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

N132873732		
FACILITY: Rec Boat Holdings LLC - Cruiser Plant		SRN / ID: N1328
LOCATION: 609 13 TH. St., CADILLAC		DISTRICT: Gaylord
CITY: CADILLAC		COUNTY: WEXFORD
CONTACT: Trent Burch , Environmental/Safety Compliance		ACTIVITY DATE: 08/13/2024
STAFF: Lindsey Wells	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: on-site inspection and records review for FY24 FCE, no further action recommended at this time;		
RESOLVED COMPLAINTS:		

On 8/13/24 AQD staff Lindsey Wells and Shane Nixon mobilized to RecBoat Holdings – Cruiser plant (SRN: N1328) located at 925 Frisbie Street, Cadillac, Michigan. On 9/5/24 in response to staff record request, RecBoats submitted a complete and timely records package. The purpose of these activities is to determine compliance with ROP-MI-N1328-2022.

**Summary:** Based on observations during the on-site inspection, and staff review of periodic reporting and submitted records, the facility is in compliance with MI-ROP-N1328-2022.

## Facility Information:

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The facility is an ungated facility, located in an industrial park in Cadillac, Michigan. Located at the SW corner of the intersection of West 13<sup>th</sup> Street and 6<sup>th</sup> Avenue, the property is bounded to the north across 13<sup>th</sup> Street and east along 13<sup>th</sup> Street by residential properties. To the NW of the facility is St. Ann Elementary School. Properties to the south and west of the facility include other industrial facilities.

The facility is a Major for VOCs, with the potential to emit of over 100 tons/yr. The source is also considered major for HAPs (>10 tons/yr). There are no control devices onsite for VOCs, therefore CAM is not applicable. In 2004, the facility took a source -wide limit of 225 ton/yr VOC, which resulted in the source becoming a non- Potential for Significant Deterioration (PSD) source.

The referenced facility operates under Renewable Operating Permit (ROP) MI-ROP-N1328-2022. The referenced ROP was issued on August 9, 2022.

The last scheduled site inspections were conducted on December 6, 2019 and October 21, 2021. The facility was reported to be in compliance with their permit at the time of both inspections.

The Cruiser division manufactures boats (personal watercraft). Gelcoats (EUGELCOAT) containing color pigments, as well as fiberglass material (EULAMINATION) are applied onto molds (FGOPENMOLDING) to create boat components. The finished component is removed from the mold and ground at the edges (EUGRINDBOOTH) prior to assembly. All stages of production and assembly are conducted on-site, with each boat moving through the various areas of the production floor. Solvent for cleanup and adhesives for various boat components are also used in the process. Cushions, upholstery, and carpet are often produced in-house.

Staff were accompanied by Trent Burch, the EHS manager for each of the RecBoats facilities located in Cadillac. The onsite inspection included a detailed process tour as well as on-site records review of technical data sheets and material usage records. Staff also visited the facility for a records review meeting focused on the facility's materials tracking procedures.

Note the facility is operating at lower production levels than previous years. Previously the facility produced up to 15 boats per day, and currently produces approximately 11 per week. Currently the Cruiser plant has the capacity to handle all of Recboats production, and the sport and engineering plant is temporarily not operating. Also note that the trailer plant is temporarily not operating.

#### Compliance Evaluation MI-ROP-N1328-2022

At the time of the inspection, all permits associated with the facility have been rolled into MI-ROP-N1328-2022. Since the previous inspection in 2021, no complaints were received, or Violation Notices (VNs) were issued. No Consent Orders are of record for the facility.

#### SOURCEWIDE:

Source-wide emissions totals are reported on a quarterly basis as required by the permit.

VOC emissions are limited to:

- 5,127.1 pounds per day (lb/day) on a calendar day basis (SC I.1); and
- 225 tons per year (tpy) based on a 12 month rolling time period (SC I.2).

A review of submitted reports indicates compliance with the emission limits for the evaluation period. In general, total facility VOC emissions are less than 60 tons per year. The reported maximum VOC per day was below 1100 lb/day.

At the time of report preparation the facility does not manufacture fiberglass reinforced plastic composite small parts for boats that are manufactured elsewhere than at this stationary source (SRN N1328), therefore, sourcewide condition IX.1 is not applicable at this time.

### **Sourcewide Work Practices**

The permit requires that all resins, gelcoats, additives, adhesives, and solvents be captured and stored in closed containers.

