

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

B147051437

FACILITY: NEENAH PAPER - MICHIGAN INC		SRN / ID: B1470
LOCATION: 501 E MUNISING AVE, MUNISING		DISTRICT: Upper Peninsula
CITY: MUNISING		COUNTY: ALGER
CONTACT: Brian Ciupak , Environmental Engineer (2019)		ACTIVITY DATE: 11/19/2019
STAFF: Sydney Bruestle	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Onsite inspection to verify compliance with MI-ROP-B1470-2019a and all other applicable state and federal air quality regulations		
RESOLVED COMPLAINTS:		

On November 19, 2019 I (Sydney Bruestle) performed an onsite inspection at Neenah Paper located at 501 East Munising Avenue, Munising Michigan. While onsite I met with Brian Ciupak, Environmental Engineer. Mr. Ciupak gave me a tour of the facility, an overview of the permitted equipment, and provided me with the required records.

Facility Description:

The Neenah Paper Michigan, Inc., Munising Mill is located on the shore of Lake Superior within the city limits of Munising in Alger County. The area surrounding the mill is zoned commercial so there are no homes located adjacent to the mill property. The main source of emissions from the mill is a 202 MM Btu/Hr spreader stoker coal fired boiler. A new baghouse was installed on this boiler in 1996 under Permit No. 218-96A to meet the 0.3 pound per 1,000-pound particulate limit. A Spray Dry Absorber (SDA) was installed on the same boiler in February 2015 to reduce HAP emissions and allow Neenah to become a synthetic minor source of HAPs. The mill also operates a latex coater and a dryer in conjunction with their #1 Paper Machine under Permit No. 530-89. Volatile organic compound (VOC) emissions from the coater are limited to 7.8 tons per year under this permit. Approximately 15 additional tons of VOCs are emitted per year from the Saturators, Coaters, and other sources located within the mill.

The facility operates a non-integrated paper mill in Munising, Michigan. It obtains large bales of pulp from pulp suppliers; the bales are soaked in water then go to a hydro-pulper. Additives may be added during the pulping depending on the product needed. Once the pulp leaves the pulper, it goes to the headbox of the paper machine where the paper is formed. Water drains from the paper as it is fed through rapidly rotating rollers and dried. The mill has two (2) paper machines and operates a latex coater and a dryer in conjunction with their #1 Paper Machine. The facility is permitted to operate three additional coaters and two saturators, that are all separate from the paper machines.

Regulatory Summary:

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

The stationary source is subject to Title 40 of the Code of Federal Regulations (CFR) Part 70, because the potential to emit of Carbon Monoxide (CO), Nitrogen Oxides (NOx), and Sulfur Dioxide (SOx) exceeds 100 tons per year.

The stationary source is considered to be a "synthetic minor" source in regards to HAP emissions because the stationary source accepted a legally enforceable permit condition limiting the potential to emit of any single HAP regulated by the federal Clean Air Act, Section 112, to less than 9 tons per year and the potential to emit of all HAPs combined to less than 22.5 tons per year. An "opt out" Permit to Install (PTI) was issued February 3, 2015 to limit facility emissions. This permit was issued for the installation of the Sorbent Spray Absorber pollution control device on EU05. This scrubber primarily controls HCL emissions from EU05. The facility adjusts the concentration of the scrubber solution as needed to comply with the HAP emission limit. The emission factors for each set concentration are outlined in the Malfunction Abatement Plan and Appendix 7 of the ROP. These emission factors are based on several stack tests. The opt out permit was issued prior to the compliance date of 40 CFR Part 63, Subpart DDDDD, allowing the facility to be subject to the area source MACT, 40 CFR Part 63,

Subpart JJJJJJ instead. Neenah Paper is no longer a major source for HAPs and is no longer subject to 40 CFR Part 63, Subpart JJJJ.

EU05 (Boiler #1) and EU15 (Boiler #2) at the stationary source are subject to the National Emissions Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters promulgated in 40 CFR Part 63, Subparts A and JJJJJJ (Area Source MACT). The ROP contains special conditions provided by Neenah Paper in their application for applicable requirements from 40 CFR Part 63, Subparts A and JJJJJJ. The AQD is delegated the regulatory authority for this area source MACT.

The emission limitations or standards for PM-10 and HAPs from EU05 (Boiler #1) at the stationary source are subject to the federal Compliance Assurance Monitoring rule under 40 CFR Part 64. This emission unit has a control device and potential pre-control emissions of PM-10 and HAPs greater than the major source threshold level.

