

ENVIRONMENTAL PROTECTION COMMISSION OF
HILLSBOROUGH COUNTY, as Delegated by

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF PERMIT ISSUANCE

CERTIFIED MAIL

Craig Best
Plant Manager
Building Materials Manufacturing Corporation
dba GAF Materials Corporation
5138 Madison Avenue
Tampa, FL 33619

File No.: 0570056-035-AF
County: Hillsborough

Enclosed is a Federally Enforceable State Operating Permit (FESOP) No. 0570056-035-AF to operate an asphalt roofing manufacturing facility, issued pursuant to Section 403.087, Florida Statutes. Please read this renewal permit thoroughly as there are changes from the previous permit.

The EPC will issue the final permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Section 120.569 and 120.57 F.S. before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Legal Department of the EPC at 3629 Queen Palm Drive, Tampa, Florida 33619, Phone 813-627-2600, Fax 813-627-2602. Petitions filed by the permit applicant or any of the parties listed below must be filed within 14 (fourteen) days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S. must be filed within 14 (fourteen) days of receipt of this permit. Under Section 120.60(3), however, any person who asked the EPC for notice of agency action may file a petition within

14 (fourteen) days of receipt of that notice, regardless of the date of publication.

GAF Materials Corporation
Tampa, FL 33619

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A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the F.A.C.

A petition that disputes the material facts on which the EPC's action is based must contain the following information:

- (a) The name and address of each agency affected and each agency's file or identification number if known;
- (b) The name, address, and telephone number of the petitioner and the name, address, and telephone number of each petitioner's representative, if any, which shall be the address for service purposes during the course of the proceedings; and an explanation of how the petitioner's substantial interests will be affected by the EPC's determination;
- (c) A statement of how and when the petitioner received notice of the EPC action;
- (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
- (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the EPC's proposed action;
- (f) A statement of specific rules or statutes the petitioner contends requires reversal or modification of the EPC's proposed action; and
- (g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the EPC to take with respect to the EPC's proposed action.

A petition that does not dispute the material facts upon which the EPC's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above as required by Rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the EPC's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the EPC on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

Mediation under section 120.573, F.S. is not available in this proceeding.

This action is final and effective on the date filed with the Clerk of the EPC unless a petition is filed

in accordance with above. Upon the timely filing of a petition, this order will not be effective until further order of the EPC.

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Tampa, FL 33619

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Any person listed below may request to obtain additional information, a copy of the application (except for information entitled to confidential treatment pursuant to Section 403.111, F.S.), all relevant supporting materials, and all other materials available to the EPC that are relevant to the permit decision. Interested persons may contact Diana M. Lee, P.E., at the above address or call (813) 627-2600, for additional information.

Any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes, by filing a notice of appeal under rule 9.110 of the Florida rules of Appellate Procedure with the EPC's Legal Office at 3629 Queen Palm Drive, Tampa, Florida 33619 and with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice must be filed within thirty days after this order is filed with the clerk of the Department.

Executed in Tampa, Florida

ENVIRONMENTAL PROTECTION COMMISSION
OF HILLSBOROUGH COUNTY

Richard D. Garrity, Ph.D.
Executive Director

RDG/KRZ/krz

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT ISSUANCE and all copies were mailed before the close of business on _____ to the listed persons.

FILING AND ACKNOWLEDGEMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the clerk, receipt of which is hereby acknowledged.

Clerk

Date

PERMITTEE:
Building Materials Manufacturing Corporation
dba GAF Materials Corporation
5138 Madison Avenue
Tampa, FL 33619

PERMIT/CERTIFICATION
Permit No.: 0570056-035-AF
Expiration Date: December 18, 2018
County: Hillsborough
Project: Asphalt Roofing Manufacturing

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 62-204, 62-210, 62-212, 62-296, 62-297, and 62-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the EPC and made a part hereof and specifically described as follows:

GAF Materials manufactures asphalt roofing shingles. Asphalt flux is received by tanker trucks and is pumped to a 210,000 gallon asphalt flux tank (Tank T1), which is a fixed roof tank, with six 6" vents, that is heated by a natural gas-fired hot oil system at approximately 220° F. The flux is transferred to a 25,000 gallon preheating tank (approximately 450° F), which is a fixed roof tank with a 6" vent that is heated from heat recovered from the afterburner via recirculation from the tank. The flux is then transferred to one of two blow stills, North and South (EU 103 and EU 004), where the product is oxidized. The physical properties of the flux are tested to determine the length of blow time necessary. Each blow still oxidizes approximately 20,000 gallons per batch by bubbling air into the still until the asphalt obtains the required properties. The oxidation process generates an exothermic chemical reaction, so an external water spray system is used to maintain the temperature of the flux at the desired level, typically around 530°F. Each blow process typically lasts between 3.5 to 4 hours, and the total batch lasts an average of 7 hours. Emissions generated during batch oxidation of the asphalt are directed to a 9 MMBTU/hr natural gas fired fume afterburner. Based on historical records regarding batches blown per year, the process rate is approximately 12.5 tons/hr, which equates to an annual rate of 26.3 mmgal/yr.

