DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Self Initiated Inspection

E443732876

FACILITY: NORTHWEST HARDWOODS		**SRN / ID:** E4437
LOCATION: 657 76TH ST SW, GRAND RAPIDS		**DISTRICT:** Grand Rapids
CITY: GRAND RAPIDS		**COUNTY:** KENT
CONTACT: Kyle Hadaway ,		**ACTIVITY DATE:** 12/16/2015
STAFF: Denise Plafcan	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT: Meeting to discuss permitting and expansion followed by a self-initiated inspection.		
RESOLVED COMPLAINTS:		

Kyle Hadaway, Second Shift Supervisor, 616-559-0946
PPE – Safety glasses, hearing, steel toe boots, hard hat and safety vest.
Guard Shack may not be manned, office is directly to the north and east of the guard shack.

BACKGROUND

Denise Plafcan (DP) conducted an announced self-initiated inspection to determine compliance with state and federal Air Quality rules and regulations. DP was escorted on the inspection by Kyle Hadaway, Second Shift Supervisor, 616-559-0946 and Edward Zeimet, Corporate Environmental Health and Safety Coordinator for Wisconsin. The day before the inspection, DP met with several company personnel, at their request, regarding changes they were anticipating. Personnel included Brian Ramthum, Mill Manager, Jerald Ross, Maintenance Supervisor, Kyle and Ed. When the meeting was arranged the company was informed that an inspection would follow the meeting. DP presented the Environmental Inspection Brochure to everyone at the meeting the day before the inspection. Prior to and immediately following both the meeting and the inspection, staff drove around the area and conducted surveillance for an extended period of time.

FACILITY DESCRIPTION

The facility operates 24 hours a day 7 days a week and has a wood fired boiler and kiln driers that can produce steam emissions along with several sawing and planning operations that could produce particulate emissions. The company requested a meeting to discuss a possible expansion of the operation and an increase from 20 million board feet to 35 million board feet limit in PTI No. 326-06C. Currently they have 25 kilns that are permitted under PTI No. 326-06C and 3 kilns that were installed using a Rule 290 exemption.

02/17/2016 EMAIL SENT TO KYLE HARDAWAY – I finally spoke to John Vial (517-284-6805), the permit engineer that would be assigned your permit. I will include the following information in my report and send you a copy before I leave today. John said that based on the modeling and review the PTI went through for the boiler that increasing the board feet should not be a problem and the PM-10 and NAAQS issues would not have to be evaluated a second time so it would be a PTI modification. You may want to go ahead and apply for the increase while it is fresh in his mind. Second, to remove the toxic limits from the kiln you would also have to request a PTI application but it was agreed that a cover letter and PTI application form should be sufficient for this request by itself. Be sure to call John and let him know so that it doesn't get sent back for being incomplete. Otherwise both the increase and the toxics could be removed in one PTI application.

REGULATORY OVERVIEW

The Rule 290 exempt kilns allow 1000 pounds per month VOC for each of the kilns (EUKILNS26,EUKILNS27, EU KILNS28). Each Rule 290 exempt kiln is considered a single emission unit and has a separate Rule 290 emission limit even though they were installed as one project.

40 CFR Part 60, Subparts A & Dc Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

EUBOILER1 (natural gas / wood waste) notification received on September 8, 2009
EUBOILER2 (natural gas) notification which was received on October 12, 2009

40 CFR Part 63, Subpart JJJJJJ (6J) Industrial, Commercial and Institutional Boilers at Area Sources
EUBOILER1 notification was submitted to EPA

COMPLIANCE EVALUATION

All records were reviewed on-site or copies were submitted, see attached. Records reviewed for 2015 confirm that all monitoring requirements are being met. All reporting and notifications are being submitted as required. No stack or vent dimensions were verified as part of this compliance inspection and no testing was requested. All magnehelics were installed and operating properly readings at the time of the inspection were in compliance. Readings are also being taken as required and are being maintained. Emission calculations for the boiler use testing results based on the last stack test, a copy is in the file.

