



Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

April 15, 2004

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.in.gov/idem

TO: Interested Parties / Applicant

RE: Building Materials, Mfg. Corp. / 129-18451-00011

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

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

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures
FNPER.dot 9/16/03

April 15, 2004

Mr. Fred Bright
Building Materials Manufacturing Corporation
901 Givens Road
Mt. Vernon, Indiana 47620

Re: 129-18451
First Significant Revision to
FESOP 129-14097-00011

Dear Mr. Bright:

Building Materials Manufacturing Corporation, located at 901 Givens Road, Mt. Vernon, Indiana 47620 was issued a FESOP on April 25, 2002 for a stationary asphalt roofing manufacturing plant. A letter requesting changes to this permit was received on December 1, 2003. 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.

The revision consists of correcting the PTE calculations from the issued FESOP Renewal.

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 attach a copy of this revision and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Aida De Guzman OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call at (800) 451-6027, press 0 and ask for extension (3-4972), or dial (317) 233-4972.

Sincerely,

Original signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments

APD

cc: File - Posey County
U.S. EPA, Region V
Posey County Health Department
Southwest Regional Office
Air Compliance Section Inspector - Scott Anslinger
Compliance Data Section
Administrative and Development

**FEDERALLY ENFORCEABLE STATE
OPERATING PERMIT (FESOP)
OFFICE OF AIR QUALITY**

**Building Materials Manufacturing Corporation
901 Givens Road
Mt. 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.

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.

Operation Permit No.: F129-14097-00011	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: April 25, 2002 Expiration Date: April 25, 2007
First Administrative Amendment: 129-16891, issued on January 15, 2003	
First Significant Permit Revision: 129-18451	Pages Affected: 26, 27, 28, 29, 40 Pages Added: 40a
Issued by: Original signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	April 15, 2004

SECTION D.1 FACILITY OPERATION CONDITIONS

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

- (a) One (1) shingles & rolls production line with a maximum production rate of 73 tons per hour, installed in 1972 and exhausting through stacks S5 and S6.
- (b) One (1) modified bitumen production line with a maximum production rate of 12.9 tons per hour, installed in 1986 and exhausting through stack S3.
- (c) One (1) asphalt blowing operation with a maximum blowing rate of 40,000 pounds per hour with emissions controlled by afterburner (boiler nos. 1 and 2), installed in 1973 and exhausting through stack S32.
- (d) Storage and handling of bulk material consisting of the following:
 - (1) Shingle and modified bitumen granules handling with maximum throughput of 268,072 tons per year, and exhausting through stacks S13, S14, S27, S28, S29 and S30.
 - (2) Shingle and modified bitumen filler handling with maximum throughput of 280,404 tons per year, utilizing dust collectors for particulate matter control, and exhausting through stacks S9, S19, S20, S21, S22, S23 and S24.
 - (3) Talc handling with maximum throughput of 801 tons per year, utilizing dust collectors for particulate matter control, and exhausting through stacks S18 and S25.
 - (4) Single and modified bitumen sand handling with maximum throughput of 40,593 tons per year, and exhausting through stacks S15, S17 and S26.

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

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

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

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

D.1.2 Particulate Matter (PM) [40 CFR Part 60.470, Subpart UU] [326 IAC 12]

Pursuant to New Source Performance Standard, 326 IAC 12, (40 CFR 60.470, Subpart UU):

- (a) The PM emissions from the modified bitumen production line shall not exceed 0.4 kilograms per megagram of asphalt shingle produced and the opacity shall not exceed twenty percent (20%).

