

Monica

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

B718631566

FACILITY: Haworth Inc		SRN / ID: B7186
LOCATION: One Haworth Center, HOLLAND		DISTRICT: Kalamazoo
CITY: HOLLAND		COUNTY: ALLEGAN
CONTACT: James Kozminski, Sr. Project Engineer - Environmental		ACTIVITY DATE: 09/17/2015
STAFF: Dale Turton	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT:		
RESOLVED COMPLAINTS:		

Monica Brothers and I arrived at the facility to conduct an unannounced inspection. Jim Kozminski was the company contact throughout the inspection.

This facility is operating under the provisions of MI-ROP-B7186-2012a.

The facility is separated into 3 general plant areas, all under the same roof. The areas are the Panels Plant, the Steel components Plant (including Walls), and the Laminated Products (Wood) Plant.

PANELS PLANT

The carbon adsorption system that formerly controlled the solvent based panel gluing operation is shut down and the carbon tanks are empty. The remaining panel gluing lines now only use hot melt adhesive for attaching the honeycomb core to the panel walls.

EU-MISC.SOLVENT

A room storing a couple of solvent barrels is located in this area. This solvent (a mix containing toluene) is dispersed throughout the facility and is used for manual equipment cleanup. Purchases are recorded and it is assumed that the usage is fairly equal between each month. There has been 5400 pounds emitted so far in 2015. This level of emissions is under the 1000 pounds a month limit in Rule 290 (FG-RULE 290).

EU-MANUAL-ADESLN

The "curved panel" booth is located in the panel plant. The filters were installed and appeared to be clean. There is not a differential pressure gauge on the booth. HB Fuller SC1931 was being used. The required VOC emission calculations and records are being kept. There has been 318 gallons received so far in 2015, which is well within compliance.

EU-PREMISEPANEL

This is currently located in the panels plant and is grouped into the FGWOOD table for convenience, although it is not located near the other woodworking equipment in the Laminates Plant. Mineral boards are cut in this area. There were no VE's observed from the baghouse exhaust and the differential pressure across the baghouse was reading 0.5 inches of water. This operation is slated to move over to the Laminates Plant in October. The baghouse will not be needed anymore and it will be sold.

Other mineral board cutting operations in the area are controlled by a cartridge filter. This was formerly exhausted indoors but has recently been switched to outdoor exhaust. This operation is also slated to be moved to the Laminates Plant in October. Although the operation was installed under the Rule 285(l)(vi)(C) exemption, it will need to be included in the ROP during the next renewal.

EUFOAM

This is the spray booth wherein polyurethane is applied. There are two filter banks for the booth, and booth had clean filters installed. Only negligible amounts of MDI are expected to be emitted from the booth. Records are

being kept to show they are in compliance with the Rule 290 limits.

EU-COMPACTFANS

This emission group covers the 3 compactors used in the material recycling area and the 1 compactor in the laminated products plant. Of the 3 in the recycle area, only the Cogen and the Mineral Board compactors have exhaust fans. None of these were being used at the time of the inspection.

The one compactor in the Laminated Products plant is used for particle board. This was not being used at the time of the inspection.

The company is taking the monthly 1-minute visible emission readings as required in the ROP.

STEEL COMPONENTS PLANT

EU-POWDERCOAT

This emission unit is listed in the ROP, but there are no conditions specific to the operation since the equipment did not need a permit to install. This emission unit now includes two powder coating lines. It now includes the older line installed many years ago, and the new line installed recently in place of the spray coating booths. There is not a table in the ROP for this equipment but it is included in the FG-METALNESHAP so that they can use the pounds of applied solids in the calculation for the Subpart RRRR MACT.

The lines first run through gas fired washers and drying equipment. The parts are then spray powder coated. The overspray is collected in fabric filters collectors and the cleaned air is exhausted inside the building. Infrared ovens are used for the curing. The gas burning units involved in this area are all Rule 282(b)(1) exempt and are included in the ROP staff report.

Drywall Cutter

This machine is exhausted to a cartridge collector and discharged into the room. The operation is not included in the ROP.

EU-WALLS-LS-ADHES

This is a manual spray adhesive operation. This was not being operated at the time of the inspection. Records are being kept of the usage and emissions to show compliance with the Rule 290 limits.

EU-ECOAT

This emission unit consists of one E Coat line. The E-coat tank is located inside an enclosure that can only be entered after shutting down the line. The parts leave the gas-fired washer, travel the dip tank for about 90 seconds, and then enter the gas-fired cure oven. The EU-SPRAYBOOTH table was eliminated from the ROP when the Hi-Solids Spray Line was removed. The VOC emissions are now limited by R290. Detailed records are kept and compiled in a spreadsheet for each month.

