

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

B642062328

FACILITY: E.B. EDDY PAPER INC.		SRN / ID: B6420
LOCATION: 1700 Washington Ave, PORT HURON		DISTRICT: Warren
CITY: PORT HURON		COUNTY: SAINT CLAIR
CONTACT: Christine Loeffler , Environmental Team Lead		ACTIVITY DATE: 03/25/2022
STAFF: Robert Joseph	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: Scheduled inspection of paper mill facility		
RESOLVED COMPLAINTS:		

On Friday, March 25, 2022, I, Michigan Department of Environment, Great Lakes, and Energy staff Robert Joseph, conducted a scheduled inspection of E.B. Eddy Paper (Domtar) located at 1700 Washington Ave, Port Huron, MI 48061. The purpose of the inspection was to determine the facility's compliance with the requirements of the Federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 Public Act 451; Michigan Department of Environment, Great Lakes, and Energy - Air Quality Division (EGLE-AQD) Administrative Rules and conditions of the facility's Title V Renewable Operating Permit, MI-ROP-B6420-2017.

Background Information

The paper mill facility was a Title V major source and had been at its current location since 1898, however, it permanently ceased operations and rendered the emission units inoperable on February 11, 2021, due to low production, the COVID pandemic, and the transfer of products to other paper mills within the company nationwide. The facility's ROP was voided by the AQD on July 20, 2021. The facility was a producer of stock paper and specialty type papers used for wrapping, packaging, laminating, and other uses. The primary emission units were the paper machines (conveyors, screens, pumps, and size presses) and all were installed between 1928 and 1969. The facility would receive starch, clay and pulp via rail located within the facility's property line and mixes these constituents into a wet slurry. This mixture goes into the paper machines where chemical additives are added in a blender. Some additives include sizing agents and dye for coloring.

Opening Introduction

I arrived at the facility at approximately 11:30 a.m. and met with the facility's Environmental Manager, Christine Loeffler. I presented my identification and informed Christine the purpose my visit. I inquired about the status of the facility, and she indicated the only operations currently ongoing is the facility's water treatment plant which is permitted through the EGLE-Water Resource Division (there are no emissions or emissions units associated with this process). She also stated the facility is still operating the Diesel Generator (9.8 MMBTU/hr) should an electrical outage occur. There are approximately 11 employees that are still employed by the facility for the operation of this process.

Facility Tour

I requested that Christine provide me a tour of the facility to verify the current thstatus of the emission units.

Permit Number: MI-PTI-B6420-2017 (MI-ROP-B6420-2017 when the facility was operating).

Source-Wide Conditions

I. EMISSION LIMITS

Pollutant	Limit Time	Time Period/ Operating
Each individual HAP Less than	Less than 8.9 tpy	12-month rolling time period, as determined at the end of each calendar month
Aggregate HAPs	Less than 22.4 tpy	12-month rolling time period, as determined at the end of each calendar month

Methanol, Naphthalene, and Acetaldehyde are the most commonly emitted HAPs. A records review under Section VI. reveals the facility to be in compliance with these totals.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

Per the facility's records, the individual max HAP totals varied between to 0.1 tons and 0.000013 tons per month from January 2020 through February 2022, and the aggregate HAP totals varied between to 0.9 tons and 0.00028 tons per month from January 2020 through February 2022.

Per the facilities records, the 12-month rolling individual max HAP totals varied between 2.0 tons to 0.1 tons per year from January 2020 through February 2022, and the 12-month rolling aggregate max HAP totals varied between 12.6 tons to 0.1 tons from January 2020 through February 2022.

EU-Boiler #5

I. EMISSION LIMIT

Pollutant	Limit	Time Period/ Operating Scenario
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NOx	180 lb/MM scf	Monthly
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Boiler #5 was installed in 1968 and modified in 1997. It was converted to natural gas usage from coal-fired in 2015 via a permit to install. The modification in 1997 and the 2015 change in fuel was not considered a modification or reconstruction under 40 CFR 60.14 and 60.15, therefore, it was exempt from subpart D (Standards of Performance for Fossil Fuel Fired Steam Generators). The stack vents unobstructed and the boiler is no longer operational.