D.1.3 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), particulate emissions from the following facilities shall be limited as follows:

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

$$E = 55.0 P^{0.11} - 40$$

where E = rate of emission in pounds per hour and

P = process weight rate in tons per hour

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

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour and
 P = process weight rate in tons per hour

Emission Unit	Process Weight Rate (ton/hr)	Allowable PM Emissions (326 IAC 6-3-2) (lb/hr)
Asphalt Blowing Operation	17.7	28.11
Shingle & roll production line	73	48.17
Modified bitumen production line	12.9	22.74
Granule handling	30.60	40.13
Filler handling	32.0	40.52
Talc handling	0.091	0.82
Sand handling	4.634	11.45

D.1.4 PM-10 Limit [326 IAC 2-8-4]

- (a) Pursuant to 326 IAC 2-8-4, PM-10 emissions shall not exceed the values stated in the following table. The combined PM-10 emissions from the listed facilities shall not exceed a total of 92.4 tons per year.
- (b) Pursuant to 326 IAC 2-8-4, the asphalt blowing throughput shall be limited to 155,476 tons per 12 consecutive month period with compliance determined at the end of each month. This throughput limit is required to limit the potential to emit of PM10 to 65.3 tons per 12 consecutive month period. This asphalt blowing throughput limit, combined with the limits from the listed facilities in the following table excluding the boilers and insignificant activities shall limit the PM10 emissions to 92.4 tons per year.

Emission Unit	Limited PM-10 Emissions (lb/hr)	Limited PM-10 Emissions (ton/yr)
Asphalt Blowing Operation	14.9	65.30
Shingle & roll production line	3.73	16.33
Modified bitumen production line	0.55	2.41
Granule handling	0.92	4.02
Filler handling	0.064*	0.28*
Talc handling	1.82E-4*	7.97E-4*
Sand handling	0.927	4.06

* emissions controlled by dustcollectors.

- (c) Compliance with (a) and (b) of this condition and Condition D.1.8 shall make 326 IAC 2-7, Part 70 rules and 326 IAC 2-2, Prevention of Significant Deterioration (PSD) not applicable.

D.1.5 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

Compliance Determination Requirements

D.1.6 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

During the period between 30 to 36 months after issuance of this permit, the Permittee shall perform the following to demonstrate compliance with Conditions D.1.2, D.1.3 and D.1.4 for the asphalt blowing line, single & roll and modified bitumen production lines.

- (a) PM and PM-10 testing utilizing methods per 40 CFR Part 60 Appendix A, Method 5A for PM and methods, as approved by the Commissioner for PM-10. PM-10 includes filterable and condensable PM-10.
- (b) Opacity testing utilizing 40 CFR Part 60 Appendix A, Method 9, to demonstrate compliance with the opacity limitation of Condition D.1.2.

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

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

D.1.7 Particulate Matter (PM and PM-10)

In order to comply with conditions D.1.2, D.1.3 and D.1.4, (1) either of the two (2) afterburners (identified as boiler nos. 1 and 2) for PM and PM-10 control shall be in operation at all times when the asphalt blowing line is in operation, and (2) the dust collectors for PM and PM-10 control shall be in operation at all times when the filler & talc handling operations are in operation.

D.1.8 Afterburner

Either of the two (2) afterburners (boiler nos. 1 and 2) shall be operated at all times the asphalt blowing line is in operation, and shall maintain a minimum operating temperature of 1,500°F up until a temperature determined in the most recent compliance stack tests to ensure that the destruction efficiency of 96.7% or destruction efficiency determined in the most recent compliance stack test is achieved. The temperature of the combustion chamber shall be continuously monitored and recorded by the temperature monitoring instrument whenever the asphalt blowing line is in operation.

D.1.9 Visible Emissions Notations

- (a) Visible emission notations of the granule handling, shingle & roll and modified bitumen production lines' stack exhausts shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

Visible emission notations of the afterburner (identified as boiler nos. 1 and 2) for controlling emissions from the asphalt blowing line are covered under section D.2.

