

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

P007368585

FACILITY: VenTower Industries LLC		SRN / ID: P0073
LOCATION: 111 Borchert Park Drive, MONROE		DISTRICT: Jackson
CITY: MONROE		COUNTY: MONROE
CONTACT: Joe Turner , Coatings Manager		ACTIVITY DATE: 08/15/2023
STAFF: Diane Kavanaugh Vetort	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: SM OPT OUT Complete scheduled inspection.		
RESOLVED COMPLAINTS:		

FACILITY: P0073 VenTower Industries, LLC, www.ventower.com (734) 682-4000 Ext. 107 or (734) 682-4012.

CURRENT CONTACTS:

Joe Turner, Coatings Manager, jturner@ventower.com (325) 214-1452

Sylena McGowan, Project Manager, smcgowan@ventower.com (734) 682-4049

Gregory Adanin, President and CEO, Ventower, gadanin@ventower.com (734) 682-4005

Contact information for VenTower's consultant: Stephanie A. Jarrett, P.E., Senior Environmental Engineer, 248.324.2146, Fishbeck, Thompson, Carr & Huber, Inc., Engineers, Scientists, Architects, Constructors.

EGLE-AQD STAFF: Diane Kavanaugh Vetort, Senior EQA, kavanaughhd@michigan.gov

On August 15, 2023, I conducted a complete, scheduled, compliance inspection, announced a short time prior at the VenTower Industries location at 111 Bochert Park Drive, Monroe. The purpose of the inspection was to determine the facility's compliance status with the applicable federal and state air pollution control regulations, in particular Part 55, Air Pollution Control of the Natural Resources and Environmental Protection Act, 1994 Public Act 451, the Michigan Air Pollution Control administrative rules and the conditions of the facility's Opt Out Air Use Permit to Install No. 52-10A. VenTower is also source type identified in Federal 40 CFR Part 63, National Emission Standards for Hazardous Air Pollutants (NESHAP) Subpart HHHHHH Paint stripping and Miscellaneous Surface Coating Operations at Area Sources. However, they do not conduct paint stripping and Coatings used do not contain the applicable five metal HAPs. AQD continues to monitor applicability of coatings. VenTower also has a small emergency generator on-site subject to federal New Source Performance Standard (NSPS) Subpart JJJJ and newer NESHAP standards referred to as Maximum Available Control Technology (MACT). Generators are covered under the Reciprocating Internal Combustion Engine (RICE) MACT Subpart ZZZZ. Facility submitted 2022 MAERS timely and reported 10 tons of volatile organic compound (VOC/HAP) emissions.

VenTower Industries is a manufacturer of the tower portion of utility-scale, wind turbine towers. They fabricate steel sheets into sections that compose the circular hollow tower structure; they do not make the blades. Steel sheets are formed into individual sections which are transported to the customer's location and assembled onsite into the Tower. Steel sheets move through metal shot blasting, grinding, polishing, plasma cutting, and welding into shape. Improvements / accessories are added inside the sections, the sections are grit blasted and finish spray painted, air dried and then finishing accessories are added. Coatings are considered extreme performance, necessary for durability due to obvious long term exposures to outdoor conditions.

Upon my arrival to the site I observed the exhaust stacks on the plant roof. I observed some windtower big circular metal tube sections sitting outdoors on the plant property. I observed the large roll doors on the coating booth end of the building were closed. I did not observe any visible emissions or notice any odors in the area around the building or while in the parking lot.

I entered the reception area, introduced myself and provided identification to the receptionist and explained the purpose of the visit. I met with contact Joe Turner, Coatings Manager. During the pre-inspection interview we discussed the details of the inspection and reviewed VenTower's PTI No. 52-10A requirements and current operation status. Joe answered all my questions and provided all the requested information. He accompanied me during the site inspection.

Per Joe, production is currently reduced. VenTower is currently operating Monday through Thursday, 6:00 AM to 4:45 PM.

General Electric is one windtower customer and there are others. Per Joe they currently have 21 employees. The previous AQD inspection was conducted June 21, 2018 and at that time they had 51.

