

**DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection**

P120264124

FACILITY: Stealthcraft Boats, LLC		SRN / ID: P1202
LOCATION: 6771 South Astor Road, BALDWIN		DISTRICT: Cadillac
CITY: BALDWIN		COUNTY: LAKE
CONTACT: Mike Batcke , Owner		ACTIVITY DATE: 07/26/2022
STAFF: Rob Dickman	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Inspection of this minor source against PTI 96-21 issued in November of 2021		
RESOLVED COMPLAINTS:		

StealthCraft manufactures composite (fiberglass) river boats, aluminum trailers and steel trailers. Composite is applied to plastic panels and formed into hulls. These hulls are then customized with parts made at the facility and finished.

Fiberglass resins, fiberglass gelcoats, an adhesive and a 2-part urethane truck bed liner are applied to the hulls in booths. Clean-up operations are performed with acetone. I performed an inspection at this facility. My contact was Mike Batke, President and CEO of StealthCraft.

On April 27, 2021, a complaint was received of strong odors from this facility. This complaint caused an inspection at this facility on May 6, 2021. The results of this inspection demonstrated a Rule 201 violation, and a Violation Notice (VN) was sent to the facility on May 13, 2021. The resolution for this Violation Notice was application for a Permit to Install by the facility. This application was received on June 3, 2021, and Permit to Install (PTI) 96-21 was issued on November 19, 2021. On June 2, 2022, a second complaint was received regarding strong odors from the facility. A request for required records was sent to the facility on July 13, 2022, and this information was received on July 19, 2022. An onsite inspection per Permit to Install 96-21 was performed on July 26, 2022. Following are the findings of this inspection.

PTI Number 96-21 describes three spray booths for where composite plastic parts are produced, urethane truck bed liner is applied, and miscellaneous cleanup activities involving acetone are performed. Observations at the facility indicated six small work areas and two large ones. Of the six small areas, four appeared to be used for sanding, one appeared to be used for small parts manufacturing and one was used for urethane application. All had dry fabric filtration. The work area for urethane application exhausts through a stack on the side of the building. One of the large work areas is used for hull fabrication and has dry fabric filtration with and exhausts through another stack. The sanding booth exhausts appeared to exit the side of the building through filtration at ground level. The second large work area appears to be used for assembly.

Emission Limits

VOC emissions, including Styrene, are limited to 5000 pounds per year based on a 12-month rolling time period. Acetone emissions are limited to 3000 pounds per year based on the 12-month rolling time period. Compliance with these limits is determined by material content and emissions calculations. Since the facility has not operated a full year since the permit issuance date, November 19, 2021. A review of requested records through June of 2022 indicates VOC emissions, including styrene, were 1736 pounds. Acetone emissions were listed at 1460 pounds. These values appear to be based on purchasing records, mass balance, and emission factors.

Material Limits

- Styrene content of fiberglass resin used at the facility is not to exceed 36% by weight, as applied. Records submitted by the facility indicate the highest styrene content of any resin used at the facility was 35% by weight as applied.

Styrene content of fiberglass gelcoat used at the facility is not to exceed 37% by weight, as applied. Records submitted by the facility indicate all gelcoats used at the facility were lower than this criterion except for one. The orange tooling gelcoat used at the facility had a content of 41.8% styrene.

The VOC content of the urethane liner coating is not to exceed 1.8 lb/gal (minus water) as applied. Safety Data Sheets (SDS) indicate this is a two-part material and neither part contains any VOC.

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Process/Operational Restrictions

Waste materials from the process are to be captured in closed containers and disposed of properly.

Liquid waste materials were stored in closed containers.

Dry fabric filters used at the facility appeared in good condition and are changed on an as needed basis. Spent filters are placed in a dumpster outside the facility and sent to landfill.

All coating materials are to be handled in a way to minimize fugitive emissions. All of the materials, with the exception of the urethane truck liner are applied by hand. Material not in immediate use appeared to be stored in closed containers.

