

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

E443770974

FACILITY: NORTHWEST HARDWOODS		SRN / ID: E4437
LOCATION: 657 76TH ST SW, GRAND RAPIDS		DISTRICT: Grand Rapids
CITY: GRAND RAPIDS		COUNTY: KENT
CONTACT: Danielle Hercules , Safety Supervisor		ACTIVITY DATE: 02/07/2024
STAFF: Laura Martin	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT: On-site, unannounced, self-initiated inspection.		
RESOLVED COMPLAINTS:		

Air Quality Division (AQD) staff, Laura Martin (LM) and April Lazzaro (AL) conducted an unannounced, scheduled inspection of Northwest Hardwoods, Inc, located at 657 76th Street, Byron Center, MI 49315, to determine compliance with state and federal Air Quality rules, regulations and Permit to Install (PTI) No. 326-06D. Prior to our arrival, off-site observations were conducted, and no odors or visible emissions, other than steam from the wood fired boiler stack, were observed. We proceeded to the office, a brown building directly to the north and east of the guard shack. LM and AL were escorted on the inspection by Danielle Hercules, Safety Supervisor, Ken Hoekstra, Plant Manager, and Joe Weist. Required PPE included safety glasses, hearing protection, steel toe boots, hard hat and safety vest. The last inspection was conducted in 2015. No violations were cited. The current PTI No. 326-06D was approved in 2017.

FACILITY DESCRIPTION

Northwest Hardwoods, Inc operates a hardwood concentration yard in Byron Center, Michigan. The facility processes fresh sawn hardwood, drying the lumber and surfacing it before sale. Northwest Hardwoods does not process conifer species. Lumber is brought to the site on trucks, inspected, sawn to length and stacked. Particulate emissions generated by the wood processing operations are controlled by a baghouse. The ends of the cut boards are coated in a wax emulsion to prevent drying or cracking. The stacks of wood are air dried in T-sheds or in the air-dry yard, then are moved to one of 22 kilns. The kilns are vented on two opposite sides near the roofline and are heated by indirect steam which is generated on-site by two boilers. The main boiler is a dual-fired (wood/natural gas) unit that has a venturi style wet scrubber for particulate control. The other is a natural gas-fired back up boiler. After the lumber is dried, it is planed or sanded. Particulate emissions generated by the sanding operation are controlled by a baghouse.

The facility operates 6 AM – 2:30 PM, Monday through Friday.

The boilers are subject to the New Source Performance Standard (NSPS) Subpart Dc for Small Industrial-Commercial-Institutional Steam Generating Units which is further described below. The facility is also subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial and Institutional Boilers for Area Sources. Compliance with the Area Source NESHAP was not evaluated during the inspection because the AQD does not have delegated authority for this federal regulation.

COMPLIANCE EVALUATION

PTI No. 326-06D

EUGREENINSPECT

Various species of wood boards are received either trimmed or untrimmed. The untrimmed boards are trimmed in the EUGREENINSPECT sawing operations process line which processes green hardwood lumber and is controlled by a bag filter. The baghouse was in place and being maintained and the magnehelic was working properly with a pressure drop reading of 2.7" water column (w.c) during the inspection. Once boards are trimmed, they are stacked, and the ends are sprayed with a wax sealant before they are set to air dry and/or kiln dry for varying periods of time depending on species. It should be noted that this process is only utilized for untrimmed boards which only accounts for about 10% of incoming lumber. Most of the lumber received has already been trimmed.

PTI 326-06D, General Conditions 12, and R336.1370, requires the collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air.

The inspectors made observations of uncontained sawdust at the scrap belt of EUGREENINSPECT. We discussed this with the company, who said they would work on a solution to the issue. This is a violation of PTI No. 326-06D, General Conditions (GC), No. 12 and Rule 370. A violation Notice will be issued. Northwest Hardwoods stated via email that this issue should be resolved by April 2024.