Steel sheets are received and formed into the Tower sections. The sections are final coated with an extreme performance, two part coating (referred to as A and B). During the inspection I observed the Company's recordkeeping log book at the paint booths consists of manually recorded sheets listing date, specific job, coatings used, and quantity. Consultant Stephanie Jarrett set up record keeping spreadsheets for them years ago and Joe said they continue to use these.

PERMIT

VenTower's current PTI No. 52-10A contains two paint booths EU-PB01 and EU-PB02 and the FG-PBs. It also contains FGFACILITY limiting facility wide hazardous air pollutant (HAP) emission limits to remain below major source thresholds. I requested Coating Data Sheets for the current coatings used. I requested up to date Method 24 from manufacturer's data and/or testing (permit condition requires). I requested Permit VOC/HAP calculation records for the 12 month rolling time period ending July 2023.

PTI 52-10A Condition II. 1-3, contains their instantaneous VOC content limits by coating type, and requires each Primer to not exceed 3.5 lb/gal (minus water) as applied. It requires each Basecoat to not exceed 3.0 lb/gal, and each Topcoat to not exceed 3.5 lb/gal. Current Air Quality Data Sheets were received from Joe by email on 8/16/23 for the top four coatings, these indicate coatings are Compliant as follows:

International Intergard 990 Storm Grey (Topcoat) = 3.5 lb/gal (Contains Xylene)

International Intergard 345 (Basecoat) = 2.67 lb/gal (Contains n-Butanol & Xylene)

(PPG) Sigmafast 278 RAL 9010 Mixed EDS = 1.92 lb/gal (HAPs Ethylbenzene & Xylenes i.e contains Xylene). VenTower records list HAP content 1.43 lb/gal.

(PPG) Sigmadur 520 US Light Gray RAL 7035 Mixed EDS = 2.77 lb/gal (HAPs Ethylbenzene & Cumene). VenTower records list HAP content 0.0282 lb/gal.

The PTI Condition I. 1-4, emission limits are:

FG-PBs VOC LIMIT = 57.9 tons per year, 12 month rolling time period: Records indicate FG-PBs for period ending July 2023 = 8.55 tpy = COMPLIANT

EUPB01

VOC emissions 2022 = 11,156.4 lbs; HAPs = 5539.73 lbs; Xylene 2,605.58 lbs

VOC emissions 2023 through August (partial) = 3664.29 lbs; HAPs = 1805.71 lbs; Xylene = 863.63 lbs; n-Butanol = 18.81 lbs.

Usage in gallons 2023 = all four coatings 1698.5 gallons

Usage in 2022 lists only two Sigmafast & Sigmadur were used. All coatings = 5213 gallons

EUPB02

VOC emissions 2022 = 6,502.08 lbs; HAPs = 3236.97 lbs; Xylene 1,522.42 lbs

VOC emissions 2023 through May 2023 (last month operated) = 3,718.44 lbs; HAPs =1834.82 lbs;
Xylene =863.09 lbs

Usage in gallons 2023 = lists only two Sigmafast & Sigmadur were used. All coatings =1735 gallons

Usage in 2022 lists only two Sigmafast & Sigmadur were used. All coatings = 3040 gallons

EACH EUPB01 & EUPB02 VOC LIMIT = 46.0 tons per year, 12 month rolling time period:
Records indicate Each EU portion of FG-PBs for period ending July 2023 = 4.73 tpy (PB1) and 3.81 tpy (PB2) = COMPLIANT

Mixed Xylenes LIMIT = 358.3 lbs / 24 hr, calendar day: Records cover all of 2022 and through 8/9/2023.
Indicate Daily compliance with this emission limit. COMPLIANT

n-butanol LIMIT = 1,254.0 lbs / 24 hr, calendar day: Records cover all of 2022 and through 8/9/2023.
Indicate Daily compliance with this emission limit. COMPLIANT

During the inspection I was told that VenTower still uses clean-up solvent Methyl Ethyl Ketone (MEK) for the coating lines and paint guns only. Joe confirmed they do not reduce or thin the coatings, they are used as received.

PTI 52-10A Testing Condition V. 1. requires determining VOC content using federal Reference Test Method 24, or as approved by AQD District Supervisor, use of manufacturer's formulation data. VenTower is now allowed to use Manufacturer's formulation data.

