

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

A593740912

FACILITY: Howard Miller Company		SRN / ID: A5937
LOCATION: 860 E Main St, ZEELAND		DISTRICT: Grand Rapids
CITY: ZEELAND		COUNTY: OTTAWA
CONTACT: Jerry Winters , Engineering Manager		ACTIVITY DATE: 07/20/2017
STAFF: April Lazzaro	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Unannounced, scheduled inspection.		
RESOLVED COMPLAINTS:		

Staff, April Lazzaro arrived at the facility to conduct an unannounced, scheduled inspection and met with Jerry Winters, Engineering Manager. Howard Miller Company operates pursuant to Renewable Operating Permit (ROP) No. MI-ROP-A5937-2015.

FACILITY DESCRIPTION

Howard Miller Company manufactures wood furniture, including clocks from hardwoods and nursing home décor out of a variety of types of manufactured wood products. The facility currently operates one shift, five days per week and has less than 100 employees. Operations include wood working and associated equipment, three coating lines, a wood waste fired boiler, natural gas fired boilers and a new exempt spray booth and vinyl wrap line. This facility is subject to National Emissions Standards for Hazardous Air Pollutants. Due to the Environmental Protection Agency's, "Once in Always In" policy, the various coating lines at the facility are subject to 40 CFR Part 63 Subpart JJ: National Emission Standards for Wood Furniture Manufacturing Operations major source regulation. In 2003, Howard Miller Company obtained an Opt-out Permit to Install to limit Hazardous Air Pollutants to synthetic minor limits. As such, the facility boilers are subject to 40 CFR JJJJJJ for Area Sources. The AQD does not have delegation for the area source regulations and as such, these were not evaluated at the time of the inspection.

This facility is a major source of Volatile Organic Compounds (VOC).

EUWOODEQUIP1-3 are subject to the Compliance Assurance Monitoring (CAM) provisions of 40 CFR Part 64. EUSILO is contained in the CAM Plan, however based on the 6,000 CFM size it is unclear if the Potential to Emit is actually over 100 tons PM-10 per year. This will be evaluated during the next ROP renewal cycle. There is also a miscellaneous emission unit for Rule 331 that appears unnecessary and is also included in the CAM Plan, but does not exist.

One cold cleaner was observed during the inspection.

The facility appears to be a synthetic minor for particulate matter due to limits being incorporated into the original ROP issued in 1999 for EUWOODEQUIP1.

The emission unit named EUSPRAYBOOTH1 contains eleven spray booths and accompanying ovens that were installed in 1966. During the inspection, Howard Miller Company was unable to identify what booths are contained in this emission unit specifically. Howard Miller Company should identify and label all booths that are a part of this emission unit in order to maintain their grandfathered status.

The emission unit named EUSPRAYBOOTH2 contains four spray booths that were originally permitted in 1977. These booths were originally permitted with a 6" deep water tray for particulate control. None of the booths observed on site were equipped with a water tray, and Howard Miller Company was unable to identify what booths are contained in this emission unit specifically. Howard Miller Company should identify and label all booths that are a part of this emission unit to clarify equipment going forward.

COMPLIANCE EVALUATION

SOURCE-WIDE CONDITIONS

The HAP limitations are contained in the Source-wide conditions of this ROP.

Emission limits apply to each individual Hazardous Air Pollutant (HAP) limited to less than 9.0 tons per 12-month rolling time period. Aggregate HAPs are limited to less than 22.5 tons per 12-month rolling time period. The company utilizes formulation data to obtain HAP and volatile organic compound (VOC) information on all materials. A current chemical listing was requested and obtained and the recordkeeping conducted contains all required information in an acceptable format. Howard Miller Company is currently keeping track of aggregate volatile HAP emissions, not total HAP emissions. Reported aggregate volatile HAP emissions for the 12-month rolling time frame of July 2016-June 2017 are 2.43 tons. Howard Miller Company needs to make a column in the spreadsheet that includes all HAP emissions. Additionally, the previous AQD inspector informed the company that since the aggregate HAP emissions are below the individual HAP emission limit, they do not need to keep 12-month rolling records of the individual HAP. This is incorrect, and Mr. Winters indicated they will begin keeping record of the 12-month rolling total individual HAP as required by the permit.