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Flexible Group ID
EUGREENINSPECT	Sawing operations to process green hardwood lumber controlled by a bag filter collector.	NA
EUPLANER	Planing operation to process dry hardwood lumber controlled by a bag filter collector.	NA
EUHAMMERMILL1	A hammer mill controlled by a cyclone collector.	FGHAMMERMILL
EUHAMMERMILL2	A hammer mill controlled by a cyclone collector.	FGHAMMERMILL
EUBOILER1	A natural gas/hardwood-fired boiler rated at 29.3 MMBtu per hour and 25.9 MMBtu/hr heat input, respectively. The maximum steam capacity of natural gas/hardwood-fired boiler is 24,000 and 20,700 pounds per hour, respectively. The boiler includes and a wet venturi scrubber for particulate control.	NA
EUBOILER2	A natural gas-fired boiler rated at 13.0 MMBtu per hour.	NA
EUSILO	A dry sander dust storage silo for the wood-fired boiler controlled by a cyclone.	NA
EUKILN1 EUKILN5 EUKILN7	Indirect steam-heated lumber drying kiln. Charge capacity of 11 MBF. (MBF is equivalent to one thousand board feet.)	FGKILNS
EUKILN2 EUKILN4 EUKILN6 EUKILN8 EUKILN9 EUKILN10 EUKILN11 EUKILN12 EUKILN13 EUKILN14 EUKILN15	Indirect steam-heated lumber drying kiln. Charge capacity of 22 MBF.	FGKILNS
EUKILN3	Indirect steam-heated lumber drying kiln. Charge capacity of 33 MBF.	FGKILNS
EUKILN16 EUKILN17 EUKILN18 EUKILN19 EUKILN20 EUKILN21	Indirect steam-heated lumber drying kiln. Charge capacity of 27 MBF.	FGKILNS

EUKILN22 EUKILN23 EUKILN24 EUKILN25	Indirect steam-heated lumber drying kiln. Charge capacity of 50 MBF.	FGKILNS

EUGREENINSPECT - Sawing operations to process green hardwood lumber controlled by a bag filter which was in place and being maintained, pressure drop was evaluated and magnehilic was working properly. Company claims they do not have problems with the gauge freezing.

1. PM	0.01 lb per 1000 lbs of exhaust gases
2. PM-10	0.83 pph

EUPLANER - Planing operation to process dry hardwood lumber controlled by a bag filter collector which was in place and being maintained

EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	COMPLIANCE
1. PM	0.01 lb per 1000 lbs of exhaust gases	Test Protocol	EUPLANER	No testing conducted
2. PM-10	0.9 pph	Test Protocol	EUPLANER	

STACK RESTRICTIONS
The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air .

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)
1. SVPLANER	45.1	26

EUSILO - is a dry sander dust storage silo for the wood-fired boiler controlled by a cyclone which appeared to be installed and maintained in a satisfactory manner. No visible emissions were observed at the silo. The exhaust gases are recirculated in a closed-loop system.

MONITORING/RECORDKEEPING

All
EUBOILER1 - A natural gas/hardwood-fired boiler rated at 29.3 MMBtu per hour and 25.9 MMBtu/hr heat input, respectively. The maximum steam capacity of natural gas/hardwood-fired boiler is 24,000 and 20,700 pounds per hour, respectively. There are separate dedicated stacks when firing natural gas and wood. The boiler has a wet venture scrubber for control equipment. During the inspection the wood waste boiler was down for repairs.

EMISSION LIMITS

Pollutant	Limit	PM compliant no additional testing

		requested
1. PM	0.17 lb per 1,000 lb exhaust gas[1, 2]	
2. PM10	1.68 pph	
3. NOx	12.7 pph	
4. CO	15.5 pph	
5. Acetaldehyde	2.15E-02 pph	
6. Acrolein	2.0E-02 pph	
7. Arsenic	5.7E-04 pph	
8. Benzene	1.09E-01 pph	
9. Formaldehyde	1.14E-01 pph	

MATERIAL LIMITS

The permittee shall burn only virgin hardwood waste, only on-site oil spills and/or pipeline quality natural gas in EUBOILER1. The permittee shall not burn on-site oil spills absorbed by sawdust greater than 400 pounds per year. They are only burning wood records reviewed on site.

The permittee shall not feed more than 3470 pounds of hardwood in EUBOILER1 per hour, based on a calendar month operating hours average. 1505 pounds per hour in June 2015.

