

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

N556970063

FACILITY: Haworth, Inc. - Big Rapids Components-steel & wood		SRN / ID: N5569
LOCATION: 300 N Bronson, BIG RAPIDS		DISTRICT: Grand Rapids
CITY: BIG RAPIDS		COUNTY: MECOSTA
CONTACT: Brandy Robinson , Mfg. Quality Engineer		ACTIVITY DATE: 11/02/2023
STAFF: Scott Evans	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: On-Site inspection to assess compliance with air quality rules and regulations.		
RESOLVED COMPLAINTS:		

Introduction

On November 2, 2023, State of Michigan Department of Environment, Great Lakes, and Energy Air Quality Division (AQD) staff member Scott Evans (SE) conducted an on-site inspection of the Haworth Inc. facility located at 300 North Bronson in Big Rapids, Michigan, to assess compliance with permitted conditions and all other air quality rules and regulations. Haworth Inc. is a manufacturer of wood and metal furniture products. The wood furniture manufacturing operation includes many woodworking processes as well as a UV wood coating line. Metal furniture manufacturing includes stamping, welding, and assembly processes as well as E-coating and powder coating processes with associated ovens. The facility also has two burn-off ovens for cleaning of metal racks. The facility is classified as a synthetic minor source of hazardous air pollutants (HAPs) and particulate matter (PM) with an opt-out permit. It is classified as a minor source of all other pollutants including volatile organic compounds (VOCs). The facility has one active permit to install (PTI): PTI No. 99-19.

Upon arrival at the facility, SE conducted an initial observation of the facility exterior. At this time there were no odors or visible emissions (VEs) observed. After this initial observation, SE entered the facility and was greeted by Brandy Robinson. A discussion to explain the purpose of the day's visit took place, after which an inspection of the facility interior and processes commenced. During this inspection, both the wood and steel plants were visited.

PTI No. 99-19

This facility has one active permit: PTI No. 99-19. This permit was approved on July 3, 2019. It includes three emission units (EUs) and one flexible group (FG):

- EUDUSTCOLL1
- EUDUSTCOLL2
- EUDUSTCOLL3
- FGDUSTCOLLS

All three EUs are 50,000 cfm baghouses that are used to collect particulate from the woodworking operations at the wood furniture building. FGDUSTCOLLS includes all three defined EUs.

FGDUSTCOLLS

This FG contains conditions that are applied to all three baghouses.

This FG has one emission limit: 0.01 pound of PM emitted per 1000 pounds of exhaust gases calculated on a dry gas basis. Compliance with this limit is based upon maintenance, functionality, and operation of the three baghouse emission units. All these factors are discussed further below.

This FG has one operational restriction, which states that the facility shall not operate woodworking equipment unless the appropriate dust collectors are installed and operating properly. During the inspection, the baghouses could be seen to be operating properly. This was verified through the below design parameter.

This FG has one design parameter, which states that the facility shall install, calibrate, maintain, and operate a pressure drop monitoring device for each baghouse on a continuous basis. During the inspection, all baghouses could be seen equipped with appropriate devices, which were reading as follows during the inspection:

- EUDUSTCOLL1: 0.1 inH₂O
- EUDUSTCOLL2: 0.25 inH₂O
- EUDUSTCOLL3: 2 inH₂O

These reading appeared to demonstrate proper functionality of the associated equipment. It was discussed with facility staff who verified that the above readings are considered normal for the devices. Recorded readings discussed below reflect comparable weekly recordings for the baghouses. These numbers also appear to be consistent with historical readings during past inspections.

This FG has one testing requirement that states the facility may be required to verify PM emission rates if requested by the AQD. During the inspection, with verification of baghouse operation as well as confirmation that there were no VEs being released from the facility, it is not felt at this time that testing is necessary.

This FG has three recordkeeping requirements. The first requirement states that the facility must observe for VEs and record the result at least once per week. These recordings were maintained on site and a copy was provided for the AQD for review. There were no recorded incidents of VEs within the past calendar year. The second requirement states that a record of baghouse malfunctions must be maintained. The facility reported no malfunctions in the past calendar year. The third requirement states that the facility must record a pressure drop reading for each baghouse daily. These records were provided to the AQD. These records demonstrated consistent function that matched the activity observed during the inspection. The provided records appear to demonstrate proper compliance with recordkeeping requirements as well as verifying other permitted requirements.

This FG has one other requirement, which states that an acceptable preventative maintenance plan (PMP) and malfunction abatement plan (MAP) must be maintained by the facility. During the inspection, the facility was able to provide copies of both documents. Copies were also provided to the AQD to be added to the facility file, as copies had only been provided in the past when the facility was still considered a Major source facility. This copy was added for the sake of cohesive records for the current PTI.