EUWOODBOILER1

This wood waste fired boiler operates during cold weather to provide plant heat, and as such was not in operation at the time of the inspection. A follow up will be conducted this winter to observe operating conditions. Howard Miller Company processes hardwoods and various panels including plywood, mdf, hdf, hardboard, pegboard and particle board. These panels may have hpl, melamine or veneer on them. The large pieces of hardwood waste are burned in the boiler. The large pieces of manufactured wood waste gets disposed, however the saw dust goes into the silo for fuel for the boiler. The boiler has an emission limit of 0.50 pounds of particulate matter per 1,000 pounds exhaust gases. Compliance with this requirement is evaluated per visible emissions readings and the preventative maintenance plan (PMP). The visible emissions logs were observed in the maintenance shop which is run by Sam Myers and his staff. All readings appeared accounted for. There is currently no visible emission limit in the permit, although pursuant to Rule 301 a 20% limit would apply. This visible emission limit should be added to the ROP during the next renewal cycle to make the permit enforceable.

EUSILO

The silo operates in conjunction with EUWOODBOILER1, and as such was empty. The silo is equipped with a small 6,000 CFM baghouse at the top of the unit. This silo is subject to an emission limit of 0.10 pounds of particulate matter per 1,000 pounds exhaust gases. Compliance with this requirement is evaluated per visible emissions readings and the preventative maintenance plan (PMP). The visible emissions logs were observed in the maintenance shop which is run by Sam Myers and his staff. All readings appeared accounted for. There is currently no visible emission limit in the permit, although pursuant to Rule 301 a 20% limit would apply. This visible emission limit should be added to the ROP during the next renewal cycle to make the permit enforceable. Mr. Winters explained that this silo has to be monitored carefully for pressure drop during operations, and they prefer to keep it just very slightly negative so that there is no blow back in the system when feeding the boiler. This can cause issues with the combustion chamber since the silo contains sawdust. As such, the CAM Plan reflects the pressure drop minimum of a $-1.0''\text{H}_2\text{O}$.

FGWOODEQUIP

This flexible group includes the four existing baghouses. Pursuant to the PMP, the facility is conducting maintenance on the units and documenting it. Annually, an outside company comes to inspect the units and make recommendations for repairs. It is identified that Howard Miller Company does not always conduct all the recommended bag replacements. Visible emissions readings that are taken daily by certified visible emissions readers have not identified any visible emissions. No visible emissions were noted at the time of the inspection. Additionally, in the future the CAM Plan needs to be changed because the range of $-1.0''$ - $10.0''$ H₂O is not appropriate for these units. Typical baghouse guidelines indicated that baghouses operating in the negative have either holes in the bags or severe air infiltration. The CAM Plan is further discussed in FGPMCAMPLAN compliance evaluation below. The maintenance area has a computer terminal that is logged into the Building Management System (BMS). On this system, the baghouse pressure drops are shown and continuously monitored. This is not a recording device, and maintenance staff takes a daily pressure drop recording and writes it on the log book. Additionally, maintenance staff manually performs shake downs of the baghouses at least twice per day.

EUWOODEQUIP1 is the newest and largest baghouse installed in 1999 at 85,521 CFM used for controlling particulate emissions from wood working equipment. Pressure drop at the time of the inspection was 1.72" H₂O. Howard Miller Company did not obtain a Permit to Install for this baghouse. In 1999 AQD staff used Rule 213(2)(d) to implement a synthetic minor limit on this baghouse through the ROP process. This method bypassed Rule 201 permit applicability as this unit should have obtained a Permit to Install (PTI) prior to installation. The limit in the permit is 0.01 pounds of particulate matter per 1,000 pounds exhaust gas which is evaluated by using visible emissions as a surrogate.

