Statement of Basis
Fiber Glass Systems L.P. Grand Bay Facility
Mobile County
Facility No. 503-0084

Introduction:
On March 28, 2023, the Department received applications from Fiber Glass Systems L.P. (formerly Containment Solutions), for a renewal of the Title V Major Source Operating Permit (MSOP) for their fiber glass facility in Grand Bay, AL. Fiber Glass Systems manufactures tanks, pipes, lids, and fittings using fiberglass reinforced plastics. The facility is a major source with respect to Title V for volatile organic compounds (VOCs) and hazardous air pollutants (HAPs).

The facility originally began operations in 1985. The initial Title V MSOP was issued on May 30, 2007, and this is the third renewal. The current MSOP expired on October 4, 2023, but a renewal application was received on March 28, 2023. ADEM Admin. Code r. 335-3-16-12(c) states "If a timely and complete application for a permit renewal is submitted, but the Department fails to take final action to issue or deny the renewal permit before the end of the term of the previous permit, then the permit shall not expire until the renewal permit has been issued or denied and any permit shield granted for the permit shall continue in effect during that time"; therefore, the current MSOP was administratively continued.

Since the last issuance of the MSOP, the filament winding process has been removed, and a Tank Mandrel Layup Process was added in 2020. A small boiler was also added in 2020. Applications to incorporate these modifications and the name change into the MSOP were submitted on January 4, 2022, and an addendum was submitted on April 25, 2022.

The facility is located in Mobile County, which is in compliance with all National Ambient Air Quality Standards (NAAQS).

There are no current or ongoing enforcement actions against Fiber Glass Systems L.P. Grand Bay Facility necessitating additional requirements to achieve compliance with the proposed permit conditions. The enforcement and compliance history for the facility can be found at https://echo.epa.gov/ (Search using Facility ID AL0000000109700084).

Operations:

Mechanical Layup Process:
Glass fiber is wetted with catalyzed resin and applied with non-atomized (impingement) spray equipment to molds to form parts such as tank lids. Each spray gun station has the potential to apply 400 pounds of resin per hour.

Manual Layup Process:
Glass fiber is manually placed on molds and wetted with catalyzed resin, which is then applied with a bucket and brush to form fittings and join larger parts. The manual layup process has the potential to apply 250 pounds per hour of resin.

Tank Mandrel Layup Process:
Activated resin, fibrous glass, and silica sand are gravity fed onto a spinning mandrel. The tank mandrel layup process has the potential to apply 2,400 pounds of resin per hour.

Boiler:
A 1.24 mmBTU/HR boiler burns natural gas for fuel.

Emissions:
Most of the facility's emissions are styrene emissions from the resins. Styrene is both a VOC and HAP. Other emissions would include particulate matter (PM) from trimming and grinding. The approximate potential to emit for styrene is based on EPA emission factors. Fiber Glass Systems has a plant-wide emission limit of 240 tons per year of VOC emissions. The table below lists Fiber Glass Systems L.P.'s approximate potential emissions.

Table 1. Fiber Glass Systems L.P. Potential Emissions

Pollutant	Mechanical Layup	Manual Layup	Tank Mandrel Layup	Boiler	Plant Wide w/o Limits	Plant Wide Potentials after Limits
VOC	91.1	85.85	258.42	0.04	435.41	240*
HAP	91.1	85.85	258.42	--	435.37	240*
NOx	--	--	--	0.75	0.75	0.75
CO	--	--	--	0.63	0.63	0.63
SO_2	--	--	--	0.004	0.004	0.004
PM	--	--	--	0.06	0.06	0.06

*Synthetic minor limit with respect to PSD

Table 2. Fiber Glass Systems L.P. Projected Actual Emissions

Pollutant	Mechanical Layup	Manual Layup	Tank Mandrel Layup	Boiler	Plant Wide
VOC	2	7.5	73.2	0.03	82.7
HAP	2	7.5	73.2	--	82.7
NOx	--	--	--	0.53	0.53
CO	--	--	--	0.44	0.44
SO_2	--	--	--	0.003	0.003
PM	--	--	--	0.04	0.04

Requirements:

The entire facility is subject to the Title V permitting program. There are no New Source Performance Standards (NSPS) in 40 CFR Part 60 that apply to the facility. Fiber Glass Systems is subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP): Reinforced Plastic Composites Production, as listed under 40 CFR Part 63, Subpart WWWW (RPC MACT). Under §63.5805 (b) of the RPC MACT, Fiber Glass Systems L.P. is required to meet the applicable emissions limits for organic HAP listed in Table 3 of this subpart and work practice standards listed in Table 4 of this subpart. Fiber Glass Systems L.P. uses various different resins and gelcoats; most of which have their own emissions limits. To demonstrate compliance with the various MACT emission limits, Fiber Glass Systems L.P. calculates weighted averages of emissions and the applicable emission limits on a monthly basis using the formulas found in §63.5810 (c). Fiber Glass Systems L.P. is currently demonstrating continuous compliance with the calculated emission limits. The work practice standards for this facility are for a cleaning operation and a HAP-containing materials storage operation. The facility is also subject to the applicable recordkeeping and reporting requirements of this MACT.