After oxidation, the product, called asphalt "coating" following oxidation, is pumped from the blow stills to coating storage and awaits production. Coating storage consists of two banks of storage tanks. Tank Nos. T3, T4, T5, and T6 are 25,000 gallon unheated horizontal tanks with one 4" vent each, and Tank No. T7 is a 42,000 gallon unheated vertical fixed roof tank with one 4" vent that is used intermittently. T7 can also be used as the flux tank when necessary. Tanks Nos. T3 thru T6 also have back-up natural gas burners for emergency use should problems with other units occur. Tank Nos. T9, T10 and T11 are unheated vertical fixed roof tanks with one 4" vent each. Asphalt destined for built-up roofing application is primarily stored in the tanks located west of the still yard. Asphalt used for mat coating is generally stored in the tanks south of the still yard.

After storage, the asphalt coating is pumped into the manufacturing building where it is mixed by agitator blades with limestone in a closed horizontal mix tank that is 30” in diameter and 7 feet in length and heated by a hot oil system. The particulate matter emissions from the mix tank go to a 20,000 ACFM United Air Specialists "Smog Hog" Model MS-20-119157-3 electrostatic precipitator (ESP). A circulating asphalt heater (coating loop heater) is used to re-circulate the asphalt coating mixture to ensure the proper viscosity to be properly applied in the manufacturing process. The natural gas-fired heater is a Born, Inc. (Serial No. 2364) unit with a maximum heat input of 8.4 MMBtu/hr. Emissions from natural gas combustion are included with the limestone filler heater emissions. The asphalt/limestone mixture is then applied to a fiberglass mat in the Asphalt Mat Coater (EU 001) by spreading it evenly across the mat with two knives at a maximum rate of 35.3 tons/hr. The fiberglass mat is fed to the Asphalt Mat Coater at a maximum speed of 750 ft/min., average daily, where it is coated with asphalt prior to the addition of sand and colored granules. The granulated mat is then cooled by moving over rollers and directed to either a shingle cutter or a pattern cutter. Two layers of mat are joined by a laminating resin in the pattern cutting section. The shingles are then wrapped and palletized for shipment. Fumes and particulate matter emissions generated during mat coating are also directed to the Smog Hog. The limestone is heated by natural gas in the Filler Heater (EU 005) prior to mixing with the asphalt in the Mat Coater. Exhaust from the Filler Heater is passed through a cyclone and then through a 7545 ACFM Eastern Control Systems 100-C-10 baghouse for particulate matter control.

Limestone is pneumatically pumped at a normal rate of around 30 tons/hr into two storage silos prior to heating in the Filler Heater. However, this rate can vary depending on the moisture content of the limestone. The East Limestone Storage Silo (EU 008) uses a 1500 ACFM Torit Model No. 16PJD8 baghouse to control particulate matter emissions from silo loading; the West Limestone Storage Silo (EU 006) uses a 1500 ACFM Torit Model No. 16PJD8 baghouse to control particulate matter emissions.

At the mat coater, the face of the coated mat is immediately covered with colored granules while the back of the mat is covered with sand in the surfacing section. Sand is applied from a hopper with a fluted roll at a maximum rate of 5.4 tons/hr, and granules are applied from a sealed blender at a maximum rate of 9.5 tons/hr. Particulate matter emissions due to the application of sand and granules to the mat are vented to two separate baghouses, Back Surfacing System with East Baghouse (EU 002) and Back Surfacing System with West Baghouse (EU 003), which handle both sand and granules, but usually more sand than granules. The East Baghouse is an 8000 ACFM Donaldson Co., Torit Model No. 324 MBWS8 baghouse. The West Baghouse is a 4400 ACFM W.W. Sly Manufacturing Co. Model Pactecon P.C. 205 baghouse.

Sand is typically transferred at a rate of 25 tons/hr into one of two Sand Storage Silos (EU 007) located west of the manufacturing building prior to being applied to the mat; however, it can be processed at rates up to approximately 51 tons/hr. The sand silo loading system is composed of gravity drop from the center of trucks onto a belt conveyor (EU 100) which feeds into a hopper where sand is picked up by a bucket elevator. At the top of the bucket elevator, either one of two kinds of sand, fine sand (fine sand #6045) or head lap sand (coarse sand #1245) can be diverted to the appropriate silo. Fine sand is stored in the North Silo, and coarse sand is stored in the South Silo. Emissions generated during the silo loadings are controlled by a single 1000 ACFM Carter-Day Model 9 DFB 8 baghouse, since only one silo can be loaded at a time. The truck to conveyor transfer point is controlled by a partial enclosure and the conveyor to hopper to bucket elevator transfer point is controlled by a shroud.

To unload the sand at the Truck/Railcar Unloading - East (EU 102), a truck or railcar empties the sand or coal slag through a grate into a below grade hopper. From the hopper, an enclosed conveyor transfers the material to a bucket elevator. The bucket elevator lifts the sand/coal slag to the top of Storage Silo No. 3 (EU 101). From the silo, sand/coal slag is pneumatically conveyed to a hopper inside the manufacturing building. Particulate matter emissions from silo loading are controlled by the same baghouse that controls the Back Surfacing System - East (EU 002). Particulate matter emissions from the conveyor and bucket elevator are controlled by partial enclosures and limiting the material usage of the sand/coal slag.

The granules are screened and colored off-site and delivered to the facility by railcar or truck. The colored granules are received from the railcars or trucks through two underground receiving hoppers adjacent to one another on the east side of the manufacturing building. The granules are transferred from the hoppers through a partially enclosed conveyor and up to the base of an enclosed elevator. The elevator transports the granules to the top of a bank of 24 storage silos. The granules are delivered to a secondary mobile conveyor system on top of the silos that allows the operator to locate the final loading chute above the desired silo for loading. The silo loading openings typically remained covered unless actively being loaded. All of the area above the silos, including the mobile conveyor system, is enclosed by a rigid structure called the penthouse. There are two openings on the penthouse: a fan on the south side and a doorway on the north side. The maximum granule handling process rate is 50 ton/hr as limited by the capacity of the conveyor leading to the elevator.

