

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

N170164628

FACILITY: Morbark, LLC		SRN / ID: N1701
LOCATION: 8507 S WINN RD, WINN		DISTRICT: Bay City
CITY: WINN		COUNTY: ISABELLA
CONTACT: Morgan Thane , E H & S Manager		ACTIVITY DATE: 09/13/2022
STAFF: Benjamin Witkopp	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Facility Inspection		
RESOLVED COMPLAINTS:		

Ben Witkopp of the Michigan Department of Environment, Great Lakes, and Energy (EGLE) - Air Quality Division (AQD) met with Morgan Thane of Morbark on September 13, 2022. Morgan is the Environment, Health, and Safety Manager for the company. Morbark is located in Isabella County at 8507 South Winn Rd which is west of Shepard and south of Mt Pleasant, Michigan. The company has been in business since 1957. For most of its history the company was family owned. In 2016 the company was sold to Stellex. In October 2019 Morbark was purchased from Stellex by the Alamo Group. Morbark manufactures a line of heavy equipment for use in the forestry, sawmill, biomass, rental, and tree care markets. Morbark produces flails, tree chippers, brush chippers, horizontal and tub grinders etc. Chippers comprise the bulk of the production. Operations consist largely of welding, cutting, fabrication, assembly, and painting.

The facility had a number of active permits in the past though only two of them concerned processes currently in operation. The remaining permits were voided. Permit 511-89E covers the painting operations and was most recently revised on May 19, 2020. August 12, 2018 was the latest revision of Permit 138-15 which covers two natural gas fired boilers. The company is also subject to the provisions of an Administrative Consent Order (ACO) identified as 2020-15. The ACO basically requires the company to comply with its permits and contains provisions for stipulated penalties in case the company is not in compliance. The company also had ACO requirements to submit quarterly records for a specific time period which has been completed. The company consultant, Fisbeck, formerly Fishbeck, Thompson, Carr, and Huber, developed the record keeping system used by the company.

The two boilers are not operated at the same time given that the units are identical. The units are run alternately. The permit has a requirement of maximum heat input capacity of 14.7 MMBTU per hour for each boiler, gas usage records, and references the National Emission Standards for Hazardous Air Pollutants: Industrial, Commercial, and Institutional Boilers Area Sources as specified in 40 CFR 63 Subpart JJJJJJ, 40 CFR 63. AQD does not have delegation for the area source MACT.

Morbark keeps track of building use of natural gas as well as that used by the boilers. A 12 month rolling time period record of boiler gas usage is kept as required and had 47.2 MMBTU used. Each boiler is rated at a maximum of 14.7 MMBTU per hour.

Permit 511-89E covers the three coating operations. FGCOATING has requirements for each coating operation. The second portion of the permit (FGFACILITY) concerns

the entire facility. FGFACILITY contains opt-out limits for hazardous air pollutants (HAPs) on an individual and aggregate basis as well as a specific limit for ethyl benzene. The previous permit also contained a specific limit for methyl ethyl ketone but it was eliminated based upon information and evaluation during the most recent permitting activity.

FGCOATING

The painting area is located in the southern portion of the facility. Parts to be painted are racked, washed, allowed to air dry, and then painted. The painted parts are air dried as no cure ovens are present. Kevin Rinker is the paint line supervisor.

The wash operations exhaust internally using a solution of LincClean 2027 Ultra C. Therefore, Rule 285 (2)(1)(iii) is applicable as "equipment for surface preparation of metals by use of aqueous solution, except for acid solutions" would be exempt from air permitting. The material contains bases.

Parts to be painted are trailered or toted into booths. Two sets of air filters on one end are used for incoming air and two sets are used for discharge air. Each set of filter area is comprised of two filters. The initial discharge filters are changed on an as needed basis to keep the second layer cleaner. All booths use Binks Global Electronic Mix (GEM) Solution to meter paint and catalyst. The materials are used as received so no manual mixing occurs. The permit has requirements for high volume, low pressure (HVLP) spray equipment or comparable. HVLP spray guns are used.

Booth one has a 35.0 tons per year (tpy) limit on volatile organic compounds (VOC). The VOC limits for booths two and three is 30.0 tpy each. The tpy limits for all booths is based on a 12 month rolling time period.