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

- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

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

D.1.10 Record Keeping Requirements

- (a) To document compliance with Condition D.1.9, the Permittee shall maintain records of visible emission notations of the granule handling, shingle & roll and modified bitumen production lines' stack exhausts once per shift.
- (b) To document compliance with Condition D.1.8, the permittee shall:
 - (1) Maintain daily records of the exhaust temperature of the afterburner, and
 - (2) Continuously record the temperature in the combustion zone of the afterburner, identified as boiler nos. 1 and 2, using the temperature monitoring instrument.
- (c) To document compliance with Condition D.1.4(b), the permittee shall maintain monthly records of the asphalt throughput to the asphalt blowstill.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.11 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.4(b) shall be submitted to the address listed in Section C - General Reporting Requirements of the FESOP, using the reporting form located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

FESOP Quarterly Report

Source Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mt. Vernon, Indiana 47620
Mailing Address: 1381 Alps Road, Wayne, New Jersey 07470-3689
FESOP No.: F129-14097-00011
Significant Permit Revision: 129-18451-00011
Facility: Asphalt Blowing
Parameter: PM10
Limit: 155,476 per 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	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

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

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

Indiana Department of Environmental Management Office of Air Quality

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

Source Background and Description

Source Name:	Building Materials Manufacturing Corporation
Source Location:	901 Givens Road, Mt. Vernon, Indiana 47620
County:	Posey
SIC Code:	2952
FESOP Renewal No.:	F129-14097-00011
FESOP Renewal Issuance Date:	April 25, 2002
Permit Revision No.:	129-18451
Permit Reviewer:	Aida De Guzman

The Office of Air Quality (OAQ) has reviewed a FESOP revision application from Building Materials Manufacturing Corporation due to typographical errors in the calculations. These corrections will increase the sourcewide uncontrolled PM emissions from 192.8 tons/year to 2,271.8 tons/yr, PM10 uncontrolled emissions from 169.12 tons/yr to 2,316.34 tons/yr. The controlled PM emissions will increase from 74.04 tons/yr to 137.89 and PM10 controlled emissions from 63.09 tons/yr to 107.5 tons/yr (see detailed calculations on page 2 of this TSD). As a result of these corrections a significant revision, pursuant to 326 IAC 2-8-11.1(f) will be made, as the PM10 emission cap will be adjusted, and an additional production limit will be added in the FESOP. The FESOP will be revised (additions are **bolded** and deletions are ~~struck through~~ for emphasis):

History

On December 1, 2003 Building Materials Manufacturing Corporation submitted an application to the OAQ requesting a revision to the emission calculations on the Asphalt Blowing operations. Building Materials Manufacturing Corporation was issued a FESOP on December 11, 1996.

Approvals

The source was issued a FESOP (129-5585-00011), on December 11, 1996. The source has since received the following:

- (a) FESOP Renewal (F129-14097-00011), issued on April 25, 2002; and
- (a) First Administrative Amendment No.: 1129-16891-00011, issued on January 15, 2003.

Recommendation

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

Unless otherwise stated, information used in this review was derived from the application and

additional information submitted by the applicant.

An application for the purposes of this review was received on December 1, 2003.

Emission Calculations

ASPHALT BLOWING:

- (a) The source found an error in the emissions calculations made in the FESOP Renewal F129-14097-00011 for the Asphalt Blowing operation. The AP-42 emission factor of 0.81 lb of PM/ton of asphalt processed is an emission factor with an afterburner (controlled). This emission factor was used in the calculations for the uncontrolled PM emissions. The source's afterburner which has an efficiency of 90%, was also applied in the PM controlled emission calculations, which therefore applied the control efficiency twice. The following table shows the original emission calculations:

	Throughput	Throughput
	(tons/hr)	(tons/yr)
Potential	20	175,200

POLLUTANT			
	PM	PM10	VOC
Emission Factor, lb/ton	0.810	0.753 0.84 *	0.017
Uncontrolled Potential Emissions, tons/yr	70.96 2,150	65.99 2,236	1.49
Controlled Potential Emissions, tons/yr	7.40 70.95	6.60 73.8	0.15

Emission Factors are from AP-42 (5th Edition 1/95) Table 11.2-2 for Asphalt Roofing

EPA 450/3-80-021a -Asphalt Roofing Manufacturing Industry -Background Information for Proposed Standards. This EPA manual indicates that the emission factor of 0.81 lb/ton was established during stack tests based on the afterburner average, three runs at 96.7%.

