

ENGINEERING ANALYSIS
Kitchen & Bath Center
FAIRHOPE, ALABAMA
Facility No. 510-0039

On April 13, 2018, the Department received an application from Kitchen & Bath Center (KBC) to change its Major Source Operating Permit to a Synthetic Minor Operating Permit due previously over estimating what the facility's actual emissions would be. KBC currently operates under a Title V Major Source Operating Permit for their fiberglass facility in Pell City, AL. KBC manufactures kitchen and bath fixtures using fiberglass reinforced plastics.

OPERATION:

Clean molds are sprayed with gelcoat in the gelcoat spray booth. Emissions from the gelcoat spray booth are released to the atmosphere through an exhaust stack. The spray booth is equipped with filtering media to remove airborne over spray and caplets before being released to the atmosphere. The molds are then removed from the booth and placed in a drying tunnel to allow the gelcoat to cure. The drying tunnel is heated with a 0.25 MMBTU natural gas heater and can be considered a trivial and insignificant activity. The 0.25 MMBTU heater is only operated when the process requires it. The estimated hours of operation are 2340 hours per year.

The molds are then sent to the cultured marble mixing area. This is where the cultured marble is mixed and applied to the molds by hand. The casted pieces are then left to cure before they are removed and sent to the finishing area. Emissions from this area are released inside the building and then released to the atmosphere by the building's general ventilation and exhaust system.

At the finishing area the castings are removed from the molds and then trimmed to remove unnecessary pieces, sanded, and smoothed with hand tools. This area is enclosed and the airflow is maintained by an exhaust with filtering media before being released to the atmosphere.

EMISSIONS:

Despite being classified as a major source, KBC has consistently had low emissions, and as the result of a guidance memorandum issued by EPA on January 25, 2018 withdrawing the policy by which a facility classified as a major source could not be reclassified as an area source KBC has applied for approval to operate under a Synthetic Minor Source Permit.

Pollutants	Potential (tpy)	Actual (tpy)
Styrene	7.7	1.89
VOC	8.4	2.06
Combined HAPs	8.4	2.06
PM-10	1.30	0.06

Potential Emissions are based on operating 8760 hours a year.
Actual Emissions are based on 2017 production.
Other emissions from this facility are negligible.

PSD:

The operations are not in one of the 28 categories listed in 335-3-14-.04(2)(a). Therefore, since the potential emissions of all regulated NSR pollutants from this operation would remain below the major source threshold of 250 tons per year, the operation is considered a minor source with respect to PSD and a PSD review would not be required. KBC currently operates under an anti-PSD limit of 240 tons per year of VOCs, however due to the VOC emissions being well below the 100 ton per year threshold, no VOC limit will be needed.

NSPS/NESHAP:

There are no New Source Performance Standards (NSPS) applicable to this facility. KBC is currently operating under the National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production as listed under 40 CFR 63, Subpart WWW (RPC MACT). However, the facility's potential emissions from its cultured marble operation are less than 10 tons per year for all individual HAPs and less than 25 tons per year for all HAPs combined; therefore, there are no National Emissions Standards for Hazardous Air Pollutants (NESHAP), as listed in 40 CFR Parts 61 and 63, that are applicable to the facility. KBC would be required to continue operations under these limits.

Coastal Consistency/Class I:

KBC is located in Baldwin County, however KBC is located more than 10 feet above sea level. Therefore this facility would not have to undergo a Coastal Consistency Review. The proposed operation is also located further than 100 km from the nearest Class I Area (Breton Wildlife Refuge). Since the emissions from this facility are below levels considered significant for PSD, there should not be any significant impact on any Class I area.

Air Toxics:

All emissions from the facility are fugitive therefore, an Air Toxics Review would not be required.

Title V:

The entire facility is currently operating under the Title V permitting program. However, because the facility's potential emissions are limited to less than 10 tons per year of a single HAP, less than 25 tons per year of all combined HAPs, and less than 100 tons per year of VOCs, KBC should not be required to maintain a Title V permit.

RECOMMENDATION:

Based on the above information, I recommend, that pending the public comment period of 15, days Kitchen & Bath Center be issued a Synthetic Minor Operating Permit 510-0039-X001 for its fiberglass columns manufacturing.

John Robert Gill
Chemical Branch
Air Division

June 26, 2019
Date
JRG/jrg