The daily average VOC per coating volume is recorded as part of the Subpart EE NSPS compliance demonstration. Records show they are in compliance with the coating VOC limits. Reference to the NSPS was inadvertently dropped from the ROP during the ROP modification and will need to be added back in. Nevertheless, the company is still sending in reports.

The E-coat line and the powder coating lines are included in the FG-METALNESHAP. The monthly average HAPs per coating volume is recorded as part of the Subpart RRRR NESHAP compliance demonstration. Records show they are in compliance with all of the monthly average HAP limits.

All of the stacks for the booths and gas-fired ovens appear to meet the minimum height and are equipped with proper no-loss hoods.

One color (black) is used in the E-coat. Resin, pigment, and solvent are added as needed to maintain the proper

mix in the tank. They track the amount of materials added to the tank, and that is assumed to be the emissions.

Laminated Products Plant

FG-WOOD

There are eight baghouses controlling the various woodworking operations in the laminated products area and one in the panel plant. The VE's are being observed from all of the filters. All are equipped with differential pressure gauges. The observed differential pressure of each in inches of water was as follows:

- #1 - <0
- #2 - 0.1
- #3 - <0
- #4 - <0
- #5 - <0
- #6 - Not in Service
- #7 - 2.1
- #8 - 2.5

Staff noted that many of the gauges did not appear to be working. It is evident that the gauges have not been serviced in a while. Although not specifically required by the ROP, I suggested that the gauges are a valuable tool to monitor the performance of the filters. I recommended that they repair the gauges and place them on the regular maintenance schedule to assure they stay in working order.

The ROP does require weekly VE readings, of which they have records showing they are being performed. There were not any VE's observed during the inspection, nor did their records show any history of reading above zero in the last 6 months.

EU-WBFINISH

The company is operating a wood surface finishing operation using water-based staining and coatings. This includes one stain application line, two top coat finishing lines and two manual booths. The top coat is VOC free. The stain is low VOC (<1 lb per gallon) and has no HAPs.

The stain and top coat lines are all enclosed from the automatic application booths to the drying/curing zone. Paper filters in the booths are followed by fiberglass filters.

This was installed without a permit due to the expected low VOC emissions. Emission records are being kept to show that they are staying under the Rule 290 thresholds.

The operation is subject to the "National Emission Standards for Wood Furniture Manufacturing", Subpart JJ. Compliance is being accomplished by demonstrating that there are no HAPs in the materials, and by submitting semi-annual reports.

EU-MANUAL-ADESLN

The "Specials" booth is a manual booth in the wood finishing area. The filters are installed and appeared to be clean. The differential pressure across the filters was 0.3 inches of water. HB Fuller SC1931 was being used. The required VOC emission calculations and records are being kept.

EU-ADHESIVEBOOTH

This booth has been removed from the Laminated Products plant. They will be able to remove this table from the ROP at the next renewal.

EU-WBADHESIVE

Water based adhesives are applied at several different stations located in the wood plant. The company is keeping records to show compliance with the Rule 290 permit exemption.

EU-MASTIC-ADHES

This table existed because of the mastic usage in the laminates plant. The company has discontinued the use of this material. They will be able to remove this table from the ROP at the next renewal.

PLANTWIDEFG-COLDCLEANERS

There were two cold cleaners observed in maintenance areas. Both use mineral spirits supplied by Crystal Flash. The lids were both kept closed as required by R707. One of the units had operating instructions posted and one did not. Jim said he would print and post the instructions ASAP so he didn't need one of our orange instruction stickers.

Consent Order

CO #9-1999 was agreed to in 1999 to settle issues related to the Wood NESHAP, 40 CFR 63 Subpart JJ. The order was terminated on November 5, 2013.

Emergency Generator(s)

The company has installed emergency generators. AQD has not received any notice regarding the installations. The size (Million BTU/hr) and the HP of the units was not readily apparent. Haworth will need to apply for a Permit to Install only if the units are greater than 10 Million BTU/hr.

The units are subject to 40 CFR 63, Subpart ZZZZ for Stationary Reciprocating Internal Combustion Engines. The size (HP) of the units was not readily apparent, so at the time of this report it is unknown what category they will fall in to. Although AQD has not taken delegation for the MACT, there will need to be a table added to the ROP to include the applicable RICE requirements.

NAME

Dale Turner

DATE

9/30/2015

SUPERVISOR

MR 9/30/2015