The following is the detailed corrected calculations:

$$\begin{aligned}
 \text{PM Controlled Emissions} &= 20 \text{ tons/hr} * 0.81 \text{ lb/ton} * 8760 \text{ hrs/yr} \\
 &= 70.95 \text{ tons/year}
 \end{aligned}$$

$$\begin{aligned}
 \text{PM Uncontrolled Emissions} &= 70.95 \text{ tons/year} (1/1 - 0.967) \\
 &= 2,150 \text{ tons/year}
 \end{aligned}$$

- (b) The source found an error in the PM10 emissions calculations made in the FESOP. Renewal. The calculations used an emission factor of 93% of the PM emission factor. Evaluation of the SCC emission factor indicates that the PM10 would be 104% of the PM values. SCC 3-05-001-02, PM = 24 lb/ton asphalt processed, PM10 = 25 lb/ton

$$\begin{aligned}
 25/24 * 100 &= 104\% \\
 104\% * 0.81 \text{ lb PM/ton} &= 0.84 \text{ lb PM}_{10}/\text{ton} \\
 \text{PM}_{10} \text{ Controlled Emissions} &= 20 \text{ tons/hr} * 0.84 \text{ lb PM}_{10}/\text{ton} * 8760 \text{ hrs/yr} \\
 &= 73.8 \text{ tons/year} \\
 \text{PM}_{10} \text{ Uncontrolled Emissions} &= 73.8 \text{ tons/yr} (1/1 - 0.967) \\
 &= 2,236 \text{ tons/year}
 \end{aligned}$$

- (c) The source also found an error in the issued FESOP’s summary sheet on Page 1 of 25 TSD Appendix A for the PM₁₀ emissions from the “Granule Handling” operation. The summary sheet shows 26.81 tons/year PM₁₀ emissions, instead of 4.02 tons/year. This incorrect PM₁₀ emission was also reflected in the established PM₁₀ limit of the issued FESOP.

The PTE Summary on Page 1 of 25 TSD Appendix of the original calculations was revised to reflect the corrected emissions for the Asphalt Blowing and Granule Handling operations.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source 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.”

Pollutant	Potential To Emit (tons/year)
PM	492.84 2,271.85
PM-10	469.42 2,316.34
SO ₂	318.14
VOC	39.53
CO	17.93
NO _x	148.88

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

HAP's *	Unrestricted Potential Emissions (tons/yr)
Formaldehyde	1.16
Toluene	1.09
Naphthalene	0.24
Hexane	0.51
Nickel	0.49
TOTAL	4.42

* Five worst HAPs are listed above

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM, PM-10, SO₂ and NO_x are equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7, but opted to be permitted under the FESOP Program.
- (b) Fugitive Emissions
 Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance

Standards that were in effect on August 7, 1980, the fugitive emissions are not counted toward determination of PSD and Emission Offset applicability.

Potential to Emit After Issuance

The source, issued a FESOP on December 11, 1996, has opted to remain a FESOP source, rather than apply for a Part 70 Operating Permit. The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered enforceable only after issuance of this Federally Enforceable State Operating Permit and only to the extent that the effect of the control equipment is made practically enforceable in the permit. Since the source has not constructed any new emission units, the source's potential to emit is based on the emission units included in the original FESOP. (F129-5585-00011; issued on December 11, 1996).

Process/emission unit	Potential to Emit After Issuance (tons/year)						
	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
Shingles and Roll Production Line	22.70	16.35	0.00	29.10	0.00	0.00	0.00
Modified Bitumen Production Line	3.33	2.40	0.00	4.43	0.00	0.00	4.24 (total) 1.16 (single)
Asphalt Blowing Line	7.10 62.96 **	6.60 65.3*	0.00	1.49	0.00	0.00	0.00
Material handling and storage	31.21	31.15 8.36	0.00	0.00	0.00	0.00	0.00
Boiler Nos. 1 and 2, heaters (mill oil # 2, coating, flux, mod-bit hot oil), (burning No. 6 fuel oil)	9.30	5.80	94.50	0.85	3.76	41.40	negl.
Heaters (mill oil # 1, liquid asphalt storage heater), (burning No. 2 fuel oil)	0.10	0.10	4.20	negl.	0.30	1.30	negl.
Natural gas combustion	0.26	0.65	0.04	0.59	8.03	9.48	0.17 (total) 0.16 (single)
Insignificant Activities	0.04	0.04	0.00	0.05	0.18	1.30	0.00
Total PTE After Issuance	74.04 129.9	63.09 99.00	98.74	36.51	12.27	53.48	4.42 (total) 1.16 (single)

* - based on throughput limit and after control.