PTI 52-10A Recordkeeping Condition VI. 1-4 for VOC usage and calculation of emissions. I requested this information for the 12 month period ending July 2023.

PTI 52-10A Reporting Condition VII. 1. requires submittal of semi-annual VOC content information in lbs/gallon. **The initial submittal period has passed and submittal is now required upon AQD inspection or request.** COMPLIANT

FGFACILITY HAPS OPT OUT 22.5 TPY AND 9 TYP LIMITS

For the 12 month rolling period ending July 2023 VenTower records show 4.26 tpy multiple HAPs. Xylene is the single worst case HAP and records report 2.01 tpy for the period. COMPLIANT

RECORDS

I requested a copy of the VenTower coating usage and VOC (FG-PBs) and HAP (under FGFACILITY) emission calculation records for the previous 12 months ending July 2023. I also requested the Coating Content information for all coatings used at this time. I discussed with Joe, that Method 24 is the required method and that this could be obtained from Coating Suppliers. It was agreed Joe would contact supplier to verify current Method 24 coating contents. He agreed to send records to me electronically by Friday, August 18th. VenTower confirmed they are still using consulting services of Stephanie Jarrett, FTC&H.

OF NOTE: Joe verified that since the prior inspection VenTower has continued coating other **miscellaneous metal tanks, vessels, in addition to windtowers.** Tanks /vessels are referred to as atmospheric or pressurized. I observed a pressurized tank in the production line and another in the coating booth. This coating process was identified in the prior inspection as a supplement to the

Tower manufacturing / coating process. Per Joe they are using the same coatings and tracking usage and emissions in the same record.

At the last inspection VenTower was asked to demonstrate this change of coatings meets exemption under meaningful change. Stephanie Jarrett submitted a meaningful change analysis on behalf of VenTower on July 13, 2018. The spreadsheet provided coating details, potential usage rates, and ITSL/IRSL/Hazard potential analysis. All coatings appeared to meet the exemptions of Rule 285 (2)(B)(i)(a) and/or Rule 285 (2)(C)(iii). VenTower is continuing to track usage, VOC contents and emissions under PTI 52-10A requirements of emission limits and material content limits for FGPBs.

FACILITY INSPECTION

Joe accompanied me during the physical walk through of the plant. The manufacturing building is essentially one long, warehouse structure with very high ceilings and overhead bridge cranes and in-floor tracks and various railcar like devices to hold, rotate and transport the large metal sections from start to end through the various production stations. Initially vacuum cups on crane arms pick up and move large flat metal sheets. Steel arrives fairly clean, do not want oils.

The first process equipment with air emissions is at the start of the line where steel sheets are fed through the **Wheelabrator steel shot blast** with pulse jet cartridge filter baghouse and precleaner. No steel processing was not occurring today. I observed two CAMFIL (F) collectors, one slightly larger than the other. The filter collectors replaced an older prior collector years ago. They are located just outside the building near where the wheelabrator operates. Materials are collected in drums. I observed the type of filter canisters are cylindrical. VenTower maintains filters in supply in boxes at the facility. The baghouses appeared to be installed and operating properly and housekeeping in the general area was good. Joe verified that they monitor cartridge filter condition via differential pressure. Spent Cartridge filters are returned to their cardboard boxes and are disposed of in the trash (Steven's is their hauler). This process equipment and collector appear to qualify for PTI exemption pursuant to Rule 285 (2)(l)(vi)(C).

Joe and I continued walking up the line and I observed the "plasma cutting tables" were not currently operating. It is a very long two part table where steel sheet is cut with down draft exhaust. I observed the far end is ducted to the smaller CAMFIL collector. The other end of the table was previously ducted to another older baghouse unit located outside the building near this end of the table. The exhaust at this end of Table has since been disconnected. I observed all emissions are ducted to the larger of the two CAMFIL collectors discussed above. This process equipment and collector(s) appear to qualify for PTI exemption pursuant to Rule 285 (2)(l).

During the inspection I observed an operator rolling steel near the large welding processes. All steel scrap generated is recycled and there is a large bin in-plant.