In addition, this boiler is an existing source and subject to an area source boiler MACT per 40 CFR Part 63 Subpart JJJJJJ, however, due to 40 CFR 63.11195(e) it is not subject to this subpart since no applicable requirements for a natural gas-fired boiler are defined in this subpart.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

The boiler is a natural gas-fired boiler rated at 196 MM BTU/hr equipped with low NO_x burners and only burns natural gas. It is no longer operational.

IV. DESIGN/EQUIPMENT PARAMETER(S)

The boiler has a dedicated fuel meter to record fuel usage.

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

Natural gas fuel usage was documented by the facility and there are no permit limitations. Monthly fuel usage varied between 74 MMcf and 101 MMcf in 2020, and 100 MMcf was the total usage in 2021.

EU-Boiler #6

Boiler #6 was installed in 2002 and is also a natural gas-fired boiler rated at 25 MM BTU/hr. It is no longer operational. It is exempt from a permit to install per Rule 282(2)(b)(i); Sweet natural gas, synthetic natural gas, liquefied petroleum gas, or a combination thereof and the equipment has a rated heat input capacity of not more than 50 MM Btu/hr.

This boiler also has a dedicated fuel meter to record fuel usage. In addition, this boiler is an existing source and subject to an area source boiler MACT per 40 CFR Part 63 Subpart JJJJJJ, however, due to 40 CFR 63.11195(e) it is not subject to this subpart since no applicable requirements for a natural gas fired boiler are defined in this subpart.

Since this boiler has a capacity equal or greater to 10 MM Btu/hr, but less than 100 MM Btu/hr, it is subject to 40 CFR 60, Subpart Dc (Standards of Performance for Small Industrial-Commercials-Institutional Steam Generating Units). The only requirement per 40 CFR 60.40c(a) is reporting and recordkeeping of fuel usage.

I. EMISSION LIMITS

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

Natural gas fuel usage was documented by the facility and there are no permit limitations. A monthly fuel usage high of 476 MMcf occurred in Feb. 2020. All other uses in 2020 were under 50 MMcf and the boiler did not operate in 2021.

EU-Paper Machine #5I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario
Isopropyl Alcohol	1144.8 lb/day	Daily

Paper machine #5 produces regular stock paper and was installed in 1928. It was modified in 1997, and again recently in 2015 when PTI 163-15 was issued for the use of Isopropyl Alcohol (also known as Quilon which is a type of chemical made up largely of isopropanol). The paper machine ceased operations in November 2020.

II. MATERIAL LIMIT(S)

The facility is not permitted to use more than 3,951 pounds of Isopropyl Alcohol containing wet size press additive paper per day. Records indicate that no more than 530 lbs were used in an entire month in 2020. The facility is not permitted to use a wet size press additive with an Isopropyl Alcohol content in excess of 29% by weight. The maximum usage per their records indicates 29%. Also, the permittee shall not use a wet size press additive with a VOC content in excess of 29% by weight. Records indicate Nalco at 22.4% to be the highest additive.

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

The facility is to keep daily records of the amount of VOC containing wet size press additives associated with this unit. Records were reviewed for the VOC content of 11 wet size press additives associated with this unit.

The facility is to keep monthly records of the usage rate of each paper additive containing VOCs associated with the operation of this unit for the previous month and 12-month period. Records indicate a high of 5.5 tons was used in February 2020 (Wet Strength at 3.49 tons).

The facility maintained records of the annual emissions of VOCs in tons per year on a calendar year basis. Records show an annual emission of VOC in tons per year on a calendar basis of 1.76 tons in 2020.

