DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Records Review (In office)

N374854018

FACILITY: Belding Tank Technologies, Inc.		**SRN / ID:** N3748
LOCATION: 200 N Gooding St., BELDING		**DISTRICT:** Grand Rapids
CITY: BELDING		**COUNTY:** IONIA
CONTACT: Paul Crystler , Purchase Manager		**ACTIVITY DATE:** 06/17/2020
STAFF: Eric Grinstern	**COMPLIANCE STATUS:**	**SOURCE CLASS:** MAJOR
SUBJECT: PCE - Records Review		
RESOLVED COMPLAINTS:		

FACILITY DESCRIPTION

Belding Tank Technologies manufactures fiberglass reinforced plastic tanks.

REGULATORY ANALYSIS

The facility is operating under ROP No. MI-ROP-N3748-2017, which was issued on May 3, 2017. Permit to install (PTI) No. 93-18 was issued on May 3, 2017. PTI No. 93-18 addresses the use a vapor suppressed resin. The PTE was incorporated into the ROP via a minor modification on October 30, 2018. PTI No 93-18a was issued on December 18, 2018, allowing for the installation and operation of three new mold rooms (EUMOLDSTATION7, EUMOLDSTATION8, EUMOLDSTATION9). PTI No. 93-18a was incorporated in to the ROP via a minor modification on April 30, 2019. As of the date of this report, the facility had not started installation of the emission units. Since the 18-month window to start installation has passed, the facility will be submitting a new permit application that will be identical to the application for PTI 93-18. The new emission units will be located at 701 Reed Street, which is about 1,000 feet from the main facility.

The facility is subject to Subpart WWW – Reinforced Plastics Composites Production NESHAP.

COMPLIANCE EVALUATION

The facilities operations are currently located in five separate structures:

1. Resin storage building (Building 1)
2. Building housing: EUMOLDROOM1, EUMOLDROOM2, EUMOLDROOM5 (Building 2)
3. Building housing: EU3&4NORTHMOLD, EU3&4MIDMOLD, EU3&4SOUTHMOLD (Building 3)
4. Tank Assembly building: EUTANKASSEMBLY
5. Tank Assembly building: EUTANKASSEMBLY2

Below is a summary of the facility's compliance with the ROP/PTI and MACT requirements. Records required by the permit and Subpart WWW were requested and provided prior to the onsite inspection due to the COVID 19 pandemic. Monthly records were requested for the previous 12 months, daily and hourly records were received for the previous 30 days.

Review of the facility records determined that they had not been accounting for a switch to the use of vapor suppressed resin usage in the monthly records and MACT records. Upon discovering the oversight, the facility corrected the MACT compliance table and started updating the monthly emission records for the previous 12 months. Review of the updated monthly, annual and MACT records showed compliance with the applicable emission limits. The facility was accounting for the use of the vapor suppressed resin in the daily records. The facility had been using a vinyl ester resin with 35% styrene and switched to a vapor suppressed resin with 44% styrene. Due to the vapor suppression, the resin is comparable to a non vapor suppressed resin with a styrene content between 32% and 37%, depending on the type of application. Additionally, the facility made a correction regarding the styrene content of the isophthalic resin used. The facility's daily records had a styrene content of 45%, however the tanker records showed a content of 47%. Review of provided daily records showed that they were still in compliance with emission limits when using 48% styrene content resin. The facility will update records for the past 30 days and utilize 48% styrene content going forward. The facility will evaluate tanker shipments to assure that the styrene content stays under 48%.

The facility converted bays 2,3,4 and 5 to an automated winding operation. The same tools/process/resin are in the automated and manual process. It does not appear that automating some of the tank making process is prohibited by the permit conditions or would require a permit modification at this time.

EUMOLDROOM1

EUMOLDROOM1 contains one tank mold and is located in Building 2.

The facility converting the bay from manual to and automated winding operation. The same tools/process/resin are in the automated and manual process. It does not appear that automating some of the tank making process is prohibited by the permit conditions or would require a permit modification at this time.

I.1. VOC limit of 438 pounds per calendar day

Review of the records provided showed compliance with the daily VOC limit.

I.2. VOC limit of 15.3 tons per year

Records reviewed for the 12-month rolling time period showed compliance with the limit. .

I.3. Styrene limit of 17.8 pounds per hour

Review of the records provided showed compliance with the pph styrene limit.

I.4. Styrene limit of 15.1 tons per year

Records reviewed for the 12-month rolling time period showed compliance with the limit.

EUMOLDROOM2

Mold Room 2 contains two tank molds and is located in Building 2, adjacent to Mold Room 1.

I.1. VOC limit of 937 pounds per calendar day

Review of the records provided showed compliance with the daily VOC limit.

I.2. VOC limit of 29.7 tons per year

Records reviewed for the 12-month rolling time period showed compliance with the limit.

I.3. Styrene limit of 38.0 pounds per hour

Review of the records provided showed compliance with the pph styrene limit.

