

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

B661969247

FACILITY: Tiara Yachts		SRN / ID: B6619
LOCATION: 725 E. 40th St., HOLLAND		DISTRICT: Kalamazoo
CITY: HOLLAND		COUNTY: ALLEGAN
CONTACT: Todd Grammatico , Environmental Health & Safety Manager		ACTIVITY DATE: 08/17/2023
STAFF: Cody Yazzie	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled Onsite Inspection		
RESOLVED COMPLAINTS:		

On August 17, 2023 Air Quality Division (AQD) staff (Cody Yazzie and Jared Edgerton) arrived at 725 East 40<sup>th</sup> Street, Holland Michigan at 2:00 PM to conduct an unannounced air quality inspection of Tiara Yachts SRN (B6619). Staff made initial contact with the office receptionist and stated the purpose of the visit. Todd Grammatico, Tiara Yachts, EHS Manager, and Jeff Pfof, Environmental Partners Inc., Consultant are the environmental contacts and arrived shortly thereafter and took staff to a conference room for further discussions.

Tiara Yachts manufactures various style boats models that include the Tiara Series, Flybridge Series, Coupe Series, and the Sport Series that range in length from 35 – 60 feet. Tiara Yachts has predesigned molds for the hulls and decks of the boats with the interior and paint being able to be customized by the customer. At the time of the inspection Tiara Yachts indicated that it manufactures about 250 boats per year.

Tiara is currently in the middle of an ROP renewal cycle. The current ROP that the facility is operating under is MI-ROP-B6619-2015. This inspection review will reflect the current ROP requirements and discuss some naming changes that may be reflected in the future ROP.

Tiara Yachts utilizes a variety of processes to manufacture large or other fiberglass reinforced plastic components. These processes include fiberglass spray layup and other gelcoat spray layup for creating hulls, decks, and various other fiberglass portion of the boats of the other products. The facility previously manufactured other composite reinforced plastic operations that were not related to the boat manufacturing. These operations include the windmill blades. Due to the facility not producing these products in a number of years the FGMACTWWWW flexible group table is being removed from the ROP in the renewal process.

Tiara Yachts was last inspected by the AQD on August 30, 2021 and appeared to be in Compliance besides a noted recordkeeping issue involving claiming a 1 percent VOC emission factor that is used for closed molding emission operations without an enforceable emission factor in the MI-ROP-B6619-2015 permit. Since The facility has come in for a permit modification, and was issued PTI No. 77-23 that incorporates the 1 percent VOC emission factor for closed molding operations. This issue appears to be resolved. Staff asked, and Mr. Pfof stated that the facility does have three boilers and an emergency generator.

Mr. Grammatico and Mr. Pfof gave staff a tour of the facility. Required personal protective equipment are safety glasses, steel toe boots, hearing protection, and high visibility vest. Staff observations and review of records provided during and following the inspection are summarized below:

**EUHULLDECKGRINDING:**

This emission unit is a single large booth that will allow three grinding booths to be operated simultaneously for hull and deck grinding. The filters of this booth are located within the dividers of the booths which share the filtration system. This system is required to be vented internally.

This emission unit currently has minimal special condition requirements. Special condition IV.1 requires the facility to not operate EUHULLDECGRINDING unless the mat/panel fabric filters are installed and operating properly. The filters that are installed for this unit are cone filters that draw the air through. During the inspection it was noted that the filters were on and working properly.

Special Condition VI.1 requires the facility to check and replace as necessary each mat/panel filter on a weekly basis. To demonstrate compliance with this Staff requested inspection records for the weeks starting with the following dates: 1/23/2023, 2/20/2023, 3/6/2023, 4/10/2023, 5/22/2023, 6/5/2023, and 7/17/2023. These records are maintained electronically. The facility was able to provide the requested records.

**FGMOLDINGEMISSIONS:**

This flexible is made up of the emission units that are responsible for the molding operations to produce the boats made at the facility. EUSOLVENT is used throughout the plant for cleanup operations associated composites production. The facility primarily uses acetone and a few other rubbing alcohols and mineral spirits for these cleanup operations. EUENGINEERING is associated with the making of the composite molds that are used in manufacturing.

