

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

N748569933

FACILITY: VOGUE FURNITURE		SRN / ID: N7485
LOCATION: 2720 W. 14 MILE RD., ROYAL OAK		DISTRICT: Warren
CITY: ROYAL OAK		COUNTY: OAKLAND
CONTACT: Dave Golpe , Finishing Department Manager		ACTIVITY DATE: 11/22/2023
STAFF: Sebastian Kallumkal	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: Scheduled inspection		
RESOLVED COMPLAINTS:		

On Wednesday, November 22, 2023, I, Michigan Department of Environment, Great Lakes & Energy, Air Quality Division (EGLE/AQD) staff, Sebastian Kallumkal conducted a targeted inspection at Vogue Furniture located at 2720 W. Fourteen Mile Road, Royal Oak, Michigan. The purpose of the inspection was to determine the Vogue's compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451, as amended, EGLE-AQD Air Pollution Rules, and requirements of the permit to install (PTI) No. 42-06 (HAP opt out permit) and 309-05 (General Permit for Coating Processes).

I arrived at the facility about 10:00 AM. I met Mr. Dave Golpe, Finishing Department Manager. I had contacted Dave on Tuesday, November 21, to schedule this inspection. During the pre-inspection meeting, Dave explained to me the business and manufacturing operations at this facility. Vogue Furniture manufactures custom furniture, wall units, and entertainment units. The process involves wood cutting, side gluing, staining, sealer application, top coating, etc. The coating process includes staining, sanding, base coat and clear coat. Vogue operates 1 shift per day, 5 days (Monday-Friday) with a half day shift on Saturday. It has about 47 employees.

Perspectives in Laminate, another wood cabinet manufacturing facility, also conducted business at this location previously. Dave told me that Perspectives In Laminate moved out of this location and Vogue has taken the complete space. Perspective had one coating booth and dust collector baghouse for its operations. Vogue is using this coating booth and the dust collector. Vogue also had installed another coating booth and a dust collector baghouse. Vogue currently has five coating booths and 4 dust collectors. I informed that they need to update the General PTI for the coating booths using new Process Information form (EQP5759). On Monday, November 27th, I emailed Dave this form and General PTI. Vogue had included these two additional booths in the 2022 MAERS report. EUCOAT4 installed in 3/1/2019 and EUCOAT5 installed in 6/1/2021 per the MAERS Report.

The facility has four dust collector baghouses to collect the dust from the table saw operations, CNC operations, saws, sanders, joiner (smoothing the edges) and planer operations (thinning). The exhausts from the baghouses are vented inside of the facility. These processes are exempt from Permit To Install (Rule 201) requirements pursuant to Rule 285(l)(vi)(C). The saw dust materials collected from these baghouses are emptied to waste dumpster.

Dave told me that the stains applied are all water based. They use about 20 solvent-based coatings and 8 water based coatings. The waste solvents/coating from the coating operations are kept in closed containers and store the containers closed cabinets until picked up. Vogue generates about two 55 gallons waste every 4-6 weeks. They use plastic cabinet to store their waste solvent barrels. Cabinet can hold up to 4 containers.

Next, we inspected the five spray booths. The filters for all booths looked relatively clean. Filters in couple of booths were not properly placed, so I told Dave to have those properly

fitted to the exhausts. The intake air filters are replaced every 2 weeks, and the exhaust air filters are replaced every week. We also inspected the dust collectors, and waste storage cabinets kept outside the building. The surroundings of the dust collectors appear clean. No leaks observed.

During the inspection, Dave told me that they are getting the exhaust from nearby facility (Southern Michigan Cremation Services, 4839 Fernlee Avenue, Royal Oak, MI) located just across them into their air intake and causing discomfort. I suggested that he contact Robert Joseph of Warren AQD to register complaints if he has any. I also sent him Robert's contact info via email.

Vogue is submitting emissions reports to AQD annually. The facility is keeping monthly records of coating usage, VOC content of the coatings, total VOC emissions, HAP content and total HAP emissions. The coating usage and emission calculations for 2022 was submitted along with 2022 MAERS submittal. The coating usage, VOC and HAP emission calculations and SDS for mostly used coatings/stains were submitted on December 1, 2023 via email.

