

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

B718650445

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: 08/14/2019
STAFF: Cody Yazzie	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

On August 14, 2019 Air Quality Division (AQD) staff (Cody Yazzie) arrived at One Haworth Center Holland, Michigan at 10:45 AM to conduct an unannounced air quality inspection of Haworth. Staff made initial contact with the office receptionist and provided her with a business card and stated the purpose of the visit. Jim Kozminski, Haworth, Sr. Project Engineer-Environmental, is the Air Quality contact and arrived shortly thereafter to start the inspection of the facility.

The Facility has three plants under one roof; steel, panels, and laminated products. In the steel plant, volatile organic compounds (VOC) containing coatings are applied by electrostatic spray guns in a series of booths and in E-coat tanks. The panels plant houses the partition making process. There are also powder coating operations in the panels plant. In the laminated products plant, there are many woodworking operations with particulate emission controls. Various other small operations using adhesives or other coatings are located throughout the plant. They have added a wood stain and topcoat line using low VOC materials.

Haworth has recently applied to be removed from the ROP program claiming that they were a true minor source. During that application the District Office denied Haworth’s request to Void the current ROP because without an Opt-Out permit for both HAPs and Particulate Matter Haworth still had a PTE that calculated to Major Source Thresholds. During the inspection Staff discussed if Haworth planned to apply for an Opt-Out Permit. Mr. Kozminski stated that Haworth planned to get the application in but did not know when.

Some of their operations are subject to federal regulations including the federal National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 63 Subpart JJ (Wood Furniture Coating), Subpart RRRR (Metal Furniture Coating), and Subpart ZZZZ (Stationary Reciprocating Internal Combustion Engines) and New Source Performance Standards (NSPS), 40 CFR Part 60 Subpart EE (Surface Coating of Metal Furniture).

Haworth was last inspected by the AQD on August 18, 2017 and was determined to be in Non-compliance at that time with MI-ROP-B7186- 2012a. Staff asked, and Mr. Kozminski stated that the facility does have emergency generators, boilers, and cold cleaners which have tables in the ROP.

Mr. Kozminski gave staff a tour of the facility. Required personal protective equipment are safety glasses and steel toe boots. Staff observations and review of records provided during and following the inspection are summarized below:

EU-MANUAL-ADESLN:

This emission unit uses manual spray applicators for adhesives and prints for curved panel, specials, paint repair, and laminates. Currently there are two separate booths with two separate stacks at the facility. During the inspection both booths were equipped with a dry fabric filter. The filters were in decent condition during the inspection. Mr. Kozminski stated that the spraybooth filters are changed once or twice per month. Staff was informed during the inspection that EU-MANUAL-ADESLN is only used to apply one adhesive. The adhesive that was being used during the inspection was HB Fuller SC 1931. The VOC content of this adhesive is 3.82 lbs./gallons.

This emission unit requires that Haworth show compliance with two emission limits. Special Condition I.1 is an hourly emission limit for VOC's. Special Condition I.2 is an annual 12-month rolling VOC emission limit. These limits are 28.21 lbs./hour and 30.66 TPY respectively.

The facility was keeping the appropriate records to calculate and record an average hourly emission rate for each month. Records spanning from January 2018 through August 2019 were reviewed during the inspection. The monthly average hourly emission rate ranged from 1.76 to 2.69 lbs/hour of VOC for this time period. The 2.69 lbs./hour of VOC occurred in May of 2018. This is well below the permitted limit.

Haworth was keeping the monthly VOC emissions records that are used to calculate and record a 12-month rolling VOC emissions for each month. The facility appeared to be correctly calculating the 12-month rolling. Records spanning from January 2018 through August 2019 were reviewed during the inspection. The 12-month rolling emission rate ranged from 1.00 to 1.56 TPY of VOC for this time period. The 1.56 TPY of VOC occurred in April of 2019. This is well below the permitted limit.

