

Permit Alteration Source Analysis & Technical Review

Company	Building Materials Investment Corporation	Permit Number	7711A
City	Dallas	Project Number	347084
County	Dallas	Regulated Entity Number	RN100788959
Project Type	Alteration	Customer Reference Number	CN605251487
Project Reviewer	Bill Moody, P.E.	Received Date	September 1, 2022
Site Name	Asphalt Roofing Manufacturing Facility		

Project Overview

Building Materials Investment Corporation, doing business as GAF Materials Corporation (GAF), submitted an alteration request for NSR Permit 7711A which authorizes their asphalt roofing manufacturing facility (Dallas Plant) in Dallas, Dallas County. The company is requesting the following changes:

1. remove Line 1 (EPNs 1-1, 1-3, 1-4, 1-5, 1-6, and COOL1)
2. reduce the annual permitted sulfur dioxide (SO₂) emission rate for the thermal oxidizer controlling emissions from the blowstills, various asphalt storage tanks, and truck loading (EPN 8/8A).

Upon issuance of the altered permit, the Dallas Plant will no longer be classified as a major source under the Title V Federal Operating Permit (FOP) program.

This request will not result in a change in method of control of emissions, a change in character of emissions, or an increase in actual emissions or the emission rates of any air contaminant authorized by this permit. Therefore, this project meets the requirements for an alteration.

Emission Summary

Air Contaminant	Current Allowable Emission Rates (tpy)	Proposed Allowable Emission Rates (tpy)	Change in Allowable Emission Rates (tpy)
PM	100.37	54.19	-46.18
PM ₁₀	100.37	54.19	-46.18
PM _{2.5}	100.37	54.19	-46.18
VOC	47.90	40.67	-7.23
NO _x	19.13	19.13	No change
CO	66.97	66.97	No change
SO ₂	128.69	80.14	-48.55
HAPs	<10, <25	<10, <25	No change

Review Summary

Removal of Line 1

The Dallas Plant has not operated Line 1 since 2017 and GAF has no plans to restart Line 1 operations in the future. As such, GAF is requesting that Line 1 sources be removed from the permit. Specifically, GAF requests the removal of:

- EPN 1-1: Line 1 Stabilizer Storage and Heater Baghouse
- EPN 1-3: Line 1 Stabilizer Use Bin Baghouse
- EPN 1-4: Line 1 Surfacing Section Dust Collector No. 1
- EPN 1-5: Line 1 Surfacing Section Dust Collector No. 2
- EPN 1-6: Line 1 Surfacing Section Dust Collector No. 3
- EPN COOL1: Line 1 Cooling Section (3 stacks)

Removal of these sources will reduce permitted emission rates for particulate matter (PM) and volatile organic compounds (VOCs) by 46.18 tons per year (tons/yr) and 7.23 tons/yr, respectively. The coalescing filter mist elimination systems (EPN CFL/34) that were formerly used to control emissions from the Line 1 and Line 3 asphalt coaters will continue to

Permit Alteration Source Analysis & Technical Review

Permit Number: 7711A

Regulated Entity No. RN100788959

Page 2

control emissions from the Line 3 coater and will remain in the permit.

Reduction in SO₂ Emissions

The thermal oxidizer at the Dallas Plant is used to control emission from asphalt blowing operations as well as emissions from asphalt storage and truck loading activities. There is a damper in the thermal oxidizer stack that can be used to divert exhaust gases to a waste heat boiler where the gases indirectly heat water for energy recovery and supplemental steam production. When the boiler is being used, emission from the thermal oxidizer exhaust through the boiler stack (EPN 8A). Otherwise, emissions exhaust through the thermal oxidizer stack (EPN 8). Collectively, these stacks are currently permitted to emit SO₂ at a rate of 29.35 pounds per hour (lbs/hr) and 128.55 tons/yr.

The permitted hourly SO₂ emission rate for EPN 8/8A is based the results of stack testing performed in 2008. The permitted annual SO₂ emission rate was calculated assuming that emissions from EPN 8/8A occur continuously at the tested rate (29.35 lbs/hr) for 8,760 hours per year (hrs/yr). However, asphalt blowing is not a continuous process and emissions from EPN 8/8A are much lower when the thermal oxidizer is only being used to control emissions from asphalt storage and truck loading activities (standby mode). As such, the current permitted annual SO₂ emission rate for EPN 8/8A is overly conservative and not representative of asphalt blowing operations at the facility.

GAF proposes to reduce the permitted annual SO₂ emission rate associated with EPN 8/8A to 80 tons/yr based on the following assumptions:

EPN 8/8A During Asphalt Blowing Operations

- Normal operating mode SO₂ emission rate of 1.5 pounds of SO₂ per ton of asphalt processed (lbs/ton).
- Maximum annual asphalt blowing operation throughput of 100,000 tons/year.

EPN 8/8A During Standby Mode

- Standby mode SO₂ emission rate of 4 lbs/hr.
- Estimated 2,500 hours per year (hrs/yr) in standby mode.

GAF will perform an official stack test of EPN 8/8A for SO₂. The purpose of the stack test will be to demonstrate compliance with the following:

- Maximum hourly SO₂ emission rate of 29.35 lbs/hr.
- Proposed normal operating mode SO₂ emission rate of 1.5 lbs/ton.
- Proposed standby mode SO₂ emission rate of 4 lbs/hr.

Changes to the Permit

The following changes were made to the permit:

- The sources associated with Line 1 were removed from the MAERT and special conditions.
- The SO₂ annual emission rate for EPN 8/8A was reduced to 80 tpy as requested.
- Production rates for Line 3 were specified based on maximum capacity of the equipment. Previously, the production rates were for the Line 1 and Line 3 maximum capacities combined.
- The throughput rate for the asphalt blowing operation was added along with a recordkeeping requirement.
- A stack test requirement for SO₂ was added to the permit for EPN 8/8A.
- The language in the MSS footnote on the MAERT (footnote 5) was inadvertently changed to the fugitive footnote in an alteration project in 2018. The footnote was corrected in this project.

Impacts Evaluation

Was modeling conducted? **No**

Type of Modeling: **N/A**

Is the site within 3,000 feet of any school?

Yes

Additional site/land use information: The surrounding area is a mix of residential and industrial. The closest receptor is a business located 250 feet away. The closest property line is 200 feet away. There are three schools nearby, a middle school located 1,600 feet away, a high school 2,500 feet away, and an elementary school 2,900 feet away.

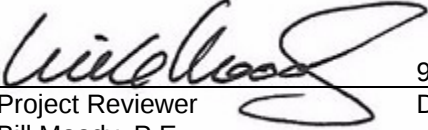

**Permit Alteration
Source Analysis & Technical Review**

Permit Number: 7711A
Page 3

Regulated Entity No. RN100788959

Summary of Modeling Results

The project results in a decrease in allowable emissions of SO₂, PM, and VOC for all affected EPNs, and no changes are requested to the remaining permitted pollutant emission rates. No changes are proposed to stack parameters. Therefore, a modeling demonstration was not required.

	9/12/2022		9/12/2022
Project Reviewer	Date	Section Manager	Date
Bill Moody, P.E.		Bonnie Evridge	