

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

N799968283

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: 06/12/2023
STAFF: Noshin Khan	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: SM OPT OUT
SUBJECT: scheduled on-site inspection		
RESOLVED COMPLAINTS:		

On Monday, June 12, 2023, 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, to discuss the facility's operations. Shelby Cabinets manufactures wood cabinetry, and according to Nikki no new equipment or processes were installed or operated since the previous inspection in July 2022. We discussed the violations issued to the facility as a result of that inspection and subsequent records review. Shelby Cabinets had been using a coating (WS2VB6—WOODSONG II AMAZING Stain Base; VOC content 7.07 lb/gallon) that exceeded the VOC material limit of 6.10 lb/gallon and had been performing adhesives application without a permit. In response to that violation, the facility said it would mix reducer VC16936 (VOC content 0.00 lb/gallon) with WS2VB6 so that the ratio of the reducer is at least 25% of the mix. This results in a mixture with a VOC content of 5.3 lb/gallon, at most. The facility also provided invoices for Hot Melt adhesive to show that that it meets exemption 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. In the facility's violation response letter, they wrote that they order 300 lbs 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. The shortest amount of time that one box was used in was 2 days in April 2023. This corresponds to 3.67 gallons and just under 2 gallons per day. During the previous inspection, Adam Bognar (EGLE-AQD) had also given verbal warnings that spray booth filters were not in satisfactory condition and that coating cans needed to be closed when not in use to prevent fugitive emissions.

Bill Laine, Production Manager, joined us for a facility walkthrough. We started in the part of the shop behind the office area, where Bill said final assembly of cabinets is done. Bill pointed out three Hot Melt application units that feed glue directly to glue guns. Generally, two of these are in use and the third is for backup. I also observed a few saws and milling machines. Any 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).

Next, we walked to the second building where more wood machining stations and the coating booths are located. Bill showed me where lumber is cut, planed, and sanded. 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. The container for this glue showed a weight of 38 lbs of material and Bill 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, Bill pointed out panel saws and clamping machines that are used to press pieces to be glued together. In this area, 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).

We then walked through the spray booth area. Bill explained that 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. In the primer booth, I observed mesh paper filters that seemed to be in satisfactory operating condition. Bill said these filters are cleaned about every 4 days and replaced every 2-4 weeks. 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. In the second booth, Bill pointed out that the facility has been using fabric filters and is considering switching out the filters in the first booth with the same type. These filters were in good condition. 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. Next, Bill showed me two coating storage rooms—one between the booths contained coatings for active jobs, and I observed that only coatings in use had lids open. We entered the second storage room from the primer booth, and I observed that all coating containers were closed. Based on these 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. Sam Dimaggio, Spraybooth Foreman, confirmed that HVLP applicators are used in the booths and showed me the pressure test caps for the spray guns, as required by S.C. 1.7.

We walked to the side of the building and Bill explained that air is cycled through a baghouse and cyclone to filter any particles from wood fabrication. These particles are collected in a large container at the side of the building, which is collected for disposal about every 5 weeks, according to Nikki. I did not observe any fallout by this container. According to Bill, the baghouse is inspected about every 3 months and bags are replaced as needed. Filtered air is recycled back into the building.

Outside, Bill also pointed out two 55-gallon drums in which solvent waste is collected. I observed that these waste containers were closed. According to Bill, 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.

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. This indicates compliance with S.C. 1.12 which requires a minimum stack height of 34.5 feet. Bill said the second stack is the same height as the one I measured. The facility's permit includes one spray booth and one stack, so it appears the operation of a second coating booth is occurring without a permit. I'll be issuing a Rule 201 violation for the facility for the operation of a second spray booth.

Nikki 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.

PTI 115-08 Compliance Evaluation

EU-WOODCOAT

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 July 2022 through May 2023, the highest VOC and acetone emissions were 7.73 tons based on the 12-month rolling total calculated in July 2022. 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). Nikki provided EDS and SDS sheets for each new coating the facility began using since the last inspection. All 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 July 2022 through May 2023, the highest aggregate HAP emissions were 1.20 tons based on the 12-month rolling total calculated in July 2022. This is below both the individual HAP and aggregate HAP emission limits.

During my inspection, I observed that the facility was operating two spray booths while permitted for one, in violation of Rule 201 of the Michigan Air Pollution Control Rules. A notice will be sent to the facility.

NAME Noshin Khan

DATE 07/26/2023

SUPERVISOR K. Kelly