

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

N799971760

FACILITY: SHELBY CABINETS		SRN / ID: N7999
LOCATION: 4651 25 MILE RD, SHELBY TWP		DISTRICT: Warren
CITY: SHELBY TWP		COUNTY: MACOMB
CONTACT: Tom Urbin, Co-owner		ACTIVITY DATE: 04/19/2024
STAFF: Noshin Khan	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: scheduled on-site inspection		
RESOLVED COMPLAINTS:		

On Friday, April 19, 2024, I, Noshin Khan, Michigan Department of Environment, Great Lakes, and Energy-Air Quality Division (EGLE-AQD) staff, performed a scheduled, on-site inspection of Shelby Cabinets located at 4651 25 Mile Road, Shelby Township, Michigan 48316 (SRN: N7999). The purpose of the inspection was to determine the facility's compliance status with the requirements of the federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 Public Act 451, as amended (Act 451); the AQD administrative rules, and the conditions of Permit to Install (PTI) Number 115-08.

I arrived at the facility at 10AM and met with Nikki DeClercq, Design Consultant, and Tom Urbin, Manager, to discuss the facility's operations. Shelby Cabinets manufactures wood cabinetry. According to Tom, no new equipment or processes have been installed or operated since the previous inspection in June 2023.

A violation was issued after the previous inspection for a paint booth operating without a PTI. The facility's permit, issued in 2008, includes one spray booth (EU-WOODCOAT) and its associated stack, SV-WOODCOAT. However, the facility operates a second booth which has its own stack. The facility's violation response letter stated that the additional booth (referred to as Booth 2) was installed in 2014. Shelby Cabinets hired Fishbeck consultants, who reviewed the coating usages from each booth and claimed that Booth 2 operates under exemption Rule 287(2)(c). This exemption applies to coating lines not using more than 200 gallons of coating per month. The facility's usage and emissions spreadsheet was updated to reflect the usage in Booth 2 to maintain records supporting qualification for the exemption.

After discussing the facility's operation and recordkeeping, Tom led me on a walkthrough of the facility. We started in the shop behind the office area and showroom. Here, I observed final assembly of cabinets. Three Hot Melt application units feed glue directly to glue guns used to assemble wood parts. Generally, two of these are in use and the third is for backup. I also observed a few saws and milling machines. Sanding stations were equipped with dust collection systems, and Tom said that the collection bags are taken for disposal when full. Other emissions from the wood machining processes are released into the general in-plant environment and are exempt from permit requirements per Rule 285(2)(l)(vi)(B). The Hot Melt application process is exempt from permit requirements per Rule 287(2)(a) for adhesive application of less than 2 gallons per day and emissions released only into the general in-plant environment. The Hot Melt SDS indicates a specific gravity of 0.98, which corresponds to a density of about 8.18 lb/gallon. According to the facility, 300 lbs of the glue is ordered every 6 months (10, 30-lb boxes). This averages to 6.11 gallons per month. During my inspection, Nikki provided a log tracking how often a box is opened from June 2023 to April 2024. The shortest amount of time that one box was used in was about 6 days. This corresponds to 3.67 gallons and about 0.61 gallons per day on average.

We walked to the side of the second building, where I observed the baghouse and cyclone used to collect particles from wood fabrication processes. These particles are collected in a large container at the side of the building, which is collected for disposal every 3 to 5 weeks according to Tom. I did not observe any fallout by this container. The baghouse is inspected about every 3 months and bags are replaced as needed. Filtered air is recycled back into the building.

Outside, Tom also pointed out two 55-gallon drums in which solvent waste is collected and stored. I observed that these waste containers were closed. According to Tom, a disposal company retrieves this

waste when the drums reach capacity. Per S.C. 1.3, the facility captures all waste materials in closed containers and disposes of them in an acceptable manner.

Next, we walked into the second building where more wood machining stations and the coating booths are located. Lumber is received at this building and processed through saws, planers, and sanders. Tom pointed out sawing machines equipped with their own dust collection systems.

In an adjacent area, laminate is applied to some wood pieces if needed as a part of the design. A contact glue is used for this process. During the previous inspection, I observed that the container for this glue showed a weight of 38 lbs of material and staff estimated that this container lasts about 6 months. The SDS for this material indicates a density of 6.73 lb/gallon, so the facility uses about 5.65 gallons in 6 months. In another area, panel saws and clamping machines are used to press pieces to be glued together. Here, Titebond Original Wood Glue is used. Per Nikki, the facility uses about 5 gallons of this glue every two weeks. Based on the usage information provided for these adhesive lines, both appear to be exempt from permit requirements per Rule 287(2)(a).

