

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

N307843417

FACILITY: Michigan Foam Products LLC		SRN / ID: N3078
LOCATION: 1820 Chicago Dr SW, GRAND RAPIDS		DISTRICT: Grand Rapids
CITY: GRAND RAPIDS		COUNTY: KENT
CONTACT: Kevin Koonmen , Plant Engineer		ACTIVITY DATE: 02/26/2018
STAFF: Adam Shaffer	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Scheduled, unannounced inspection.		
RESOLVED COMPLAINTS:		

Air Quality Division (AQD) staff Adam Shaffer (AS) arrived at the Michigan Foam Products LLC (MF) facility located in Wyoming, MI at 10:27 am on February 26, 2018 to complete a scheduled, unannounced inspection.

Facility Description

Prior to entering the facility, offsite odor and visible emission observations were completed. Weather conditions at the time of the inspection were sunny, winds from the southwest and temperatures in the high 30s°F. A slight plastic odor was observed along the edge of the facility property. Steam was observed during the offsite observations.

Upon arrival, AQD staff AS met with Mr. Kevin Koonmen, Plant Engineer, who provided all applicable records and a tour of the facility. MF is an expanded polystyrene (EPS) foam manufacturing company. The facility is in operation with one Opt Out Permit to Install (PTI) No. 211-02B and is a synthetic minor source of volatile organic compounds (VOCs). During the initial discussion it was concluded that no significant changes have occurred to the facility since the last inspection in May 2016.

EUPLASTICRESIN

This emission unit includes the Preex 9000 vacutrans batch-type resin preexpander, canvas holding bags, Big W adjustable wall mold, hot room, wire cutting operations including one (1) GP-11000 Autowire slabbing system*, embossing area, and other polystyrene foam producing operations.

The EPS foam process was observed during the facility walk through. During operations steam is generated from the boiler and pumped into a wet accumulator. The boiler was installed in 1999, is 8.4 MMBtu/hr in size and utilizes only natural gas. Based on the size of the boiler it is not subject to New Source Performance Standards. Additionally, the boiler appears to be exempt per Rule 282(2)(b)(i).

EPS beads are loaded into the pre-expander and steam heated to expand the beads. Following this, the expanded beads are placed in holding bags before being steam molded to the appropriate shape. Following the mold area, one hot room was observed where foam products are stored to allow stabilization of the blocks and remaining water to evaporate. The cutting and embossing area was also observed. Emissions from operations observed here were not venting externally. In 2011 a memo was provided by MF stating the replacement of the mold area equipment and using a lower VOC content containing bead. The replacement of the mold area equipment was stated by MF to be exempt per Rule 285(2)(b). It was also concluded that one additional hotwire cutting machine had been installed since the issuance of Opt Out PTI No. 211-02B and was stated by MF to be exempt per Rule 285(2)(b).

A regrind area was observed where foam material waste is reground. Emissions from this area are not vented externally. Materials reground are either shipped to customers as is or sent back to the molding process to be reused. The regrinding area appears to be exempt per Rule 285(2)(l)(vi)(B).

At the time of the inspection records were not up to date, with the most recent completed records being May 2017. This is a violation per Special Condition (SC) 1.5. Updated records were later provided by MF staff. MF is limited to a facility wide 12-month rolling VOC limit of 64 tons per year (tpy). Records received following the site inspection show that MF had exceeded their 12-month rolling total VOC limit since January 2017, with the highest exceedance occurring in January 2018 at 155,899 lbs (77.95 tons). This is a violation of SC.1.1. The VOC emissions were reviewed and appear to be calculated, as required, by using the formula specified in SC.1.3.

Per SC.1.2 the VOC content of the EPS beads shall not exceed 5.1 pounds per 100 pounds of EPS beads based on a 12-month rolling total. As of January 2018, the VOC content was 4.52 pounds per 100 pounds of EPS beads which is within the permitted limit. Previous 12-month rolling totals reviewed back to January 2017 are also within permitted limits.

A sampling schedule was submitted and received by the MDEQ-AQD on November 4, 2016 in response to a VN letter issued to MF on June 15, 2016. Records were provided at the time of the inspection for the EPS bead samples tested during the 2016 reporting year and 2017 reporting year. For the 2017 reporting year the VOC content for the sample taken was 0.82% pentane by weight. During a phone conversation between AQD staff AS, Mr. Koonman, and Mr. Anderson, Plant Manager, it was identified that there was some initial confusion with the sampling plan on the products to be tested. The miscommunication was resolved and MF plans on submitting two samples to be tested per the sampling plan. Additionally, the sampling plan states that samples will be tested in the first quarter of each reporting year. For the 2017 reporting year the testing was completed in December 2017. After speaking with MF staff further on this it was concluded that MF did not complete testing as stated per the approved sampling plan which is a violation of SC.1.4. MF stated they intend to submit bead samples according to the sampling plan for the first quarter of the 2018 reporting year.

Records provided verified that MF is keeping track of pounds of VOC per 100 pounds of EPS beads for each shipment received. As of January 2018, the monthly total of EPS beads used was 332,955 lbs and the 12-month rolling total was 3,455,235 lbs. Based on records provided, MF is adequately keeping track of their EPS bead usages.

Additional Observations

- A second building was observed during the inspection. The building was previously used for storage and process operations and was now used entirely for storage purposes.

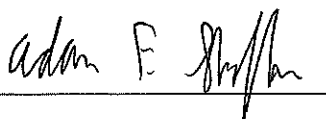
Conclusion

A final discussion was completed with AQD staff AS and Mr. Koonmen. Based on the review of the records provided and the facility walk through, MF is not in compliance with Opt Out PTI No. 211-02B. A VN will be sent for the following violations identified:

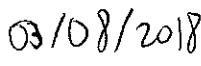
- Reviewing records that were provided by MF, it was concluded that since January 2017, MF has exceeded their 12-month rolling total VOC emission limit of 64 tpy which is a violation of SC.1.1.
- At the time of the inspection, records were concluded to be incomplete for EUPLASTICRESIN. This is a violation of SC.1.5.
- Per the sampling plan that was submitted and received by the MDEQ-AQD on November 6, 2016, appropriate sampling to determine the VOC content of EPS beads used is to be completed the first quarter of each reporting year. For the reporting year of 2017, sampling was completed in December. This is a violation of SC.1.4.

After speaking with Mr. Brian Anderson, Plant Manager, it was concluded that additional documentation demonstrating the Rule 285(2)(b) exemption for the hotwire cutting machine and mold area would be provided along with the response to the VN MF would be receiving.

NAME



DATE



SUPERVISOR