** - PM is 96% of PM10, or PM10 is 104% of PM.

The asphalt blowing line PM10 emissions after control (73.6 tons/year) when added with the PM 10 emission limits from the other operations will result in exceedance of the sourcewide PM10 limit of less than 100 tons per year. Therefore, the throughput from the asphalt blowing line will be limited in addition to the operation of the afterburner as follows:

$$\begin{aligned} \text{Throughput Limit} &= 65.3 \text{ tons of PM10 limit/yr} * 2000 \text{ lb/ton} * \\ &= \text{ton /0.84 lb PM10} * \\ &= 155,476 \text{ tons of asphalt/year} \end{aligned}$$

$$\begin{aligned} \text{PM Emissions @ 155,476 throughput limit:} &= 155,476 \text{ tons of asphalt/year} * 0.81 \text{ lb/ton} * \end{aligned}$$

$$= \frac{\text{ton/2000 lb}}{62.96 \text{ ton/yr}}$$

Therefore, compliance with this limit will make 326 IAC 2-7, Part 70 rules and 326 IAC 2-2, Prevention of Significant Deterioration (PSD) not applicable.

County Attainment Status

The source is located in Posey County.

Pollutant	Status
PM-10	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Posey County has been designated as attainment or unclassifiable for ozone.

Federal Rule Applicability

The applicability determination that follows is based on that conducted for the original FESOP F129-5585-00011, issued on December 11, 1996; and FESOP Renewal F129-14097, issued on April 25, 2002:

- (a) The asphalt blowing is not subject to the New Source Performance Standard, 326 IAC 12, 40 CFR 60.470, Subpart UU, because it was constructed in 1972, which is before the rule applicability date of November 18, 1980.

State Rule Applicability - Entire Source

The corrections made on the original calculations resulted in a higher PTE (see page 2 of this TSD for details). Also, the applicability date of August 7, 1980 for 326 IAC 2-2 was corrected to August 7, 1977. Therefore, 326 IAC 2-2, Prevention of Significant Deterioration will be re-analyzed as follows:

- (b) 326 IAC 2-2 (Prevention of Significant Deterioration)
~~This source is not subject to the requirements of this rule. The source was constructed prior to the rule applicability date of August 7, 1980, is not one of the 28 listed source categories and no major modifications were done, therefore, it is not subject to the requirements of the rule. Therefore, the requirements of 326 IAC 2-2 do not apply.~~
- (1) **The source was originally constructed in 1972 and into 1973, which is before the PSD applicability date of August 7, 1977. Therefore, it is grandfathered from the requirements of 326 IAC 2-2, Prevention of Significant Deterioration. Based on after control, the source emits PM and PM10 below 250 tons per year, and it is not one of the 28 listed sources. Therefore, it was not an existing major source.**
- (2) **In 1985, the source was modified through the installation of the Modified Bitumen Production Line. The PM and PM10 emissions from this 1985 modification are below 250 tons per year. Therefore, it was not a major source modification under 326 IAC 2-2.**

- (b) 326 IAC 2-8-4 (FESOP)
The applicability determination that follows is based on that conducted for the original FESOP F129-5585-00011, issued on December 11, 1996; and FESOP Renewal F129-14097, issued on April 25, 2002:

This source is subject to 326 IAC 2-8-4 (FESOP). Pursuant to this rule, the source shall limit facility PM-10 and SO₂ emissions as follows:

