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

N775438345

FACILITY: Harbor Foam		**SRN / ID:** N7754
LOCATION: 2950 Prairie SW, GRANDVILLE		**DISTRICT:** Grand Rapids
CITY: GRANDVILLE		**COUNTY:** KENT
CONTACT: Laura Kuperus , Owner		**ACTIVITY DATE:** 01/19/2017
STAFF: Kaitlyn DeVries	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: The purpose of this inspection was to determine compliance with MI-ROP-N7754-2013 and all other applicable air quality rules and regulations.		
RESOLVED COMPLAINTS:		

On Thursday January 19, 2017 AQD Staff Kaitlyn DeVries (KD) conducted an unannounced, scheduled inspection of Harbor Foam Inc. Located at 2950 Prairie SW, Suite 300, Grandville, MI. The purpose of this inspection was to determine compliance with MI-ROP-N7754-2013 and all other applicable air quality rules and regulations.

KD arrived at the facility at approximately 9:30 AM and met with Mr. Mike Hickox, since Ms. Laura Kuperus, owner, was not immediately available. Ms. Kuperus met with KD after Mr. Hickox escorted KD on a tour of the facility. Prior to entry, KD surveyed the area for any odors or opacity. None were noted.

Facility Description

Harbor Foam, Inc. (Harbor Foam) is a manufacturer of blocks made from expandable polystyrene (EPS) beads. The end product is used for a variety of different applications depending on the density of the foam, and the shape and size it is cut into.

Regulatory Analysis

Harbor Foam is a major source of volatile organic compounds (VOC) and is subject to the Title V program, so they subsequently hold a renewable operating permit (ROP).

Compliance Evaluation

Harbor Foam's process includes one (1) Hirsch 9000 resin pre-expander, eight (8) canvas holding bags, one (1) Hirsch adjustable wall mold, a hot room, wire cutting operations, scrap densifying operations, and an embossing area. Steam and pressure are used to force the bonding of the block. All of these operations are covered in MI-ROP-N7754-2013 under EUPLASTICRESIN.

The raw material has a sugar like appearance before it is placed into the pre-expander for expansion and processing. After expansion, it gets housed in one of the eight (8) holding bags. Per Mr. Hickox, the beads typically stay in the bags between six (6) and eight (8) hours, depending on the density of the product that is needed. The time can also vary, however, depending on the temperature and moisture of the air. Once the beads are appropriately aged, they get sent to the mold, where steam and pressure creates the block, which is then cut and/or embossed to the proper shape and size. Any scrap from the cutting of the blocks is sent to the densifying equipment where it is ground and then compressed. The scrap is then shipped of site.

Harbor foam adequately tracks the pounds of beads put through the pre-expander, and the throughput can drastically range from approximately 650,000 pounds per month to 1,300,000 pounds per month, per the attached records. As of December, 2016 the 12-Month rolling throughput was 14,173,296 pounds of beads. Harbor foam uses this information, and other information in accordance with Appendix 7 of the ROP to calculate the VOC emissions. Emissions from these processes are limited to 139.8 tons per year (tpy), 12-month rolling. As of December 2016, the 12-month rolling emissions were 107.3 tpy, per the attached records.

The VOC content of the beads is limited to 6.3 lbs/100 lbs of EPS beads, as received, 12-month rolling. Per Ms. Kuperus, Harbor Foam uses many different VOC content beads, but only one type of bead is used at a time. Thus each block is made only of one bead type. Additionally, Harbor Foam receives lot specific VOC content information from the manufacturer with every shipment that is received. Harbor Foam then updates this information in their records to ensure proper VOC emissions tracking. Per the attached records, The VOC content of the beads used is less than 5.00 lbs of VOC per 100 lbs of beads. Harbor Foam has most recently

conducted VOC content testing of the product, as shipped, in 2013. Results indicate that the VOC content of the beads, as shipped are a max of 4.0% Pentane, from the raw bead of 4.7% Pentane. KD discussed the possibility of obtaining more current testing data with the facility, but no formal request has been made.

Once the blocks are molded, cooled and ready for processing, they are cut to the correct shape and size at one of the various CNC, wire cutting, or sanding stations. These operations are exempt from Rule 201 permitting under Rule 285(I)(vi)(B).

Harbor Foam grinds up any residual, or scrap foam, from the cutting operations, and then ships it off-site. Harbor Foam is properly tracking the pounds of scrap material processed by the grinder, and VOC emissions from the grinding operations are also tracked.

Stack dimensions, while not explicitly measured, appeared to be correct.

Harbor Foam does not have any cold cleaners or emergency generators, but does have one (1) cleaver brooks 370,000 BTU/hr. Natural gas fired boiler. This boiler is exempt from Rule 201 permitting under Rule 282(b)(i). Finally, Harbor Foam has been properly submitting the required ROP certification forms, and 2015 MAERS throughput and VOC emission data is similar to what was reported for this report.

Compliance Determination

Based on the observations made during the inspection and a subsequent review of the records, it appears as if Harbor Foam, Inc. is in compliance with MI-ROP-N7754-2013 and all applicable air quality rules and regulations.

NAME Kaitlyn Davis DATE 1/26/2017 SUPERVISOR