The general process flow for the open resin application operations are the gelcoat gets sprayed then the fiberglass is applied to the molds. After the fiberglass is laid; resin is applied. In the closed molding operations the gelcoat and fiberglass are applied in an open environment as they do typically. However, in the closed mold resin applications once the fiberglass is laid the facility then applies a vacuum and pumps resin into the vacuum and time is allowed for the resin to cure. Staff is told that the applied vacuum pulls the fiberglass into the gelcoat and resin increasing strength and providing additional benefits in the manufacturing of their boats.

During the previous inspection it was noted that this flexible group it was noted that the facility is using closed molding as a method of production. In utilizing the closed molding operations facility is assigning an emission factor of 1 percent of VOCs being emitted for when this method of operation is utilized. It was brought up during the ROP renewal process and as well as the previous inspection that FGMOLDINGEMISSIONS did not appear to have evaluated the closed molding operations as a part of the permitting process for these emission units. The District Office made the determination that because the closed molding operations were not evaluated through the New Source Review in the permitting process and established an acceptable and enforceable emission factor that the facility would need to either submit a permit modification for the closed molding operations to be evaluated and the closed molding emission factor be established. Tiara submitted a permit mod application and was issued PTI No. 77-23. In this PTI the emission factors established a federally enforceable emission factor for the closed molding operations of 0.01. This issue appears to be resolved as PTI No. 77-23 was issued on June 6, 2023 and currently being incorporated into the ROP renewal.

**EUMOLDINGEQUIP:**

This emission unit is required to maintain daily and monthly records of the composites resin and gelcoat operations used. The emission unit is required to perform the VOC emission calculations using the emission factors outlined in Appendix 7. Appendix 7 outlines that the facility is to use an emission factor of 13 percent of the VOC content, including styrene, for composite resin spray lay-up. It is also noted that the facility should use 33 percent of the VOC content, including styrene, for gel-coat lay-up. PTI No. 77-23 established the 0.01 emission factor for closed mold resin operations in appendix 4a, 4b, and 4c.

The facility is required to track and calculate 12-month rolling VOC emissions. Staff requested 12-month rolling records for January 2022 through July 2023. During this period the highest 12-month rolling VOC emissions were calculated to be 38.46 TPY in March 2023. This is below the permit limit of 76 TPY.

EUMOLDINGEQUIP is also required to calculate VOC emissions associated with the bulk tank storage on a pounds per hour and pounds per day basis. The facility is tracking both these emission rates. Staff requested records for the period of January 2022 through July 2023. During this time period the highest pounds per hour emission rate was recorded on July 6, 2022 in which it was 13.2 pounds per hour. The largest pounds per day emission rate occurred on July 6, 2022 in which the emission rate was 315.7 pounds per day. The facility also calculates monthly pounds per hour and pounds per day VOC emissions from the lamination portion of EUMOLDINGEQUIP. Records were reviewed for the same time period. During this time period largest calculated pound per hour VOC emissions occurred in May 2022, which was calculated to be 14.7 pound per hour of VOC emissions from lamination in EUMOLDINGEQUIP. The largest calculated pound per day VOC emissions also occurred in May 2022, which was calculated to be 353.1 pounds per day. Combining the bulk resin emissions and lamination VOC emissions from EUMOLDINGEQUIP have calculated VOC emissions that are well below both the permit limit of 100 pounds per hour and 1,200 pounds per day.

This emission unit is located within a large room that has a connected ventilation system. The ventilation system is equipped with mat/fabric filters on the inlets of the systems. During the inspection Staff noted the condition of these filters as being in good operational condition without lots of build up or rips/tears.

**EUENGINEERING:**

This emission unit is required to maintain daily and monthly records of the composites resin and gelcoat operations used. The emission unit is required to perform the VOC emission calculations using the emission factors outlined in Appendix 7. Appendix 7 outlines that the facility is to use an emission factor of 13 percent of the VOC content, including styrene, for composite resin spray lay-up. It is also noted that the facility should use 33 percent of the VOC content, including styrene, for gel-coat lay-up. PTI No. 77-23 established the 0.01 emission factor for closed mold resin operations in appendix 4a, 4b, and 4c.