2022 Usage and emissions

Booths	Annual Usage	Annual VOC emissions	
Coating booth 1	371.51 gallons	984.86	Pounds
Coating booth 2	508.86 gallons	1509.73	Pounds
Coating booth 3	476.51 gallons	1749.37	Pounds
Coating booth 4	593.75 gallons	1765.46	Pounds
Coating booth 5	384.25 gallons	992.78	Pounds
Total VOC emissions		=	7002.2 pounds

2023 (8 months usage and emissions)

Booths	Annual Usage	VOC emissions	
Coating booth 1	183 gallons	504	Pounds
Coating booth 2	337.4 gallons	864	Pounds
Coating booth 3	318.5 gallons	1182	Pounds
Coating booth 4	380 gallons	986	Pounds
Coating booth 5	514.04 gallons	1421	Pounds
Total VOC emissions		=	4957.0 pounds

The total HAP emissions for 2022 were 3791 pounds. Total 10 months HAP emissions in 2023 were 944 pounds. From the VOC emissions and HAP emission calculations, the facility appears to be in compliance with the VOC and HAP emission limits.

The facility keeps waste coatings and solvents in sealed barrels in special waste holding sheds. Mr. Golpe provided a manifest from the waste disposal company that processes their waste (See Attachment A).

Synthetic Minor (Opt-Out) Permit for HAPs (PTI No. 42-06)

The based on the submitted 2022 emission report, the aggregate HAP emissions were 3791 pounds. Total 10 months HAP emissions in 2023 were 944 pounds. The individual HAP emissions are less 9.0 TPY and aggregate HAP emissions were less than 22.5 TPY. The facility uses manufacturer formulation data to calculate HAPs emissions. The facility is keeping records of gallons of each HAP containing material used, aggregate HAP emission calculations determining the monthly emission rate, and HAP content (pounds per gallon) of each HAP containing material. The facility does not reclaim any HAP containing materials.

General Permit for Coating Process (PTI No. 309-05)

Facility appears to be in compliance with the monthly and annual VOC emissions for each coating line and all coating lines combined. Each operator takes out coating from the storage cabinet and marks the amount as used. Dave collects the usage sheets at the end of the month. He provided me a copy of the daily coating usage. The facility keeps MSDS for all the coatings.

The conditions referencing controls do not apply to Vogue Furniture as they utilize dry filters for the coating booths.

FG-COATING

Monthly VOC emission limit of 2000 pounders per calendar month. No month in 2022 and 10 months in 2023 exceeded 2000 pounds of VOC in a month. 12-month rolling time period limit of 10 tons of VOC. VOC emissions for January through December 2022 totaled at 3.5 tons. The VOC emissions for Jan-Oct 2023 were 3.16 tons.

The permittee captures and stores all waste coatings and solvents in closed containers and contracts a waste disposal company to remove it from the facility. The spray applicators used in all the spray booths are High volume-low pressure (HVLP).

The permittee uses dry filters as a control device for the coating booths. The booths all appeared to be fitted with dry filters at the time of inspection. Couple of booth filters were not fitted properly. I advised Dave to have them properly placed. He agreed to comply with the suggestion. Dave told me that usually the filters are replaced weekly or depending on workload.

The permittee has received AQD approval to use manufacturer formulation to determine VOC content of materials used in FG-COATING.

The permittee keeps and provided the records on a monthly basis for FG-COATING VOC content (lbs/gal) of each coating, reducer, and solvents; gallons of each material used, VOC monthly emission calculations and 12-month rolling time period VOC emission calculations.

Dave showed me the SDSs for all materials utilized in FG-COATING. Copies were not requested at this time. The exhausts for FG-COATING appeared to be unobstructed and discharging vertically.

Vogue added two more coating booths in 2019 and in 2021 in FG-COATING. In the December 21, 2023, email, Vogue claimed that these two booths are exempt from Permit to Install requirements (R336.1201) pursuant to Rule 287(2)(c). I informed Dave about submitting EQP 3759 to update the general PTI for FG-COATING with these booths. I provided him an electronic copy of this form. These booths are reported in 2022 annual emissions reports in MAERS. They proposed in the email (12/1/2023) that they will submit EQP 3759 for these booths if needed. I informed them to submit the forms to add the booths to the general permit.

FG-SOURCE

A source-wide VOC limit of 30 tons per year, based on 12-month rolling time period. The source wide VOC emissions are equal to the FG-COATING VOC emissions, 3.5 in 2022 and 3.16 tons for 10 months in 2023. The permittee keeps and provided 12-month rolling time period VOC emission calculations.

Conclusion

The permittee appears to be in compliance with all applicable requirements of the permit to install (PTI) Nos. 42-06 and 309-05.

NAME Sebastianykallemkal

DATE 2/2/2024

SUPERVISOR Joyce