Since the facility has requested limits to establish it as a synthetic minor source for hazardous air pollutants (HAP) emissions, the facility is exempt from the NESHAP for Asphalt Roofing and Processing (40 CFR 63, Subpart LLLLL). The facility, however, is subject to PM-RACT, Rules 62-296.711 and 712, F.A.C.

Miscellaneous VOC emissions from products of combustion (excluding the fume afterburner) and losses associated with the various asphalt flux and asphalt coating storage tanks are estimated to be less than one ton per year. The existing storage tanks were determined to be exempt from permitting due to their low emissions and since they are not subject to 40 CFR 60, Subpart UU due to their age. HAP emissions are estimated to be less than the major source threshold of ten tons per year for any individual HAP and 25 tons per year for any combination of HAPs.

Location: 5138 Madison Avenue, Tampa

UTM: 17-362.50 E 3087.10 N NEDS NO: 0056

Emission Unit ID: 001 - Asphalt Mat Coater
002 - Back Surfacing System, East
003 - Back Surfacing System, West
004 - Asphalt Oxidizing Plant: South Still
005 - Limestone Filler Heater System
006 - West Limestone Storage Silo
007 - Sand Storage Silos/Elevator System - West
008 - East Limestone Storage Silo
100 - Sand Truck Unloading - West (Gravity Drop)

101 - Storage Silo No. 3

102 - Truck/Railcar Unloading - East (Hopper, Conveyor and Bucket Elevator)

103 - Asphalt Oxidizing Plant: North Still

105 - Granule Receiving and Storage

Emission Point No. 1: Truck/Railcar Drop to Hoppers

Emission Point No. 2: Conveyor to Elevator

Emission Point No. 3: Elevator to Silos (Penthouse)

Replaces Permit No.: 0570056-034-AF

PERMITTEE:
Building Materials Manufacturing Corp.

Permit/Certification No.: 0570056-035-AF
Project: FESOP Renewal - Asphalt Roofing Manufacturing

SPECIFIC CONDITIONS:

1. A part of this permit is the attached General Conditions. [Rule 62-4.160, F.A.C.]
2. All applicable rules of the Environmental Protection Commission of Hillsborough County including design discharge limitations specified in the application shall be adhered to. The permit holder may also need to comply with county, municipal, federal, or other state regulations prior to construction.
[Rule 62-4.070(7), F.A.C.]
3. Issuance of this permit does not relieve the permittee from complying with applicable emission limiting standards or other requirements of Chapters 62-204, 62-210, 62-212, 62-296 and 62-297, F.A.C., or any other requirements under federal, state, or local law. [Rule 62-210.300, F.A.C.]
4. In order to limit the potential to emit for the facility, the maximum allowable particulate matter (PM) emissions for the facility shall not exceed 91.2 tons per twelve consecutive month period.
[Rule 62-4.070(3) and 62-212.300, F.A.C., Permit Nos. 0570056-023/026/028-AC; and Permit No. 0570056-034-AF]
5. In order to limit the potential to emit for the facility, the maximum allowable volatile organic compound (VOC) emissions for the facility shall not exceed 71.5 tons per twelve consecutive month period as follows:
[Rule 62-4.070(3) and 62-296.320, F.A.C., Permit No. 0570056-026/034-AC/AF]
 - A) 25.2 tons from the Asphalt Mat Coater (EU 001).
 - B) 45.3 tons from the Asphalt Oxidizing Plant: South Still (EU004) and North Still (EU 103).
 - C) 1.0 tons from miscellaneous sources such as tank losses & fugitives and products of combustion (excluding the fume afterburner).
6. As requested by the permittee, in order to establish the facility as a synthetic minor source for Hazardous Air Pollutants (HAPs), the HAP, as defined in Rule 62-210.200, F.A.C., emissions shall be less than 10 tons in any 12 consecutive month period for any individual HAP, and less than 25 tons in any 12 consecutive month period for any combination of HAPs.
[Rule 62-210.200, F.A.C., Permit No. 0570056-034-AF]
7. The maximum natural gas fuel usage shall not exceed 127 million cubic feet per twelve consecutive month period. [Rule 62-4.070(3), F.A.C. and Permit No. 0570056-006-AC]
8. The permittee shall not cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor. [Rule 62-296.320(2), F.A.C.]
9. The permittee shall demonstrate compliance with the emission limitations of NSPS Subpart UU and PM-RACT, and Specific Condition No. 4, as detailed in Tables 1 and 2 below:
[40 CFR 60.472; Rules 62-4.070(3), 62-204.800 and 62-296.700, F.A.C.; Chapter 1-3.52 Rules of the EPC; Permit Nos. 0570056-023/026/028-AC and Permit No. 0570056-034-AF]

PERMITTEE:
Building Materials Manufacturing Corp.