PTI 115-08 Compliance Evaluation

EU-WOODCOAT

We then walked through the spray booth area. The first booth is used for priming wood pieces. In a room between the spray booths, the pieces are scuffed before final paint coating is applied in the second booth. I observed filters in place and in good operating condition in both booths. Tom said that the filters in the booths are replaced weekly. When they're disposed, dust is shaken off into a waste bin inside the booth before the filters are placed in the dumpster. This practice meets the requirement—per PTI 115-08, Special Condition (S.C.) 1.4—to dispose of filters in a manner to minimize the introduction of air contaminants to the outer air. Based on my observations in the booths, the facility maintains and operates exhaust filters in a satisfactory manner in accordance with S.C. 1.6.

There are two coating storage rooms adjacent to the booths—one between the booths contained coatings for active jobs, and I observed that only coatings in use had lids open. The second storage room is next to the primer booth and stores coatings not in use. I couldn't enter this room during my inspection because the booth was in use at the time. Based on my observations, the facility handles VOC and HAP-containing materials in a manner to minimize the generation of fugitive emissions in compliance with S.C. 1.5. I observed HVLP applicators used in the booths and pressure test caps available for the spray guns, as required by S.C. 1.7.

During my previous inspection, I used the Nikon Forestry Pro Range Finder to measure the stacks that exhaust from the spray booths—my measurements showed a height of about 39 feet, indicating compliance with S.C. 1.12 which requires a minimum stack height of 34.5 feet. Staff said the second stack was the same height as the one I measured. No changes have been made to the stacks since my last inspection.

Tom said that there are no emergency generators or boilers on site, and I did not observe any during the walkthrough. I did not observe any parts washers in either building during the walkthrough.

Emission Limits

Per S.C. 1.1, the facility has an emission limit of 30 tons per year (tpy) for VOCs and acetone, based on a 12-month rolling time period as determined each calendar month.

In accordance with recordkeeping conditions 1.10 and 1.11, the facility maintains manufacturer formulation data containing the chemical composition of each coating, reducer, solvent and thinner. The facility also maintains monthly and 12-month rolling usage and emissions calculations.

The records provided by the facility indicate that from June 2023 through March 2024, the highest 12-month rolling VOC and acetone emissions were 6.54 tons as calculated in September 2023 and February 2024. This is below the permitted limit.

Material Limits

Per S.C. 1.2, the VOC content of any coating, as applied, may not exceed 6.10 lb/gallon (minus water). The facility has provided EDS and SDS sheets for all coatings used. No new coatings have been used since the last inspection. The records provided indicate that all coatings have a VOC content of less than 6.10 lb/gallon less exempt solvents, in compliance with this condition.

FGFACILITY

Emission Limits

Per S.C. 2.1a, the facility has an emission limit of less than 9.0 tpy (based on a 12-month rolling time period as calculated each month) for each individual HAP.

Per S.C. 2.1b, the facility has an emission limit of less than 22.5 tpy (based on a 12-month rolling time period as calculated each month) for aggregate HAPs.

In compliance with S.C. 2.4, the calculations provided by the facility include usage, HAP content, and monthly and 12-month rolling emissions for individual and aggregate HAPs. Per S.C. 2.2, the facility determines HAP content using manufacturer formulation data.

The facility's records indicate that from June 2023 through March 2024, the highest aggregate 12-month rolling HAP emissions were 1.01 tons as calculated in June and July 2023. This is below both the individual HAP and aggregate HAP emission limits.

BOOTH 2 - RULE 287(2)(c) EXEMPTION

The facility has been tracking coating use in each booth starting with 2024. For data updated through April 19, 2024, the facility's usage records show that a total of 320 gallons of coating were used in Booth 2. The facility has not tracked monthly coating use in the booth. I contacted the facility to notify them that they are required to maintain monthly usage records to claim the exemption. We made an adjustment in the usage/emissions calculations spreadsheet to track monthly coating usage in Booth 2 moving forward. The highest monthly coating usage in the booth from January through March was 96.25 gallons in March. This indicates compliance with the exemption. Since the facility's spreadsheet has been adjusted to track monthly usage in Booth 2 moving forward, I am utilizing enforcement discretion and will not issue a violation notice.

Based on my observations during the inspection and the records reviewed, the facility is in compliance with all evaluated rules and regulations.

NAME Noshin Khan

DATE 06/12/2024

SUPERVISOR K. Kelly