Design/Equipment Parameters

Non atomizing applicators and mechanical applicators are to be used for resin and gelcoat application respectively. It appeared during the inspection that all resins and gelcoats were applied by hand.

Testing/Sampling

The facility has submitted a request to use manufacturer's formulation data in lieu of having materials tested utilizing Method 24. The AQD is currently working with the facility to approve this request.

Monitoring/Recordkeeping

A request for required records was sent to the facility on July 13, 2022, and this information was received on July 19, 2022. SDS information for all materials used was submitted along with a spreadsheet containing emissions calculations.

A review of these records indicate they are completed monthly. As the facility has not operated under the PTI for a full year, 12-month rolling averages were not available. Material usage is based on purchasing records and not actual usage. A review of the calculations and emission factors used indicated these calculations are correct. The wax solution, denatured alcohol cleaning material, and MEKP catalyst were not included in the calculations and should be. Inclusion of these emissions still demonstrates compliance with emissions limits.

Reporting

No reporting is required by the PTI

Stack/Vent Restrictions

There are three stacks listed in the PTI. They are required to be no less than 31 feet tall and no more than 20 inches in diameter. The facility only has two stacks in place and Mr. Batke indicated they were obtained from another fiberglass facility, Noron Composites, which is now shut down. Upon review of Noron Composites former ROP, stack requirements were the same at 31 feet tall. However, in my estimation, the two current stacks do not meet the minimum height requirement. The intent of the PTI was that all composite and urethane coating operations would be vented through one of three compliant stacks listed in the PTI.

Other Requirements

No additional requirements from the PTI

Additional notes

Mr. Batke indicated that a dust collection system was being installed at the facility and would be vented out through a permitted stack. There was new construction at the facility where this collector would be housed.

The facility is currently forming full boat hulls in addition to manufacturing parts for the and installing those parts. In short, they are manufacturing whole boats. This does not appear to be what they indicated in their permit application. In discussions with the permit engineer, Jeff Kahled, he indicated that as long as they stay below their emissions limits, there should be no issues. However, he also expressed concern that they may not be able to do that while make full boat hulls. A review of federal MACT standards indicated no area source MACT regulations for boat hull manufacturing.

Issues and Recommendations

A review of the records indicated the following issues:

- The Orange Tooling Gel Coat is a non-compliant material at 41.8% styrene, permitted limit is 37%.
- The wax solution has a high styrene content and is not included in the total VOC emission calculations
- The denatured alcohol cleaning solvent has a 6 pounds per gallon of VOC content and is not included in the total VOC emission calculations.
- MEKP is listed as a VOC and should be included in the emissions
- Emission factors used do not appear to be the United Emissions Factors for Open Molding of Composites as noted in the PTI. The factors used appear to be overestimating VOC emissions from the resin and probably the gelcoat.

Regarding the orange gelcoat, it is recommended that I bring this to the attention of Mr. Batke, ask him to not continue use of this material, and remind him that there is a limit on styrene content for gel coats. Records indicate they have purchased only 45 pounds of this material and emissions from it, once completely used, would be around 8 pounds of styrene emitted.

Regarding the inclusion of some other VOC containing materials in the emissions calculations, it is recommended to ask Mr. Batke why these are not included. If they should be included, all of the information to include them is in the records, he would need to only add the numbers to the spreadsheet. Addition of these values would still indicate the facility to be in compliance with emission limits.

During the inspection, it was mentioned to Mr. Batke that the dry fabric filtration was critical to nuisance dust from the facility. It is recommended that this discussion be documented as a reference for future inspections.

There is concern that with the facility forming full hulls, they may not be able to meet emission limits set forth in the permit. It is recommended that a formal records request be sent in January of 2023 to review a full years' worth of production and emissions data to determine the facility's compliance with their emissions limits.

The stacks at the facility are not to the specifications listed in the permit. Additionally, it was noted that a large garage door was open to the large room where most of the composite lamination takes place. It is recommended that a violation notice be sent to the facility for incorrect stack parameters and operating in a manner that does not minimize fugitive emissions.

NAME 

DATE _____

SUPERVISOR _____