Special Condition VI.2 requires Northwest Hardwoods, Inc to record at least once per calendar day (while operating) and keep, in a satisfactory manner, records of pressure drop across the bag filter portion of EUGREENINSPECT. All records shall be kept for a period of at least 5 years and made available to the Department upon request.

Some records were reviewed on-site, and some were requested via email, see attached. Records reviewed for 2022-2024 show that record keeping requirements are not adequately being met. Readings are not being taken and maintained as required.

AQD staff identified that many days and even whole months including May, June, November and December of 2022 and January, February, March, April, November and December of 2023, daily readings were missing. This is a violation of PTI No. 326-06D, Special Condition (SC) VI.2. A violation letter will be issued.

EUPLANER

When the boards are sufficiently dry, they are sent to the resurfacing operation EUPLANER. The planing operation is controlled by a bag filter collector which was in place and being maintained and the magnehelic was working properly with a pressure drop reading of 2.8" w.c at the time of inspection. During the inspection, the facility identified that the planer/sander was replaced, however an evaluation as to whether or not a permit modification for this was necessary was not provided. The AQD does not currently have a permit exemption that allows for a like-for-like equipment replacement without assessing whether that replacement is considered installation, modification or reconstruction of an emission unit. In this case, the emission unit consists of the planer/sander and associated baghouse as identified in the permit. An evaluation in accordance with Rule 278a will be requested.

Special Condition VI.2 requires Northwest Hardwoods, Inc to record at least once per calendar day (while operating) and keep, in a satisfactory manner, records of pressure drop across the bag filter portion of EUGREENINSPECT. All records shall be kept for a period of at least 5 years and made available to the Department upon request.

Some records were reviewed on-site, and some were requested via email, see attached. Records reviewed for 2022-2024 show that record keeping requirements are not adequately being met. Readings are not being taken and maintained as required.

AQD staff identified that during January 2022, and December 2023 daily readings were missing. This is a violation of PTI No. 326-06D, SC VI.2. A violation letter will be issued.

EUSILO

The dust and wood shavings collected from the EUPLANER process is sent through one of two hammermills that break down wood shavings into smaller pieces, before entering EUSILO, a dry dust storage silo for the wood-fired boiler. Additionally, no visible emissions were observed at the silo. The exhaust gases are recirculated in a closed-loop system.

Special Conditions VI.2 requires Northwest Hardwoods, Inc to record at least once per calendar week (when operating) and keep, in a satisfactory manner, records of visible emission check from the silo portion of EUSILO. We reviewed these records on-site and confirmed compliance with this requirement.

EUBOILER1

After storage in the silo, the dust and wood shavings go through the second of two hammermills before being incinerated in EUBOILER1 a natural gas/hardwood-fired boiler rated 29.3 MMBtu/hr and 25.9 MMBtu/hr heat input, respectively, manufactured by Cleaver Brooks with a serial number L-97304. There are separate dedicated stacks when firing natural gas and wood. The boiler has a wet venture scrubber for control of particulate emissions.

Emissions limits outlined in the PTI include PM, PM10, NOx, CO, Acetaldehyde, Acrolein, Arsenic, Benzene, and Formaldehyde. Visible emissions shall not exceed 20 percent opacity, a limit that is based on the federal Standards of Performance for New Stationary Sources, 40 CFR Part 60 Subparts A and Dc. Emission calculations for the boiler use testing results based on the last stack test, which was conducted on the unit when the previous scrubber was in use in 2009. There were some issues with testing before the company was able to come into compliance with the PM limits. A copy is in the file. Performance testing has not been conducted since the new control equipment has been installed and will be requested.

Material limits include only burning virgin hardwood waste, on-site oil spills and/or pipeline quality natural gas. Burning on-site oil spills absorbed by saw dust is limited to 400 pounds per year. The feed rate for hardwood into EUBOILER1 shall not exceed 3470 pounds per hour(pph), based on a calendar month operating hours average. Records received included monthly wood fuel usage in pounds, oil spill records in pounds, and natural gas firing records. It appears that a column needs to be added to this spreadsheet to reflect the 12-month rolling totals of fuel usage in pounds as opposed to the Year-to-Date (YTD) calculations that they are currently using. The facility is below the required 3470 pph feed rate with records indicating the highest feed rate in the past two years to be 775pph. The facility records indicate that they have not burned any on-site oil spill waste in the past two years.

