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

A647566394

FACILITY: UP Paper LLC.		**SRN / ID:** A6475
LOCATION: 402 West Elk Street, MANISTIQUE		**DISTRICT:** Marquette
CITY: MANISTIQUE		**COUNTY:** SCHOOLCRAFT
CONTACT: MARK OZOGA , ENVIRONMENTAL MANAGER		**ACTIVITY DATE:** 02/16/2023
STAFF: Lauren Luce	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT: Targeted Inspection FY23		
RESOLVED COMPLAINTS:		

Facility: UP Paper (SRN: A6475)

Location: 402 West Elk Street, Manistique, MI 49854

Contact(s): Mark Ozoga, Environmental Manager

Regulatory Authority

Under the Authority of Section 5526 of Part 55 of NREPA, the Department of Environment, Great Lakes, and Energy may upon the presentation of their card, and stating the authority and purpose of the investigation, enter and inspect any property at reasonable times for the purpose of investigating either an actual or suspected source of air pollution or ascertaining compliance or noncompliance with NREPA, Rules promulgated thereunder, and the federal Clean Air Act.

Facility Description

UP Paper is a producer of unbleached kraft paper for packaging applications. The paper is made from 100% recycled fiber. The facility recycles OCC (old corrugated container) and DLK (double lined kraft) to produce specialty paper used for a variety of purposes including food bags, gift bags, and gift paper. The facility is located in the City of Manistique in a historically industrial district, however there are residential homes directly across the streets bordering the facility to the west and north. The paper mill borders the Manistique River to the east. The facility shut down in 2015 and was purchased and reopened in June 2016. The mill has been manufacturing paper since 1920.

Process Description

Recycled fiber comes into the facility and goes into a pulper where it is blended. The product then goes into a screener and refining process. Additives may be added depending on the product need. The product then goes into the headbox of the paper machine and through wet felts that remove water and into the dryer. After drying, the product goes to a rewinder and is put into rolls for finishing and wrapping. There is one paper machine at the facility.

Emissions

UP Paper operates a natural gas-fired boiler. Pollutants emitted from the combustion of natural gas-fired equipment includes nitrogen oxides (NOx), carbon monoxide (CO), volatile organic compounds (VOCs), particulate matter (PM), carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), and trace amounts of sulfur dioxide. Higher temperatures of burning and longer residence time results in higher NOx emissions. CO and VOC emissions are directly related to combustion

efficiency. Higher combustion temperatures, longer residence times, and well mixing of fuel and combustion air results in greater combustion efficiency and lower emissions of CO and VOCs. Emissions of sulfur oxides are low since processed natural gas contains a very low sulfur content. PM emissions are also low since natural gas is a gaseous fuel. Nitrous oxide and methane emissions are related to the combustion temperature and amount of excess oxygen.

Water vapor is the primary emission from the paper machine. However, the potential exists for other air emissions to be vented during the paper manufacturing process. Chemicals can be added to the pulp to give the paper the desired qualities, such strength or appearance. Some amount of these chemicals may be emitted to the atmosphere during paper production. The composition of these additives varies greatly, and some additives may include hazardous air pollutants (HAP) and volatile organic compounds (VOCs).

Emissions Reporting

UP Paper is required to report its annual emissions to Michigan Air Emissions Reporting System (MAERS). The table below shows the facility's 2021 MAERS submittal.

Pollutant	Pounds per Year (PPY)	Tons per Year (TPY)
CO	12564.38	6.28
NOx	37714.52	18.86
PM10	8119.84	4.06
PM2.5	8119.84	4.06
SO2	641.04	<1
VOC	14935.78	7.47

Compliance History

The facility has not received any violation notices in the past five years. The facility was last inspected in December 2020 and was found to be in compliance with all applicable air quality rules and regulations at that time.

Regulatory Analysis

Schoolcraft County is currently designated by the U.S. Environmental Protection Agency (USEPA) as attainment/unclassified for all criteria pollutants.

UP Paper is subject to MI-ROP-A6475-2019. Equipment permitted under MI-ROP-A6475-2019 includes a natural gas fired boiler rated at 186.8 MMBtu/hr used for steam production (EUBLR004), a paper dyeing process (EUDYE001), Process Chemicals used to make paper products (EUPROCESS), and a 99 MMBtu/hr natural gas or fuel oil package boiler (EUBLR003) brought onsite when EUBLR004 is down. There are two original coal fired boilers still on site which have been decommissioned. Since installing the natural gas boiler and decommissioning the coal fired boilers, the facility has significantly decreased their potential to emit (PTE). The facility submitted an ROP renewal application in March 2019 with revised PTE. Revised PTE calculations show the facility is below the Part 70 thresholds, however the facility maintains their ROP.

The stationary source is a minor source of HAP emissions because the potential to emit of any single HAP regulated by Section 112 of the federal Clean Air Act, is less than 10 tons per year and the potential to emit of all HAPs combined are less than 25 tons per year.

EUBLR003 and EUBLR004 at the stationary source are subject to the Standards of Performance for Small Industrial Commercial-Institutional Steam Generating Units promulgated in 40 CFR Part 60, Subparts A and Dc.