The permit requires that a minimum of 50% of resin usage be applied with non-atomized applicators or equivalent technology. Per the 8/13/24 on-site inspection, and consistent with previous reports, no processes utilize atomized applicators and application is airless (III.2-3)

The proper installation and operation of dry exhaust filters is required for both the lamination and gelcoat processes. Air collection devices (plenums) are located in the lamination and gelcoat areas and were visibly equipped with filters at the time of the 8/13/24 on-site inspection. The plenums vent to the 5 stacks associated with the facility. Operators check filters on a minimum of once weekly. Previous reports indicate the stack dimensions are compliant with permit requirements.

## Sourcewide Recordkeeping

The permit requires maintenance of records of manufacturer's chemical composition data for each resin, including styrene and vinyl toluene weight percent.

The permit also requires daily recordkeeping for:

- Gallons or pounds of each material used;
- Where applicable, gallons or pounds of each material reclaimed;
- VOC content or emission factor in pounds per gallon or pounds per pound of each material used;
- VOC emission calculations determining the daily emissions in pounds per calendar day;
- · VOC emission calculations determining the monthly emissions in tons per calendar month;

VOC emission calculations determining the annual emission rate in tons per 12 month rolling time period, as determined at the end of each calendar month.

Records are required to be made available by the 15<sup>th</sup> day of each succeeding calendar month. At the time of the on-site inspection, records were readily available for staff review upon request.

Facility personnel perform an inventory of materials each day, including both the chemical storage areas and in-use production floor counts. In general, material weights are included on labels for materials received in drums. The material level of in-use drums is noted on the inventory sheet. These data are entered into facility tracking software that will calculate pounds used. Periodically, specific gravity is used as another check on inventory calculations. The facility utilizes bulk storage for the production resin and measures the tank level daily to track usage.

Daily usages are compiled in a spreadsheet that uses material component data to calculate emissions. The spreadsheet includes usage on a per day and per month basis, with 12-month rolling totals when required by the permit.

#### Sourcewide Reporting

As an ROP source, the facility is required to submit periodic reports of monitoring and deviations. Records review indicates that the facility has fulfilled the reporting obligations. Submissions are timely and complete. No ROP deviations or Rule 912 exceedances are of record for the evaluation period.

Also of note, most material usage EUs at the facility are required to report material usage and emissions on a quarterly basis. Quarterly reporting is due no later than 30 days following the end of each calendar quarter Quarterly reporting includes:

- Volatile organic compound (VOC), styrene, and acetone emissions for all applicable emission units (EUs)
- Material usage rates for all applicable EUs

At the time of report preparation, a review of the facility's spreadsheet indicates emissions are determined using mass balance and the application of the emission factors referenced in the permit.

**EULAMINATION**: This emission unit (EU) includes fiberglass lamination of boat parts using open molds at the Cruiser Plant.

VOC emissions (including styrene and toluene) are limited to:

- 127.3 pounds per hour (lb/hr) on a calendar day basis (SC I.1) and
- 158.2 tons per year (tpy) based on a 12-month rolling time period (SC I.2).

Records review indicates emissions were less than 25 tons per year. The reported maximum was 33 lbs VOC/hr. VOC emissions are also limited to 0.0385 lbs VOC per lb of resin applied. An averaging period is not specified. An analysis of the month with the highest VOC emissions and resin usage result in 0.0315 lb VOC/lb resin applied, indicating compliance.

Material usages are limited to:

- 45,489 pounds per day total resin usage (including vinyl toluene containing resin)
- Note that vinyl toluene production resins are not currently in use per the facility.
- Production resins with a maximum styrene monomer content of 35% by weight

Records indicate that the maximum daily resin use was less than 12,000 lbs per day. At the time of the 8/13/24 inspection, the facility reports that tooling resins are not in use at the Cruiser plant. SC VI.4 requires the facility to track the hours of operation per calendar day. In general, 12 hours per day are reported for all operating days. The plant is not in production on the weekends.

**EUGELCOAT**: This emission unit consists of the application of gel coat which comprises the outermost layer of exterior boat parts. The gelcoats contain pigments for boat color and are applied using non-atomized applicators. VOC emissions (including styrene) are limited to:

- 98.9 pounds per hour (lb/hr) on a calendar day basis (SC I.1) and
- 134.4 tpy based on a 12-month rolling time period (SC I.2).

Review of quarterly reporting indicates that 12-month rolling VOC emissions were less than 32 tpy for the evaluation period.

Styrene emissions are limited to:

- 69.8 pounds per hour (lb/hr) pph on a calendar day basis (SC I.3) and
- 94.8 tons per year (tpy) based on a 12 month rolling time period (SC I.4).

Review of quarterly reporting indicates that styrene emissions were less than 20 tpy and 46 pounds per hour for the evaluation period.

Material usages are limited to 10,000 pounds of gelcoat per calendar day. The styrene monomer content of all gel coats is limited to 30.7% by weight (SC II.1 – II.2).