At the very end of the fabrication line is a separate large totally enclosed grit blast booth located next to the spray coating booths. Grit Blasting is done pre-painting and it has it's own air pollution control collector, a large CAMFIL Unit. I observed there were no ongoing operations, only two employees were in the booth replacing and/or cleaning the track in the floor of the booth that the pieces sit on. Farther down the booth there is a shot blast material Collector/recycler where shot blasting occurs. The shot blast material is collected and reused and then disposed of properly. Operators manually blast within the booth. This process equipment and collector were part of the permit application and appear to qualify for PTI exemption pursuant to Rule 285 (2)(l)(vi)(C).

Next to this booth are the two separate large paint booths EUPB01 and EUPB02 (FG-PBs) which are also Ovens @187 degree F. They were not operating during the inspection. However I observed a recently painted Tank inside one booth. Both Booths had the far wall/roll door closed to the outside this is how they move the finished Towers /Tanks out. Joe and I walked into one booths and I observed the portable spray pot and spray guns. The booth filters were all installed and appeared to be in good condition. Air intake is in the ceiling and exhausts out the side wall through particulate filters. Filters are monitored by differential pressure gauges. Two operators can spray at a time in each booth. Following the FG-PBs there is a final inspection room and Tower Sections are then moved outside and are stored together.

Joe and I then entered the separate room containing the paint kitchen. Epoxy two part coating is automatically transferred by PC Pumps. The Marco auto pump combines them into the appropriate ratio. Coating A-part is the Base and B-part is the cure. Other coating materials are stored in drums and gallon containers in the room. Topcoat is hand poured into the portable coating containers hooked to spray guns. I observed 55 gal containers of MEK used as clean-up solvent only and per Joe it is recovered & stored for offsite reclaim. Heritage Crystal Clean is their Waste hauler for waste oils, liquid paint / solvent wastes. Spent paint filters are disposed of in the trash, Steven's is their solid waste hauler.

During the 2018 inspection I observed an emergency generator on-site and Joe said it is still there. He said it does not appear to be operational and has not been used in a very long time. It is a Cummins Model: GGH-6545612, Serial Number: B110189907, 100 kW (341,442 BTU; 134 horsepower) and is consider new, installed after June 2006 and is therefore subject to 40 CFR 60, Subpart JJJJ, New Source Performance Standard for Spark ignition ICE. It is fueled by natural gas or propane. Following the 2018 inspection VenTower provided me with the Engine Family number and photo of EPA Certification tag on engine (Attached to this Report). The engine appears to be an EPA Certified Engine. It is referenced on US EPA website for certification in the excel table under "large Nonroad Spark-Ignition (NRSI) Engines".

CLOSING CONFERENCE

At the closing conference with Joe, the Emergency Generator was discussed briefly. I advised Joe that the federal standard for compliance requirements include regular maintenance if it is going to be used for emergencies. Hours of operation including allowed testing hours need to be recorded. If it is not going to be used they may want to consider removing it. VenTower has a HAP Opt Out permit making them an Area Source for applicable MACT standards. We discussed the required recordkeeping and demonstration of compliance with the Emission Limits and Material Limits. VenTower was confident that production has been down and they are easily in compliance with their limits. We agreed Joe will send me the electronic spreadsheet(s) for the 12 month rolling time period ending July 2023, by August 18, 2023. We discussed verification of VOC content in lb/gallon is required for all coatings being used or during past year. Up to date Air Quality Data Sheets will be acceptable with support of updated/current Method 24 from manufacturer data.

I gave Joe an Orange Sticker Part 6 / Part 7 Cold cleaner rules for their maintenance machine(s).

COMPLIANCE SUMMARY

Joe will submit the required records and compliance demonstration with their PTI by August 18, 2023. On August 16th, Joe submitted Air Quality Data Sheets for the four coatings they use. He is waiting for the Method 24 data verification for all of these and will send as soon as received. An extension was granted until August 25th. Joe submitted the Coating usage / emission calculation spreadsheet requested on August 17th.

AQD has determined that VenTower Industries is in substantial compliance with the conditions of their PTI 54-10A and the applicable state and federal regulations evaluated. Updated VOC contents will be considered when received and VenTower records will be updated. All records referenced are attached to report to file.

NAME *Diane Kavanaugh Vetter*

DATE 9/6/2023

SUPERVISOR 