TECHNICAL EVALUATION

AND

PRELIMINARY DETERMINATION

FOR

Tampa Fiberglass, Inc.

Hillsborough County

Air Construction and Title V Operation Permit Renewal

Application Number

0570472-008-AV and 0570472-009-AC

Environmental Protection Commission of

Hillsborough County

Tampa, FL

January 10, 2014

Concurrent Air Construction/Title V Operation Permits
Permit Nos. 0570472-008-AV/0570472-009-AC

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.

The professional engineer who sealed the application is: Jeffrey E. Elick, P.E., King Engineering Associates, Inc., 4921 Memorial Highway, One Memorial Center Suite 300, Tampa, FL 33634. The P.E. registration number is: 61019.

PROJECT DESCRIPTION

The purpose of this project is to renew and revise the Title V operation permit for the facility. As part of this project, the manufacture of fiberglass reinforced plastic boats is being included in the renewal permit to reflect the facility's current operations. Therefore, the facility is subject to the NESHAP for Boat Manufacturing, 40 CFR 63, Subpart VVVV, in addition to the NESHAP for Reinforced Plastic Composites Production, 40 CFR 63, Subpart WWWW. A concurrent Air Construction permit is being issued to the facility to revise the permitted styrene content limits based on the two NESHAP's above and establish facility-wide emission caps on VOC and HAP emissions.

The project has been assigned NEDS Source Classification Code Nos. 3-08-007-21, 3-08-007-22, 3-08-007-23, and 3-08-007-30 (Industrial Processes, Rubber and Miscellaneous Plastic Products, Fiberglass Resin Products, Resin and Gel Coat Roll-On and Spray-On) and Nos. 3-14-015-11, 3-14-015-12, 3-14-015-15, 3-14-015-16, 3-14-015-17 (Boat Manufacturing, Fiberglass Open Contact Molding: Gel Coat Application, Hand Layup and Spray Layup, and Resin/Laminate Application, Hand Layup, Spraying, Rolling, and Brushing).

The Standard Industrial Code for the project is No. 3089 (Rubber and Miscellaneous Plastic Products). The project is located at 4209 Raleigh Street, Tampa, Hillsborough County, FL 33619. UTM Coordinates of the location are 17-361.41 E and 3088.47 N.

FACILITY DESCRIPTION

The applicant operates a fiberglass reinforced plastic products 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 REVIEW

The concurrent Air Construction/Title V permit renewal application 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, 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 permit. However, the boat manufacturing operation is subject to 40 CFR 63, Subpart VVVV, and the facility must meet the emission limits under this subpart. In lieu of 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 VOC and HAP emissions to demonstrate compliance with these emission caps.

This Title V Permit renewal/revision updates 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.

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

This project is subject to the preconstruction review requirements of Chapter 403, Florida Statutes, Chapters, 62-204, 62-210, 62-212, 62-296, and 62-297, Florida Administrative Code (F.A.C.) and Chapter 1-3 of the Rules of the Environmental Protection Commission of Hillsborough County.

This project is subject to the requirements of Rule 62-212.300, General Preconstruction Review Requirements, F.A.C., since the project is not exempt from the permit requirements in Rule 62-210.300, F.A.C.

This project is not subject to the requirements of Rule 62-212.400, Prevention of Significant Deterioration, F.A.C., since the facility is a minor source for PSD.

This project is not subject to the requirements Rule 62-212.500, Preconstruction Review for Nonattainment Areas, F.A.C., since the facility is not located in a designated nonattainment area.

This project is subject to the requirements Rule 62-213, Operation Permits for Title V Sources of Air Pollution, F.A.C., since the facility is subject to the NESHAPs for Reinforced Plastic Composites Production and Boat Manufacturing (40 CFR 63 Subpart WWWW and VVVV) and the facility is a major source.

This project is subject to the requirements of Rule 62-296.320, General Pollutant Emission Limiting Standards, F.A.C., since the project is a source of particulate matter, volatile organic compounds, and a potential source of odors.

This project is not subject to the requirements of Rule 62-296.401 through 62-296.480, Specific Emission Limiting and Performance Standards, F.A.C., since there is not an applicable source specific category in these rules.

This project is not subject to the requirements of Rule 62-296.500, Reasonably Available Control Technology (RACT) - Requirements for Volatile Organic Compounds (VOC) and Nitrogen Oxides (NOx) Emitting Facilities, F.A.C., since there is not an applicable source specific category in this rule.

This project is not subject to the requirements of Rule 62-296.600, Reasonably Available Control Technology - Lead, F.A.C., since there is not an applicable source specific category in this rule.

This project is not subject to the requirements of Rule 62-296.700, F.A.C., Reasonably Available Control Technology (RACT) Particulate Matter, since there is not an applicable source specific category in this rule.

This project is subject to the requirements of Rule 62-204.800, Federal Regulations Adopted by Reference, F.A.C., since it is subject to the NESHAPs for Reinforced Plastic Composites Production and Boat Manufacturing (40 CFR 63 Subpart WWWW and VVVV).

This project is subject to the requirements of Chapter 84-446, Laws of Florida and Chapter 1-3, Rules of the Environmental Protection Commission of Hillsborough County.

SUMMARY OF EMISSIONS

Emission Unit (EU)	Pollutant	Actual Emissions (tons/yr) [b]	Potential Emissions (tons/yr) [c]	Emissions Increase (tons/yr)
Facility-wide [a]	VOC	1.1	48.0	46.9
	HAPS	1.1	27.3	26.2

a. Facility will be subject to facility-wide emission caps for VOC and HAPS for the combined Fiberglass Product Manufacturing (EU 001) and Boat Manufacturing (EU 002).

b. Actual emissions are based on the average of the 2011 and 2012 AOR emissions data.

c. Potential emissions are based on estimated maximum material usages and organic HAP emission factors.

The inventory of Title III pollutants for the facility is estimated to be greater than 10 tons/yr individually and 25 tons/yr collectively.

CONCLUSION

The emission limits proposed by the applicant will meet all of the requirements of Chapters 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C., and Chapter 1-3, Rules of the EPC.

The General and Specific Conditions listed in the draft/proposed permits (attached) will assure compliance with all the applicable requirements of Chapters 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C.

PROPOSED AGENCY ACTION

Pursuant to Section 403.087, Florida Statutes and Rule 62-4.070, Florida Administrative Code the Environmental Protection Commission of Hillsborough County hereby gives notice of its intent to issue a permit to modify the aforementioned air pollution source in accordance with the DRAFT/PROPOSED permits and their conditions as stipulated (see attached).