EUWOODEQUIP2 appears to consist of two emission units, but for some reason is listed as one. This consists of the east wheelabrator and the west wheelabrator, both of which operate at 33,500 CFM used for controlling particulate emissions from wood working equipment. Pressure drop of the east unit was 5.55" H₂O and the pressure drop of the west unit was 1.86" H₂O at the time of the inspection. I commented to Mr. Winters that it is strange that identical baghouses would operate at such different differential pressures. He could not explain it at the time. After reviewing the maintenance logs, the cause appears to be because the bags on the west unit are "dry rotted" per the annual inspection conducted in September of 2016 (attached) and therefore they have a much lower differential pressure. The bags were not replaced as recommended because the bags on **EUWOODEQUIP3** were determined to also need replacement and that was done first. No visible emissions or fallout were noted at the time of the inspection. Going forward, operating parameters for this unit should be closely observed. Additionally these should be broken up into separate emissions units during the next ROP renewal cycle to make the permit accurate. The limit in the permit is 0.01 pounds of particulate matter per 1,000 pounds exhaust gas which is evaluated by using visible emissions as a surrogate.

EUWOODEQUIP3 consists of one 75,000 CFM baghouse for controlling particulate emissions from wood working equipment. Pressure drop at the time of the inspection was 1.70" H₂O. The limit in the permit is 0.01 pounds of particulate matter per 1,000 pounds exhaust gas which is evaluated by using visible emissions as a surrogate.

There are no stack requirements for any of the four baghouses.

FGNESHAPJJ

This flexible group contains the equipment listed in **EUSPRAYBOOTH1** (11 spray booths), **EUSPRAYBOOTH2** (4 spray booths) **EURULE287** (new booth/laminate line) and **EURULE290** (there is no Rule 290 equipment currently). This facility is an existing source using the averaging approach, with an emission limit of 1.0 lb VHAP/lb solids as applied. As applied means that the VHAP must include any thinning solvents used and applied, and these values are included in the weighted average.

Staff requested the spreadsheet that is used to calculate the lb VHAP/lb solids from the company so the work could be reviewed. It was reviewed, and the value appears accurately calculated. I also requested some formulation data to check to see that the information in the spreadsheet was current, and up-to-date. Of the seven formulation sheets one was noted to be different for VOC's than the spreadsheet. I identified this and discussed it with Howard Miller and they corrected the spreadsheet. The facility is required to maintain a record of VOC emissions for the annual Michigan Air Emissions Reporting System (MAERS), however there is no required recordkeeping format or other guidance for keeping track of emissions.

Recordkeeping for the various work practice implementation plans, including the operator training program, cleaning solvent accounting system and other requirements were observed in notebooks maintained on the plant floor. Operator training is completed in May each year. All recordkeeping appeared in order.

FGPMCAMPLAN

All baghouses at the facility are included in the CAM Plan, including the small one on the silo. This will be reevaluated based on the PTE of Pm at the next ROP renewal cycle. Each is equipped with a differential pressure gauge as required and is monitored through the Building Management System. Recordkeeping of the daily logs were observed on site, and appeared in order. As previously mentioned, the pressure drop of a typical baghouse should not be in the negative range. As such, this will be reevaluated and changed during the next ROP renewal cycle. Recordkeeping for the daily visible emissions check was observed on site, and appeared in order.

The permittee is maintaining record of data as required. EUMISC331 is listed as part of the CAM Plan, although there are no sources of PM or an emission unit with equipment for this. It will be removed during the next ROP renewal cycle.

FGRULE287(C)

There is currently one emission unit operating per Rule 287(2)(c), which is the new spray booth and vinyl wrap system. Usage was maintained in a log next to the booth, and had a maximum monthly usage of 54 quarts, which is 13.5 gallons.

FGRULE290

There are currently no Rule 290 exempt emission units on site. This flexible group will be removed during the next ROP renewal cycle if there are still none at the facility.

FGCOLDCLEANERS


There is currently one cold cleaner on site. The unit was observed, with the lid down and the proper postings on the lid and inside.

FGAREASOURCEBOILER- Existing Biomass

The AQD does not have delegated authority for the area source boiler regulations. As such, it was not evaluated for compliance during this inspection.

COMPLIANCE SUMMARY

Howard Miller Company was in compliance at the time of the inspection.

NAME 

DATE 8-7-17

SUPERVISOR 