

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

N098472216

FACILITY: Bilco Products		SRN / ID: N0984
LOCATION: 1373 S LINCOLN AVE, HOLLAND		DISTRICT: Kalamazoo
CITY: HOLLAND		COUNTY: ALLEGAN
CONTACT: Matt Tibbe , Vice President		ACTIVITY DATE: 05/29/2024
STAFF: Cody Yazzie	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS:
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

On May 29, 2024 Air Quality Division (AQD) staff (Cody Yazzie and Mariah Scott) arrived at 1373 South Lincoln Avenue Michigan at 1:00 PM to conduct an unannounced air quality inspection of Bilco Products (hereafter Bilco) SRN (N0984). Staff made initial contact with the office receptionist and stated the purpose of the visit. Matt Tibbe, Bilco, Vice President, is the environmental contact and arrived shortly thereafter and took staff to his office for further discussions.

Bilco is a wood furniture manufacturing facility that primarily produces furniture for motel/hotel chains. The facility primarily acquires prefinished parts that get assembled into cabinets, headboards, nightstands, etc. The facility uses a variety of woodworking equipment and coating booths. Bilco has approximately 40 staff members that operate on one 8-hour shift Monday through Friday.

Bilco was last inspected by the AQD on December 7, 2011 and appeared to be in Non-compliance at that time with Rule 201 for not meeting exemption requirements outlined in Rule 285(l)(vi)(c). Staff asked, and Mr. Tibbe stated that the facility does not have any emergency generators, boilers, or cold cleaners.

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

Woodworking:

The facility has multiple woodworking equipment that is ventilated to the general in plant environment. Each equipment is either equipped with an individual bag filter or routed to the central dust collector that then gets vented back inside the building. During the inspection it was noted that the 3 panel saws and the point-to-point CNC were ducted to the dust collector. There was a CNC machine, hardware insertion machine, 2 bore machines, and saws that had the stand-alone fabric filters.

The facility appears to be using Rule 285(2)(l)(vi)(B) to operate the woodworking equipment. During the inspection it was noted that the dust collector was installed with a differential pressure monitor. It was noted that this differential pressure monitor appeared to have a cracked line which prevented it from having an accurate reading. The dust collector contains the dust inside it then staff was told that about every other week the facility has the dust removed and taken off as waste.

On June 13, 2024 Billco Products provided a photograph of the differential pressure monitor operating correctly. Staff explained that while Rule 285(2)(l)(vi)(B) only requires that these operations only exhaust to the general in-plant environment the use of the differential pressure monitor are a good tool to use as a best management practice to monitor the dust collector. Differential pressure readings outside the typical operating ranges can indicate operational issues with it.

Spray Booth:

During the inspection there was a spray booth that was in operation. The facility indicated that they do a small amount of finishing with their operation. In the previous inspection it was noted that the facility elected to utilize Rule 287(2)(c). For this exemption the facility is required to maintain monthly coating usage records that show the emission unit does not exceed 200 gallons, as applied, minus water, per month. Staff requested these records for 2022 and 2023. These records showed that the largest coating usage amount occurred in October 2023 for this time period. In October 2023 the facility used 11 gallons of coating. This is well below the 200 gallons allowed by the exemption.

The exemption also requires that any exhaust system that serves the coating spray equipment is installed, maintained, and operated in accordance with the manufacturer's specifications. During the inspection it was noted that the booth was equipped with a fabric filter that appeared to be properly installed. It was indicated to Staff that they do change the fabric filter every few times they use it. It was also indicated that coating in the booth is so little and inconsistent that there is no set schedule to change the filters.

Adhesive Booth:

It was observed that there was a second booth that is used for laying up laminate using adhesive. During the inspection it was noted that this booth had seen significant decline in usage over the past few years. During the inspection the booth was not in operation. Staff did note that the booth did have an exhaust which was not equipped with a fabric filter. The exhaust did have some plywood that was set on an angle near the exhaust. This plywood did not cover the exhaust fully though and was left exposed.

In the previous inspection it was noted that the facility appeared to utilize Rule 287(2)(c) for this emission unit. Staff requested the monthly usage records show compliance with the 200 gallon per month limit for the time period of January 2022 through December 2023. Instead of providing usage records the facility provided purchase records. It was explained during the inspection that if the facility elects to use purchase records it is assumed that what was purchased during the month is used in that month. These records show that there was 108 gallons purchased in June 2023, 108 gallons purchased in December 2022, and 108 gallons purchased in February 2022. These are all below the 200 gallons per month limit.

As noted above the adhesive booth appeared to have an exhaust system that is not controlled by a properly installed fabric filter. This is required for any emission unit that is trying to utilize Rule 201 exemption Rule 287(2)(c). Staff intends to send a violation notice for the emission unit not appearing to comply with the requirements of Rule 287(2)(c).

Solvent Clean Up:

The facility uses a lacquer thinner to use as clean up solvent throughout the facility to clean up glue during the manufacturing process. In the previous inspection it was noted that the facility utilized Rule 290 for this process. Rule 290 limits monthly emissions based on categorizes and requires recordkeeping to show compliance with these records. Staff requested the monthly usage records for the period of January 2022 through December 2023. During this time period the facility indicated that the largest clean up solvent usage was 110 gallons in a month.

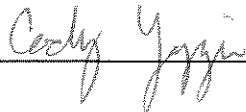
Staff was provided with the SDS for the lacquer thinner. The lacquer thinner that is used is a Rollie Williams Paint Spot. It is composed of toluene, xylene, methanol, isopropyl alcohol, methyl ethyl ketone, and ethylbenzene. The SDS indicates that the lacquer thinner has a density of 7.09 lbs/gallon and is 100% VOC's. Toluene, xylene, methanol, isopropyl alcohol, and methyl ethyl ketone all of initial threshold screening levels (ITSL) that are greater than $2.0 \mu\text{g}/\text{m}^3$. This allows the facility emit 1,000 lbs of these emissions per month. Total VOC emissions from the lacquer thinner assuming 110 gallons and the 7.09 lb/gallon density calculates 779.9 lbs of VOC emissions for the entire composition of the lacquer thinner. This is below the 1,000 lb limit in rule 290.

Ethylbenzene has an initial risk screening level (IRSL) of $0.4 \mu\text{g}/\text{m}^3$. Rule 290 limits the emissions of emissions that have an IRSL greater than $0.04 \mu\text{g}/\text{m}^3$ to 20 pounds per month uncontrolled. The SDS indicates that ethylbenzene has a composition value of 0.73% - 0.75% by weight. Emission calculations should assume worst case and use the 0.75% by weight value. Applying this to the 779.9 lbs of total VOC emissions calculates 5.85 lbs of ethylbenzene emissions per month which is less than the 20 lbs of emissions that is allowed by Rule 290. The facility should be tracking specific emissions of ethylbenzene as this is from a separate category in Rule 290 and has a separate emission limit.

Conclusion:

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 Rule 201 for not meeting the requires of Rule 287(2)(c) and having an exhaust system that is serving a coating spray equipment installed without dry filter control or water wash control. Staff stated to Mr. Tibbe that a report of the inspection would be sent to the facility for their records. Staff concluded the inspection at 1:30 PM.-CJY

NAME



DATE

6/13/24

SUPERVISOR

