DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

N078047165

FACILITY: LOUISIANA-PACIFIC CORP NEWBERRY PLANT		**SRN / ID:** N0780
LOCATION: 7299 N COUNTY ROAD 403, NEWBERRY		**DISTRICT:** Upper Peninsula
CITY: NEWBERRY		**COUNTY:** LUCE
CONTACT: MATTHEW HIESHETTER , PLANT ENVIRONMENTAL MGR		**ACTIVITY DATE:** 12/04/2018
STAFF: Joe Scanlan	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: Scheduled inspection and file review to determine compliance with MI-ROP-N0780-2018.		
RESOLVED COMPLAINTS:		

FACILITY DESCRIPTION

Louisiana-Pacific Corporation (LP) Newberry Siding Plant is located at 7299 North County Road 403, approximately one mile southeast of the Village of Newberry, Luce County, Michigan. The plant was constructed in 1984 and manufacturers oriented strand board (OSB) siding.

The plant is currently permitted under Renewable Operating Permit MI-ROP-N0780-2018. The facility is also permitted as a synthetic minor under PTI# 55-09A that limits the facility's potential HAP emissions below the major source threshold. Because of this the facility is not subject to 40 CFR Part 63 Subpart DDDDD (NESHAP for Plywood and Composite Wood Products).

OSB siding produced at the LP Newberry Siding Plant is a composite engineered product, made primarily of aspen and using resin as a binding agent. The plant uses approximately 230,000 tons of aspen per year. The process begins as logs are moved from the log storage area to log ponds, where the logs are softened and moved through conditioning ponds into the plant. Once inside the plant, logs are fed into debarking equipment. As a byproduct of the process, some of the bark is used to heat the plant and the press; the remaining bark is sold. Debarked logs are then sawn into 33" bolts and sent to the log flaker, where the logs are shredded into stranded flakes about the size of a credit card.

After flaking, the material is then sent to the flake dryer (EUDRYERRC). EUDRYERRC is a 13' x 60' triple-pass rotating drum dryer with heat provided by a 42 MMBTU/hour wood-fired McConnell burner and/or three independent Maxon natural gas burners (19 MMBTU/hour each) and a dryer exhaust recirculation (DER) system that is used as needed. EUDRYERRC has a capacity of 16.5 tons/hour of dried flakes. Flakes enter the dryer with a moisture content of approximately 50% and exit the dryer with a moisture content of approximately 6%. EUDRYERRC emissions are controlled by a wet electrostatic precipitator (WESP) and a regenerative thermal oxidizer (RTO). The wet ESP is an E-tube unit with two separately energized electrical sections operating in parallel.

After drying, flakes are sent to the blending system where they are suspended in a rotating drum while being blended with resin, wax, and zinc borate (wood preservative). Once blended, the material is sent to the forming line where the blended flakes are laid up in a continuous ribbon of flake. The mat is three layers: the top and bottom layers have flakes orientated on the long direction and the core layer is of random orientation. The mat is then cut to specific lengths. After exiting the forming line, the cut mat heads into the overlay area where a resin-saturated paper overlay is applied.

Once the paper overlay is applied, the mats are then loaded into the press (EUPRESS). EUPRESS has 14 oil-heated platens, heated by hot oil from one of two Konus thermal oil heaters (EUKONUSTOH) or the Geka thermal oil heater (EUGEKTOH). Here the mats are compressed at 2200 psi at a temperature of approximately 425° until the resin is cured. Cycle time for the press is around 2.5 minutes, including 10 second press time. EUPRESS currently has no exhaust controls--uncontrolled process exhaust is via two roof vents above EUPRESS.

Once pressed, the new siding goes through edge-trimming, and if necessary, grooves are cut into the siding, then painted (EUCOATING), then packaged. Finished product is shipped by rail directly from the plant.

EUKONUSTOH is two 19.9 MMBTU/hour wood-fired Konus thermal oil heaters with two economizers. The economizers are heat exchangers that do not combust any fuel. Each Konus heater is controlled by an individual cyclone which exhausts into EUBAGHOUSE4.