- (1) Either of the two (2) afterburners (with control efficiency of ~~90~~ **96.7%** for PM, PM-10 and VOC) identified as boiler No. 1 and 2, controlling the asphalt blowing line shall be in operation at all times the asphalt blowstill is in operation. **The asphalt blowing line PM10 emissions after control (73.6 tons/year) when added with the PM 10 emission limits from the other operations will result in exceedance of the sourcewide PM10 limit of less than 100 tons per year. Therefore, the throughput from the asphalt blowing line with limited in addition to the operation of the afterburner as follows:**

$$\begin{aligned} \text{Throughput Limit} &= 65.3 \text{ tons of PM10 limit/yr} * 2000 \text{ lb/ton} * \\ & \text{ton /0.84 lb PM10} * \\ &= 155,476 \text{ tons of asphalt/year} \end{aligned}$$

PM Emissions @ 155,476 throughput limit:

$$\begin{aligned} &= 155,476 \text{ tons of asphalt/year} * 0.81 \text{ lb/ton} * \\ & \text{ton/2000 lb} \\ &= 62.96 \text{ ton/yr} \end{aligned}$$

- (2) The dust collectors controlling the modified bitumen and shingle & roll filler handling shall be in operation at all times the facilities vented to the dust collectors are in operation and the PM10 emissions from this operation shall not exceed 0.064 pounds per hour, which is equivalent to 0.28 tons per year.
- (3) The consumption of No. 6 fuel oil from boilers, heaters and back-up fuels, shall be limited to 1,504,800 gallons per twelve (12) consecutive month period, based on maximum sulfur content of 0.8 percent. Limited potential SO₂ emissions from the aforementioned No. 6 fuel oil limit equal a limited SO₂ emission rate of 94.50 tons per year.
- (4) The consumption of No. 2 fuel oil from heaters and back-up fuels, shall be limited to 127,200 gallons per twelve (12) consecutive month period, based on maximum sulfur content of 0.47 percent. Limited potential SO₂ emissions from the aforementioned No. 2 fuel oil limit equal a limited SO₂ emission rate of 4.20 tons per year.

Note: Limiting the fuel usage will automatically limit sourcewide NOx emissions to less than 100 TPY.

Compliance with these limits shall limit the sourcewide potential to emit PM10, SO₂ and NOx to less than 100 tons per twelve (12) consecutive month period and will render 326 IAC 2-7 (Part 70 Permit Program) not applicable.

Changes to the FESOP

D.1.4 PM-10 Limit [326 IAC 2-8-4]

- (a) Pursuant to 326 IAC 2-8-4, PM-10 emissions shall not exceed the values stated in the following table. The combined PM-10 emissions from the listed facilities shall not exceed a total of ~~20.54 pound per hour, which is equivalent to 90.0~~ **92.4** tons per year.

Compliance with these PM-10 limits will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

- (b) Pursuant to 326 IAC 2-8-4, the asphalt blowing throughput shall be limited to 155,476 tons per 12 consecutive month period with compliance determined at the end of each month. This throughput limit is required to limit the potential to emit of PM10 to 65.3 tons per 12 consecutive month period. This asphalt blowing throughput limit, combined with the limits from the listed facilities in the following table excluding the boilers and insignificant activities shall limit the PM10 emissions to 92.4 tons per year.

Emission Unit	Limited PM-10 Emissions (lb/hr)	Limited PM-10 Emissions (ton/yr)
Asphalt Blowing Operation	1.51 14.9	6.61 65.30
Shingle & roll production line	3.73	16.33
Modified bitumen production line	0.55	2.41
Granule handling	6.12 0.92	26.80 4.02
Filler handling	0.064*	0.28*
Talc handling	1.82E-4*	7.97E-4*
Sand handling	0.927	4.06

* emissions controlled by dustcollectors.

- (c) Compliance with (a) and (b) of this condition and Condition D.1.8 shall make 326 IAC 2-7, Part 70 rules and 326 IAC 2-2, Prevention of Significant Deterioration (PSD) not applicable. these PM-10 limits will satisfy 326 IAC 2-8-4. Therefore, the Part 70 rules (326 IAC 2-7) do not apply.

