

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

N245465274

FACILITY: Wolverine Hardwoods Inc.		SRN / ID: N2454
LOCATION: 2810 113TH AVENUE, ALLEGAN		DISTRICT: Kalamazoo
CITY: ALLEGAN		COUNTY: ALLEGAN
CONTACT: Tina Mallery , Office Manager		ACTIVITY DATE: 12/12/2022
STAFF: Cody Yazzie	COMPLIANCE STATUS: Compliance	SOURCE CLASS:
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

On December 12, 2022 Air Quality Division (AQD) staff (Cody Yazzie) arrived at 2810 113<sup>th</sup> Avenue Allegan, Michigan at 3:00 PM to conduct an unannounced air quality inspection of Wolverine Hardwoods Inc. (hereafter WHI) SRN (N2454). Staff made initial contact with the office receptionist and stated the purpose of the visit. Tina Mallery, WHI, Office Manager, is the MAERS and environmental contact and arrived shortly thereafter and took staff to her office for further discussions.

WHI was last inspected by the AQD on March 4, 2008 and appeared to be in Compliance at that time with PTI No. 190-90A and NSPS Dc. WHI is a facility that manufactures different hardwood boards. These boards are received from other suppliers in which WHI cuts them to size, planes them, and then kiln dry the boards.

Mr. Scott gave staff a tour of the facility. Required personal protective equipment are hard hat, high visibility vest, steel toe boots, and safety glasses. Staff observations and review of records provided during and following the inspection are summarized below:

**PTI No. 190-90A:**

This permit is for a Hurst 600 HP (28.7 MMBTU/hr) wood fired boiler. It is a dual burning chamber and dual screw fed boiler. The chambers combine and the gases pass over the steam tubes. The exhaust from the boiler goes through a multicyclone control. The facility doesn't have a lot of requirements due to the age of the Permit.

The facility has three testing conditions. Special Condition 15, 16, and 17 establish emission limits for carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), particulate emissions (PM), and benzo-a-pyrene emissions. CO, NO<sub>x</sub>, and PM have both pounds per hour (pph) and Tons per Year (TPY) emission limits. The pph emissions limits can only be evaluated when a stack test is conducted, which may be requested by the department. The benzo-a-pyrene pph emission limit is similar that compliance can only be determined from the results of a stack test, which may be requested by the department. AQD has not appeared to require a stack test for CO, NO<sub>x</sub>, PM, or benzo-a-pyrene in the facility history.

Compliance for the TPY CO, NO<sub>x</sub>, and PM emission limits can be evaluated with the submission of the MAERS report. The facility does submit MAERS emissions every year. The facility uses how much wood shavings were used as material throughput in Tons and uses MAERS emission factors to calculate emissions for the criteria pollutants. Staff reviewed 2022 and 2021 emissions. The following are the reported emissions for 2022. The CO emissions were calculated to be 3.76 TPY. NO<sub>x</sub> emissions were calculated to be 1.38 TPY. PM emissions are calculated and reported as

**PM10 and PM2.5 emissions.** The reported emissions for these are 2.26 TPY and 1.94 TPY respectively. The 2022 emissions are based on 1,202 Tons of wood material used as fuel.

The following are the reported emissions for 2021. The CO emissions were calculated to be 3.80 TPY. NOx emissions were calculated to be 1.40 TPY. PM emissions are calculated and reported as PM10 and PM2.5 emissions. The reported emissions for these are 2.28 TPY and 1.97 TPY respectively. The 2021 emissions are based on 1,206 Tons of wood material used as fuel.

These reported emissions are well below the permitted emission limits for NOx, CO, and PM, which are 50.3 TPY, 37.7 TPY, and 67.4 TPY respectively. The MAERS report appears to use appropriate MAERS emission factors to do the calculation.

Special Condition 21 requires the facility discharge the exhaust of the boiler at a minimum height of 73 feet above ground level. During the inspection Staff used a range finder to measure the height of the exhaust stack. The ranger finder measures a distance from the height of use to the height of the point of interest. This means roughly the height of the user must be added to find the total height above ground level. Staff measured a height of 22.6 yards during the inspection at sight angle of 54.1 degrees perpendicular to their height. This height converts to 67.8 feet. The total height above ground level measures to be around 73 ft which is the required minimum height.

Staff looked for any visible emissions during the inspection coming from the boiler exhaust. During the inspection it was noted that there were no visible emissions observed. The facility has a visible emission limit of a 6-minute average of 20% opacity. The facility has no requirements of conducting or recording periodic visible emission checks.

The unit is subject to the NSPS Subpart Dc regulation. However, since the unit is only woodfired and less than 30 MMBTU/hr it appears the only specific requirements are that the facility keep records of fuel usage. During the inspection Staff was shown the hand log in which the facility keeps a record of fuel usage. The facility uses a meter that measures the screw feeder revolutions. They derive the poundage of fuel based on a factor of average pounds of wood delivered per revolution. They use this recordkeeping to calculate emissions and report in the MAERS report.

#### Coating Line:

The facility apply a coating to the ends of the wood boards that are planed and sized. The facility typically buys 2 55-gallon drums of the paint at a time and are periodically bought. Staff explained that Rule 287(2)(c) only allows for 200 gallons of coating to be applied during a month. Staff explained purchase records could be used as records but the total amount purchased would need to be below the allowed 200 gallons even if the facility did not use the entire purchased amount due to the assumption that all of paint is used. No month provided exceeded the 110 gallons. Which is below the allowed 200 gallons. The coating line appears to meet the requirements of Rule 287(2)(c).

#### Back-up Boiler:

The facility does have a 100 HP gas fired boiler that is maintained and used as a backup. The boiler appears to meet the requirements of Rule 282(2)(b)(i).

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 compliance with PTI No. 190-90A and NSPS Dc. Staff stated to Mrs. Mallery that a report of the inspection would be sent to the facility for their records. Staff concluded the inspection at 4:00 PM.-CJY

NAME Corday Yoppis

DATE 4/27/23

SUPERVISOR R/L 4/27/23