EU-SANDSTRIPPER:

EU-SANDSTRIPPER is a fluidized bed hot sand paint rack stripping process with a secondary after burner and cyclone as control. EU-SANDSTRIPPER is only used to process cured paints on metal parts from other Haworth processes. Haworth has the waste from EU-SANDSTRIPPER disposed of as non-hazardous waste. During the inspecting Mr. Kozminski stated that the facility was looking into getting rid of this unit as it does not get much use. This unit is required to not operate unless the sand bed is preheated to a minimum of 650 degrees Fahrenheit before the parts are loaded into the sand bed for processing. Mr. Kozminski stated during the inspection that the sand bed is not pre-heated before the parts are loaded because it is not how this unit works. Haworth will load the parts into the bed at the beginning as opening the unit after it is heated would waste heat. Even though preheating may not be how the unit is designed to operate it is still a permit condition. Haworth should apply for a permit modification if they wish to use the unit in the future or find a way to pre-heat the sand bed and comply with Special Condition III.2

There are two material limits that are associated with EU-SANDSTRIPPER. The facility must comply with a 24 batch per day and 6,000 batch of material per 12-month rolling time period limit. Haworth was able to provide recordkeeping that showed a 12-month rolling total on an excel spreadsheet. Haworth's records showed that the facility has never exceeded 805 batches during the 12-month rolling time period, which is well below the permitted limit. Haworth does not track the number of batches processed on a spreadsheet. Instead Haworth uses a Java application in which Mr. Kozminski is able to pull up a day and count the number of cycles. While the Java program does record each day and number of cycles Staff does not think that the current format is a format that would be acceptable to the District Supervisor. The only way staff could check records is by know sitting with Mr. Kozminski as he counts the

batches on the Java Program. This is a violation of Special Condition VI.4

The facility is required to continuously record the temperature of the afterburner when material is being processed in EU-SANDSTRIPPER. Haworth also uses the Java application for this recordkeeping. Staff was able to review the afterburner temperatures on a few days that EU-SANDSTRIPPER was processing material. On July 29, 2019 at 7:04 AM the facility recorded an afterburner temperature of 1,471 degrees Fahrenheit. On July 31, 2019 at 3:41 PM the facility recorded an afterburner temperature of 1,482 degrees Fahrenheit. These are both specific instances where the secondary afterburner does not maintain a minimum temperature of 1,500 degrees Fahrenheit as required by Special Condition IV.1. During these operating days it appeared the facility made the setpoint temperature of the afterburner 1,500 degrees Fahrenheit. Staff observed that the records for these operating days had an oscillation around the 1,500-degree Fahrenheit mark. Staff stated that this is a violation of Special Condition IV.1 and suggested that the afterburner temperature setpoint be set at a higher value to allow for the oscillation that appears to occur when the afterburner is in operation.

Haworth was able to provide a copy of the Malfunction Abatement Plan (MAP) associated with EU-SANDSTRIPPER. This MAP specifies a preventative maintenance program that identifies supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air cleaning devices. The plan also includes the frequency of the inspection or repairs. Identification of operating variables that shall be monitored to detect a malfunction or failure is also documented. The MAP also includes a description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emissions limits.

EU-COMPACTFANS:

This emission unit are four trash compactors each with a fan located in the wood plant and recycling area. Each compactor has its own stack. Three of the four compactors are located in the Panels Plant. Each of the three compactors at this location are used for a specific material. The materials that are processed through the three compactors are mineral board, waste to energy materials (non-recyclables), and co-gen materials (particle board, wood, and cardboard). During the inspection Staff observed the compactors at the Panels Plant location. Staff did visit this location but did not observe any visible emissions during the inspection.

The 4th compactor is located in the Laminated Product Plant. This compactor operation is used to strictly compact wood and is equipped with an exhaust fan. Staff did not observe this location during the inspection.

Staff requested the required monthly 1-minute visible emission readings required by MI-ROP-B7186-2018 be provided for the months of January through July 2019. Staff was provided with records for the months of February, March, May, June, and July for the Mineral board Compactor. Haworth did not provide visible emission readings for January or April. This is a violation of Special Condition VI.1 as it does not appear that Haworth conducted visible emissions for these months.

FG-RULE290:

Haworth operates five different Rule 290 groups at the facility. During the last inspection the records did not show the documentation of ITSL's and IRSL's that were assigned to every chemical throughout these emission units. Since the last inspection Mr. Kozminski has reworked the Rule 290 calculations identifying chemicals that have ITSL's and IRSL's. An evaluation of the reworked Rule 290 calculations will be provided along with each emission unit.

EUWBADHESIVES: This is a miscellaneous water based adhesive line. The facility only uses

two adhesives for this 1070-2301 Franklin MX 90 and 2240-1038 Franklin 65. In this emission unit's Rule 290 calculations the facility calculates for volatilized chemicals but does not list a screening level. Air Quality requires that if a screening level is not present then the facility provide documentation of a screening level to be associated with it. The facility is not tracking actual emissions of the categorized air contaminants just calculating emissions for a worst-case scenario. These do not meet the recordkeeping requirements of Rule 290 and is a violation of Rule 201.