MI-ROP-B1470-2016a Source Wide Conditions:

*Emission Limits:*

- *Individual HAPs:* Less than 9.5 tpy: October 2019 12 month rolling: HCl: 5.3 tpy: In Compliance (Records attached to filed report)
- *Aggregate HAPs:* Less than 23.5 tpy: December 2017 12 month rolling: 9 tpy, most of the HAP emissions are HCL

*Testing Requirements:* Within 180 days of placing the spray dry absorber (SDA) into service, the permittee shall determine emission rates for Hydrogen Chloride, Arsenic, Phosphorous, Manganese, Barium, Chromium, and lead and determine the Hydrogen Chloride control efficiency from EU05 (using exhaust emissions and the chlorine in the coal) by testing at owner's expense, in accordance with Department requirements. The permittee must complete the test once every five years, thereafter. Testing Completed November 1-3, 2016: In Compliance

*Monitoring/ Record Keeping:*

The permittee shall keep the following information monthly:

- The quantity of each HAP containing material used or emitted.
- The HAP emission factor of each HAP containing material used or emitted.
- Individual and aggregate HAP emission calculations determining the monthly emission rate of each in tons per calendar month.
- Individual and aggregate HAP emission calculations determining the annual emission rate of each in tons per 12-month rolling period as determined at the end of each calendar month. For the first month following permit issuance, the calculations shall include the summation of emissions from the 11-month period immediately preceding the issuance date. For each month thereafter, calculations shall include the summation of emissions for the appropriate number of months prior to permit issuance plus the months following permit issuance for a total of 12 consecutive months.

*Reporting: In Compliance*

- Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
- Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))

- Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

In Compliance: The last reports were received July 19, 2019.

Emission Units:

EU05: Boiler #1

*Unit Description:* Boiler, baghouse, stack, coal and ash handling. It can burn coal and natural gas. The boiler capacity is 202 MM BTU/Hr. heat input. The baghouse is utilized to reduce particulate emissions from EU05. EU05 is a CAM subject emission unit subject to the requirements of 40 CFR Part 64. The CAM subject pollutant for the emission unit is PM-10.

*Pollution Control Equipment:* Fabric filter baghouse to control particulate matter emissions (this is a CAM subject control device), and a spray dry absorber (SDA) to control Hazardous Air Pollutants (HAPs).

*Emission Limits:*

· *Particulate:* 0.30 lbs/1000lbs: In Compliance: stack test

*Material Limits:* Coal: maximum sulfur content of 1.5% by weight calculated based on 12,000 BTU's per pound of coal: In Compliance: the last analysis was received November 7, 2019 the sulfur content was 0.67% (Analysis is attached to the hard file of this report).

*Process/Operational Restrictions:* In Compliance

- If less than three baghouse modules (out of five) are operating at the baghouse collector, the permittee shall implement corrective action and maintain a record of action taken to prevent reoccurrence. (R 336.1213(3), R 336.1910)
- Within 60 calendar days of placing the SDA into service, the permittee shall submit to the AQD District Supervisor, an updated Malfunction Abatement Plan (MAP) for EU05. At a minimum the plan shall contain the following: Received: April 29, 2019 for review: In compliance
  - o Operation and maintenance criteria for EU05, add-on control device(s), and for the process and control device(s) monitoring equipment as well as a standardized checklist to document the operation and maintenance of the equipment;
  - o The work practice standards for the add-on control device(s) and monitoring equipment;
  - o Procedures to be followed to ensure that equipment or process malfunctions due to poor maintenance or other preventable conditions do not occur; and
  - o A systematic procedure for identifying process equipment, add-on control device(s) and monitoring equipment malfunctions and for implementing corrective actions to address such malfunctions.

Upon detecting an excursion of the opacity limit, the permittee shall restore operation of EU05 to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. An excursion is the exceedance of the opacity limit (i.e., opacity greater than 20%, except for one 6-minute average per hour greater than 27%). (40 CFR 64.6, 40 CFR 64.7)

*Design/Equipment Parameters:*

- Equip and maintain the baghouse collector with a pressure drop indicator: In Compliance

- Shall not operate EU05 unless SDA is installed, maintained, and operated in a satisfactory manner: In Compliance.