I.4. Styrene limit of 29.2 tons per year

Records reviewed for the 12-month rolling time period showed compliance with the limit.

EUMR3&4NORTHMOLD

Mold Room 3&4 North Mold contains one tank mold and is located in Building 3.

I.1. VOC limit of 391 pounds per calendar day

Review of the records provided showed compliance with the daily VOC limit.

I.2. VOC limit of 6.6 tons per year

Records reviewed for the 12-month rolling time period showed compliance with the limit.

I.3. Styrene limit of 15.8 pounds per hour

Review of the records provided showed compliance with the pph styrene limit.

I.4. Styrene limit of 6.5 tons per year

Records reviewed for the 12-month rolling time period showed compliance with the limit.

EUMR3&4MIDMOLD

Mold Room 3&4 Mid Mold contains one tank mold and is located in Building 3.

I.1. VOC limit of 391 pounds per calendar day

Review of the records provided showed compliance with the daily VOC limit.

I.2. VOC limit of 8.9 tons per year

Records reviewed for the 12-month rolling time period showed compliance with the limit.

I.3. Styrene limit of 15.8 pounds per hour

Review of the records provided showed compliance with the pph styrene limit.

I.4. Styrene limit of 8.8 tons per year

Records reviewed for the 12-month rolling time period showed compliance with the limit.

EUMR3&4SOUTHMOLD

Mold Room 3&4 South Mold contains one tank mold and is located in Building 3.

I.1. VOC limit of 391 pounds per calendar day

Review of the records provided showed compliance with the daily VOC limit.

I.2. VOC limit of 14.0 tons per year

Records reviewed for the 12-month rolling time period showed compliance with the limit.

I.3. Styrene limit of 15.8 pounds per hour

Review of the records provided showed compliance with the pph styrene limit.

I.4. Styrene limit of 13.8 tons per year

Records reviewed for the 12-month rolling time period showed compliance with the limit.

EUMOLDROOM5

Mold Room 5 contains two tank molds and is located in Building 2, adjacent to Mold Room 2.

I.1. VOC limit of 391 pounds per calendar day

Review of the records provided showed compliance with the daily VOC limit.

I.2. VOC limit of 24.8 tons per year

Records reviewed for the 12-month rolling time period showed compliance with the limit.

I.3. Styrene limit of 15.8 pounds per hour

Review of the records provided showed compliance with the pph styrene limit, with the exception of May 30, 2020. The facility reported an emission rate of 16.356 pph. The facility stated that they were using a default of 5 hours of work on Saturdays. Upon investigating, the facility determined that they actually worked 8.5 hours on May 30, 2020. The facility provided electronic timesheet records to support the hours worked. The facility will update the emissions records. Based on the actual hours worked, the facility is in compliance with the pph limit for all records provided.

I.4. Styrene limit of 23.6 tons per year

Records reviewed for the 12-month rolling time period showed compliance with the limit.

EUCLEANUP

The facility only uses acetone for cleanup. The facility utilizes a small distiller to recycle used acetone.

I.1. Acetone emission limit of 55 tons per year.

Review of the records provided shows that the facility emitted 30.64 tons for the 12-month period ending in June 2020.

EUTANKASSEMBLY

Emission unit associate with the assembly of tank components.

I.1. VOC limit of 62.2 pounds per calendar day

Review of the records provided showed compliance with the daily VOC limit.

I.2. VOC limit of 3.6 tons per year

Records reviewed for the 12-month rolling time period showed compliance with the limit.

I.3. Styrene limit of 2.6 pounds per hour

Review of the records provided showed compliance with the pph styrene limit.

I.4. Styrene limit of 3.6 tons per year

Records reviewed for the 12-month rolling time period showed compliance with the limit.

II.1. Styrene content in resin not to exceed 35%, for resins that do not contain a vapor suppressant.

For the records reviewed, the facility was only using a vinyl ester vapor suppressed resin in tank assembly.

II.2. Styrene content in resin not to exceed 45%, for resins that contain a vapor suppressant.

The facility is using a vapor suppressed resin with a styrene content of 44%.

EUTANKASSEMBLY2

Emission unit associate with the assembly of tank components.

I.1. VOC limit of 62.2 pounds per calendar day

Review of the facility's daily records showed VOC emissions below the daily limit.

I.2. VOC limit of 3.6 tons per year

Records reviewed for the 12-month rolling time period showed compliance with the limit.

I.3. Styrene limit of 2.6 pounds per hour

Review of the records provided showed compliance with the pph styrene limit.

I.4. Styrene limit of 3.6 tons per year

Records reviewed for the 12-month rolling time period showed compliance with the limit.

II.1. Styrene content in resin not to exceed 35%, for resins that do not contain a vapor suppressant.

For the records reviewed, the facility was only using a vinyl ester vapor suppressed resin.

II.2. Styrene content in resin not to exceed 45%, for resins that contain a vapor suppressant in tank assembly 2.

The facility is using a vapor suppressed resin with a styrene content of 44%.

