

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

P033472406

FACILITY: VERSATILE WOOD SOLUTIONS		SRN / ID: P0334
LOCATION: 11335 APPLE DRIVE, NUNICA		DISTRICT: Grand Rapids
CITY: NUNICA		COUNTY: OTTAWA
CONTACT: Shawn VanLare , VP Operations		ACTIVITY DATE: 06/27/2024
STAFF: Chris Robinson	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT: Self Initiated inspection to determine compliance with applicable air quality rules and regulations and to investigate a recent odor complaint.		
RESOLVED COMPLAINTS: C-24-01366		

On June 27, 2024, Staff Chris Robinson (CR) from Michigan's Department of Environment, Great Lakes, and Energy (EGLE) Air Quality Division (AQD) conducted an unannounced inspection at Versatile Wood Solutions (P0334) located at 11335 Apple Drive in Nunica, Michigan. The inspection was initiated in response to a recent odor complaint. Weather conditions were approximately 78°F, mostly cloudy with southwest winds at approximately five (5) mph (www.weatherunderground.com). The perimeter of the facility was surveyed prior to entry for odors and visible emissions, none were observed.

A) Introduction

Versatile Wood Solutions is a woodworking facility that uses both hardwood and composite wood. They manufacture store fixtures, furniture, and other miscellaneous wood products. CR met with Mr. Shawn Vanlare, VP of Operations. Identification was provided and the purpose of the inspection was relayed, which was to address a recent odor complaint and to determine the facility's compliance status with applicable air quality rules and regulations. Prior to the walkthrough CR discussed the previous 2022 inspection and recent odor complaint. With the exception of a new panel saw and baghouse in the layup building, the facility has not made any significant changes. Mr. VanLare then provided a walkthrough of the facility.

B) Compliance Evaluation

The facility does not have a Permit to Install (PTI). All process equipment is currently being operated under Rule 201 permitting exemptions.

1) Rule 201 Permitting Exemptions

a) Wood Waste Combustion

The facility has three (3) wood waste boilers and one (1) wood waste furnace (forced air) which are being operated under Rule 282(2)(b)(iii) for fuel burning equipment. The fuel is required to be wood, wood residue, or wood waste that is not painted or treated with wood preservatives, which does not contain more than 25% plywood, chipboard, particle board, and other types of manufactured wood boards, that is not contaminated with other waste materials, and the equipment has a rated heat input capacity of not more than 6,000,000 Btus per hour. Each are most likely rated at less than 6,000,000 Btus/hr. but the facility should verify. Versatile staff have indicated that no more than 25% manufactured board is being burned, however based on observations from the previous AQD inspection and this one CR is concerned that the 25% is being exceeded. However, this could not be verified since they were not operating during this inspection. The grinder, which feeds the wood waste furnace contained melamine coated wood which cannot be burned in any amount. However, because the facility is not using the wood waste furnace at this time the grindings are going directly to the sawdust collection bins for offsite disposal instead of

being combusted. . A follow-up inspection during the cooler months is necessary to verify compliance of the wood waste boilers and furnace.

a) Coating Processes:

Versatile has two (2) manual spray booths, an enclosed manual spray booth (Col-met brand), and an automated Ultra-Violet (UV) spray line which consists of coaters, a flash off oven, a curing oven heated by hot water, a UV curing unit, and a sanding unit used in case items need to be re-sanded and sent back through the coating line. All booths are equipped with dry filters which were in place and appeared to be in good shape. Filters are replaced as needed and all spray booths vent externally. Open 5-gallon buckets of coatings were near the auto spray line. CR informed Mr. VanLare that the buckets should be kept closed at all times to help minimize odors. In addition, a door in the coating area was propped open for ventilation. CR also recommended that the door be kept closed.

A white/yellow wood glue is used throughout the facility. Assembly uses it to attach solid wood face frames; Layup uses it for adhering laminate to 4x8 sheets of MDF board; and it is also used to make hardwood panels by gluing strips together.

The facility claims all four (4) spray booths and the adhesive applications are exempt from Rule 201 permitting requirements per Rule 287(2)(c) with individual coating usage of no more than 200 gallons per month per booth. The facility is not tracking usage of each booth, rather they are maintaining purchase orders which are used to calculate a monthly average. The facility was advised during the 2022 inspection that a new way of tracking usage should be developed if they wish to continue to use this exemption. No changes have been made. Based on the size of the facility, monthly averages are not an appropriate way to demonstrate compliance with this exemption. Failure to provide adequate records to show compliance with an exemption is a Rule 201 violation.

The facility operates two banders for edge banding MDF board. A hot melt adhesive in either a block or pellet form is being used. The facility has claimed the banders are exempt from permitting per Rule 287(2)(i).

c) Cutting/Sanding Processes:

Various equipment is used for cutting and sanding wood, including five (5) CNC machines. All sawdust is directed to one of two baghouses which can be either vented internally for HVAC assistance or externally. No issues were observed with the layup building baghouse, however there were issues with the larger baghouse located on the southeast corner of the main building. There was a large amount of sawdust on the ground in the area around this baghouse and the sawdust storage/auguring system for the wood fired furnace. This accumulated sawdust has been identified in the past AQD inspections (5/22/2008, 3/29/2012, and 2/23/2022) as an area that has needed attention. The same issues were identified during this inspection. Concerns discussed by the previous inspectors are noted below.