All three booths typically had less than one ton of VOC per month. On a 12 month rolling time period, booth one was usually five to six tons, booth two, seven to eight tons, and finally booth three emitted the most but it was still only nine to ten tons.

FGCOATING has an additional emission limit which concerns the combination of VOCs and a specific chemical, PCBT (Chemical Abstract Service # 98-56-6). The limit is based on a 12 month rolling time period and is 65.0 tpy. Records showed emissions in the range of 1.5 to 2.5 tons per month and 19 to 23 tons per year based on a 12 month rolling time period.

The final limit in FGFACILITIES is a VOC content of 3.5 pounds per gallon (minus water and solvents exempt from the definition of VOC) as applied. This does not mean that each coating must meet the requirement on an individual basis. The limit is compared to a daily volume-weighted basis for VOC content. Records review did not find an instance of the limit being exceeded.

FGFACILITY

FGFACILITY has limits on HAPs, both individually and aggregate. It also has a limit on a specific HAP, ethylbenzene. Individual HAPs are to be less than 8.9 tpy while aggregate HAPs are to be less than 22.4 tpy. Ethylbenzenes limit is 7.9 tpy. All of the aforementioned limits are based on a 12 month rolling time period.

The most emitted HAP was xylene, most typically around 2.4 tpy. Ethylbenzene emissions were frequently near 1 tpy. Aggregate HAP levels were around 4 tpy. The HAP amounts from FGFACILITY did include the minute amount contributed via natural gas combustion. HAP emissions were below permit limits based on records review.

RULE 290

Facility wash water is collected and sent to an evaporator system located on the south east side of the facility. It is natural gas fired and exhausts externally. Fishbeck prepared documentation and calculations to show the operation is exempt from permitting via rule 290 and meet the requirements found under rule 278 and 278 (a).

COLD CLEANERS

The cold cleaners used by Morbark are not the typical trough with lid type equipment. Morbark uses units that are somewhat sink-like in that solvent is pumped up for use in a vertical egg shaped basin and then allowed to drain down into a container. Therefore, no lid exists, yet there was no solvent odor whatsoever. The cleaners would be deemed as new for the purposes of AQD part seven rules. Operating instructions were posted but showed the signs of age, wear, and tear. AQD instruction stickers were later provided to Morbark for consideration and possible use. The units are maintained by Safety Kleen. Rule 281 (h) provides an exemption from air permitting for cold cleaners that have an air/vapor interface of not more than 10 square feet.

CUTTING, WELDING, METAL WORKING

Morbark has implemented the use of both laser and plasma cutting operations. The fumes are exhausted externally at the north end of the production building. The cutting is directed downward, and as such, any potential small metal shards drop to the floor. The directional cutting acts as a pre-cleaner for subsequent emissions collection and handling. Retractable fume collection devices connect to the side of the cutting decks. Therefore, only fumes get routed to one of the two collectors. Plasma cutting has its own collector while another is dedicated to lasers. All other metal working operations are exhausted internally. The air permit exemptions found under rule 285 (2) (i) and (vi) are applicable.

FUTURE CONSIDERATIONS

Discussions ensued about future plans. A large spray booth is planned for the area along the east side of the facility and north of an existing booth used for painting large scale products. A paint kitchen for mixing could be involved. The existing booth would be converted to a cure oven. Permitting for both changes would likely be required.

Powder coating was also a topic because 80 percent or more of Morbark's products are painted Morbark Orange. Kevin would like to see powder coat used extensively and the smaller booths used to coat products whose customers desire other colors. The most significant obstacle is that production methods would need to change to accommodate how parts are put together. They would need to ensure all parts are appropriately coated.

Morgan stated the new ownership seems to be quite interested in anything related to sustainability so she foresees changes in coatings, energy use and possibly energy production, wastewater etc. She said the various divisions in EGLE would be contacted well prior to proceeding with any new implementations or changes in an effort to seek additional insight and provide full transparency.

CONCLUSION

The facility is considered to be in compliance with its existing air permit and the various pertinent AQD rules.

NAME B. Zilkopp

DATE 9-30-2022 SUPERVISOR C. Hoe