Condition D.1.3 will be revised to calculate the PM emissions from the Asphalt Blowing based on the throughput limit as follows:

D.1.3 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Process Operations), particulate emissions from the following facilities shall be limited as follows:

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

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour and } P = \text{process weight rate in tons per hour}$$

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:

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

Emission Unit	Process Weight Rate (ton/hr)	Allowable PM Emissions (326 IAC 6-3-2) (lb/hr)
---------------	------------------------------	--

Asphalt Blowing Operation	20 17.7	30.54 28.11
Shingle & roll production line	73	48.17
Modified bitumen production line	12.9	22.74
Granule handling	30.60	40.13
Filler handling	32.0	40.52
Talc handling	0.091	0.82
Sand handling	4.634	11.45

The stack testing schedule for the afterburner as required in Condition D.1.6 of the FESOP shall remain the same.

The destruction efficiency of 96.7%, where EPA emission factor of 0.81 lb of PM10/ton was based from, was utilized in the calculations and in the following conditions, since the source preliminary test indicated that the afterburner's efficiency was greater than 90% and 96.7%. This efficiency will be verified through a compliance stack test. Also, the operation of the afterburner in combination of the asphalt blowing line throughput limit is what limits the PM and PM10 emissions below 250 tons per year and 100 tons per year. Therefore, this afterburner shall continuously be operated when the asphalt blowing line is in operation.

D.1.8 Afterburner

Either of the two (2) afterburners (boiler nos. 1 and 2) shall be operated at all times the asphalt blowing line is in operation.—for controlling emissions from asphalt blowing line, and shall maintain a minimum operating temperature of 1,500°F ~~or the up until a temperature is~~ determined in the most recent compliance stack tests to ensure that the destruction efficiency of ~~90%~~ **96.7%** or destruction efficiency determined in the most recent compliance stack test is achieved. The temperature of the combustion chamber shall be continuously monitored and recorded by the temperature monitoring instrument whenever the asphalt blowing line is in operation.

D.1.10 Record Keeping Requirements

- (a) To document compliance with Condition D.1.9, the Permittee shall maintain records of visible emission notations of the granule handling, shingle & roll and modified bitumen production lines' stack exhausts once per shift.
- (b) To document compliance with Condition D.1.8, the permittee shall:
 - (1) Maintain daily records of the exhaust temperature of the afterburner, and
 - (2) Continuously record the temperature in the combustion zone of the afterburner, identified as boiler nos. 1 and 2, using the temperature monitoring instrument.
- (c) **To document compliance with Condition D.1.4(b), the permittee shall maintain monthly records of the asphalt throughput to the asphalt blowstill.**
- (d e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

The following condition will be added in the FESOP and be numbered D.1.11:

D.1.11 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.4(b) shall be submitted to the address listed in Section C - General Reporting Requirements of the FESOP, using the reporting form located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

FESOP Quarterly Report

Source Name: Building Materials Manufacturing Corporation
Source Address: 901 Givens Road, Mt. Vernon, Indiana 47620
Mailing Address: 1381 Alps Road, Wayne, New Jersey 07470-3689
FESOP No.: F129-14097-00011
Significant Permit Revision: 129-18451-00011
Facility: Asphalt Blowing
Parameter: PM10
Limit: 155,476 tons per 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	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

No deviation occurred in this quarter.

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

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

Attach a signed certification to complete this report.

Conclusion

The operation of this asphalt blowing process shall be subject to the conditions of the attached **Significant Permit Revision 129-18451-00011.**

Appendix A: Emission Calculations

Company Name: GAF Building Materials
 Address City IN Zip: 901 Givens Road, Mt. Vernon, IN 47620
 Sig./Revision No.: 129-19451-00011
 Reviewer: Aida De Guzman
 Date: Dec. 1, 2003

Potential Emissions (tons/year)