FGFACILITY

These conditions are applicable to the entire facility.

This FG has two emission limits:

Pollutant	Limit	Time Period / Operating Scenario	Recorded Max	Compliance Status
Each Individual HAP	Less than 8.9 tpy	12-month rolling time period as determined at the end of each calendar month	< 181 lbs./yr	Compliant
Aggregate HAPs	Less than 22.4 tpy	12-month rolling time period as determined at the end of each calendar month	181 lbs./yr	Compliant

Compliance with these limits is demonstrated and discussed below by the emissions records maintained by the facility.

This FG has one testing requirement that states the facility must determine HAP content of used materials by using manufacturer's formulation data unless verification through EPA Test Method 311 is requested by the AQD. As verification has not been requested, the facility is using formulation data as required. This data was used for the emissions data discussed below. At this time, it is not necessary for the facility to test and verify material contents.

This FG has two recordkeeping requirements. The first states that records must be provided in a format acceptable to the AQD, which the facility is compliant with. The second requirement outlines the following monthly record requirements:

- Gallons of HAP containing material used.
- HAP containing material reclaimed, if any.
- HAP of each material used.
- Individual and aggregate monthly HAP emissions.
- Individual and aggregate 12-month-rolling HAP emissions.

The facility was able to provide the AQD with copies of the above records, which are included with this report. Review of the records confirmed compliance with emission limits as shown above. It was expressed by the facility that individual HAPs are not recorded as the aggregate HAP levels are well below the individual HAP limit. This is acceptable as the facility is able to track individual HAPs, but simply doesn't record them for the sake of document sizing.

NSPS and NESHAP Requirements

This facility is subject to New Source Performance Standards (NSPS) 40 CFR Part 60 Subpart EE as a facility that conducts metal coating operations. Per the requirements of the regulation, the facility is required to submit semiannual reports stating that the total VOC emissions were not greater than 0.90 kilograms per liter of coating solids applied. The facility has submitted these reports on time and in satisfactory fashion since the last inspection in 2019, demonstrating compliance with the regulation.

This facility has one generator on site that is subject to NSPS 40 CFR Part 60 Subpart ZZZZ. Per the requirements of the regulation, the facility has an hour meter installed and the hours of operation are recorded. The generator has only been run for the sake of testing functionality periodically and is well below any limits for operation.

This facility has historically been subject to National Emissions Standards for Hazardous Air Pollutants (NESHAP) regulations 40 CFR Part 63 Subparts JJ and RRRR as a manufacturer of wood

and metal furniture. However, as this facility is no longer classified as a major source of HAP emissions, it is no longer subject to either regulation.

Exemptions

This facility operates an E-coat line for metal furniture, which includes a dip tank, a rinse tank, and a curing oven. This equipment is exempt from air permitting requirements under Rule 290 as demonstrated by records that were provided. The records demonstrated that the highest emission level of VOCs was 228 lbs. in December of 2022, which is below the 1,000 lbs./mo limit.

This facility has a UV wood coating line, which includes topcoat application, UV-light curing, a heating chamber, spray booths, and cure ovens. This equipment is exempt from air permitting requirements under Rule 290 as demonstrated by records that were provided. The records demonstrated that the highest emission level of VOCs was 363 lbs. in December of 2022, which is below the 1,000 lbs./mo limit.

This facility has two burn-off ovens for cleaning of excess paint off racks used for coating metal furniture parts. These ovens were demonstrated by the facility to be compliant with Rule 290 limits in 2003 as long as fewer than 115 batches per month are burned. Facility operations limit the number of batches to 80 per month, meaning that the 500 lbs. of VOCs per month will not be exceeded. A copy of the calculations was provided for verification.

The facility has multiple cold cleaners on site. These cleaners are exempt from air permitting requirements under Rule 281(2)(h). during the inspection the lids were closed, and the units were labeled as required. All were under 10 ft² in surface area.

This facility has one emergency generator on site as mentioned above. Though it is subject to NSPS requirements, it is exempt from air permitting requirements under Rule 285(2)(g) as it has a heat rating of less than 10 mmBtu/hr.

Reporting

As discussed above, the facility is required to submit semiannual VOC emissions reporting to satisfy NSPS requirements. The facility has submitted all reports satisfactorily and on time since the last inspection.

This facility also submitted their Michigan Air Emissions Reporting System (MAERS) report on time on March 9, 2023. There were no reported exceedances, and an audit of the report had a passing result. A copy of the report is included with this report.

Conclusion

At the conclusion of this inspection the facility appeared to be compliant with all permitted requirements as well as all other applicable air quality rules and regulations.

NAME Scott Evans

DATE 12/8/2023

SUPERVISOR HH