Permit/Certification No.: 0570056-035-AF
Project: FESOP Renewal - Asphalt Roofing Manufacturing

SPECIFIC CONDITIONS:

Table 1

<u>EU ID</u>	<u>Source</u>	<u>gr/dscf</u>	<u>lb/ton</u>	<u>ton/yr</u>	<u>Opacity</u>	<u>Regulations</u>
001	Asphalt Mat Coater	0.03	0.08 ¹	12.4	5%	Rule 62-296.712, F.A.C., 40CFR60.472
002	Back Surfacing System, East	0.03	-----	8.4 ²	5%	Rule 62-296.711(2), F.A.C.
003	Back Surfacing System, West	0.03	-----	3.4	5%	Rule 62-296.711(2), F.A.C.
004/103	Asphalt Oxidizing Plant: South and North Stills	-----	0.99 ²	54.0	0%	Rules 62-296.712 and 62-4.070(3), F.A.C., 40CFR60.472
005	Limestone Filler Heater System	0.03	-----	7.8	5%	Rule 62-296.711(2), F.A.C.
006	West Limestone Storage Silo	0.03	-----	0.9	1%	Rule 62-4.070(3), F.A.C., 40CFR60.472
007	Sand Storage Silos	0.03	-----	0.2	1%	Rule 62-4.070(3), F.A.C., 40CFR60.472
008	East Limestone Storage Silo	0.03	-----	0.9	1%	Rule 62-4.070(3), F.A.C., 40CFR60.472
100	Sand Truck Unloading – West (Gravity Drop)	-----	-----	0.5	1%	40 CFR 60.472
101	Storage Silo No. 3	0.03	-----	Note ³	1%	Rule 62-296.711, F.A.C., 40CFR60.472
102	Truck/Railcar Unloading (Hopper, Conveyor and Elevator)	0.03	-----	0.6	1%	40 CFR 60.472
105	Granule Receiving and Storage	-----	-----	2.0	1%	Rule 62-296.711, F.A.C., 40CFR60.472

Table 2

<u>EU ID</u>	<u>Source</u>	<u>Process Rate</u>	<u>Hours of Operation or Truck Loads per 12 Consecutive Months</u>	<u>Control</u>	<u>O&M Plan</u>
001	Asphalt Mat Coater	35.3 ton/hr asphalt mix	8,760 hours	ESP	Yes
002	Back Surfacing System, East	5.4 ton/hr sand	8,760 hours	Baghouse	Yes
003	Back Surfacing System, West	5.4 ton/hr sand	8,760 hours	Baghouse	Yes
004/103	Asphalt Oxidizing Plant: South and North Stills	26.3 MMgal/yr ⁴	8,760 hours	Afterburner	Yes
005	Limestone Filler Heater System	26.9 ton/hr limestone	8,760 hours	Baghouse	Yes
006	West Limestone Storage Silo	~12 psig	5,000 hours ⁵	Baghouse	Yes
007	Sand Storage Silos	51 ton/hr of sand	3,000 truck loads	Baghouse	Yes
008	East Limestone Storage Silo	~12 psig	5,000 hours ⁵	Baghouse	Yes
100	Sand Truck Unloading – West (Gravity Drop)	51 ton/hr of sand	3,000 truck loads	Partial Enclosure	Yes
101	Storage Silo No. 3	70 ton/hr of sand/coal slag	8,760 hours	Baghouse	Yes
102	Truck/Railcar Unloading (Hopper, Conveyor and Elevator)	70 ton/hr of sand/coal slag	3,000 hours	Partial Enclosure	Yes
105	Granule Receiving and Storage	50 ton/hr of granules	8,760 hours	Partial Enclosure	No

¹ lb/ton of asphalt shingle produced

² 40 CFR 60.472 requires a limit of 1.2 lb/ton for PM emissions; however, the facility elected a lower standard to avoid Title V.

³ EU 002 and EU 101 are controlled by the same baghouse. Emissions from both are covered under EU002 based on 0.03 gr/dscf.

⁴ 1,314 batch/year x 20,000 gal/batch = 26.3 mmgal/yr asphalt

⁵ 5,000 truck loads total between the two limestone storage silos (EU006 and EU008), based on 1 truck unloading per hour.

PERMITTEE:
 Building Materials Manufacturing Corp.

Permit/Certification No.: 0570056-035-AF
 Project: FESOP Renewal - Asphalt Roofing Manufacturing

SPECIFIC CONDITIONS:

10. In order to demonstrate compliance, in part, with the emission limitations in Specific Condition Nos. 5 and 9, the maximum asphalt processed (oxidized) shall not exceed 26.3 million gallons per twelve consecutive month period. [Rule 62-4.070(3), F.A.C.; Permit No. 0570056-026/034-AC/AF]

11. The permittee shall conduct emissions testing at the point of highest expected emissions for the following sources for the pollutants and test frequencies indicated below. Annual visible emission testing is required once per federal fiscal year (October 1 through September 30). An EPA Method 5A particulate matter test shall be performed on the mat coater (precipitator exhaust) prior to operating permit renewal (at least once every five (5) years). However, if the results of any EPA Method 5A particulate matter test on the mat coater (precipitator exhaust) are within 20 percent of the 0.08 lb/ton or 0.03 gr/dscf emission standards specified in Specific Condition No. 9, the permittee shall test the mat coater (precipitator exhaust) for particulate matter every two and a half years. Submit two copies of the test data to the Air Section of the Environmental Protection Commission of Hillsborough County within 45 days of testing. Testing procedures shall be consistent with the requirements of Rule 62-297.310(8)(b), F.A.C. and 40 CFR 60.8(a): [Rules 62-4.070(3) and 62-297, F.A.C.; and 40 CFR 60.8(a) and 60.474]