Inspection

On February 16, 2023, AQD Staff (Lauren Luce) conducted a targeted inspection of UP Paper in Manistique, MI. Upon arrival, observations of the stacks were taken to inspect for visible emissions. No visible emissions or no odors were detected. AQD staff met with Mark Ozoga, Environmental Manager, to discuss operations and records. A tour of the facility was then provided.

EUBLR003

This emission unit consists of a 99 MMBtu/hr boiler that can be fired on natural gas or #2 fuel oil. This is a permitted portable boiler that can be brought onsite only when EUBLR004 is down. The facility has not brought a portable boiler onsite since 2012.

EUBLR004

This emission unit consists of a natural gas-fired 186.8MMBtu/hr boiler for steam production use on the paper machine. The boiler is equipped with low NOx burners and flue gas recirculation. At the time of inspection, the boiler was on low-fire as the facility was in a maintenance shut down. The heat input at 1:38pm on 2/16/2023 was 36.996 MMBtu/hr. The natural gas flow at the same time was 30.2 KSCFH.

Special Conditions (SC) I. 1-2

EUBLR004 has a NOx emission limit of 0.20 lb/MMBtu on a 30-day average rolling time period and uses a predicative emission monitoring system (PEMS) to show complaince with the NSPS Db limit. Records were provided for calendar year 2022 and all emissions were within permitted limits. For 2022, the average NOx emission rate was 0.036 lb/MMBtu. In December 2022, the 30-day average rolling time period was 0.039 lb/MMBtu. EUBLR004 also has an emission limit for GHG as CO_{2e} of 74, 975 tons per year. The 12-month rolling sum in December 2022 was 58,891 tons per year. The highest 12-month rolling total was 65,287 tons per year in January 2022.

SC II.1

EUBLR004 has a material limit of 1247 MMcf natural gas on a 12-month rolling time period. Records were provided for calendar year 2022. The 12-month rolling sum in December 2022 was 999.2 MMcf. The highest 12-month rolling total during 2022 was 1064.6 MMcf in January.

SC III. 1-2

A malfunction abatement plan (MAP) is required to operate the boiler. The MAP plan date October 24, 2016 specifies all parameters as required in the permit. These parameters include maintenance, responsible parties, and corrective action procedures. The boiler only operates on pipeline quality natural gas.

SC IV. 1-4

The maximum design heat input capacity of the boiler is 186.7 MMBtu/hr. The low NOx burners and flue gas recirculation systems are maintained and operated properly. A meter is installed that monitors the natural gas usage on a continuous basis. The facility operates a PEMS to monitor and record NOx emissions.

SC VI. 1-8

UP Paper operates a PEMS to verify NOx emission rates. They perform an annual RATA to verify system accuracy. The most recent RATA for NOX lb/MMBtu was conducted on 12/20/2022 by Montrose Air Quality Services. Operating parameters were consistent throughout testing. The source test report from Montrose was received 1/27/2023 with acceptable results.

The facility submits quarterly PEMS reports. The last report was received January 27, 2023. No deviations have been reported the last two quarters of 2022. The facility keeps monthly natural gas usage records and maintains monthly and 12 month rolling time period records of the annual capacity factor for natural gas. The 12-month rolling total was 0.64 in December 2022. UP Paper maintains monthly and 12 month rolling time period records for CO_{2e} emissions using PEMS data. December 2022 CO_{2e} emissions were 4546 tons (monthly) and 58,891 tpy (12 month rolling time).

PEMS data was requested and provided for multiple time periods. All NOx readings were within permitted limits.

SC VII. 1-6

The facility has been prompt in submitting complete annual, semiannual, and NSPS required compliance reports. No deviations were reported in 2022.

SC VIII. 1

As verified by the range finder, the stack appeared to exceed the 40ft minimum above ground height requirement. Measurements (3) were taken from the parking lot to the north of the

facility. Measurements were taken using a 2 point method to the top of the stack and accounting for viewer height.

EUDYE001

This emission units consists of the paper dyeing process. This process has not operated since 2014. UP Paper produces unbleached kraft paper and does not utilize dye. The facility does not have plans to use this system, but keeps it permitted for in the event of future use.

EUPROCESS

This emission units consists of the process chemical usage. EUPROCESS has emission limits for VOC, kerosene, and petroleum distillate. Kerosene and petroleum distillate have not been used in the process since prior to 2016 and currently, there is no plan to use them. Mass balance calculations were provided on VOC emissions for calendar year 2022. The emission limit is 82.3 tons per year on a 12-month rolling time period. For December 2022, emissions were 4.60 tons on a 12-month rolling time period (SC I.1-3). The records provided also show VOC content of the materials used (SC VI.4). The stacks and vents from EURPROCESS vent through the roof and appear to meet the minimum height requirements (SC VIII).

Compliance

Based on the site inspection and records reviewed, UP Paper appears to be in compliance with MI -ROP-A6475-2019 and all other applicable air pollution control rules and federal regulations. It was conveyed to the facility that no violations were noted during the inspection.

Image 1: Finished product

Image 2: EUBLR004

Image 3: Recycled fiber

Image 4: Paper machine

NAME _____ DATE 3-6-2023 SUPERVISOR _____