DESIGN/EQUIPMENT PARAMETERS

The permittee shall not operate EUBOILER1 unless the wet venturi scrubber collector is installed, maintained, and operated in a satisfactory manner.

The permittee shall not operate EUBOILER1 without an interlock system which precludes the operation of the boiler using wood waste fuel without a properly operating scrubber.

TESTING was conducted on April 29, 2009

STACK/VENT RESTRICTIONS

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)
1. SVNGBOILER1	21.75	43.5
2. SVWBOILER1	32	63.5

OTHER REQUIREMENTS

The permittee shall submit a start-up; shut-down; maintenance and malfunction abatement plan for EUBOILER1 required under Special Condition III.3 to the AQD District Supervisor within 60 days of permit issuance. The permittee shall retain a copy of the startup plan at the facility at all times. Plan has been submitted and seems appropriate.

EUBOILER2 - is a natural gas-fired boiler rated at 13.0 MMBtu per hour allowed to burn only pipeline quality natural gas.

REPORTING
40 CFR Part 60, Subparts A & Dc reporting/notification which was received on October 12, 2009

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)
1. SVBOILER2	21.75	43.5

FLEXIBLE GROUP SUMMARY TABLE

Flexible Group ID	Flexible Group Description	Emission Unit IDs
FGHAMMERMILL	Two hammer mills	EUHAMMERMILL1, EUHAMMERMILL2
FGKILNS	25 indirect steam-heated lumber drying kilns	EUKILN1sequentially numbered from through EUKILN25

FGHAMMERMILL - Two hammer mills - EUHAMMERMILL1, EUHAMMERMILL2 controlled with cyclone in two separate closed loop systems. EUHAMMERMILL1 was down for repairs during the inspection

DESIGN/EQUIPMENT PARAMETERS

The permittee shall not operate FGHAMMERMILL unless the cyclone is installed, maintained, and operated in a satisfactory manner.

STACK/VENT RESTRICTIONS

1. The exhaust gases from the cyclone portion of FGHAMMERMILL shall not be discharged to the ambient air. Both Hammermills are connected to a close looped collection system

FGKILNS - 25 indirect steam-heated lumber drying kilns sequentially numbered from EUKILN1 through EUKILN25

EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	COMPLIANCE
1. VOC (as carbon)	43.0 tpy *	12-month rolling time period as determined at the end of each calendar month.	31.5 tpy
2. Acetaldehyde	0.15 pph	These two limits were placed here in PTI No. 326-06 as place holders until the PTI modification for the boilers When the modification was completed the conditions were not removed. No testing is required and because the kilns have vents testing could not be conducted to determine compliance with these two conditions.	
3. Formaldehyde	0.19 pph		
* VOC calculations are based on the amount of wood dried (in MBF) multiplied by its corresponding VOC emission factor in pounds carbon per thousand board feet (lbs C/MBF)			

MATERIAL LIMITS

They are only processing hardwoods and are drying 14,675 MBF in a 12-month rolling time period under their limit of 20,000 MBF of wood. They are processing less than 15 MMBF

STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted. Vents are not considered stacks they are openings

in structure itself without additional duct work and are not discharged unobstructed vertically upwards.

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)
1. SVKILN1, SVKILN5, SVKILN7 (4 vents)	14 x 14	23.3
2. SVKILN2, SVKILN4, SVKILN6 (8 vents)	14 x 14	23.3
3. SVKILN3 (12 vents)	14 x 14	23.3
8. SVKILN8 (8 vents)	17.5 x 17.5	23.3
9. SVKILN9 (6 vents)	20.25 x 20.25	23.3
SVKILN10, SVKILN11, SVKILN12, SVKILN13, SVKILN14,SVKILN15 (5 vents)	20.25 x 20.25	23.3
SVKILN16, SVKILN17, SVKILN18 (12 vents)	18.0	28.0
SVKILN19, SVKILN20, SVKILN21, SVKILN22, SVKILN23, SVKILN24, SVKILN25 (6 vents)	24 x 24	28.0

Based on the observations made at the time of the inspection and subsequent records review, the facility appears to be in compliance with PTI No. 326-06C and all other applicable AQD Rules and Regulations.

NAME Denise Draper DATE 2-18-16 SUPERVISOR PMB