EUGEKTOH is a single Geka thermal oil heater which burns natural gas at a maximum heat input of 40 MMBTU/hour.

There are eight baghouses which are control for various sawing, flaking, screening, conveying, etc., of wood material.

The plant has two Safety-Kleen cold cleaners (EUCLEANERS) which were covered during the inspection and use a non-chlorinated solvent.

There are two backup generators: one gasoline generator (EUDRYBACKUP) to provide emergency power to EUDRYERRC; one diesel generator (EUTOHDIESEL) to provide emergency power to EUKONUSTOH. There is also one diesel-fired water pump for fire emergency (EUFIREPUMP).

In February of 2019, the facility submitted a Permit to Install application to modify EUPRESS to increase production. A construction waiver was requested for with the PTI application and was granted to the company on April 4, 2019. PTI# 43-19 was issued to the facility on August 30, 2019. Installation of new equipment requires a complete facility shutdown and is scheduled to occur in October of 2019. This will increase production limits for EUPRESS and increase the hourly formaldehyde limit for EUDRYERRC and EUPRESS. Additionally, three flights will be added to the press and vented platens on all press flights will be installed. Platen vents will route approximately 30% of the press exhaust to EUDRYERRC. Emissions from EUPRESS will be routed to EUDRYERRC and will be controlled by the WESP and RTO. This will result in a 30% reduction of emissions from the uncontrolled press stacks overhead.

EUPRESS currently has 14 flights. After the project is completed EUPRESS will have a total of 17 flights, all of which will have vented platens. PTI# 43-19 increases production limit on EUPRESS from 98,852 tons of finished product per year to 109,686 tons of finished product per year. The description for EUKONUSTOH has been updated to remove natural gas as a potential fuel and remove the burner rating for the economizers.

There are specific emission testing requirements for EUKONUSTOH, EUDRYERRC and EUPRESS. Within 180 days after these emission units commence regular operation after the project is completed the company shall verify emission rates for the pollutants identified in SC No. V.1 for each emission unit in PTI# 43-19.

The original PTI application requested that EUTRIMSAW&GRIND and EUTRIMPAINT be removed from the permit. These emission units were originally permitted under PTI# 99-05C for the installation of a trim line. However, the new trim line was never installed but was included in MI-ROP-N0780-2018. This will require a minor modification to the ROP. It is expected the company will request the ROP modification.

COMPLIANCE

EUDRYERRC

EUDRYERRC has emission limits for PM, SO2, NOx, CO, VOCs, Acetaldehyde, Acrolein, Formaldehyde, and Manganese. Stack testing of these pollutants is required every five years. The last stack test for EUDRYERRC was conducted June 2017. Results were acceptable to EGLE AQD.

Records of monthly amounts of CO and VOC emitted from EUDRYERRC are submitted with semi-annual and annual reports. Following are the amounts reported from June 2018 - June 2019:

- Rolling 12-month average for CO pph was 8.87 pph -- ROP limit for CO pph is 23.98 pph
- Rolling 12-month average for CO tpy was 38.86 tpy -- ROP limit for CO tpy is 78.34 tpy
- Rolling 12-month average for VOC pph was 1.56 pph -- ROP limit for VOC pph is 5.12 pph
- Rolling 12-month average for VOC tpy was 6.83 tpy -- ROP limit is 14.07 tpy

There is a material limit for EUDRYERRC that limits the amount of coniferous wood used to 30% by volume over a 12-month rolling time period. The facility is required to submit monthly records, with each semi-annual report, of the amount of non-coniferous and coniferous wood used to manufacture the finished product. The plant has been using exclusively aspen for several years and records from June 2018 - June 2019 show 0% usage of any softwoods.

Reported emissions for EUDRYERRC are well within permitted limits.

There were no deviations reported for the RTO where the combustion chamber hourly average temperature fell

below 1525°F (SC No. VI.3) and no combustion chamber monitor downtime (SC No. VI.4) from January 1, 2019 through June 30, 2019.