*Testing/Sampling:*

- Shall perform a stack test for particulate matter by June 30, 2016 and once every three years thereafter: In Compliance most recent testing done 10/1/2019

*Reporting:*

- Prompt Reporting of Deviations
- Semiannual reporting of monitoring and deviations
- Annual certification of compliance

In compliance with reporting requirements the last reports were received July 19, 2019

EU15: Boiler #2

*Unit Description:* Boiler #2 and stack: Boiler #2 burns #2 fuel oil. This boiler produces 150,000 lbs. of steam per hour. Boiler capacity is 225 MMBTU/hour heat input. This is a limited use boiler.

*Emission Limits:*

- *Sulfur Dioxide:* 1.7 pounds per million BTUs of heat input for fuel oil. The facility removed the 17,000 gallons of fuel oil for this boiler. The fuel delivery system for the boiler is no longer operable. The facility plans to keep Boiler #2 in the permit but has not used it in 20 years.

*Material Limits:*

- *#2 Fuel Oil:* Maximum sulfur content of 1.6% calculated based on 18,000 BTUs per pound of fuel oil. The facility no longer has fuel onsite for this boiler.

*Monitoring and Record Keeping:* Shall obtain and keep records of sulfur content of the fuel oil burned in Boiler #2: In Compliance there is currently no fuel onsite for this boiler.

*Reporting:*

- Prompt Reporting of Deviations
- Semiannual reporting of monitoring and deviations
- Annual certification of compliance

In compliance with reporting requirements the last reports were received July 19, 2019.

*Other Requirements:*

Comply with the applicable requirements of 40 CFR Part 63, Subpart JJJJJJ - National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers. (40 CFR Part 63, Subpart JJJJJJ)- In Compliance

Flexible Groups:

FGPM1COATER

Emission Unit: EUPM1COATER

*Group Description:* Paper Machine #1 coater, dryers and stack. Paper machine #1 converts pulp and water mixture into a sheet of uniform thickness. The dryers are used to remove moisture at a predetermined rate. Paper is coated on the machine.

**Emission Limits: In Compliance**

- VOCs: 12 lb/hr and 7.8 tpy October 2019 emissions from Coater: 1.83 tons/year
- Acrylonitrile: 0.19 mg/m<sup>3</sup>
- Formaldehyde: 6.3 mg/m<sup>3</sup>
- Particulate: 0.01 lbs/1000 lbs of exhaust
- Opacity: 0%

**Process/ Operational Restrictions:** Shall not fire any fuel in the dryers other than sweet natural gas: In compliance, the dryers only operate on natural gas.

**Testing/ Sampling:**

Upon request of the AQD District Supervisor, the permittee shall verify VOC, acrylonitrile, and formaldehyde emission rates from FGPM1COATER by testing at owner's expense, in accordance with the Department requirements. In compliance

**Monitoring and Record Keeping Requirements:**

Shall monitor and record the paper machine feed rate from the paper machine number 1 on a continuous basis: In compliance

Shall obtain and keep records of VOC emissions, VOC Content of coatings, and gallons of coatings used: In compliance

**Reporting:**

Prompt Reporting of Deviations

Semiannual reporting of monitoring and deviations

Annual certification of compliance

In compliance with reporting requirements, the last report was received July 19, 2019.

**FGSATURATORS&COATERS:**

**Group Description:** Paper Machine #1 saturator, Paper Machine #2 saturator, Saturator #15 and #18 and ovens, and Coaters #16, #17, and #19

**Emission Units:** EUPM1SATURATOR, EUPM2SATURATOR, EUSATURATOR15, EUSATURATOR18, EUCOATER16, EUCOATER17, EUCOATER19

**Emission Limits:**

- VOC: 2.9 lb/gal (minus water) daily volume weighted average: In compliance: materials were reviewed onsite, every coating had a VOC content less than 2.9 lb/gal

**Process/Operational Restrictions:**

The permittee shall handle all VOC and/or HAP containing materials, including coatings, reducers, solvents and thinners, in a manner to minimize the generation of fugitive emissions. The permittee shall always keep containers covered except when operator access is necessary

**Monitoring/Record Keeping:**

Maintain a current listing from the manufacturer of the chemical composition of each coating, including the weight percent of each component. In Compliance: Records reviewed onsite

Keep the following information daily for FGSATURATORS&COATERS:

- Gallons (with water) of each coating used.
- VOC content (minus water and with water) of each coating as applied.
- VOC emission calculations determining the volume-weighted average VOC content of the coatings as applied daily.

In Compliance: Records reviewed onsite

*Reporting:*

- Prompt Reporting of Deviations
- Semiannual reporting of monitoring and deviations
- Annual certification of compliance

In compliance with reporting requirements, the last report was received July 19, 2019.