EU-FOAM: This is where Polyurethane is sprayed on (Automated Sprayers) as an adhesive for panels. There were two horizontal tanks storing the products that make up the Polyurethane since it is a two-component system. The facility is not tracking actual emissions of the categorized air contaminants just calculating emissions for a worst-case scenario. These do not meet the recordkeeping requirements of Rule 290 and is a violation of Rule 201.

EU-MISCSOLVENT: 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. The facility is not tracking actual emissions of the categorized air contaminants just calculating emissions for a worst-case scenario. These do not meet the recordkeeping requirements of Rule 290 and is a violation of Rule 201.

EU-WBFINISH: This an all automated coating system used for applying water-based stains and coatings. The process includes a stain application line, two automated top coating booths, and a cure oven. Staff requested that the SDS for the four most used coating to review if Haworth was categorizing the contaminants into the proper ITSL and IRSL categories. From the four selected SDS's Haworth did appear to be categorizing each contaminate correctly. The facility is not tracking actual emissions of the categorized contaminants just calculating emissions for a worst-case scenario. These do not meet the recordkeeping requirements of Rule 290 and is a violation of Rule 201.

EU-ECOAT: The E-coat tank is self-contained in an enclosure and cannot be entered unless the line is shutdown. The E-coating consists of a Resin, Pigment, Solvent, and lots of water. These items are added as needed to maintain a proper mix in the dip tank. The parts being coated exit a pre-wash system and then travel the length of the dip tank and then go through a cure oven. The coating in the dip tank gets applied to the parts through electro-static means which is why it would need to be shut down prior to entering the enclosure. The facility is not tracking actual emissions of the categorized contaminants just calculating emissions for a worst-case scenario. These do not meet the recordkeeping requirements of Rule 290 and is a violation of Rule 201.

FG-WOOD:

This flexible group includes all the various woodworking operations found throughout the facility. These woodworking operations are controlled by eight different baghouses. The facility is required to complete weekly 6-minute visible emissions observations. Haworth provided Baghouse emission observations logs that document if emissions were observed, date, time, and the hours of operation per week. The only log that indicated there was visible emissions was the log for Baghouse #5. Emissions were observed during the weekly observations from March 20, 2019 until April 24, 2019. The log notes that a bag change was scheduled for May during these weeks. While the log does note that visible emissions were observed and possible reason for emission Special Condition VI.1 specifies that the procedure for the visible emission observations must follow appendix 3 of MI-ROP-B7186-2018. In appendix 3 it specifies that a determination of needed repairs and/or maintenance shall be made within 24 hours and recorded. Then the repair and/or maintenance shall be performed within 48 hours of the discovery. The Log notes that maintenance was not able to

be performed for about a month and a half. This is a violation of Special Condition VI.1.

Each baghouse is equipped with a differential pressure gauge. During the inspection it was noted by Staff that a majority of the different pressure gauges were not working. Haworth does not currently have any conditions that require the differential pressure across the baghouse be monitored or required. Staff should consider adding the monitoring and recordkeeping requirements as apart of the next permit modification or ROP renewal.

The facility calculates the PM emissions from each dust collector based on volume of air flow per minute, the weight of air per cubic foot (0.072 lbs. air/CF), and an emission factor of 0.0005 lbs. PM emitted/1000 lbs. of air. All dust collectors are operated 8760 hours per year. This calculates PM emissions to be 3.30 TPY. This is below the permitted limit of 25.0 TPY.

FG-METALNESHAP:

This flexible group contains all the metal coating operations located facility-wide that are subject to 40 CFR Part 63, Subpart RRRR NESHAP for Metal Furniture Coating. Specific emissions units that are a part of this flexible group include EU-POWDERCOAT, EU-FOAM, and EU-ECOAT. This NESHAP requires that the facility complies with an Organic HAP emission limit of 0.83 pounds per gallon of applied coating solids. The facility appears to be meeting the appropriate monitoring and recordkeeping requirements along with submitting the necessary Semi-Annual and Annual Reports.

FG-WOODNESHAP:

This flexible group contains all the wood furniture coating operations located facility-wide that are subject to 40 CFR Part 63, Subpart JJ NESHAP for Wood Furniture Coating. Specific emissions units that are a part of this flexible group include EU-WBFINISH. This regulation has various instantaneous Volatile HAP limits for the following finishing materials: stains, washcoats, sealers, topcoats, basecoats, enamels, and thinners. The facility has reported that there are no HAPs in the coatings used in EU-WBFINISH.