There were no deviations reported for the WESP where the hourly average quench temperatures was above 180°F (SC No. VI.6 and No. VI.7) and no hourly average grid voltages < 30KV while operating Grid 1 & 2 (SC No. VI.9, No. VI.10, No. VI.11) and no monitoring downtime from January 1, 2019 through June 30, 2019.

EUPRESS

EUPRESS has emission limits for PM, NOx, CO, VOC, Formaldehyde, Methylene Diphenyl Isocyanate and Phenol. Stack testing of these pollutants is required every five years. The last stack test for EUPRESS was conducted in May of 2015. Results were acceptable to EGLE AQD.

Records of monthly amounts of PM, PM-10, NOx, CO and VOC emitted from EUPRESS are submitted with semi-annual and annual reports. Following are the amounts reported from June 2018 - June 2019.

- Rolling 12-month average for PM pph was 4.95 -- ROP limit for PM pph is 24
- Rolling 12-month average for PM tpy was 21.69 -- ROP limit for PM tpy is 100.8 tpy
- Rolling 12-month average for PM-10 pph was 4.95 -- ROP limit for PM-10 pph is 24
- Rolling 12-month average for PM-10 tpy was 21.69 -- ROP limit for PM-10 tpy is 100.8 tpy
- Rolling 12-month average for NOx pph was 0.48 pph -- ROP limit for NOx pph is 1.36 pph
- Rolling 12-month average for NOX tpy was 2.09 tpy -- ROP does not have a tpy limit for NOx
- Rolling 12-month average for CO pph was 0.65 pph -- ROP limit for CO pph is 4.64 pph
- Rolling 12-month average for CO tpy was 2.85 tpy -- ROP limit for CO tpy is 15.5 tpy
- Rolling 12-month average for VOC pph was 3.62 pph -- ROP limit for VOC pph is 73.6 pph
- Rolling 12-month average for VOC tpy was 15.85 tpy -- ROP limit is 159.0 tpy

There are material limits for EUPRESS which limit the throughput of finished product to 98,852 tpy over a 12-month rolling time period. The plant reported an average throughput of finished product of 94,902 tpy from June 2018 - June 2019, below the permitted limit. Throughput for EUPRESS has been increased to 109,686 tpy in PTI# 43-19. This limit was not in effect at the time of inspection.

There is a material limit for EUPRESS that limits the amount of coniferous wood used to 30% by volume over a 12-month rolling time period. The facility is required to submit monthly records of the amount of non-coniferous and coniferous wood that has been used. The plant has been using exclusively aspen for several years and records from June 2018 - June 2019 show 0% usage of any softwoods.

Reported emissions for EUPRESS are well within permitted limits.

EUKONUSTOH

EUKONUSTOH has emission limits for PM, PM-10, NOx, CO, VOC and visible emissions and is controlled by EUBAGHOUSE4. Stack testing of these pollutants is required every five years. The last stack test for EUKONUSTOH was conducted in May of 2015. Results were acceptable to EGLE AQD. It should be noted that EUBAGHOUSE4 is not listed as an emission unit in the Emission Unit Summary Table of MI-ROP-N0780-2018, however it is addressed in the MAP.

Records of monthly amounts of CO emitted from EUKONUSTOH are submitted with semi-annual and annual reports. Following are the amounts reported from June 2018 - June 2019.

- Rolling 12-month average for CO pph was 4.07 pph -- ROP limit for CO pph is 26.0 pph
- Rolling 12-month average for CO tpy was 17.84 tpy -- ROP limit for CO tpy is 93.4 tpy

EUKONUSTOH has material limits that limit the amount of Wood Fuel fired to 24,000 tpy over a 12-month rolling time period. The facility is required to submit monthly records of the amount of Wood Fuel that has been used. Records indicate EUKONUSTOH used 14,500 tons of Wood Fuel from June 2018 - June 2019.

Reported emissions for EUKONUSTOH are well within permitted limits.

EUKONUSTOH has operation restriction that does not allow the facility to operate both heaters simultaneously on wood fuel for longer than six hours. The feeder system for the Konus heaters is set up so that only one heater may be fed bark fuel at a time--it is impossible to feed both heaters fuel at the same time. Each heater is run for one week and then shut down to be cleaned out. The transition period for one heater to completely burn out fuel when shut down to when the second heater is fueled and up to temperature typically happens well within the six-hour window.

