner

Notice of Public Comment

October 1, 2020
Building Materials Manufacturing Corporation
129-43012-00011

Dear Concerned Citizen(s):

You have been identified as someone who could potentially be affected by this proposed air permit. The Indiana Department of Environmental Management, in our ongoing efforts to better communicate with concerned citizens, invites your comment on the draft permit.

Enclosed is a Notice of Public Comment, which has posted on IDEM's Public Notice website at <https://www.in.gov/idem/5474.htm>.

The application and supporting documentation for this proposed permit have been placed at the library indicated in the Notice. These documents more fully describe the project, the applicable air pollution control requirements and how the applicant will comply with these requirements.

If you would like to comment on this draft permit, please contact the person named in the enclosed Public Notice. Thank you for your interest in the Indiana's Air Permitting Program.

Please Note: *If you feel you have received this Notice in error, or would like to be removed from the Air Permits mailing list, please contact 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



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Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

AFFECTED STATE NOTIFICATION OF PUBLIC COMMENT PERIOD DRAFT INDIANA AIR PERMIT

October 1, 2020

A 30-day public comment period has been initiated for:

Permit Number: 129-43012-00011
Applicant Name: Building Materials Manufacturing Corporation
Location: Mount Vernon, Posey County, Indiana

The public notice, draft permit and technical support documents can be accessed via the **IDEM Air Permits Online** site at:

<http://www.in.gov/ai/appfiles/idem-caats/>

Questions or comments on this draft permit should be directed to the person identified in the public notice by telephone or in writing to:

Indiana Department of Environmental Management
Office of Air Quality, Permits Branch
100 North Senate Avenue
Indianapolis, IN 46204

Questions or comments regarding this email notification or access to this information from the EPA Internet site can be directed to Chris Hammack at chammack@idem.IN.gov or (317) 233-2414.

Affected States Notification 1/9/2017

Mail Code 61-53

| | | | | |
|----------------------------|--|---|---|--|
| IDEM Staff | TAWEAVER 10/1/2020 Building Materials Manufacturing Corporation 129-43012-00011 (draft) | | | AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING |
| Name and address of Sender | ▶ | Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204 | Type of Mail: CERTIFICATE OF MAILING ONLY | |

| Line | Article Number | Name, Address, Street and Post Office Address | Postage | Handing Charges | Act. Value (If Registered) | Insured Value | Due Send if COD | R.R. Fee | S.D. Fee | S.H. Fee | Rest. Del. Fee |
|------|----------------|---|---------|-----------------|----------------------------|---------------|-----------------|----------|----------|----------|----------------|
| | | | | | | | | | | | Remarks |
| 1 | | Matthew Mahrenholz Building Materials Manufacturing Corporation 901 Givens Rd Mount Vernon IN 47620 (Source CAATS) | | | | | | | | | |
| 2 | | Sean Marren Plant Manager Building Materials Manufacturing Corporation 901 Givens Rd Mount Vernon IN 47620 (RO CAATS) | | | | | | | | | |
| 3 | | Posey County Commissioners County Courthouse, 126 E. 3rd Street Mount Vernon IN 47620 (Local Official) | | | | | | | | | |
| 4 | | Posey County Health Department 100 Vista Dr Mount Vernon IN 47620 (Health Department) | | | | | | | | | |
| 5 | | Mount Vernon City Council and Mayors Office 520 Main Street Mount Vernon IN 47620 (Local Official) | | | | | | | | | |
| 6 | | Dr. Jeff Seyler Univ. of So Ind., 8600 Univ. Blvd. Evansville IN 47712 (Affected Party) | | | | | | | | | |
| 7 | | Mr. Don Mottley Save Our Rivers 6222 Yankeetown Hwy Boonville IN 47601 (Affected Party) | | | | | | | | | |
| 8 | | Alexandrian Public Library 115 W 5th St Mt. Vernon IN 47620 (Library) | | | | | | | | | |
| 9 | | Mr. Mark Wilson Evansville Courier & Press P.O. Box 268 Evansville IN 47702-0268 (Affected Party) | | | | | | | | | |
| 10 | | Mrs. Connie Parkinson 510 Western Hills Dr. Mt. Vernon IN 47620 (Affected Party) | | | | | | | | | |
| 11 | | Robert Hess c/o Mellon Corporation 830 Post Road East, Suite 105 Westport CT 06880 (Affected Party) | | | | | | | | | |
| 12 | | David Boggs 216 Western Hills Dr Mt Vernon IN 47620 (Affected Party) | | | | | | | | | |
| 13 | | John Blair 800 Adams Ave Evansville IN 47713 (Affected Party) | | | | | | | | | |
| 14 | | Brandon Mogan Tora Consulting 509 Harwich Ct. Lexington SC 29072 (Consultant) | | | | | | | | | |
| 15 | | | | | | | | | | | |

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