Northwest Hardwoods is required to maintain records of the hourly wood fuel usage for EUBOILER1 based on monthly hours of operation, records of monthly wood fuel and oil spill usage, monthly and 12 month rolling fuel use records, and records of the time and duration of using SVNGBOILER1 when firing natural gas only. These records were received via email and appear to be maintained in a satisfactory manner. It should be noted that the 2023 records were using a YTD method and should be changed to a 12-month rolling time-period in order to adequately meet the requirements of the PTI.

In order to operate EUBOILER1, they are also required to have a wet venturi scrubber installed, maintained and operated in a satisfactory manner. The scrubber was replaced in 2023 pursuant to permit exemption Rule 285(2)(e) and the serial number of the new scrubber is 22-8707-1. The scrubber appears to be maintained and operated in a satisfactory manner. A magnehelic gauge was installed and operating properly showing the pressure drop to be -0.2 w.c with an acceptable range of zero to -1.

During the inspection, AQD requested an updated plan pursuant to SC V.3 that describes how emissions will be minimized during all startups, shutdowns and malfunctions. The most recent plan on file with the AQD is dated 2012. The documents received on-site appear to be only shutdown procedures and is not acceptable. An updated plan that will meet the requirements of the permit as well as Rule 911 will be requested.

EUBOILER2

A second natural gas fired boiler, EUBOILER2 rated 13.0 MMBtu/hr heat input, manufactured by Cleaver Brooks with serial number L-46824, is permitted to only burn pipeline quality natural gas. They are required to maintain monthly and 12-month rolling time period fuel use records.

Requested records show that the recordkeeping requirements of the PTI are being met and only natural gas is being burned.

FGHAMMERMILLS

There are two hammermills that breakdown wood shavings into smaller pieces before going into the boiler. The hammermills are controlled by a cyclone collector and appeared to be installed and maintained in a satisfactory manner. Special Conditions VI requires Northwest Hardwoods to record at least once per calendar week (when operating) and keep, in a satisfactory manner, records of visible emission checks from the cyclone portion of FGHAMMERMILL. Some records were reviewed

on-site as well as requested and the company appears to be in compliance with this requirement. The cyclone portion of FGHAMMERMILLS is part of a closed loop system in order to contain the exhaust from being discharged to the ambient air.

FGKILNS

Northwest Hardwoods has 22 indirect steam-heated, lumber drying kilns and are limited to drying no more than 30,000 MBF of wood per rolling 12-month time period. Total wood usage reported for the 12-month rolling time period, ending in January 2023 is 11,1485.5 MBF.

Requested records are being maintained for each species on a monthly basis, however the facility is not maintaining 12-month rolling time period records in lbs/MBF for all wood processed. The data indicates compliance with the limit of 30,000 MBF as calculated above, however Northwest Hardwoods must modify the recordkeeping to add the 12-month rolling totals for all wood processed.

The kilns have a volatile organic compound (VOC) emission limit of 10 tons per year based on a 12-month rolling time period as determined at the end of each calendar month. The company is calculating VOCs based on the wood species with the highest VOC emissions factor. The VOC emissions in 2022 were 2.20 tons, and in 2023 2.01 tons, which is in compliance with the requirements of the PTI. There is also a 0.306 pph emission limit for Acetaldehyde. Compliance with this limit is shown through a stack test that may be required. At this time, a test is not being required.

Stack measurements were not taken during this inspection but appeared to be in compliance with the requirements.

SUMMARY

Based on the observations made at the time of the inspection and subsequent records review, the facility is in noncompliance with PTI No. E3347 and a Violation Notice will be issued.

NAME Laura Martin

DATE 3/7/2024

SUPERVISOR HH