Pollutant	Boiler Nos. 1 and 2 No. 6 oil combustion	Heaters		Flux Heater		Filler Heater		Oil Heater		Heater			Shingles and Roll Production Line	Process		Handling and Storage			Total	
		No. 6 oil combustion Mill oil heater # 2 and Coating Heater	No. 6 oil Combustion	Natural Gas Combustion	No. 6 oil Combustion Hot oil heater	natural gas Combustion Hot oil heater	No. 6 oil Combustion Mod-bit oil heater	natural gas Combustion Mod-bit oil heater	No. 2 oil Combustion Liquid Asphalt Storage Heater	natural gas combustion Liquid asphalt Storage Heater	No. 2 oil Combustion Liquid asphalt Storage Heater	Lpg combustion Mat heater and Flame Bar		Modified Bitumen Production Line	Asphalt Blowing	Granule Handling	Filler Handling	Talc Handling		Sand Handling
PM	21.1	2.6	2.7	0.1	2.4	0.1	1.9	0.04	0.2	0.02	0.1	0.04	22.7	3.33	2150	26.81	33.65	0.1	4.06	2271.85
PM10	18.4	1.6	1.7	0.2	1.5	0.2	1.2	0.17	0.2	0.08	0.1	0.04	16.35	2.4	2236	26.81	28.04	0.06	4.06	2339.13
SO2	213.7	25.7	27.5	0	23.8	0.02	19.1	0.01	5.2	0.01	3.1	0	0	0	0	0	0	0	0	315.14
NOx	93.6	11.2	12	3.3	10.4	2.8	8.4	2.28	1.6	1.1	0.9	1.3	0	0	0	0	0	0	0	145.85
VOC	1.9	0.23	0.25	0.2	0.21	0.2	0.17	0.13	0	0.06	0	0.05	29.1	5.54	1.49	0	0	0	0	39.53
CO	8.5	1.02	1.1	2.8	0.95	2.4	0.76	1.91	0.4	0.92	0.2	0.18	0	0	0	0	0	0	0	17.93
total HAPs	0	0	0	0.061	0	0.054	0	0.043	0	0.02	0	0	0	4.24	0	0	0	0	0	4.418
worst case	0	0	0	0.059 (Hex.)	0	0.05 (Hexane)	0	0.039 (Hex.)	0	0.019 (Hexane)	0	0	0	0	0	0	0	0	0	0.116 (Formaldehyde)

Total emissions based on rated capacity at 8,760 hours/year.

Controlled Emissions (tons/year)

Pollutant	Limited No. 6 Oil Combustion Sourcewide	Limited No. 2 Oil Combustion Sourcewide	Flux Heater natural gas Combustion	Filler Heater natural gas Combustion Hot oil heater	Oil Heater natural gas Combustion Mod-bit oil heater	Heater			Shingles and Roll Production Line	Process Modified Bitumen Production Line	Asphalt Blowing	Handling and Storage			Total
						natural gas Combustion Liquid asphalt Storage Heater	Lpg combustion Mat heater and Flame Bar					Granule Handling	Filler Handling	Talc Handling	
PM	9.3	0.1	0.1	0.1	0.04	0.02	0.04	22.7	3.33	70.95 controlled	26.81	0.336	0.001	4.06	137.89
PM10	5.8	0.1	0.2	0.2	0.17	0.08	0.04	16.35	2.4	73.9 controlled	4.02	0.28	0.001	4.06	107.5
SO2	94.5	4.2	0	0.02	0.01	0.01	0	0	0	85.3 PM10 limit	0	0	0	0	99.0 with limit
NOx	41.4	1.3	3.3	2.8	2.28	1.1	1.3	0	0	0	0	0	0	0	53.48
VOC	0.85	0	0.2	0.2	0.13	0.06	0.05	29.1	5.54	0.15	0	0	0	0	36.28
CO	3.76	0.3	2.8	2.4	1.91	0.92	0.18	0	0	0	0	0	0	0	12.27
total HAPs	0	0	0.061	0.054	0.043	0.02	0	0	4.24	0	0	0	0	0	4.418
worst case	0	0	0.059 (Hex.)	0.05 (Hex)	0.039 (Hex.)	0.019 (Hexane)	0	0	0	0.116 (Formal.)	0	0	0	0	0.116 (Formal.)

Total emissions based on rated capacity at 8,760 hours/year, after control.