

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

B661947134

FACILITY: Tiara Yachts Division of S2 Yachts		SRN / ID: B6619
LOCATION: 725 E. 40th St., HOLLAND		DISTRICT: Kalamazoo
CITY: HOLLAND		COUNTY: ALLEGAN
CONTACT: Todd Grammatico , Employee Safety & Wellness Coordinator		ACTIVITY DATE: 11/15/2018
STAFF: Cody Yazzie	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

On November 15, 2018 Air Quality Division (AQD) staff (Cody Yazzie and Dennis Dunlap) arrived at 725 East 40th Street, Holland, Michigan at 12:45 PM to conduct an unannounced air quality inspection of Tiara Yachts Division of S2 Yachts (hereafter Tiara Yachts). Staff made initial contact with the office receptionist and provided her with a business card and stated the purpose of the visit. Todd Grammatico, Tiara Yachts, Employee Safety and Wellness Coordinator, arrived shortly thereafter and took staff to his office 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 30 – 50 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. Tiara Yachts manufactures about 15 boats every month. The facility operates 24 hours a day with 1 primary manufacturing shift. The manufacturing operation is 5 days per week. The facility had around 600 employees at the time of the inspection.

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 used to manufacture other composite reinforced plastic operations that were not related to the boat manufacturing. These operations include the windmill blades. The facility stated that it has not manufactured the windmill blades in about four years.

The Facility is subject to 40 CFR Part 63 Subpart VVVV. This is the National Emission Standards for Hazardous (NESHAP) Air Pollutants for boat manufacturing. The ROP also includes the facility as being subject to 40 CFR Part 63 Subpart WWWW. This is the National Emission Standards for Hazardous Air Pollutants for Reinforced Plastic Composites Productions. Any reinforced plastic composites production that is not a part of the boat manufacturing process is subject to these regulations. The facility is currently only manufacturing boats.

Tiara Yachts was last inspected by the AQD on May 9, 2017 and was determined to be in Compliance at that time with MI-ROP-B6619-2015. Staff asked, and Mr. Grammatico stated that the facility does not have any cold cleaners but, does have an emergency generator and two boilers.

Mr. Grammatico gave staff a tour of the facility. Required personal protective equipment are steel toe boots and safety glasses. Staff observations and review of records provided during

and following the inspection are summarized below:

EUMOLDINGEQUIP:

EUMOLDINGEQUIP includes composites reinforced plastic molding operations for the production of boats. There is the small boat molding room that has multiple bays to perform the molding for the smaller boats. The large molding room is open with multiple molding lines. This room has hull and deck lines. The facility dispenses Aropol Q 677700 T22 resin from a bulk resin tank. The tank is equipped with a digital readout that is recorded daily.

Special Condition VI.1 of FGMOLDINGEMISSIONS requires that composite resin usage in the bulk storage tank be monitored daily. The facility is also required to determine the hourly and daily VOC emission rate. The limit for hourly VOC emissions is 100 lbs/hour while the daily VOC limit is 1,200 lbs/day. The VOC emission rates from the records show that the bulk storage tank averages around 150 lbs/day and around 7 lbs/hour. These are all well below the permit limits.

Tiara Yachts monitors and records monthly usage records for all resin/gelcoat operations a part of the EUMOLDINGEQUIP. The records include monthly usage for each resin and gelcoat, hours of operation, density, volatile weight percent, and emission factor. An emission factor of 0.33 represents a gelcoat operation while 0.13 represents resin operations as stated in Appendix 4a of the ROP. Special Conditions I. 1-3 specify the VOC limits to be 100 lbs/hour, 1200 lbs/day, and 76 tons/year.

The facility provided records as requested starting in May of 2017. From these records the highest calculated VOC emissions in lbs/hour and lbs/day occurred in October 2018. The calculated VOC emission rates were 19.8 lbs/hour and 475.6 lbs/day. The calculated 12-month rolling VOC emissions averaged around 35 TPY. These calculated emission rates are all well below the permit limits.

The facility has mat/panel filters that are on the vents hanging on the wall of the building. All of the filters are easily observable from the operation floor and appeared to be in good working condition.

EUENGINEERING:

EUENGINEERING is an emission unit that is used to make new molds. This room is separate and has three booths. There is one CNC router both that is exempt by Rule 285(2)(l)(vi)(c) and two booths that are identified in the ROP as composite booths controlled by mat/panel filters. Staff observed both composite booths during the inspection, but neither were being used. The booths were equipped with mat/panel filters that were in good operating condition. One booth did have a 55-gallon drum of solvent that the cap was left off. Staff reminded Mr. Grammatico that the caps should be sealed. Mr. Grammatico took a picture of the drum and told staff that it would be fixed.