The facility air tracking spreadsheet records usage for each type of gelcoat and the styrene content of each gelcoat. A weighted average is calculated based on monthly usages. Records review indicates maximum average styrene content was 24.2% by weight.

**EUADHESIVE**: Application of adhesives during the boat assembly process. Combined VOC and acetone emissions are limited to:

- 484 pounds per day (lb/day) on a calendar day basis (SC I.1) and
- 61.0 tpy based on a 12-month rolling time period (SC I.2).

The organic HAP content of carpet fabric adhesives is limited to 5% by weight. The facility reports compliance with this material limit in semi-annual MACT reporting.

Records review indicates less than 7 tons VOC and acetone emissions per year. The maximum reported daily VOC and acetone was 210 pounds. Generally, daily emissions are less than 50 pounds per day.

**EUVOCCLEANUP**: This EU includes activities associated with VOC based cleanup solvent usage for both the Sport and Engineering plants. No emission limits exist for this EU.

Material usage is limited to 937,500 pounds/year of VOC based cleanup solvents, based on a 12-month rolling time period (SC II.1).

Review of records indicates a maximum usage of 5,854 pounds per year of VOC based cleanup solvents. Previous reports indicate the HAP content of the 3680 cleanser is 4.4% by weight, which is compliant with the 5% maximum organic HAP content of cleaning solvent.

The facility records total gallons of solvent used, which is converted to pounds using material density. VOC content of the solvents utilized in EUVOCCLEANUP is reported to be 12.24%. SC III.1 requires the facility to reclaim a minimum of 48% by weight of VOC based cleanup solvents used. The facility reports 100% solvent reclaim for the reporting quarter. Solvent usage and reclaim is tracked electronically and included in guarterly reports.

The permit also requires that all organic HAP containing solvents be stored with covers that have no visible gaps and are in place at all times except when operator access is required. Observations during the 8/13/24 on-site inspection noted compliance with this requirement. The facility performs and maintains records of monthly visual inspections as required (VI.2, VI.3).

**EUACETONECLEANUP**: This EU includes acetone based solvent cleanup activities for the facility. Previous reports indicate that the facility uses 100% acetone.

Acetone emissions are limited to 125 tons per year (tpy) based on a 12 month rolling time period (SC I.1). Reported emissions are in general less than 20 TPY, well below the emission limit.

There are no material usage limits. SC III.1 requires the facility to reclaim a minimum of 48% by weight of acetone used. Review of quarterly reports indicates that the facility has reclaimed the required minimum of acetone. The facility tracks acetone usage and reclaim using mass balance methodology.

## EUGRINDCUTBOOTH

This EU is an enclosed booth for the grinding/cutout activity for boat parts. At the time of the 8/13/24 on-site inspection, the booth was visibly equipped with a differential pressure gauge that read 2.6" at the time of inspection, compliant with the 2.20 - 3.20" range specified in the permit. Pressure drop is recorded weekly as required by the permit.

#### EURTM

This activity includes closed molding vacuum infusion processes that are currently used to manufacture smaller boat components.

Emissions of VOC including styrene are limited to 12.6 tons per year on a 12-month rolling time period. The permit specifies an emission factor of 0.01 lb VOC per lb material applied.

Styrene and VOC content of RTM resins are limited to 47% and 50% by weight, respectively. Styrene and VOC content of adhesive/tackifier are limited to 0.6% and 46% by weight, respectively.

RTM resins are tracked separately in the air tracking spreadsheet. Records indicate a total of 54 pounds VOC were emitted from EURTM during the evaluation period. The RTM resins listed in the tracking spreadsheet conform to the material limits.

# FGOPENMOLDING

This flexible group includes conditions pertain to all open molding operations utilizing production resin, tooling resin, pigmented gel coat, clear gel coat, and tooling gel coat including the application of gel coat or skin coat layers that are applied before lamination by closed molding for the purpose of compliance with 40 CFR Part 63, Subpart VVVV (MACT 4V).

Previous reports indicate SC I.1 includes the organic HAP limit for the emissions averaging option of the subpart. However, the facility reports utilizing the 'compliant materials' option to comply with MACT 4V. These options are reflected in the material limits conditions of this flexible group. Note that clear gel coat, filled production resin, tooling resin, and atomized applicators are not used.

The facility maintains records of the organic HAP content of all resins and gelcoats in the form of technical datasheets. The facility reports 12-month rolling, weighted averages of the HAP content of resins used during the applicable MACT reporting period. A review of the semi-annual reports associated with the evaluation period indicates compliance with the

material limits for production resin and pigmented gel coats. Staff were able to reproduce total amounts reported in MACT 4V reports for selected resins utilizing data in the air tracking spreadsheet and facility inventory counts.

