Title V Air Operation Permit Renewal/Revision
Permit No. 0570472-008-AV

APPLICANT

The applicant for this project is Tampa Fiberglass, Inc. The applicant's responsible official and mailing address are: Mr. Kenneth McCleave, President, Tampa Fiberglass, Inc., 4209 Raleigh Street, Tampa, FL 33619.

FACILITY DESCRIPTION

The applicant operates a fiberglass reinforced plastic products and boat manufacturing facility which is located at 4209 Raleigh Street, Tampa, FL 33619.

This facility manufactures custom fiberglass reinforced plastic products, such as septic tanks, small tanks for wastewater treatment plants, and pipes (12" in diameter), etc. The facility also manufactures fiberglass reinforced plastic boats using the same types of materials used to make the other reinforced plastic products. In the past, the facility also manufactured military tank simulators and cockpit simulators. The facility is still capable of manufacturing these simulators if the market demands. The operation consists of resin and gelcoat open molding (spray lay-up and hand lay-up), closed molding, finishing operations, and clean-up activities. The predominant materials associated with the processes include resin, gelcoat, polymerization initiator, styrene monomer, and miscellaneous filler. All these operations are performed inside a production building, which is divided into sections. Also on the southwest side of the production building is a separate, smaller building which is used to manufacture fiberglass boats, however, the boat manufacturing operations can take place in the main production building as well.

Usually, the parts/products with complex shapes are made through the closed molding process. In the case of the septic tank production, the top portion of the tanks are made through the closed molding process by injecting resin/fiberglass into the closed mold, and the bottom portion of the tanks are made through the open molding process by spraying resin/fiberglass on the mold (lamination). On the other hand, pipes are made by open molding, manual resin application, which involves laying the resin/fiberglass on a flat sheet and then rolling it into a round shape.

During the spray lay-up application process, the mold defines the structure of the outer surface. A layer of gelcoat is sprayed onto the mold and is allowed to cure. Following the gelcoat application, the styrene based resin and polymerization initiator is applied with a spray gun equipped with a glass chopper. Small droplets of resin from the spray gun are applied to the mold. The facility uses a non-atomized gun made by Magnum Venus Plastech (MVP), which employs Fluid Impingement Technology (FIT) for the spray nozzles to achieve a spray pressure of approximately 25 to 30 psi. The spray lay-up application activities are typically conducted in the south side of the facility.

The hand lay-up application involves manually mixing the resin and the polymerization initiator in a container and applying the mixture to the mold or material with a brush or roller. Each layer applied is rolled out to remove air pockets.

The closed molding operation consists of a low pressure molding process, where glass fiber mats are placed between two gelcoat coated molds. Catalyzed resin is injected into the molds after they are clamped together. The hand lay-up and closed molding application activities are typically conducted in the middle of the production building.

The finishing operations include grinding, sanding and gelcoat application, as necessary. Grinding is performed with hand-held grinding equipment. The gelcoat is applied on products that require a smooth finish. For the cleanup activities, acetone is used as a cleanup agent. Acetone that comes into contact with the styrene based resin and fiberglass material is incorporated into the manufacturing process as filler or glue. Since acetone has

been delisted as a photochemically reactive VOC, this function is now unregulated. The cleanup activities can be done at the area where the application is conducted or in the north side of the production building.

Tampa Fiberglass, a major source of HAP emissions, is subject to the NESHAP for Reinforced Plastic Composites Production (40 CFR 63, Subpart WWWW) and Boat Manufacturing (40 CFR 63, Subpart VVVV). Therefore, the facility must meet the organic HAP emissions limits in both subparts. Each subpart has different compliance options that the facility may use to comply with the emission limits. The permittee may switch between the compliance options, provided the proper procedures are followed as specified in the NESHAPs.

VOC and styrene emissions associated with these operations are controlled through material HAP content limitations and work practice standards. Also included in the renewed Title V permit are miscellaneous unregulated/insignificant emissions units and/or activities.

PROJECT DESCRIPTION

The concurrent Air Construction/Title V permit renewal/revision application received on October 17, 2013 requested to remove all material usage limits for resin, gelcoat, polymerization initiator, etc., as well as remove any material styrene content permit limits that are more stringent than the NESHAP for fiberglass reinforced plastic product manufacturing, 40 CFR 63, Subpart WWWW. The application also requested to include fiberglass boat manufacturing as part of the facility's current operations. Since the boat manufacturing operations use the same types of materials and processes as the fiberglass product manufacturing operation, this operation is being included in the renewal Title V permit as a new emission unit (EU 002). The boat manufacturing operation is subject to 40 CFR 63, Subpart VVVV, and the facility must meet the emission limits under this subpart by either the emissions averaging or compliance materials options. In lieu of specific material usage limitations, the facility will be subject to facility-wide emission caps of 48.0 tpy VOC and 27.3 tpy HAP, as requested by the applicant. The facility will be required to keep monthly records of facility-wide VOC and HAP emissions to demonstrate compliance with these emission caps.

PROCESSING SCHEDULE AND RELATED DOCUMENTS

Initial Title V Permit Application received February 6, 1997
FINAL Title V Permit issued June 23, 1998
Title V Permit Renewal/Revision Application received December 23, 2002
FINAL Title V Permit Renewal/Revision issued October 22, 2003
Title V Permit Renewal Application received April 21, 2008
FINAL Title V Permit Renewal issued June 9, 2009
Title V Permit Renewal/Revision Application received October 17, 2013

PRIMARY REGULATORY REQUIREMENTS

Title III: The facility is identified as a major source of hazardous air pollutants (HAP).

Title V: The facility is a Title V source of air pollution in accordance with Chapter 62-213, Florida Administrative Code (F.A.C.).

PSD: The facility is not a Prevention of Significant Deterioration (PSD) major source of air pollution in accordance with Rule 62-212.400, F.A.C.

NSPS: The facility does not operate units subject to the New Source Performance Standards (NSPS) of 40 Code of Federal Regulations (CFR) 60.

NESHAP: The facility does operate units subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR 63 Subpart WWWW and Subpart VVVV, specifically for the fiberglass product manufacturing and boat manufacturing operations.

CAIR: The facility is not subject to the Clean Air Interstate Rule (CAIR) set forth in Rule 62-296.470, F.A.C.

CAM: Compliance Assurance Monitoring (CAM) does not apply to any of the emission units at the facility, since they are subject to the post-1990 MACT standards.

PROJECT REVIEW

This Title V Permit revision updated portions of the permit, summarized as follows:

1) A new subsection has been added to reflect the specific conditions for the boat manufacturing operations (40 CFR 63, Subpart VVVV).

2) All material usage limits and styrene content limits more stringent than the MACT standards have been removed from the permit. The facility will demonstrate compliance with the permit by complying with the NESHAPS for Reinforced Plastic Composites Production and Boat Manufacturing (40 CFR 63, Subparts WWWW and VVVV), as well as the facility-wide emissions caps for VOC and HAP emissions.

CONCLUSION

This project renews and revises Title V Air Operation Permit No. 0570472-007-AV, which was issued on June 9, 2009. This Title V permit revision is issued under the provisions of Chapter 403, Florida Statues (F.S.), and Chapters 62-4, 62-210 and 62-213, F.A.C.