EUENGINEERING does have hourly, daily, and 12-month rolling VOC limits as a part of FGMOLDINGEMISSIONS. Special Conditions I. 4-6 specify the VOC limits to be 50 lbs/hour, 300 lbs/day, and 5 tons/year. Tiara Yachts is keeping records of these VOC limits as specified in Special Condition VI.2. The records include monthly usage for each resin and gelcoat, hours of operation, density, volatile weight percent, and emission factor. An emission factor of 0.33 represents a gelcoat operation while 0.13 represents resin operations as stated in Appendix 4a of the ROP.

The facility provided records as requested starting in May of 2017. From these records the highest calculated VOC emissions in lbs/hour and lbs/day occurred in July 2018. The

calculated VOC emission rates were 0.8 lbs/hour and 18.7 lbs/day. The calculated 12-month rolling VOC emissions averaged around 1.3 TPY. These calculated emission rates are all well below the permit limits.

The facility has mat/panel filters that are used in the layup booths. All of the filters are easily observable and appeared to be in good working condition.

EUSOLVENT:

EUSOLVENT accounts for solvents (primarily acetone) that are used throughout the plant for cleanup operations associated with composites production. The amount of cleaning solvents used exceeds the Rule 290 thresholds and is accounted for as a part of FGMOLDINGEMISSIONS. EUSOLVENT is also subject to the 40 CFR Part 63 Subpart VVVV.

As a part of FGMOLDINGEMISSIONS EUSOLVENT has yearly and monthly material limits that are specified in Special Conditions II.1-3 of the ROP. EUSOLVENT has a 15 tons per year limit based on a 12-month rolling time period for cleaning solvents. Since May 2017 the facility has not exceeded 7.95 Tons per year which is well below the permit limit. Acetone is limited to 16 tons per month and 190 tons per year based on a 12-month rolling basis. Since May 2017 the facility has not exceeded 8.63 tons per month and 73.35 tons per year. Both acetone material limits are well below the permit limit. The facility currently does not have a solvent reclamation system or a still. Tiara Yachts collects all the acetone in totes as hazardous waste and ship it to a waste management firm.

As stated previously acetone is the primary cleaning solvent that is used for gelcoat and resin cleaning, both catalyzed and uncatalyzed. The facility does also use Mineral Spirits as a wiping/cleaning solvent and Repcolite Lacquer Thinner as a wiping/lacquer thinner. These other cleaning solvents are used primarily for boat cleaning and surface preparations. The facility provided the SDS of the acetone, mineral spirit, and lacquer thinner. The MACT VVVV requires cleaning solvents used for routine flushing of resin and gelcoat application equipment to contain less than 5% organic HAP by weight. The acetone is the only cleaning solvent used routinely flush resin and gelcoat application equipment. The other cleaning solvents (mineral spirits and lacquer thinner) are used for wiping and small jobs and do not have an organic HAP content limit stated in 40 CFR 63.5434(a).

The facility has mat/panel filters that are on the vents hanging on the wall of the building. All of the filters are easily observable from the operation floor and appeared to be in good working condition.

EUUPHOLSTRYADH:

This emission unit accounts for the adhesives that are used during the assembly of upholstery fabrics. This is a Rule 287(2)(c) exempt source. This emission unit is also subject to the 40 CFR Part 63 Subpart VVVV. This emission unit is located outside the assembly room. In this room there are sewing machines, fabric tools, and the adhesive application booth. The booth is equipped with a mat/panel filter. This filter was in good operating condition during the inspection.

As apart of the MACT VVVV this emission unit must use carpet and fabric adhesives that are less than 5% organic HAP by weight. The facility uses four adhesives for this process. Two of the four adhesives had organic HAPs in its composition according to the SDS. Toluene was the only HAP identified in both adhesives. The SPSTAK 850710 HP showed that it was composed of 1% toluene and 3M Scotch-Weld Hi-Strength Laminating 93 Cylinder Spray Adhesives reported it was 0.7% toluene by weight. These are both below the 5% organic HAP limit required by the MACT VVVV.

This emission units usage is low enough to operate under exemption rule 287(2)(c). The facility must track monthly material usage and has surface coating limit of 200 gallons per month minus water. Since November of 2017 the facility has been below the 200 gallons per month limit averaging around 30 gallons per month.

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 since July 2018. Tiara Yachts was compliant with the MACT VVVV organic HAP emissions from open molding production since then. The facility is required to report these emissions semi-annually. After checking the reports submitted to the district office the Tiara Yachts has been compliant since January 2017.

FGWOODCAM:

This flexible group is the compliance assurance monitoring requirements for the woodworking equipment associated with EUWOODSHOP. EUWOODSHOP includes wood sawing, cutting, and sanding work stations 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.