The facility maintains a current listing from the manufacturer of the chemical composition of each chemical used, including the weight percent of each component. The VOC content for each paper additive (11 total) varies between 0.01% and 29% by weight. These wet press additives include Nalco 61720 Retention Aid, Liquid Tinting Dye, Impress, Solvay Solexis, Wet Strength, Unidyne TG-8112, Unidyne TG-8731, Nalco 7546, Pergasol Yellow PR 440L, Pergasol Blue PR377L, and Quilon L (isopropyl alcohol).

VII. REPORTING

The facility did not exceed the calendar year actual emissions of VOC per the baseline actual emissions. Baseline tons per year was 3.08 and projected annual was 39.01 tons per year.

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EU-Paper Machine #6

Paper machine #6 is used to produce specialty type paper but has not operated in over four years. Color dyes are used in this machine and it also a grandfathered unit having been installed in 1956.

EU-Diesel

The facility has one diesel fueled emergency generator that uses #2 fuel and is rated at 9.8 MM Btu/hr. It is exempt from a permit to install per Rule 285(2)(g); Internal combustion engines that have less than 10,000,000 BTU/hr maximum heat output. It was installed in 1988. Material limits for the fuel oil is a 1.5% sulfur content based on a heat value of 18,000 BTU/lb. This generator is used for the wastewater treatment plant and has a non-resettable meter.

The permit limit for emergency engines is 500 hours per year for a 12-month rolling time period. In order for the engine to be considered an emergency stationary RICE, the engine must not run for more than 100 hrs per calendar year which includes 50 of those hours for non-emergency use.

Since the facility is no longer a major source but an area source, it is no longer subject to 40 CFR Part 63 Subpart ZZZZ for a Reciprocating Internal Combustion Engine Maximum Achievable Control Technology (RICE MACT). This previously required the facility to maintain oil and filter change every 500 hrs operation, or annually, whichever comes first. In addition, air cleaner and spark plugs are to be inspected every 1,000 hours or annually, whichever comes first, and replace as necessary. Also, all hoses and belts every 5000 hrs. of operation or annually, whichever comes first, must be replaced as necessary.

I. EMISSION LIMITS

NA

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario
Fuel Oil	1.5% sulfur content	Daily

The used diesel content listed was less than 1.5% sulfur content.

III. PROCESS/OPERATIONAL RESTRICTION(S)

Records indicate the generator has only operated primarily for maintenance and testing between 1 and 1.5 hours each month with a total run time of 16.5 hours over a 12-month rolling time period. Records indicate that engine oil changes and inspection of the unit occurs within 500 hours of operation or annually. This is performed by Cummins Sales and Service. The facility followed the manufacturer's written instructions to minimize emissions when possible, during start-up.

IV. DESIGN/EQUIPMENT PARAMETER(S)

There is a non-resettable hour-meter on the generator.

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

Records of maintenance were maintained on the generator. This includes oil changes, battery tests, and air filter service. The hours of operation for the emergency generator were recorded and documented whether its use was emergency based or for non-emergency. Readiness checks totaled less than 17 hours each year in 2020 and 2021. Emergency operation usage was 2.5 hours in 2020.

There were no malfunction occurrences or records of malfunctions. This generator was installed in 1988 and has a rating of 9.8 MM Btu/hr. The type of fuel used is an ultra-low sulfur #2 diesel. 933 gallons were used in 2020 and 2021 and the hours of operation of the generator had a 12-month rolling total of 16.5 hours in 2020.

EU-Starchsilo**I. EMISSION LIMITS**

Material	Limit	Time Period/ Operating Scenario
Particulate Matter	0.1 pound per 1,000 lbs of exhaust gases, on dry gas basis	Instantaneous

The starch silo receives starch, clay, and pulp via rail and uses a fabric filter as its pollution control device. It is limited to 0.1 lbs per 1,000 lbs of exhaust gases on a dry basis for particulate matter. Maintenance recordkeeping was maintained and the silo was no longer in operation.

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

The silo was not operating at the time of inspection.