FGMR3&4

North, Middle and south tank molds in Room 3&4.

I.B.1. Stack height of 60 feet, 36-inch maximum diameter

Compliance to be determined during onsite inspection.

I.B.2. Stack height of 60 feet, 36-inch maximum diameter

Compliance to be determined during onsite inspection.

FGCOMPOSITESMACT

Subpart WWW – Reinforced Plastics Composites Production NESHAP

Subpart WWW had a compliance date of April 21, 2006. The facility has opted to show compliance with the standard via Option C. Option C allows for demonstration of compliance with a weighted average emission limit for all open molding operations. Option C compliance is based on a 12-month rolling average. The facility is using the software created by ACMA for recordkeeping and compliance demonstration with the NESHAP.

Review of the facility's records shows compliance with the MACT weighted average emission limit on a 12-month rolling average. The facility was at 88.8 percent of the 12-month rolling average of the MACT limit.

Work Practice Standards – The facility is subject to five work practice standards under the NESHAP (63.5805, Table 4). The facility became subject to these standards on April 21, 2006.

For each cleaning operation, the permittee shall not use cleaning solvents that contain HAP, except that styrene may be used as a cleaner in closed systems, and organic HAP containing cleaners may be used to clean cured resin from application equipment. Application equipment includes any equipment that directly contacts resin. (40 CFR 63.5805, Table 4)

The facility stated that they do not use any HAP containing solvents. The only solvent currently in use is acetone.

For each HAP-containing materials storage operation, the permittee shall keep containers that store HAP-containing materials closed or covered except during the addition or removal of materials. Bulk HAP-containing materials storage tanks may be vented as necessary for safety. (40 CFR 63.5805, Table 4)

The facility has two 5500 bulk tanks that that are divided for iso and vinyl resins. Each side of the tank has a vent.

Compliance to be determined during onsite inspection.

For each mixing operation, the permittee shall use mixer covers with no visible gaps present in the mixer covers, except that gaps of up to 1 inch are permissible around mixer shafts and any required instrumentation. (40 CFR 63.5805, Table 4)

Compliance to be determined during onsite inspection.

For each mixing operation, the permittee shall close any mixer vents when actual mixing is occurring, except that venting is allowed during addition of materials, or as necessary prior to adding materials or opening the cover for safety. Vents routed to a 95 percent efficient control device are exempt from this requirement. (40 CFR 63.5805, Table 4)

Compliance to be determined during onsite inspection.

FGFACILITY

I.1. VOC limit of 89.9 tons per year based on a 12-month rolling average.

Review of the facility records show the 12-month rolling total VOC emissions ending in July 2020 to be 26.49 tons (combined styrene and MMA)

I.2. Styrene limit of 57.6 pounds per hour based on a calendar day facility-wide and calendar day hours of operation calculation

Review of the facility's daily records provided showed styrene emissions below the pound per hour daily limit. The highest observed rate was under 30 pounds per hour.

II.1. Styrene content of chop/hoop winding not to exceed 50%

Review of facility's records showed compliance with this limit. The facility does not use any resins with a styrene content that exceeds 50%.

II.2. Styrene content of vinyl ester lamination resins not to exceed 35% that do not contain vapor suppressants.

Vinyl ester laminate resin used by the facility has a styrene content of 35% (without a vapor suppressant)

II.3. Styrene content of vinyl ester lamination resins not to exceed 45% that contain vapor suppressants.

The facility uses a vapor suppressed vinyl ester resin with a styrene content of 44%.

II.4. Styrene content of resin for wet filament winding not to exceed 50% -

Review of facility records showed compliance with this limit. The facility does not use any resins with styrene content greater than 48%.

II.5. Styrene content of isophthalic resins not to exceed 50%.

Review of facility records showed compliance with this limit. The facility does not use any resins with styrene content greater than 48%.

II.6. Styrene content of gelcoats not to exceed 37%

Review of facility records showed compliance with this limit. The facility does not use any non-tooling gelcoat with styrene content greater than 37%.

II.7. Styrene content of tooling gelcoat not to exceed 42%

Review of facility records showed compliance with this limit. The facility does not use any tooling gelcoats with styrene content greater than 41.8%.

III.1. Operate mold rooms with exhaust filters.

Compliance to be determined during onsite inspection.

IV.1. Use of non-atomizing applicator guns.

Compliance to be determined during onsite inspection.

IV.2. Filament chop/hoop shall be done using dry winding in combination with non-atomizing guns with chop.

Compliance to be determined during onsite inspection.

Misc

The facility continues to use a two-part foam, on some of the tanks. The manufacture has previously supplied a letter indicating no VOC emissions or extremely small amount of emissions.

The facility is maintaining records of material usage per a previous request. The facility provided combined (Part A and Part B) for the past 12 months.

Summary

Based upon review of the records provided the facility is in compliance with the applicable limits and requirements. Compliance will be determined upon completion of an onsite inspection.

NAME Eric Grinstern DATE 8/31/2020 SUPERVISOR HH