Tiara Yachts is required to monitor the pressure drop and take visible emissions readings daily. The visible emission readings are required to record the presence of visible emissions. The past six months of recordkeeping showed that the dust collector had no visible emission during the daily inspections performed by the facility. The acceptable operating range for the pressure drop across the magnehelic gauge is between 0.5 and 6 inches of water. The past six months of recordkeeping show that gauge readings were typically between 0.6 and 0.8 inches of water. The gauge reading never fell below 0.6 or above 1 which is compliant with Special Condition VI.5.

The facility is required to report monitoring downtime and detection of excursion or exceedances. If the facility were to experience an excursion or exceedance the facility must record corrective actions that were taken, or any written quality improvement plan and any activities undertaken to implement a quality improvement plan. Since July 2016 the facility has not experience any excursions, exceedances, or monitor downtime according to the semi-annual CAM certifications.

FGRULE287:

Tiara Yachts is operating multiple emission units under the Rule 287(2)(c) exemption. The facility has emission units EUUPHOLSTRYADH, EULB2SOUTH, EULB3SANDCOAT, EUNBOOTH, EUFAPAINTS, EUHULLPAINT, EUBLADEPAINT-1, and EUBLADEPAINT-2 all identified in the ROP as Rule 287(2)(c) exempt. The facility has had some changes with additions, removals, and relocations of some of the emission units.

EUBLADEPAINT-1 and EUBLADEPAINT-2 have been removed since they no longer manufacturing this product. The facility has not manufactured Windmill Blades in about 4

years.

EULB2SOUTH and EUNBOOTH were both lacquer booths that have been reoriented at the same location to East and West. The booths are now called West Small Parts and East Small Parts painting booths. The booths operate independently of each other and are used to color coordinate and touchup various boating related components. The facility is tracking monthly usage for these surface coating lines. The West Parts Painting Booth averaged around 20 gallons per month. The East Parts Painting Booth has not recorded any usage since May 2018. The first quarter of the year this painting booth's usage ranged from 3.0 – 52.3 gallons per month.

EULB3SANDCOAT was a Lacquer booth that has been relocated to the east side of the facility. There are two booths at this location that now apply low volume spray wood finishes to individual parts. During the inspection Mr. Grammatico stated during the inspection that these booths have been used for painting the out-board motors that the facility had recently started installing. The 287(2)(c) records show since November 2017 that the facility has been below the 200 gallons per month limit averaging around 70 gallons per month.

EUFAPAINTS are paints that are applied as needed on the assembly floor. Paints used in this emission unit include touch up paints on engines and antifouling coating. The facility is tracking the monthly surface coating usage. Staff requested records since November 2017. The facility has been below the 200 gallon per month limit averaging around 85 gallons per month.

EUHULLPAINT is a booth that is located in the assembly room. The facility uses the booths to apply coatings to hulls. There is also an enclosed area that is used to prep hulls for painting. Tiara Yachts is monitoring and recording surface coating usage for this emission unit. Records since November 2017 show that the it is averaging around 120 gallons per month and has not exceeded the 200 gallon per month limit.

The Auto Varnish Operation applies a water-based material under exemption Rule 287(2)(c). There are two drying ovens and a UV curing oven associated with Auto Varnish Operation. The facility is keeping monthly usage records. Records show that since November 2017

FGRULE290:

The facility has two emission units that operate under the Rule 290. The two groups tracked are EUFASEALANTS and EUWOODFINISHING. EUFASEALANTS are adhesives, caulks, and sealers that are used in final assembly. EUWOODFINISHING uses wood finishing materials that are applied to interior boat components such as bulkheads, galley, and heads. All the wood finishing compounds are applied on the assembly floor. Different models and options require custom applications of various wood components that use a relatively small amount of the wood finishing compounds.

The facility is tracking monthly emissions from these emission units. The facility appears to have checked the screening levels for all the materials used in the emission groups. The facility groups emissions into two groups: Carcinogenic and Non-Carcinogenic. Tiara Yachts have appropriately applied the limits to each group. The facility appears to have no Carcinogenic emissions. The monthly non-carcinogenic emissions have averaged around 20 lbs. per month for EUWOODFINISHING since November 2017. The emissions ranged from 54.5 – 212.3 lbs. per month for EUFASEALANTS. These are all below the 1000 lbs. per month limit.

EMERGENCY GENERATOR:

There is one emergency generator that is fueled by natural gas. Staff looked at the generator

during the inspection. Staff noted that the generator nameplate indicated that the braking horsepower was 126 HP. This generator is a 2007 Cummins power generator Model #GGHF-5786312. The facility supplied the serial number: A070013234 installed August 2007. The generator appears to be 40 CFR Part 60 Subpart JJJJ. Facility should include this emission unit in ROP renewal application

BOILERS:

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.

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 ROP No: MI-ROP-B6619-2015 and 40 CFR Part 63 Subpart VVVV. 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 3:30 PM.-CJY

NAME

Cody Younger

DATE

12/7/18

SUPERVISOR

MD 12/7/2018