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

A maintenance log was provided documenting air filter replacement, motor cleanout, and other miscellaneous repairs. In addition, there were no visible emissions observed due to the fact there was no loading of materials to the silo at the time of inspection.

FG-Paper Machines (Flexible Group Conditions) PM #5, #6, #7, #8

Paper machine #7 is like machine #5 in that it produces regular stock paper. It was installed in 1962 and modified in 1998. The facility has not used 1,2 dibromo-2, 4 dicyanobutane in its process for over five years. Paper machine #8 is like machine #6 in that it produces specialty type paper. It was installed in 1969 and modified in 1998. Paper machine #6 is grandfathered from air use permitting requirements. Paper machines #5 and #8 did not operate in 2021. Paper machine #7 operated in 2021.

I. EMISSION LIMITS

Pollutant	Limit	Equipment	Time Period/ Operating Scenario
VOC	5.3 lbs	PM #7	hourly
VOC	1.9 lbs	PM #7	monthly

VOC	23.2 tons	PM #7	12-month rolling time period
1,2-dibromo-2,4 dicyanobutane	0.47 lbs	PM #7	hourly
VOC	17.1 lbs	PM #8	hourly
VOC	4.2 lbs	PM #8	monthly
VOC	26.2 tons	PM #8	12-month rolling time period

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

The AQD has not provided a written request to the facility regarding volatile organic compound testing for any coatings.

VI. MONITORING/RECORDKEEPING (paper machines #7 and #8)

The usage rate of ten paper additives containing VOCs was documented detailing the dates in which the additives were used (Liquid Tinting Dye, Nalco 61610, Cartafix SWE, Impress, Yellow 5GLLN, Blue Dye 491s, Blue Dye 77L, Brill Turq K-RL, Intrabond Blue BTS, Red K-2B, Nalco 7546).

The pounds of VOC for each additive were documented each day as were the hours of operation. Records indicate the VOC emissions were under the hourly permit limits varying up to 3 lbs/hr for paper machine #7 and up to 14 lbs/hr for paper machine #8. The following are the monthly and 12-month rolling totals in 2020 and 2021 for each.

PM #7: 2020

-VOC monthly high total Jan. 0.51 tons

-VOC monthly low total Dec. 0.14 tons

-12 month rolling total 2.97 tons

PM #7: 2021

-VOC high total Jan. 0.14 tons

-VOC low total Feb. 0.06 tons

-12 month rolling total 2.44 tons

PM #8: 2020

-VOC monthly high total Feb. 0.50 tons

-VOC monthly low total Dec. 0.23 tons

-12 month rolling total 4.52 tons

PM #8: 2021

-Did not operate.

The facility maintained Material Safety Data Sheets from the manufacturer for each paper additive.

EU-Boiler #2 and #4

Boilers #2 and #4 are grandfathered boilers and were installed in 1966 and 1937 respectively and have not been modified. Boiler 2 is rated at 69 MM Btu/hr and Boiler #4 is rated at 91 MM Btu/hr.

In addition, these boilers are existing sources and are subject to an area source boiler MACT per 40 CFR Part 63 Subpart JJJJJ. However, due to 40 CFR 63.11195(e) they are not subject to this subpart since they are natural gas fired boilers as defined in this subpart.

Miscellaneous Exempt Processes

The facility uses a water-based solvent which contains no VOCs as cold cleaner. The wastewater treatment plant discharges effluent into the St. Clair River and is permitted through a National Pollutant Discharge Elimination System (NPDES) permit with the EGLE Water Resource Division.

Conclusion

Based on the AQD inspection and records review, E.B. Eddy Paper has met the requirements of the Federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 Public Act 451; Michigan Department of Environment, Great Lakes, and Energy - Air Quality Division (EGLE-AQD) Administrative Rules and conditions of the facility's Title V Renewable Operating Permit, MI-ROP-B6420-2017.

NAME Robert Joseph

DATE 05-11-22

SUPERVISOR Joyce