

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

N545538534

FACILITY: Motus Integrated Technologies - Maplewood Facility		SRN / ID: N5455
LOCATION: 88 E. 48th Street, HOLLAND		DISTRICT: Kalamazoo
CITY: HOLLAND		COUNTY: ALLEGAN
CONTACT: Emily Ludwick , Safety/Environmental		ACTIVITY DATE: 01/31/2017
STAFF: Dale Turton	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT:		
RESOLVED COMPLAINTS:		

An inspection was conducted at this facility formerly known as JCI, Maplewood plant. Emily Ludwick was not in the office, so Tom Potgetter, Engineer, was able to show me around the plant.

This plant makes headliners and other interior parts for automobiles. Each area has a different method of producing the end product, depending on the customer requirements. Generally, the main objective is to mate a semi rigid poly foam board to a fiberglass reinforcing mat (scrim) and a fabric cover. During the process, the board must enter a press to form the board to the desired shape and permanently attach the layers to each other. Water jets are used to cut the edges and holes out of the formed part.

Permit to Install No. 139-04A now covers the entire facility. In addition, it has a FGFACILITY table that contains both HAPs and VOC limits to make the company a synthetic minor. The actual VOC emissions for calendar year 2015 were reported as about 8.5 tons.

The equipment and operations of interest are as follows:

Polybond 1 (PB1)

There is only one line operating at this time. There is not a specific table in the permit for this area. It is operating under the Rule 290 exemption. The 2015 annual emissions were reported as 4,979 lbs of VOCs. A permit will be required if the emissions go over 1000 lbs for any month.

This operation roll coats the Baynat adhesive on the part and sprays the Ever-Lock catalyst onto the board to activate the adhesive. This water based adhesive and catalyst contains a low percent VOC. The emissions are emitted uncontrolled.

A small amount of VOC is emitted in the process of cleaning the roll coater equipment and the press tools on the forming lines.

Records are being kept of the material usage and emissions.

Polybond 2 (PB2)

The front end of the process has two separate forming lines (EUAUTOFORMINGLINE & EUMANUALFORMINGLINE). The manual line is still in place but is not used. The automatic line is being used for only one shift per week at this time.

Baynat adhesive is applied by roll coater. Baynat is a low VOC material that contains MDI that is nearly 100% converted when catalyzed. After the Baynet application, the Everlock catalyst is sprayed onto the surface and the layers are added. The 2015 emissions of VOC from the area were reported as 10,846 lbs, well under the permit limit. The spray booth exhaust stacks are both vertical no-loss as required.

The marriage line EUMARRIAGELINE2 receives headliners from the forming lines. EUMARRIAGELINE1 has been removed from the plant.

The #2 marriage line has a spray booth, flash area, and a cure oven, all totally enclosed. The adhesive is a two part (Mor-Ad and IRIS K) that is mixed at the gun and applied robotically. The catalyst supply line is occasionally purged with solvent, whereas the adhesive is purged with water.

The spray booth portion of line #2 has a magnehelic gauge that was measuring 0.13 inches pressure drop from outside the booth to inside. The negative pressure in the booth indicates that the air flow is inwards towards the

booth, and the exhaust ductwork. There are only two openings, one entering the line and one exiting the line. For the MAERS emission calculation purposes, they use a control efficiency of 95%, which takes into account the capture efficiency, destruction efficiency, and the uncontrolled fugitives. The booth filters are changed on a regular weekly schedule.

The company submitted a letter in 2005 to support the use of manufacturer's data in lieu of method 24. This has been accepted by AQD.

An RTO controls the VOC emissions from the spray booth and curing chamber. The RTO was being operated at a temperature of 1512 deg F, which is above the minimum 1400 deg F required in the permit. The total differential pressure across the RTO was 5.7 inches of water.

A small amount of VOC is emitted in the process of cleaning the roll coater equipment and the press tools on the forming lines.

Records are being kept of the material usage and emissions. The VOC emissions are well under the permit limits.

Thermobond

No VOCs are emitted from the operation of the 8 remaining lines. There have been at least 4 lines removed. The adhesive is already on the purchased board and no catalyst is required to be applied. The adhesive is cured in an IR oven.

The 2015 reported VOC emissions from cleaning the press tools was 269 lbs.

Records of material purchases are kept for all of the lines.

Blasting

Baking soda is used as the blasting agent to clean the press tools. This booth is being operated under the Rule 285(l)(vi) exemption from permitting.

The booth filter is equipped with a differential pressure gauge to measure the loading on the filter. The booth was not being operated at the time of the inspection, so a reading of the gauge could not be taken. After each cleaning, the filters are back flushed with air to remove some of the accumulated material. The booth is currently exhausted outdoors through a vertical discharge stack.

Molding

There are now two injection molding machines at this facility. These have minimal emissions. The machines are exempt under Rule 286b.

Miscellaneous

Natural gas is used in all the heaters, ovens, and air makeup units. All units are exempt under Rule 282b.

NAME Dale Turton

DATE 2/6/2017

SUPERVISOR MD 2/6/2017