NARRATIVE

TO: Heather Brown  
FROM: Cassie Smith  
DATE: September 2, 2022

Facility Name: Building Materials Mfg. Corporation  
AIRS No.: 031-00064  
Location: Statesboro, GA (Bulloch County)  
Application #: 28535  
Date of Application: August 9, 2022

Background Information

Building Materials Mfg. Corporation is a polyisocyanurate (ISO) foam board manufacturing facility located in Bulloch County. The facility is classified as a synthetic minor source and currently operates under Air Quality Permit No. 3086-031-0064-S-02-0, issued June 8, 2022.

Purpose of Application

Application No. 28535, dated August 9, 2022, was submitted for the purpose of updating the minimum total hydrocarbon (THC) emissions routed to the regenerative thermal oxidizer (RTO) from the process as well as updating the RTO destruction removal efficiency (DRE).

The Process (Source Code L01) at the facility comprises a pour table, laminator, edge-trim enclosure, end-trim enclosure, and other miscellaneous foam cutting operations. The pour table and laminator are the primary sources of volatile organic compound (VOC) emissions that currently exhaust to the RTO. The foam cutting operations, which primarily emit both VOC and particulate matter (PM), exhaust through a baghouse for particulate control.

Permit Amendment 3086-031-0064-S-01-1 incorporated a new RTO that was installed as a pollution control project pursuant to GA Code Rule 391-3-1-.01(qqqq)(4). The RTO was installed on a voluntary basis to control VOC emissions from the pour table and laminator. Once the RTO became operational in January 2022, the facility was able to increase production while maintaining facility-wide VOC emissions below the 99 ton per year (tpy) limit specified in Condition 2.1 of the Permit.

The facility previously assumed that the vapor collection system routing emissions from the pour table and laminator would route to the RTO at least 75% of the total THC emissions generated from the Process. This was based on information from engineering evaluation performed prior to installation of the RTO. However, installation of the RTO has affected the airflow of the entire ventilation system and the facility has made other changes to optimize the performance of the ventilation system, thus impacting the results of the prior engineering evaluation.
Engineering evaluation completed after the installation of the RTO indicated that the total emissions routed to the RTO from the Process are likely closer to 60%. Even with this value, the total emissions from the facility are below the 99 tpy threshold established in Condition 2.1 of the Permit. Based on these considerations, the facility is proposing to change the percentage of THC emissions routed to the RTO from 75% to 60%.

Additionally, it was previously assumed that the RTO would achieve a minimum THC destruction efficiency of 95%. During the recent engineering evaluations following the RTO installation, the facility noted that the RTO was consistently achieving a DRE of 97% and higher. Based on these considerations, the facility is proposing to change the RTO DRE from 95% to 97%.

It should be noted that Condition 6.2 of the permit requires the facility to conduct performance testing to determine both THC destruction efficiency and the percentage of THC emissions routed to the RTO for compliance with values listed in Conditions 4.4 and 4.5.

**Permit Conditions**

Condition 4.4 requires the RTO to be maintained and operated to ensure a control efficiency of at least 75% when the foam board manufacturing process is in operation. This efficiency was revised from 75% to 60%.

Condition 4.5 requires the facility to achieve a minimum THC destruction efficiency for the RTO. This efficiency was revised from 95% to 97%.

**Summary & Recommendations**

The facility will continue to be a synthetic minor source with respect to Title V. The public comment period expired on September 16, 2022 with no comments received. Therefore, I recommend that Air Quality Permit No. 3086-031-0064-S-02-1 be issued to Building Materials Mfg. Corporation in Statesboro, Georgia.