The facility is required to track and calculate 12-month rolling VOC emissions. Staff requested 12-month rolling records for January 2022 through July 2023. During this period the highest 12-month rolling VOC emissions were calculated to be 0.99 TPY in June 2022. This is below the

permit limit of 5 TPY. Staff was told that the facility recently has been outsourcing molds which limits the amount of materials used in EUENGINEERING.

EUENGINEERING does have hourly and daily VOC limits as a part of FGMOLDINGEMISSIONS. Staff requested these records for the period of January 2022 through July 2023. During this time period the highest pounds per hour emission rate was recorded in February 2022 in which the calculated daily average was 1.0 pounds per hour. The largest pounds per day emission rate occurred also occurred in February 2022 in which the daily average emission rate was 23.6 pounds per day. These are both well below the permit limit of 50 pounds per hour and 300 pounds per day respectively.

During the inspection Staff noted the condition of the fabric filters located inside the booths. These filters appeared to be in good operational condition without lots of build up or rips/tears.

#### EUSOLVENT:

This emission unit has three separate material usage limits. The facility has a Solvent material limit which is restricted to 15 TPY calculated on a 12-month rolling time period. Tiara has two Acetone material limits. The facility is limited 16 tons/month of acetone calculated monthly as well as 190 TPY calculated on a 12-month rolling time period. The facility is tracking monthly and 12-month rolling usage for both Acetone and Solvent usage.

Staff requested records for the period of January 2022 through July 2023. Tiara Yachts reported that largest 12-month rolling Solvent usage occurred in March 2023 in which it used 7.22 TPY on the 12-month rolling time period. The largest monthly Acetone usage occurred in July 2022 in which it used 7.49 Tons. The largest 12-month rolling Acetone usage occurred in March 2023 in which the facility used 71.31 TPY. These are all below the permitted limits.

Monthly Records include Tiara Part number (which is used by Tiara to identify the solvent), total solvent used, VOC content percent, and individual emission calculations.

#### MACT VVVV HAP Limit:

As a part of the MACT VVVV the facility has two options for complying with the open molding emission limits specified in 40 CFR Part 63.5701. The facility can use Maximum achievable control technology (MACT) model point value averaging (emissions averaging) option or the compliant materials option. Tiara Yachts has elected to use the emissions averaging option. By using the emissions averaging option the facility demonstrates compliance on a 12-month rolling-average basis. The facility uses equation 1 in 40 CFR 63.5698 to calculate the HAP emissions limit. Since the equation is used to calculate the HAP limit and HAP emissions both vary month to month. The facility provided records for the period of January 2022 through June 2023. During this time period the facility was compliant with the Point Value System emission limit.

The following are the calculated 12-month rolling HAP emissions using the Point Value System for the time period of January 2022 through June 2022.