This regulation also requires that all emission units shall comply with the Work Practice Standards noted in 40 CFR 63.803. The facility does have a work practice plan for the Wood Furniture Finishing. This work practice plan appears to meet all the requirements of Special Condition VI.3.

Haworth appears to be meeting the appropriate monitoring and recordkeeping requirements along with submitting the necessary Semi-Annual and Annual Reports for this regulation.

FG-NSPSEE:

This flexible group contains all the operations that apply coating to metal furniture located facility-wide that are subject to 40 CFR Part 60, Subpart EE NSPS for Surface Coating of Metal Furniture. Specific emissions units that are a part of this flexible group include EU-EUCOAT. This regulation requires that VOC emissions be limited to 0.9 kg per liter (7.5 pounds per gallon) of solids as applied.

Haworth appears to be meeting the appropriate monitoring and recordkeeping requirements along with submitting the necessary Semi-Annual and Annual Reports for this regulation.

FG-MACTZZZZ:

Haworth has six existing and new natural gas-fired emergency generators that range in horse power from 40-771 HP. These emergency generators are subject to Part 63 Subpart ZZZZ National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE). This regulation requires that every 500 hours of

operation the oil be changed, and the hoses and belts be inspected. It also requires that every 1000 hours the of operation the air cleaner be inspected and replaced as necessary. Haworth is contracting out the preventative maintenance on these engines to Cummins. Haworth's current contract goes from April 1, 2019 until March 31, 2024. Haworth was able to provide invoices that appear to meet the required preventative maintenance task. Each engine is also equipped with a non-resettable hour meter.

<u>Location Class</u>	<u>Make</u>	<u>Model</u>	<u>HP</u>	<u>Install Date</u>	<u>RICE</u>
HQ Office	Onan	GFGA	670	2007	New
Data Center	Onan	GFJA	771	2004	New
Distribution	Kohler	30RZ	47	Pre-1998	Existing
Panels	Kohler	45RZ	60	Pre-1998	Existing
HCP	Kohler	30RZ	40	Pre-1998	Existing
LPP	Kohler	30RZ	40	Pre-1998	Existing

FG-MACTDDDDDD:

Haworth has 15 natural gas-fired boilers/process heaters that range in heat input capacity from 0.1 – 4.5 MMBTU/hr. These boilers and process heaters are subject to 40 CFR Part 63 Subpart DDDDD National Emissions Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters. As a part of this regulation the facility is required to all boilers or process heaters that are less than 5 MMBTU/hour to complete a tune-up every 5 years. Haworth provided records that the tune-up was last conducted on October 29, 2018. The tune-up appears to meet the necessary inspection requirements.

FG-COLDCLEANERS:

Staff observed one parts washer during the inspection. The parts washer was filled with Crystal Clean 142 Mineral Spirits. The lid was closed and had operational instructions posted. Staff was told that there was a total of 8 located throughout the facility. Staff is assuming that all other parts washers are meeting the requirements under the flexible group.

EU-POWDERCOAT:

Is a powder coating system operation that includes a wash, followed by a dryer, then the powder coat, and finally ending at the cure oven. The powder coating systems are controlled by cartridge filters and vented indoors. This operation appears to be exempt from permitting via Rule 287(2)(d). This coating operation is still subject to 40 CFR Part 63, Subpart RRRR NESHAP for Metal Furniture Coating.

Non-Production Coating Line:

Staff observed a coating line that Mr. Kozminski stated was used as on-site nonproduction painting. Mr. Kozminski stated that mostly aerosols are used. Staff did find some spray guns located at the station. Mr. Kozminski stated that exemption Rule 287(2)(j) can be utilized, which is for portable equipment that is used for on-site nonproduction painting. Staff disagrees with the use of this exemption because the exemption specifically states that the equipment is portable. Staff observed that this spray booth is equipped with both a stack and fabric filter.

Because the spray booth is not movable Staff does not feel that the equipment is portable. Staff feels the appropriate exemption is Rule 287(2)(c) if the facility wants to continue using the spray guns. This is a Rule 201 violation since there was not the appropriate recordkeeping available for Rule 287(2)(c).

Non-compliance

At the time of the inspection and based on a review of records obtained during or following the inspection, the facility appears to be in non-compliance with MI-ROP-B7186-2018. Staff stated to Mr. Kozminski that a violation notice would be sent to the facility for the violations related to EU-SANDSTRIPPER, FG-RULE290, FG-WOOD, Non-Production Coating Line, and EU-COMPACTFANS. Staff concluded the inspection at 1:30 PM.-CJY

NAME Cody Young

DATE 9/19/19

SUPERVISOR RIL 9/30/19