X002: Mechanical Layup Process

The mechanical layup process is an open molding operation with corrosion-resistant and/or high strength and is therefore, according to Table 3 of Subpart WWWW, subject to a 113 lb/ton emission limit for HAP.

X003: Manual Layup Process

The manual layup process is an open molding operation with corrosion-resistant and/or high strength and is therefore, according to Table 3 of Subpart WWWW, subject to a 123 lb/ton emission limit for HAP.

X004: Tank Mandrel Layup Process

The tank mandrel layup process is an open molding operation with corrosion-resistant and/or high strength and is therefore, according to Table 3 of Subpart WWWW, subject to a 113 lb/ton emission limit for HAP.

Because each of the above three processes are open molding, Fiber Glass Systems L.P. is required to use one of the compliance options listed in §63.5810 (a) through (d) to meet the emission limits. Fiber Glass Systems L.P. has chosen to use the facility-wide organic HAP limit averaging under §63.5810(c). Each month, a weighted average emission limit is calculated as well as an average weighted organic HAP emission factor. It should be noted that under §63.5810, Fiber Glass Systems L.P. is allowed to switch between compliance options. Fiber Glass Systems L.P. is also required by §63.5905 to submit all notifications required by Table 13, which covers applicability and timing of notifications for various operating scenarios, and by §63.5910 to submit a compliance report that meets the requirements of Table 14.

X005: 1.24 mmBTU/HR Boiler

The boiler is subject to 40 CFR 63 Subpart DDDDD: Industrial, Commercial, and Institutional Boilers and Process Heaters. The facility is required to meet the work practice standards in Table 3 of the subpart as required in 40 CFR 63.7540(a). These requirements include a biennial tune-up and submitting an annual compliance report.

The boiler is also subject to ADEM Rules 335-3-4-.03, 335-3-4-.01, and 335-3-5-.01. Fiber Glass Systems L.P. has been performing daily visible emission observations on the boiler stack, but due to the use of natural gas as the only fuel, this requirement is being removed. Natural gas is considered a clean-burning fossil fuel commonly used in a variety of different types of boilers and is not expected to lead to high particulate emissions or visible emissions from this boiler. However, should problems with opacity arise the Department could reinstitute this requirement. They are also required to comply with all monitoring and recordkeeping requirements related to the boiler. Table 4-1 in ADEM Rule 335-3-4-.03 limits allowable particulate emissions to 0.5 lb/million BTU.

Prevention of Significant Deterioration (PSD):
The operations at Fiber Glass Systems L.P. are not listed under ADEM Admin. Code 335-3-14-.04(2)(a), which states they would be considered a major stationary source if emitting greater than 100 tons per year or more of any regulated New Source Review (NSR) pollutants. Since VOC emissions are being limited to 240 tons per year and the potential emissions of all other regulated NSR pollutants from this facility are below the major source threshold of 250 tons per year, Fiber Glass Systems L.P. is considered a synthetic minor source with respect to PSD.

Monitoring:
Emissions from fiberglass operations are calculated using emission factors provided in 40 CFR 63, subpart WWWW, National Emission Standards for Hazardous Air Pollutants (NESHAP): Reinforced Plastic Composites Production. Emissions of VOCs and HAPs will be submitted to the Department on a quarterly basis.

Compliance Assurance Monitoring (CAM) is not applicable because Fiber Glass Systems L.P. is subject to MACT standards that were promulgated after November 15, 1990. According to 40 CFR 64.2(b)(1)(i) on exemptions from CAM, emission limitations or standards proposed after November 15, 1990 pursuant to section 111 or 112 of the Clean Air Act are exempt from CAM requirements, and there are no other source specific standards applicable to this facility.

Recordkeeping and Reporting Requirements:
Fiber Glass Systems is required to keep records of the type and quantity of each VOC and HAP containing material used each calendar month, the quantity of VOCs and HAPs emitted each calendar month, and the rolling 12-month total of VOCs and HAPs emitted from fiber glass operations. These records will be evaluated by the Department during the

annual inspection. The facility is also required to submit a deviation report on a semi-annual basis and an Annual Compliance Certification (ACC).

Recommendation:
I recommend that after a public comment period and EPA review, Major Source Operating Permit 503-0084 be issued to Fiber Glass Systems L.P. for the mechanical layup, manual layup, and tank mandrel layup operations and the 1.24 mmBTU/hr boiler along with associated equipment.

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John Robert Gill
Chemical Branch
Air Division

May 30, 2024
Date

JRG/jrg