January 2022 – 33.03 Tons Total HAP Emissions, Limit = 38.45 Tons

February 2022 – 33.18 Tons Total HAP Emissions, Limit = 38.95 Tons

March 2022 – 33.65 Tons Total HAP Emissions, Limit = 39.67 Tons

April 2022 – 34.16 Tons Total HAP Emissions, Limit = 40.37 Tons

May 2022 – 37.15 Tons Total HAP Emissions, Limit = 43.92 Tons

June 2022 – 37.49 Tons Total HAP Emissions, Limit = 44.67 Tons

July 2022 – 38.67 Tons Total HAP Emissions, Limit = 46.36 Tons

August 2022 – 39.20 Tons Total HAP Emissions, Limit = 47.12 Tons

September 2022 – 39.16 Tons Total HAP Emissions, Limit = 47.44 Tons

October 2022 – 38.69 Tons Total HAP Emissions, Limit = 47.28 Tons

November 2022 – 39.01 Tons Total HAP Emissions, Limit = 47.94 Tons

December 2022 – 37.86 Tons Total HAP Emissions, Limit = 48.43 Tons

January 2023 – 37.91 Tons Total HAP Emissions, Limit = 48.81 Tons

February 2023 – 37.13 Tons Total HAP Emissions, Limit = 47.74 Tons

March 2023 – 37.20 Tons Total HAP Emissions, Limit = 47.80 Tons

April 2023 – 36.03 Tons Total HAP Emissions, Limit = 46.47 Tons

May 2023 – 33.59 Tons Total HAP Emissions, Limit = 43.83 Tons

June 2023 – 33.41 Tons Total HAP Emissions, Limit = 43.36 Tons

These values correspond to the submitted semi-annual NESHAP VVVV reports that Tiara is submitting. These values show they have not exceeded the HAP emission limit using the emission averaging compliance demonstration. The facility appears to meet compliance using this method.

#### FGWOODCAM:

This flexible group is the Compliance Assurance Monitoring requirements for the woodworking equipment associated with EUWOODSHOP. EUWOODSHOP includes wood sawing, cutting, and sanding workstations used for constructing wooden boat parts. The woodworking equipment is controlled by a high efficiency Torit & Day fabric filter dust collector that exhaust back inside the facility. The dust collector is directly hooked up to waste bins outside the facility. The dust collector also is equipped with a magnehelic gauge that can be used to monitor the pressure drop across the bag house. Under this ROP this flexible group is currently subject to the CAM requirements.

As part of these CAM requirements the facility is currently required to monitor the pressure drop across the dust collector, along with recording daily pressure drop and visible dust readings. The facility appears to be maintaining these records. During the inspection the pressure drop reading was noted as 4.2 inches of H<sub>2</sub>O. This is within the operational range specified in the CAM

plan of 0.5 – 6.0 inches of H<sub>2</sub>O. In the facilities ROP certification the facility has reported that there have been no deviations or downtimes associated with this emission unit.

The facility also submitted the daily inspection records for the time period of January 2023 through July 2023. These records include the gauge reading, indication of visible emissions, indication of rotator turning, indication if box is full, and if corrective actions are need.

#### FGPARTICULATE:

This emission unit is for grinding booths associated with the composite's operations. This emission unit currently has minimal special condition requirements. Special condition IV.1 requires the facility to not operate FGPARTICULATE unless the mat/panel fabric filters are installed and operating properly. During the inspection the booths were equipped with the appropriate filters.

Special Condition VI.1 requires the facility to check and replace as necessary each mat/panel filter on a weekly basis. To demonstrate compliance with this Staff requested inspection records for the weeks starting with the following dates: 1/23/2023, 2/20/2023, 3/6/2023, 4/10/2023, 5/22/2023, 6/5/2023, and 7/17/2023. These records are maintained electronically. The facility was able to provide the requested records.

#### FGRULE287:

The facility has several emission units that operate under Rule 287(c). As stated in the previous inspection report during this ROP renewal cycle the facility is wanting to make changes to the names that would reflect stack numbers that the emission unit is also associated with. The names in this report will reflect the discussed name changes. The stack numbers/identification numbers are reflective of a stack map that was provided to staff during the inspection.

EUUPHOLSTRYADH#55 is the new naming convention for the Upholstery Adhesive Booth. The facility is tracking gallons usage through this emission unit. Staff reviewed the records for January 2022 through July 2023. The largest monthly recorded gallons used was 64.0 gallons, which occurred in August 2022. The facility appears to meet the requirements of Rule 287(c) with not exceeding 200 gallons per month minus water.

EUMISCPAINT is the naming convention discussed for the Paints & Misc Solvents emission unit. The facility is tracking gallons usage through this emission unit. Staff reviewed the records for January 2022 through July 2023. The largest monthly recorded gallons used was 33.0 gallons, which occurred in June 2022. facility appears to meet the requirements of Rule 287(c) with not exceeding 200 gallons per month minus water.

EUWESTBOOTH#52 is the naming convention discussed for the West Parts Painting Booth. The facility is tracking gallons usage through this emission unit. Staff reviewed the records for January 2022 through July 2023. The largest monthly recorded gallons used was 18.8 gallons, which occurred in July 2022. The facility appears to meet the requirements of Rule 287(c) with not exceeding 200 gallons per month minus water.