#### FGEMERGENCYENGINES

*Group Description:* Emergency engines exempt from the requirements of Rule 201 pursuant to Rules 278 and 285(g). These engines are used to run the mill, the fire pump and the wastewater treatment system in the event of a power failure. Each is an existing emergency, combustion ignition (CI) reciprocating internal combustion engine (RICE) greater than 500 brake hp.

*Emission Units:* EUPOWERGENERATOR, EUFIREPUMPGEN, EUWWTPGENERATOR

*Material Limits:*

- *Diesel Fuel:* Maximum sulfur content of 15 ppm (0.0015 percent by weight)
- *Diesel Fuel:* Minimum cetane index of 40 or maximum aromatic content of 35 volume percent

In Compliance: *Records reviewed onsite*

*Monitoring/Record Keeping:*

Keep records of hours of operation recorded through the non-resettable hour meter, document how many hours were spent during emergency operation and how many hours were spent during non-emergency operation. *In Compliance: Records reviewed onsite DURING the Inspection EUPOWERGENERATOR hours read 10416 hours, EUFIREPUMPGEN read 22950 hours, and EUWWTPGENERATOR read 3573 hours*

*Reporting:*

- Prompt Reporting of Deviations
- Semiannual reporting of monitoring and deviations
- Annual certification of compliance

In compliance with reporting requirements, the last report was received July 19, 2019.

*Other Requirements:*

The Facility is subject to 40 CFR Part 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. (40 CFR Part 63, Subparts and ZZZZ) and must comply with applicable requirements: In Compliance

#### FGCOLDCLEANERS

*Group Description:* Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278 and Rule 281(h) or Rule 285(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.

*Material Limits:* Shall not use cleaning solvents containing more than 5% by weight of the following halogenated compounds: methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethylene, carbon tetrachloride, chloroform, or any combination thereof: In compliance There are three cold cleaners onsite. A copy of the SDS for the ZEP Dyna is attached to the hard file of this report. The solution does not contain any of the above halogenated compounds.

*Process/Operational Restrictions:* Cleaned parts shall be drained for no less than 15 seconds or until dripping ceases. In Compliance

Shall perform routine maintenance on each cold cleaner as recommended by the manufacturer. In Compliance

#### *Design/Equipment Parameters:*

The cold cleaner must meet one of the following design requirements: The air/vapor interface of the cold cleaner is no more than ten square feet. (R 336.1281(h)) The cold cleaner is used for cleaning metal parts and the emissions are released to the general in-plant environment. (R 336.1285(r)(iv)) The cold cleaner shall be equipped with a device for draining cleaned parts. (R 336.1611(2)(b), R 336.1707(3)(b)) All new and existing cold cleaners shall be equipped with a cover and the cover shall be closed whenever parts are not being handled in the cold cleaner. (R 336.1611(2)(a), R 336.1707(3)(a)) The cover of a new cold cleaner shall be mechanically assisted if the Reid vapor pressure of the solvent is more than 0.3 psia or if the solvent is agitated or heated. (R 336.1707(3)(a)) The cold cleaner must be designed such that the ratio of the freeboard height to the width of the cleaner is equal to or greater than 0.7. (R 336.1707(2)(a)) In Compliance. *None of the cold cleaners onsite are heated.*

#### FGJJJJJJ-EU05

*Group Description:* Conditions for any existing large ( $\geq 10$  MMBtu/hour heat input) coal-fired industrial, commercial or institutional boiler as defined in 40 CFR 63.11237 (excluding limited use boilers) that is located at, or is part of, an area source of hazardous air pollutants (HAP), as defined in 40 CFR 63.2, except as specified in 40 CFR 63.11195.

*Pollution Control Equipment:* Fabric filter baghouse to control particulate matter emissions and spray dry absorber (SDA) to control HAP emissions.