EUGEKTOH

EUGEKTOH has emission limits for PM, PM-10, NOx, CO and VOC, however there are no testing, monitoring, or reporting requirements for this emission unit.

EUGEKTOH has a material limit that only allows the unit to be fired with natural gas (SC No. II.1).

EUCOATING

EUCOATING has limits for visible emissions and VOCs. EUCOATING is equipped with a natural gas-fired oven and an edge-seal paint booth. There are no testing requirements for these pollutants for this emission unit.

There is an operational restriction that limits the operation of EUCOATING unless all exhaust filters are in place and operating properly. Exhaust filters were in place and operating properly at the time of my inspection.

The facility is required to maintain a record of the VOC content of each material used (SC No. VI.1). The facility is also required to maintain records of usage rate of each material used in EUCOATING on a monthly basis (SC No. VI.2). The facility is also required to maintain records of monthly calculations determining the average VOC emission rate in pph (SC No. VI.3). The coatings currently used by the facility contain 0% VOCs.

EUTRIMSAW&GRIND and EUTRIMPAINT

These emission units were permitted under PTI# 99-05C but never installed. PTI# 99-05C was voided on February 14, 2018. The company should apply for a minor modification to the current ROP so the emission units can be removed from the ROP.

BAGHOUSES

The facility houses eight fabric filter dust collectors serving various sawing, flaking, screening, conveying and grooving of wood material. No deviations were reported for any of the baghouses from January 1, 2019 through June 30, 2019. Minor corrective actions were reported from January 1, 2019 through June 30, 2019.

FGCOLDCLEANERS

The facility houses two Safety-Kleen cold cleaners which use non-chlorinated cleaners. These units are serviced by Safety-Kleen and the covers are kept closed when parts are not being handled in the cold cleaner.

EUFIREPUMP (FGCIRICEMACT) and EUDRYBACKUP (FGSIRICEMACT)

These two emission units and flexible groups are subject to 40 CFR Part 63 Subpart ZZZZ for compression ignition (CI) and spark ignition (SI) RICE under 500 horsepower installed prior to June 12, 2006, and located at an area source of HAP emissions.

The emission units are required to have maintenance performed at set hourly intervals with recordkeeping requirements. These records were not reviewed during this inspection.

EUTOHDIESEL (FGRICEMACTNEW)

This emission unit and flexible group is subject to 40 CFR Part 63 Subpart ZZZZ for new compression ignition RICE of all sizes.

This emission unit is required to have maintenance performed at set hourly intervals with recordkeeping requirements. These records were not reviewed during this inspection.

MALFUNCTION ABATEMENT PLAN

A Malfunction Abatement Plan (MAP) is required to address maintenance, operation, and corrective action for malfunction events for the following emission units to operate:

- EUDRYERRC
- EUKONUSTOH
- EUCOATING
- EUBAGHOUSE1
- EUBAGHOUSE2
- EUBAGHOUSE3
- EUBAGHOUSE4
- EUBAGHOUSE5
- EUBAGHOUSE6
- EUBAGHOUSE8
- EUBAGHOUSE9

The MAP adequately address maintenance, operation, and corrective actions for these emission units.

SUMMARY

The ROP has sourcewide limits for individual HAPs of 9.9 tons per year and 24.9 tons per year of aggregate HAPs. Formaldehyde emissions for 2018 were 5.10 tons, and emissions of formaldehyde plus phenol were 5.87 tons. These reported HAP emissions were in compliance with the ROP Source Wide emission limits specified in the facility's ROP.

At the time of my inspection, visible emissions from plant process exhausts were zero to <5% opacity, in compliance with visible emission limits. Housekeeping of yard and plant roadways was acceptable. Plant interior housekeeping was excellent, with little spillage of raw material or dust observed.

There were no CAM excursions or exceedances reported from January 1, 2019 to June 30, 2019.

The facility is in compliance with ROP MI-ROP-N0780-2018.

NAME _____ DATE 9/30/19 SUPERVISOR _____