STATEMENT OF BASIS
American Fiberglass Products, Inc.
Double Springs, Winston County
Facility No. 713-0016

On April 10, 2020, Mr. Greg Farris, President of American Fiberglass Products, Inc. submitted a Major Source Operating Permit Renewal Application for the manufacture of fiberglass tubs and showers (SIC #3089). The facility is located in Double Springs, Alabama in Winston County. American Fiberglass' current Major Source Operating Permit 713-0016 expires on October 13, 2020. There are no major changes to this renewal of the Major Source Operating Permit.

The regulated criteria air contaminant emitted into the atmosphere by the manufacturing of fiberglass parts is volatile organic compounds (VOC), which comes from the organic solvents in the resin, gelcoat, and cleanup solvents. The operations are also a source of hazardous air pollutants (HAPs) as listed in Appendix G of the ADEM Air Regulations.

OPERATION:

American Fiberglass operates a single shift 5 days a week. This facility consists of two fiberglass lines that manufacture shower and tub units for residential and mobile homes. They produce an average of 130 to 150 units from the first line and 30 to 50 units from the second line in a single work shift schedule. Both lines use a conveyor line where the shower/tub unit molds are manufactured, waxed and sprayed with a gelcoat, resin and fiberglass. The gelcoating application is the second step in production of the shower/tub units. The gelcoat is a clear resin mix that is sprayed onto the bare waxed mold surface, forming the outer finished surface of the shower/tub unit. The shower/tub unit finish is actually completed before the unit is made. The gelcoat is applied with special air-powered or airless spray guns that mix the gelcoat resin and MEKP, a catalyst, together in an external atomized mist. After the gelcoat has been applied, the units are then sprayed with a resin and fiberglass for strength. Spray lay-up is an automated fiberglass lamination technique that uses a special spray gun device called a chopper gun. A chopper gun applies the glass fiber reinforcement and resin simultaneously, without the manual steps required in hand lay-up. A rotating knife on the gun chops a continuous bundle of glass fibers, called roving, into approximately one-inch pieces that are thrown out onto the mold surface. At the same time, two streams of both resin and MEKP catalyst are mixed together in an external spray. This catalyzed resin spray coats the chopped glass fibers and mold surface. Once the proper thickness of wet glass fibers has been deposited, a rolling process identical to the hand lay-up rolling is used to compact and smooth the laminate. Clean up is required following most gelcoat and spray lay-up operations.

EMISSIONS

Styrene is the major hazardous air pollutant for American Fiberglass Products, Inc. Styrene emissions are calculated using emission factors calculated from Table 1 of 40 CFR 63 Subpart WWWW. Based on the information submitted, American Fiberglass's VOC and styrene uncontrolled potential and actual emissions are shown below. The potential emissions were calculated based on 8760 operating hours per year and are subject to a synthetic limit of 245 tons per year. The actual emissions are the 12 month rolling total emissions through February 2020.

	Potential (tpy)	Actual (tpy)
HAPs	245	88.91
VOCs	245	88.91

This facility is a major source of HAP emissions since it actually emits more than ten tons of a single HAP and more than twenty-five tons of any combination of HAP. The HAP emissions are based on styrene usage only. This HAP pollutant is also a VOC and along with MEKP, American Fiberglass has the potential to emit greater than 100 tpy of VOCs. No other criteria air pollutants are emitted in sufficient quantities, actually or potentially, to exceed the major source thresholds.

NSPS

There are no New Source Performance Standards (NSPS), as listed in 40 CFR Part 60, that apply to American Fiberglass.

MACT/NESHAP

Under 40 CFR 63.5805 (b) of the Fiberglass MACT, American Fiberglass is required to meet the applicable emissions limits of 354 lb of styrene per ton or resin and 267 lb of styrene per ton of gelcoat as listed in Table 3 of this subpart and work practice standards listed in Table 4 of this subpart. According to Material Safety Data Sheets, the resin used by American Fiberglass contains 36% styrene, while the gelcoat contains 28.9% styrene. Using the emissions factor formulas in Table 1 of subpart WWWW, emissions are approximately 115.2 lb per ton for the resin and 106.9 lb per ton for the gelcoat, which meets the limits. The work practice standards for this facility are for a cleaning operation, a HAP-containing materials storage operation, and a mixing operation. The facility is also subject to the applicable recordkeeping and reporting requirements of this subpart.

The fiberglass operation at American Fiberglass is an open molding process therefore it is required to use one of the compliance options listed in 40 CFR 63.5810 (a) through (d) to meet the emission limits in Table 3. Under 40 CFR 63.5810, American Fiberglass is allowed to switch between compliance options and is required to complete the emissions calculations within 30 days following the end of each month.

PSD

American Fiberglass is located in an attainment area for ozone but is not within 10 km of a Class I area. This facility is subject to MACT standards for Reinforced Plastic Composites Production. The potential emissions from American Fiberglass are greater than 250 TPY. This facility is currently operating with a VOC emission limit of 245 tpy to eliminate a PSD review.

MONITORING

CAM will not be applicable as American Fiberglass has no pollution control devices. American Fiberglass currently submits quarterly reports to demonstrate compliance with the anti PSD limit of 245 tons per year. Additionally, American Fiberglass is required to include demonstration of compliance with the 40 CFR 63 subpart WWWW monitoring requirements. The fiberglass operation at American Fiberglass is an open molding operation; therefore, it is required to use one of the compliance options listed in 40 CFR 63.5810 (a) through (d) to meet the emission limits in Table 3. Under 40 CFR 63.5810, American Fiberglass is allowed to switch between compliance options and is required to complete the emissions calculations within 30 days following the end of each month. American Fiberglass is currently using the compliance option found in 40 CFR 63.5810 (b).

RECOMMENDATION:

Based on the above information, I recommend that American Fiberglass Products, Inc. be issued the attached permit (MSOP 713-0016) following a 30-day public notice period. The facility wide VOC emissions limit shall be 245 TPY.

John Robert Gill
Chemical Branch
Air Division

April 21, 2020
Date

JRG/jrg