<u>EU I.D.</u>	<u>Control</u>	<u>Annually per Federal Fiscal Year</u>	<u>At Least 120 Days Prior to Permit Expiration</u>	<u>V.E. Test Duration (minutes)</u>
001	ESP	VE ¹	PM, VE ¹	30
002	Baghouse	VE ⁶	---	30
003	Baghouse	VE	---	30
004/103	Afterburner ⁴	VE	PM, VOC ² , VE	30
005	Baghouse	VE	---	30
006	Baghouse	VE	---	30
007	Baghouse	VE	---	30
008	Baghouse	VE	---	30
100	Partial Enclosure	VE ³	---	30
101	Baghouse	VE ⁶	---	30
102	Partial Enclosure	VE ⁵	---	30
105	Partial Enclosure	VE ⁷	---	30

¹ Also conduct a VE test on the roof monitor directly above the mat coater concurrently with this test.
² Inlet and outlet of the afterburner.
³ Concurrently with the baghouse test on EU 007. Truck Unloading also includes VE tests from partial enclosure around initial product drop from truck to conveyor, at hopper from conveyor, and bucket elevator material transfer points.
⁴ See Specific Condition No. 17.
⁵ Concurrently with the baghouse test on EU 101. Truck/Railcar Unloading also includes VE tests from initial product drop from truck/railcar into underground hopper, and bucket elevator material transfer points.
⁶ Conduct testing of the baghouse controlling EU 002 and EU 101 while both the silo loading and back surfacing operations are taking place in order to simulate highest expected emissions.

PERMITTEE:
Building Materials Manufacturing Corp.

Permit/Certification No.: 0570056-035-AF
Project: FESOP Renewal - Asphalt Roofing Manufacturing

SPECIFIC CONDITIONS:

⁷ VE test for Granule Handling includes observation of 3 separate emission points: #1 - Truck/Railcar Drop to Hoppers, #2 - Conveyor to Elevator, and #3 - Elevator to Silos (Penthouse). The test for silo loading shall be from the highest point of opacity observed from the penthouse. The test report shall indicate the point on the penthouse at which the emissions were observed.

12. In order to demonstrate compliance with the emission limitations in Specific Condition Nos. 5 and 9 (Table 1, EU 001), the following shall apply:
[40 CFR 60.473(a), Rule 62-4.070(3), F.A.C. and Permit No. 0570056-032-AC]

- A) The maximum asphalt mat coating processing rate is 35.3 tons per hour of asphalt/limestone mixture.
- B) Maximum line speed and the asphalt mix temperature are 750 ft./min. and 480° F, respectively, averaged daily.
- C) The permittee shall calibrate and maintain a magnehelic gauge to measure the static pressure inside the inlet of the evacuation hood over the coating process.
- D) The evacuation hood over the coating process shall be kept at a minimum static pressure of 0.1 inch of water at all times.
- E) The particulates from the asphalt coating process shall be evacuated by a 20,000 ACFM United Air Specialists "Smog Hog" Model MS-20-119157-3 electrostatic precipitator.
- F) The hot asphalt delivery and return troughs shall be kept closed at all times, with the exception of open inspection ports located under the mat coater exhaust hood, and vapors from the mix shall not be allowed to escape into the building.
- G) The permittee shall continuously monitor and record the temperature of the gas at the inlet of the precipitator and ensure that temperature monitoring instrument shall have an accuracy of ± 15 °C (± 25 °F) over its range, as specified by 40 CFR Subpart UU.

13. In order to demonstrate compliance with the emission limitations in Specific Condition Nos. 5 and 9 (Table 1, EU 004 and EU 103), the following shall apply:
[40 CFR 60.472, Rules 62-4.070(3) and 62-204.800, F.A.C.]

- A) As requested by the permittee, particulate matter from the asphalt oxidizing operation shall not exceed 0.99 pounds of particulate per ton of asphalt charged to the still during blowing.
- B) Minimum afterburner VOC destruction efficiency: 90%
- C) Minimum temperature in the combustion chamber shall be 1200° F while oxidizing asphalt with a minimum flue retention time of 0.3 seconds in the combustion zone.
- D) Typical Batch Size: 20,000 gallons
- E) Average Blow Time: 4 hours/batch
- F) Average Batch Time: 7 hours
- G) Number of Batches: 1,314 batches/year* (equivalent to 12.5 ton/hr and 20,000 x 1,314 = 26.3 million gallons/yr. *)
- H) The hours of operation are not limited (8,760 hours/year).

PERMITTEE:
Building Materials Manufacturing Corp.

Permit/Certification No.: 0570056-035-AF
Project: FESOP Renewal - Asphalt Roofing Manufacturing

SPECIFIC CONDITIONS:

- I) The afterburner shall be fired on natural gas with a maximum heat input of 9 MMBtu/hr, and shall operate continuously when a charge is in either blow still.
- J) Both blow still tanks shall be allowed to operate simultaneously, but only one tank shall be allowed to be blown at any given time.
- K) No catalyst shall be used.

* In any consecutive twelve (12) month period.

14. In order to demonstrate compliance with the emission limitations in Specific Condition Nos. 4 and 9 (Table 1, EU 101 and EU 102), the following shall apply:
[40 CFR 60.472, Rules 62-4.070(3), 62-204.800, F.A.C., and Permit No. 0570056-023-AC]

- A) The maximum amount of sand or coal slag delivered to EU 101 (Storage Silo No. 3) shall not exceed 81,000 tons per twelve consecutive month period.
- B) The facility shall install and maintain a measuring device to measure the air pressure differential across the baghouse bags within 10% accuracy.