5/22/2008:

"There was a larger than normal amount of sawdust observed by JD on the outside of the roll-off container that the baghouse vented into. JD directed Mr. Riggs to keep the area cleaned up so that the sawdust would not become an air contaminant. Mr. Riggs stated that the clean-up of the area would be added to the maintenance schedule".

3/29/2012:

"The area around the baghouse was poorly maintained. There was a lot of accumulated saw dust. Mr. Schroeder indicated that it is the winters accumulation. Staff recommended cleanup of the area, and since it was not airborne was not specifically an air pollution issue. There was saw dust floating around in the air, however its source was not able to be identified".

2/23/2022:

"The area outside near the baghouse and the sawdust storage/auguring system for the wood fired furnace needed attention. According to Mr. Roop the auger that feeds sawdust to the wood waste furnace froze and required material to be removed to thaw also noting that the company responsible for removing the baghouse dumpsters tends to forget to unlatch the ducting prior to removal, which causes spillage. CR informed Mr. Riggs and Mr. Roop during the inspection and later with Mr. Schroeder by phone that regardless of the transporter's actions Versatile is responsible and that Rule 370 requires collection and disposal of air contaminants to be performed in a manner to minimize the introduction of contaminants to the outer air".

Based on these observations, it does not appear the dust collector is being maintained in a satisfactory manner. During the recent inspection (see attached photos) several of the pipe joints were leaking and had either been wrapped with duct tape or plastic wrap; there was a hole in the ductwork near the blower; and many of the clamps that connect the hoses to the collection bins were either broken or not being used. When the baghouse is venting externally, the facility uses Rule 285(2)(l)(vi)(C) permit exemption for the equipment and baghouse. However, in order to use this exemption, the facility MUST operate the baghouse appropriately per the requirements of the exemption. The permit exemption Rule 285(2)(l)(vi)(C) cannot be used with the baghouse in its current state. Therefore, operating the equipment attached to the baghouse is a Rule 201 violation for unpermitted equipment. In addition, this represents a violation of Rule 370 of Michigan's Air Pollution Control Rules which requires the collection and disposal of an air contaminant to be performed in a manner so as to minimize the introduction of contaminants to the outer air. Improper operation of the baghouse also constitutes a violation of Rule 910 of Michigan's Air Pollution Control Rules which requires that an air-cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the administrative rules and existing law.

The CFM rating on this baghouse is unknown but has been noted in the past as most likely being between 30,000 - 40,000 CFM and Mr. Schroeder, the facility's president has also assured the inspectors in the past that it was not more than 40,000 CFM. The 2022 inspection noted the following:

"Using Rule 331 emission rate of 0.10 lbs. of Particulate Matter (PM) per 1,000 lbs. of exhaust gas, potential annual PM emissions would be approximately 85 tons per year, which is less than the Title V threshold of 100 tpy. A second baghouse could trip the 100 tpy limit requiring the facility to either operate as a major source for PM or apply for a Title V opt-out permit to restrict PM potential to below the Title V threshold".

Since that inspection, the facility has installed a second baghouse (50,350 cfm) on the layup building. Based on a total combined air flow of 50,350 CFM and Rule 331 emission rate of 0.10 lbs. of Particulate Matter (PM) per 1,000 lbs. of exhaust gas the facility's Potential to emit (PTE) for these two baghouses alone is now 99.3 tons per year of PM. Although this is not above the Title V (40 CFR Part 70) threshold of 100 tpy, it does not include all facility-wide PM emissions such as the woodfired boilers and furnace. Once combined it is most likely that the facility's PTE would exceed it. Therefore, the facility needs to either operate as a major source for PM or apply for a Title V opt-out permit to restrict PM10 potential to below the Title V threshold.

C) Conclusion

Based on observations and discussions made during the inspection and subsequent records review Versatile Wood Solutions is not operating in compliance with applicable air quality rules and regulations. Specifically, Versatile is in violation of Rule 201, 370 and 910 for not properly maintaining the baghouse and Rule 201 for not providing adequate records to demonstrate the spray/application booths are exempt from air permitting. In addition, since the facility's PTE for PM emissions are most likely over 100 tons per year the facility should apply for a PTI to opt-out of Title V for PM10.



Image 1(South Baghouse) : Wood waste furnace collection bin and auguring system.



Image 2(South Baghouse) : Collection bin area



Image 3(South Baghouse) : Collection bin area



Image 4(South Baghouse) : Unused ducting to collection bin clamp



Image 5(South Baghouse) : Blower area



Image 6(South Baghouse) : Ducting joint flange wrapped in duct tape



Image 7(South Baghouse) : Hole in blower access cover.



Image 8(South Baghouse) : Hole in ducting and ducting flange connection wrapped in plastic.



Image 9(South Baghouse) : Unused collection bin to ducting clamp.



Image 10(South Baghouse) : Broken collection bin to ducting clamp.

NAME 

DATE 7/11/2024

SUPERVISOR 