#### *Emission Limits:*

- *Mercury:*  $2.2 \times 10^{-5}$ : The facility demonstrates compliance with this emission limit using fuel analysis: In Compliance: analysis done November 7, 2019 shows a mercury content of 0.03 micrograms/grams
- *CO:* 420 ppmvd: In Compliance: Stack test performed on August 24, 2016: High boiler load results CO: 40.3 ppmvd Low boiler load results CO: 42.1 ppmvd

#### *Process/Operational Restrictions:*

An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in Table 2 of 40 CFR Part 63, Subpart JJJJJJ satisfies the energy assessment requirement. A facility that operates under an energy management program established through energy management systems compatible with ISO 50001, that includes the affected units,

also satisfies the energy assessment requirement: In Compliance: The energy assessment was performed on April 10, 2015. A copy of the report is attached to the hard file of this inspection report

The boiler must maintain opacity to less than or equal to 10% opacity (daily block average): In Compliance: records were reviewed onsite, the COMs system showed opacity values of 0.03%

Minimize startup and shutdown periods following the manufacturer's recommended procedures, if available: In Compliance

*Testing/Sampling:*

Conduct all performance tests according to 40 CFR 63.7(c), (d), (f), and (h). The permittee must also develop a site-specific test plan according to the requirements in 40 CFR 63.7(c). The permittee must conduct each stack test according to the requirements in Table 4 of 40 CFR Part 63, Subpart JJJJJJ: In Compliance

Conduct performance stack tests at the representative operating load conditions while burning the type of fuel or mixture of fuels that have the highest emissions potential for each regulated pollutant, and the permittee must demonstrate initial compliance and establish the permittee's operating limits based on these performance stack tests. For subcategories with more than one emission limit, these requirements could result in the need to conduct more than one performance stack test: In Compliance

Must conduct a minimum of three separate test runs for each performance stack test required in 40 CFR 63.11212, as specified in Section 63.7(e)(3) and in accordance with the provisions in Table 4 of 40 CFR Part 63, Subpart JJJJJJ: *In Compliance*

The facility demonstrates compliance with the mercury emission limit through fuel analysis and conducts fuel analyses according to 40 CFR 63.11213 and Table 5 of 40 CFR Part 63, Subpart JJJJJJ.

The Facility follows the procedures in paragraphs (c)(1) through (3) of 40 CFR 63.11211, as listed below. (40 CFR 63.11211(c))

If the permittee burns more than one fuel type, the permittee must determine the fuel type, or mixture, the permittee could burn in the boiler that would result in the maximum emission rates of mercury. (40 CFR 63.11211(c)(1)): In Compliance: the facility only burns coal in boiler 1.

Must conduct all applicable performance (stack) tests according to 40 CFR 63.11212 on a triennial basis, except as specified in paragraphs (c) and (d) of 40 CFR 63.11220, stated in SC V.11. Triennial performance tests must be completed no more than 37 months after the previous performance test: In Compliance

*Monitoring/Record Keeping:*

The facility has a continuous opacity monitoring system (COMS) installed and operated continuously according to PS 1 of 40 CFR Part 60 Appendix B. They perform calibrations and performance evaluations as recommended by the manufacturer (VI. SC. 1-5, 11). The facility appears to follow emission/operating limits in Tables 1 and 3 of 40 CFR Part 63, Subpart JJJJJJ (VI. SC. 6-9).

The facility operates under a site-specific monitoring plan (VI. SC. 10)

The facility maintains copies of each notification submitted to comply with 40 CFR Part 63 Subpart JJJJJJ and all documentation supporting any initial notification or notification of compliance status submitted (VI. SC. 12-13).

*Reporting:*

- Prompt Reporting of Deviations
- Semiannual reporting of monitoring and deviations
- Annual certification of compliance

In compliance with reporting requirements, the last report was received July 19, 2019. (VII. SC 1-3, 5-7)

The energy assessment was performed April 10, 2015, the report is attached to the hard copy of this report (VII. SC. 4)

Performance test results are submitted to CDX within 60 days, the last report was submitted November 22, 2019. (VII. SC. 8)

*Other Requirements:*

The facility appears to be following the applicable requirements of 40 CFR Part 63 Subpart JJJJJJ (IX. SC. 1-3).

FGJJJJJ-EU15

*Group Description:* Conditions for existing oil-fired industrial, commercial or institutional limited-use boiler as defined in 40 CFR 63.11237 that is located at, or is part of, an area source of hazardous air pollutants (HAP), as defined in 40 CFR 63.2, except as specified in 40 CFR 63.11195.

*The facility has not operated EU15 (Boiler #2) in over 20 years and has removed 17,000-gallon of fuel oil, they still have a tank onsite. The fuel delivery system of the boiler does not work, and the electrical controls have been disconnected. This boiler appears to follow 40 CFR subpart JJJJJJ and the facility would like to keep this unit in the ROP until further notice.*

At the time of my inspection Neenah Paper appeared to be following MI-ROP-B1470-2019a and all other applicable state and federal air quality regulations.

NAME Sagey

DATE 12/2/19

SUPERVISOR EDL