15. In order to demonstrate compliance with the emission limitations in Specific Condition No. 9 related to granule handling, the following restrictions and limitations shall apply:
[40 CFR 60.472, Rules 62-296.320(1)(a), 62-4.070(3), 62-204.800, F.A.C. and Permit No. 0570056-028-AC]

- A) The maximum granule processing rate is 50 tons per hour of granules to the silos.
- B) The maximum amount of granules delivered to the granule silos shall not exceed 438,000 tons per twelve consecutive month period.
- C) Hours of operation for the granule receiving and storage operation are not limited.
- D) The permittee shall use enclosures as necessary around the conveyor, elevator, hoppers, and silos in order to comply with the opacity standard from Specific Condition No. 9.

16. All emission units with a control device shall have their emissions vented through the corresponding control device. [Rules 62-210.650, 62-4.070(3), F.A.C. and Permit No. 0570056-026-AC]

17. The permittee shall avoid pneumatic line pressures that may cause baghouse failure during loading of the storage silos covered in this permit. The line pressure shall not exceed 12 psig.
[Rules 62-210.650 and 62-4.070(3), F.A.C.]

18. Compliance with the testing requirements in Specific Condition No. 11 shall be determined using EPA Methods 1, 2, 3, 4, 5, 5A, 9, and 25A contained in 40 CFR 60, Appendix A and adopted by reference in Rule 62-297, F.A.C. The minimum requirements for stack sampling facilities, source sampling and reporting, shall be in accordance with Rule 62-297, F.A.C. and 40 CFR 60, Appendix A. Destruction Efficiency testing shall be conducted using EPA Methods 2 and 25A on the inlet and the outlet of the afterburner. [40 CFR 60.11 and 60.474; and Rules 62-4.070(3) and 62-297, F.A.C.]

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19. Testing of emissions shall be conducted with the source operating at capacity. Capacity is defined as 90-100% of rated capacity described in the process rate column in Table 2 of Specific Condition No. 9, and under the conditions described below. If it is impracticable to test at capacity, then the source may be tested at less than capacity; in this case subsequent source operation is limited to 110% of the test load until a new test is conducted. Once the unit is so limited, then operation at higher capacities is allowed for no more than fifteen days for purposes of additional compliance testing to regain the rated capacity in the permit, with prior notification to the EPC. Failure to submit the input rates and actual operating conditions, including the Delta P across the baghouses and the heat input rate to the asphalt oxidizer during the blowing cycle, may invalidate the test. For the pneumatic loading of silos, include the maximum tanker/line pressure (psig) registered during the test and the resulting loading rate (ton/hr) at that pressure. The permittee shall use a temperature monitoring device to monitor and record continuously the temperature during the particulate matter runs for the blow stills and the Mat Coater, and submit the results with the tests. [Rules 62-4.070(3) and 62-297.310, F.A.C.; 40 CFR 60.474]

- A) For the Asphalt Mat Coater (ESP), the test shall be conducted at the maximum rate of 35.3 tons of asphalt coating mix per hour and with the asphalt/limestone mix tank actively in operation.
- B) For the Asphalt Oxidation Plant (Afterburner), the test shall be conducted at the rated capacity of 12.5 tons of asphalt oxidized per hour and while a still is actively being blown. The test shall be performed on the opposite still that was tested during the most recent compliance test (i.e. if the previous compliance test was performed while the North Blow Still tank was blown, then the South Blow Still should be in operation during the new test). In the event that the tank which is due for testing is not available (or inoperable) for the forthcoming scheduled test, the permittee may request from the EPC to conduct the test on the alternate available tank.
- C) Test EU 007 and EU 100 when handling fine sand.
- D) Test EU 006 and EU 008 at a minimum of 9 psi truck unloading pressure and 25 ton/hr, unless it is unattainable in practice to reach that loading rate.

20. Testing to demonstrate compliance with the lb/ton emission limitations from 40 CFR 60.472 for the Mat Coater and Blow Stills shall include the following: [40 CFR 60.472 and Rule 62-4.070(3), F.A.C.]

- (1) If the final product is fiberglass shingle, then the test on the mat coater shall be conducted on the highest weight nominal shingle typically produced. If a different product is produced, then testing shall be consistent with 40 CFR 60.474(a).
- (2) The emission rate (E) of particulate matter shall be computed for each run using the following equation:

$$E=(c_s Q_{sd})/(PK)$$

where:

E=emission rate of particulate matter, kg/Mg (lb/ton).

c_s =concentration of particulate matter, g/dscm (gr/dscf).

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Q_{sd} =volumetric flow rate of effluent gas, dscm/hr (dscf/hr).

P=asphalt roofing shingle production rate or asphalt charging rate, Mg/hr (ton/hr).

K=conversion factor, 1000 g/kg [7000 (gr/lb)].

- (3) Method 5A shall be used to determine the particulate matter concentration (c_s) and volumetric flow rate (Q_{sd}) of the effluent gas. For the mat coater, the sampling time and sample volume for each run shall be at least 120 minutes and 3.00 dscm (106 dscf), and for the blowing stills, at least 90 minutes or the duration of the coating blow or non-coating blow, whichever is greater, and 2.25 dscm (79.4 dscf).
- (4) For the mat coater, the asphalt roofing production rate (P) for each run shall be determined as follows: The amount of asphalt roofing produced on the shingle (weight of roofing shingle) or saturated felt process lines shall be obtained by direct measurement. The asphalt roofing production rate is the amount produced divided by the time taken for the run.
- (5) For the blowing still, the asphalt charging rate (P) shall be computed for each run using the following equation:

$$P=(Vd)/(K' \Theta)$$

where:

P=asphalt charging rate to blowing still, Mg/hr (ton/hr).