The MACT 4V reports required by this flexible group are complete and received timely.

## FGMIXING

This flexible group includes EURESINMIXING and EUGELCOATMIXING. At the time of report preparation, the facility has indicated that no mixing activities take place at the Cruiser plant, therefore this section is appears to not apply at this time. As previously indicated, during the 8/13/24 on-site inspection, all containers observed by staff were equipped with well fitting covers with no visible gaps.

### Additional Sourcewide Considerations

If the facility manufactures fiberglass reinforced plastic composite small parts for used in the construction of boats offsite, the facility is subject to requirements under 40 CFR Part 63, Subpart WWWW, except as described in 40 CFR 63.5787 (d). Based on information the facility only produces components for onsite use and the referenced Federal regulations do not apply at this time.

Facility staff indicated that in historic discussions with previous staff, that it was determined that if the Facility met the requirements under 40 CFR Part 63, Subpart VVVV (NESHAP for Boat Manufacturing), it also met the less rigorous requirement under Subpart WWWW. This will be evaluated as needed should the facility become subject to MACT 5W.

## **Facility Information of Record**

#### Resin info

Note that prior discussions with AQD permit engineers indicated that the additive resins as well as paste waxes, et al, materials not used in significant quantities as would be needed to produce boats. As a result, additive resins were not considered production resins for purposes of permitting and would have been evaluated as a miscellaneous toxic, and not included in material restrictions for production resins.

#### **Facility History**

Production onsite began in approximately 1985. The facility has expanded since that time and has purchased adjacent properties, including an adjacent cabinet shop in appx. 2005 and an adjacent building to the south in 2006-2007. The expansions allowed the facility to expand not only their production area, but to add pools to test their product in, and expand shipping and storage space. Rec Boats now makes use of a total of 9 locations ranging from an engine warehouse to a rental location referred to as the Warranty Bldg.

Other permitted locations associated with the Facility/Company includes:

- The Rec Boats LLC Sport and Engineering (N1470) (925 Frisbie Street, Cadillac)
- Trailer Divisions (N1772) (1552 Miltner Street, Cadillac) and
- Rec Boat Cabinetry (N7941) (701 6<sup>th</sup> Street, Cadillac)

The facilities are located within an approximately 1-mile radius of the Cruiser Division.

Previously, in 2009, due to decreased sales Rec Boat Holdings LLC transferred production in the Sport Plant to the Cruiser Plant. Based on discussions during the March 16, 2018, site inspection, it was indicated that increasing sales had reached a point where production of the smaller boats would be returning to the nearby sport plant. Hours of operation for the facility have ranged from 10-15 hours/day depending on orders. Since the 2018 site inspection at the Sport Plant, "sport boat" production has completed transfer to the sport plant. At the time of 2024 report preparation, the sport plant is temporarily not operating. For now, most boats produced are the 'Cruiser line', or can be produced at the Cruiser plant.

Rec Boat Holdings LLC, was purchased in 2014 by Beneteau Group, but still is legally operating as Rec Boat Holdings LLC. At the time of the December 6, 2019, site inspection, the signage associated with the Facility has changed to reflect the purchase (AKA Groupe Beneteau).

The facility manufactures boats for multiple brands. Brands that have been or are presently produced at the Cruiser Plant include: Four Winns, Wellcraft, Glastron, Scarab, Jeanneau and Beneteau.

Each boat constructed onsite is a custom/special order and have historically reported using over 70 different models/forms and over 40 different modification choices resulting in over 100 different configurations. More recently the company has decided to eliminate some of their less popular models/forms and anticipate by spring of 2022 to only be down to approximately half of the previous models produced.

#### Conclusion

On 8/13/24 AQD staff Lindsey Wells and Shane Nixon mobilized to RecBoat Holdings – Cruiser plant (SRN: N1328) located at 925 Frisbie Street, Cadillac, Michigan. On 9/5/24 in response to staff record request, RecBoats submitted a complete and timely records package. The purpose of these activities is to determine compliance with ROP-MI-N1328-2022.

**Summary:** Based on observations during the on-site inspection, and staff review of periodic reporting and submitted records, the facility is in compliance with MI-ROP-N1328-2022. Review of periodic reporting included 2023 MACT 4V Semi 2, 2024 MACT 4V Semi 1; 2023 Quarters 3 and 4; 2024 Quarters 1 and 2; and appliable periodic ROP reports corresponding to the evaluation period of July 2024 – August 2023.

Lindseywells NAME

DATE 12-2-24

SUPERVISOR Thank Thixon