EUEAST#51 is the naming convention discussed for the East Parts Painting Booth. The facility is tracking gallons usage through this emission unit. Staff reviewed the records for January 2022

through July 2023. The largest monthly recorded gallons used was 18.3 gallons, which occurred in June 2023. The facility appears to meet the requirements of Rule 287(c) with not exceeding 200 gallons per month minus water.

EUHULLPAINT#67-72 is the naming convention discussed for the Hull Painting Booth. The facility is tracking gallons usage through this emission unit. Staff reviewed the records for January 2022 through July 2023. The largest monthly recorded gallons used was 174.3 gallons, which occurred in June 2023. The facility appears to meet the requirements of Rule 287(c) with not exceeding 200 gallons per month minus water.

EUWBVARNISH#73-76 is the naming convention discussed for the Auto Varnish operation. The facility is tracking gallons usage through this emission unit in addition to gallons minus water. Staff reviewed the records for January 2022 through July 2023. Since the coatings used in this emission unit are water based the facility does subtract out the water from the gallons used. The largest monthly recorded without water gallons used was 43.4 gallons, which occurred in June 2022. The facility appears to meet the requirements of Rule 287(c) with not exceeding 200 gallons per month minus water.

EUMANUALWOODFINISH#53 is the naming convention discussed for the sanding and sealing emission unit. The facility is tracking gallons usage through this emission unit. Staff reviewed the records for January 2022 through July 2023. The largest monthly recorded gallons used was 102.0 gallons, which occurred in April 2023. The facility appears to meet the requirements of Rule 287 (c) with not exceeding 200 gallons per month minus water.

#### FGRULE290:

The facility has two emission units that the facility operates under Rule 290. The two groups tracked are EUFASEALANTS and EUWOODFINISHING. EUFASEALANTS are recorded as Adhesives Caulks & Sealers under Tiara Yacht's recordkeeping. EUWOODFINISHING are recorded as Assembly Wood Finishing in Tiara Yacht's recordkeeping.

The facility is tracking monthly emissions from these emission units. The facility appears to have categorized the emissions from these emission units as non-carcinogenic VOCs. This gives the facility 1,000 lbs per month per emission unit. The monthly non-carcinogenic emissions have averaged around 1-5 pounds per month for EUWOODFINISHING from January 2020 through July 2023. The emissions for EUFASEALANTS ranged from around 13.4 – 360.5 pounds during the reviewed time period for EUFASEALANTS. These are all below the 1000 lbs. per month limit categorized by the non-carcinogenic VOC's in Rule 290.

#### BOILERS and Emergency Generator:

The facility has two boilers. Both boilers appear to be exempt under Rule 282(2)(b)(i). The boilers have two different Maximum Heat Input Capacities. The 3.05 MMBTU/hour operates on natural gas and was manufactured December 2005. This is used for space heating. The 1.05 MMBTU/hour boiler is fueled by natural gas and manufactured in August 2007. This boiler is used to heat the pavement bricks in the parking lot.

As stated in the previous inspection report the facility also has an emergency generator that is being added to the ROP in this Renewal. The emergency generator is fueled by natural gas. Staff

did not look at the generator during the inspection. In the previous inspection it was noted that the generator nameplate indicated that the braking horsepower was 126 HP. This generator is a 2007 Cummins power generator Model #GGHF-5786312.

Instead, Staff requested maintenance records and run time operation logs. Staff requested maintenance records for the calendar year 2022. In these records the facility is conducting regular maintenance in which oil, fittings, filter, and other fluids are checked. During 2022 the facility recorded that the engine operated for a total of 1 hour for engine maintenance and exercise with no emergency operation.

At the time of the inspection and based on a review of records obtained during or following the inspection, the facility appears to be in compliance with MI-ROP-B6619-2015. Staff stated to Mr. Grammatico that a report of the inspection would be sent to the facility for their records. Staff concluded the inspection at 4:30 PM.-CJY

NAME Cody Yonnie

DATE 9/28/23

SUPERVISOR [Signature]