V=volume of asphalt charged, m^3 (ft^3).

d=density of asphalt, kg/m^3 (lb/ft^3).

K'=conversion factor, 1000 kg/Mg (2000 lb/ton).

Θ =duration of test run, hr.

(i) The volume (V) of asphalt charged shall be measured by any means accurate to within 10 percent.

(ii) The density (d) of the asphalt shall be computed using the following equation:

$$d = K_1 - K_2 T_i$$

Where:

d = Density of the asphalt, kg/m^3 (lb/ft^3)

K_1 = 1056.1 kg/m^3 (metric units)

= 64.70 lb/ft^3 (English Units)

K_2 = 0.6176 $kg/(m^3 \text{ } ^\circ C)$ (metric units)

= 0.0694 $lb/(ft^3 \text{ } ^\circ F)$ (English Units)

T_i = temperature at the start of the blow, $^\circ C$ ($^\circ F$)

21. The permittee shall notify the Air Compliance Section of the Environmental Protection Commission of Hillsborough County at least 15 days prior to the date on which each formal compliance test is to begin of the date, time, and place of each such test, and the contact person who will be responsible for coordinating and having such test conducted. [Rule 62-297.310(7)(a)9, F.A.C]

22. The permittee shall maintain daily records of hours of operation of the asphalt mat coater in order to ensure compliance with Specific Condition No. 12. The records shall include, as a minimum, the following information and shall be made available for inspection by the Environmental Protection

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Commission of Hillsborough County for at least three years. The records shall include, as a minimum:
[Rules 62-4.070(3) and 62-4.160(14), F.A.C.]

- A) Date:
- B) Asphalt Mat Coater Processing Rate (in ton/hr.)
- C) Maximum Line Speed (in ft./min.)
- D) Maximum Asphalt Mix Temperature (in °F)

On a monthly basis, records shall be maintained of the following:

- E) Month, Year
- F) Tons of asphalt/limestone mixture coated in the month
- G) 12 month rolling total of Item F) above

23. The permittee shall maintain daily records of hours of operation of the oxidizing tanks in order to ensure compliance with Specific Condition No. 13. The records shall include, as a minimum, the following information and shall be made available for inspection by the Environmental Protection Commission of Hillsborough County for at least three years. The records shall include as a minimum:
[Rule 62-4.070(3) and 62-4.160(14), F.A.C.; and 40 CFR 60.473]

- A) Date
- B) Blow Still Identification
- C) Batch Size (in gallons)
- D) Temperature records as described in Specific Condition No. 30

On a monthly basis, records shall be maintained of the following:

- F) Monthly and rolling 12-month total of the number of batches processed
- G) Monthly and rolling 12-month total of asphalt oxidized (in gallons)
- H) Monthly and rolling 12-month total of hours of operation

24. The permittee shall maintain a log book for each storage silo loading operation covered in this permit. The records shall be maintained onsite for at least three years and shall be made available to any local, state, or federal air pollution agency. The log book shall include, but not be limited to, the following information: [Rule 62-4.070(3) and 62-4.160(14), F.A.C.]

- A) Date, Month
- B) Monthly summary of materials received. Maintain separate record for each silo
- C) Maximum air pressure at which tanker unloads
- D) Record the pressure drop across the baghouse at least once per day for each emission unit that is used
- E) 12 month rolling total of Item B above

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25. The permittee shall maintain monthly records of the granule receiving and storage operation in order to ensure compliance with Specific Condition No. 15. The records shall be maintained onsite for at least three years and shall be made available to any local, state, or federal air pollution agency. The records shall include as a minimum: [Rules 62-4.070(3) and 62-4.160(14), F.A.C.]

- A) Date, Month
- B) Granules received (tons)
- C) Monthly and rolling consecutive 12-month totals of granules received (tons)

26. The permittee shall maintain and operate the temperature controller to prevent heat damage to the fabric filters in the Limestone Filler Heater System baghouse. The thermocouple shall be replaced and/or calibrated annually. [Rule 62-4.070(3), F.A.C. and Permit No. 0570056-034-AF]

27. The permittee shall maintain the electrical interlock system which prevents the feed of sand to the back surfacing operation without the East and West dust collector blowers being in operation. [Rule 62-4.070(3), F.A.C.]

28. The permittee shall operate and maintain the measuring devices used for determining the air pressure differential (Delta P) across the baghouses according to the manufacturers' manuals and the pressure differential shall be recorded on a daily basis. [Rule 62-4.070(3), F.A.C.]

29. The permittee shall not store, handle, process, or use in any process the volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems as follows and as deemed necessary and ordered by the Environmental Protection Commission of Hillsborough County: [Rule 62-296.320(1), F.A.C.]

- A) Maintain tightly fitting cover, lids, etc. on all containers when they are not being handled, tapped, etc.
- B) Where possible and practical, procure/fabricate a tightly fitting cover for any open trough, basin, etc. of VOC so that it can be covered when not in use.
- C) Immediately attend to all spills/waste as appropriate.

30. The permittee shall operate a temperature monitor on the Asphalt Oxidizing Plant to measure and display the afterburner/furnace combustion chamber temperature. Records shall be maintained of this temperature during each batch processed based on periodic (beginning and end of blow cycle) readings of the temperature monitor. [Rule 62-4.070(3), F.A.C. and 40 CFR 60.473]

31. All reasonable precautions shall be taken to prevent emissions of unconfined particulate matter. Reasonable precautions shall include, but not be limited to, the following: [Rule 62-296.320(4)(c), F.A.C.]

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- A) Paving or maintenance of roads, parking areas, and yards.
- B) Application of water when necessary to control emissions.
- C) Removal of particulate matter from roads and other paved areas under control of the owner or operator to prevent re-entrainment, and from buildings or work areas to prevent particulates from becoming airborne.
- D) Proper operation and maintenance of the material transport and storage system.
- E) Use of coverings or enclosures, as necessary.
- F) Curtailing of operation if winds are entraining unconfined particulate matter.
- G) Posting of vehicle (or truck) speed limits, if necessary.
- H) Insuring that the limestone filler heater storage silo high level warning system is operational when the silo is being filled with limestone.
- I) Use wind shields or coverings around the mineral handling and storage operations as necessary to ensure compliance with the 1% opacity limit. This includes all handling of sand and limestone.

32. [Reserved.]

33. Excess emissions resulting from startup, shutdown or malfunction of any emissions unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. [Rule 62-210.700, F.A.C.]

34. The permittee shall comply with the conditions of the Operation and Maintenance (O&M) Plan for particulate control of EUs 001, 002, 003, 004, 005, 006, 007, 008, 100, 101, 102 and 103, which are attached as part of this permit. In conjunction with the O&M Plan, the permittee shall perform formal cleaning and maintenance on the mat coater control system (including ductwork, precipitator, fan, etc.) at least annually in order to ensure proper designed operation of the emission control system. [Rules 62-296.700(6) and 62-4.070(3), F.A.C and FESOP Renewal Application submitted October 4, 2013]

35. The facility is subject to 40 CFR 60 – Subpart UU: Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture. The permittee shall comply with the following requirements: [Rule 62-204.800, F.A.C. and 40 CFR 60.470]

- A) The permittee shall furnish the EPC written notification as follows: [40 CFR 60.7(a)]
 - 1) A notification of any physical or operational change to an existing facility which may increase the emissions rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an application subpart or in §60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emissions control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The EPC may request additional relevant information subsequent to this notice. [40 CFR 60.7 (a)(4)]

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- B) The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. [40 CFR 60.7(b)]
- C) The permittee shall maintain a file of all measurements, including performance testing measurements and all other information required by this part recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records. Visible emissions test results are required to be maintained on-site for five years. [40 CFR 60.7(f)]
- D) Compliance with opacity standards shall be determined by conducting observations in accordance with Reference Method 9 in Appendix A (40 CFR 60). [40 CFR 60.11(b)]
- E) The opacity standards set forth in this permit shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in the applicable standard. [40 CFR 60.11(c)]
- F) At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the EPC which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. [40 CFR 60.11(d)]
- G) No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged to the atmosphere. [40 CFR 60.12]

36. When the Environmental Protection Commission of Hillsborough County (EPC) after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in Rules 62-204, 62-210, 62-212, 62-296, or 62-297, F.A.C., or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the source to conduct compliance tests which identify the nature and quantity of pollutant emissions from the source and to provide a report on the results of said tests to the EPC. [Rule 62-297.310(7)(b), F.A.C.]

37. The permittee must submit to the Environmental Protection Commission of Hillsborough County each calendar year, a completed DEP Form 62-210.900(5), "Annual Operating Report (AOR) for Air Pollutant Emitting Facility", for the preceding calendar year. The AOR shall be submitted by April 1 of the following year. [Rule 62-210.370(3), F.A.C.]

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38. The use of property, facilities, equipment, processes, products, or compounds, or the commission of paint overspraying or any other act, that causes or materially contributes to a public nuisance is prohibited, pursuant to the Hillsborough County Environmental Protection Act, Section 16, Chapter 84-446, Laws of Florida, as Amended.

39. The permittee shall provide timely notification to the Environmental Protection Commission of Hillsborough County prior to implementing any changes that may result in a modification to this permit pursuant to Rule 62-210.200, F.A.C., Modification. The changes do not include normal maintenance, but may include, and are not limited to, the following, and may also require prior authorization before implementation: [Rules 62-210.300 and 62-4.070(3), F.A.C.]

- A) Alteration or replacement of any equipment or major component of such equipment.
- B) Installation or addition of any equipment which is a source of air pollution.

40. If the permittee wishes to transfer this permit to another owner, an "Application for Transfer of Permit" (DEP Form 62-210.900(7)) shall be submitted, in duplicate, to the Environmental Protection Commission of Hillsborough County within 30 days after the sale or legal transfer of the permitted facility. [Rule 62-4.120, F.A.C.]

41. Prior to sixty days before the expiration date of this operating permit, the permittee shall apply for a renewal of the permit using the current version of the permit renewal application form. A renewal application shall be timely and sufficient. If the application is submitted prior to sixty days before the expiration date of the permit, it will be considered timely and sufficient. If the renewal application is submitted at a later date, it will not be considered timely and sufficient unless it is submitted and made complete prior to the expiration of the operation permit. When the application for renewal is timely and sufficient, the existing permit shall remain in effect until the renewal application has been finally acted upon by the EPC or, if there is court review of the final agency action, until a later date is required by Section 120.60, Florida Statutes. [Rule 62-4.090, F.A.C.]

ENVIRONMENTAL PROTECTION COMMISSION
OF HILLSBOROUGH COUNTY

Richard D. Garrity, Ph.D.
Executive Director