

DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY DIVISION

FCE Summary Report

Facility : Billerud Escanaba LLC	SRN : A0884
Location : 7100 COUNTY 426 M.5 ROAD PO BOX 757	District : Marquette
	County : DELTA
City : ESCANABA State: MI Zip Code : 49829	Compliance Status : Compliance
Source Class : MAJOR	Staff : Michael Conklin
FCE Begin Date : 9/29/2021	FCE Completion Date : 9/29/2022
Comments : FCE completed for the period 09/29/2021 through 09/29/2022. Based on the inspections performed and records reviewed, Billerud Escanaba and Omya, Incorporated are in compliance with MI-ROP-A0884-2021a.	

List of Partial Compliance Evaluations :

Activity Date	Activity Type	Compliance Status	Comments
09/16/2022	On-site Inspection	Compliance	Part 2 targeted inspection for FY 22.
09/16/2022	On-site Inspection	Compliance	Targeted inspection for FY 22 on Section 2 - Omya, Incorporated.
09/01/2022	Stack Test	Compliance	Woodyard Chip Thickness Screening test. Results show the facility is in compliance.
08/18/2022	Stack Test Observation	Compliance	Stack test observation for Boiler 9 on 8/18/2022.
08/04/2022	MACT (Part 63)	Compliance	40 CFR Subpart S and MM Semi-Annual Report Jan 1, 2022 to June 30, 2022.
08/04/2022	MACT (Part 63)	Compliance	40 CFR 63 Subpart JJJJ Semi-Annual Report from Jan 1, 2022 to June 30, 2022. #1, #3, and #4 Coaters are covered under MACT JJJJ. No deviations reported.
08/04/2022	Excess Emissions (CEM)	Compliance	Second Quarter 2022 CEMS/COMS Excess Emission Report (EER) from Jan 1, 2022 to June 30, 2022. No. 10 Recovery Furnace: opacity, TRS and O2. No. 11 Power Boiler: opacity, NOx and O2. Lime Kiln: TRS and O2. No.8 Power Boiler: NOx and O2. Recovery Furnace had 12, 6-minute average opacity exceedances and 12 hours of TRS exceedance. Reasons and corrective actions provided.

Activity Date	Activity Type	Compliance Status	Comments
07/27/2022	ROP Semi 1 Cert	Compliance	Semi-Annual Report Certification for Omya Inc from Jan 1, 2022 to June 30, 2022. No deviations reported.
06/14/2022	On-site Inspection	Compliance	Targeted inspection for FY 22.
06/07/2022	Stack Test Observation	Compliance	Stack test observation for EUCS14 – Chip Thickness Screening.
05/26/2022	Rule 912	Compliance	Rule 912 Notification - TRS Exceedance from May 1, 2022 to May 18, 2022. Report provides periods of TRS limits exceedances on the Recovery Furnace. Corrective actions were reported. Incident occurred on May 8, 2022.

05/23/2022	MAERS	Compliance	<ul style="list-style-type: none"> • Emissions from the following emission units in the ROP appear to not be accounted for: <ul style="list-style-type: none"> ? EUSB03 - Wood residue surge bin for Boiler 9 ? EUCH68 - Coal Handling ? EUFH68 - Fuel Handling for Boiler 11 ? EU1S68 - #1 Coal Silo for Boiler 11 ? EU2S68 - #2 Coal Silo for Boiler 11 ? EU3S68 - #3 Coal Silo for Boiler 11 ? EU1AS68 - #1 Ash Silo for Boiler 11 ? EU2AS68 - #2 Ash Silo for Boiler 11 ? EUCS61 - Chip Silo for the Refiner Mechanical Pulping System ? EUSS43 - #1 Coater Dry Starch System ? EU1SS08 - #1 Starch Silo ? EU1M08 - #1 Starch Make down tank ? EU2SS08 - #2 Starch Silo ? EU3SS08 - #3 Starch Silo ? EU2M08 - #2 Starch Make down tank ? EUSS66 - Starch Storage for the #4 coater system ? EUME05 - Miscellaneous Evaporator System Devices ? EUSA33 - The Soda Ash Storage Tank ? EUB25 - Chlorine Dioxide Generator Plant ? EUED25 - The Extraction Devices ? EUM25 - Methanol Storage ? EULK129 - Lime Storage Bins ? EULKSIRICE - Lime Kiln Emergency Drive Motor ? EUEOCSIRICE - EOC Back-up Generator ? EUE1CIRICE - E1 Emergency Lift Pump ? EUFW1CIRICE - Water Treatment Building Emergency Fire Water Pump ? EUFW2CIRICE - Administrative Building Emergency Fire Water Pump ? EUTTGCIRICE - Turbine Turning Gear Back-up Generator ? FGHVLC - HVLC System • No. 7 boiler fuel oil activity not reported. • Chip Thickness Screening using lb/hr FF's instead of lb/ton.
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05/23/2022	MAERS	Compliance	<p>throughput is in tons.</p> <ul style="list-style-type: none"> • No emissions reported from the pulp dryer. • Throughput reported for natural gas on Recovery Furnace but no emissions reported. • PM10 emissions for smelt dissolving tank are higher than calculated. • Calculating different value for PM10 from Recuasticizing than emission factor and throughput provided. • No emissions reported for EUPB - Paint Spray Booth. • For Boiler 9 - wood fuel, emissions being reported do not match emission factor provided and throughput. Emission factors also appear to be in lb/MMBtu as stated in the spreadsheet, where throughput in MAERS is tons of wood waste. Slight discrepancies in emission factors listed vs. what is stated in spreadsheet. • Nox emissions for Boiler 11 - coal are not correct based on fuel usage and emission factor. • Incorrect SCC being used for Boiler 11 - natural gas. Should be SCC for greater than 100 MMBtu/hr. • Emission factors entered into MAERS do not align with units that are in spreadsheet. This is causing confusion in understanding the emission calculations. Emission factors do not have to be listed in MAERS if using "other". • Calculating 779,7146 lbs of Nox for Boiler 11 - natural gas. Not able to calculate reported value. Please show all work in calculating emissions. • PM10 and PM2.5 emission factors for Boiler #11 - natural gas are different than what is provided in spreadsheet, under particulate tests for Boiler 11. • Calculating 3,874 lbs of Nox based on data provided for Boiler 11 - waste sludge. • Calculating slightly different values for emissions from Boiler #11 - TDF based on fuel data entered in MAERS and emission factors from spreadsheet. • Calculating 119, 057 lb of Nox from Boiler #11 - TDF based on Nox emission factor and total heat
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05/23/2022	MAERS	Compliance	<p>input.</p> <ul style="list-style-type: none"> • PM10 emissions for Boiler #11 being reported are higher than calculated based on emission factor, fuel data, and control efficiency. • SO2 emissions for Boiler #11 - TDF not able to calculate the same value. • Not able to calculate the reported emissions for Boiler #11 - waste wood. Values are higher than calculated based on emission factors and fuel data. • Not able to calculate reported value for Chip Surge Bins based on throughput and emission factors in spreadsheet. • Source for VOC emission factors from paper machines? • Unable to verify EU1C36 #1 coater VOC emissions. • Unable to verify EU3C27 #3 coater VOC emissions. • Natural gas activity for coater #4? • Unable to verify EU4C6
05/05/2022	Excess Emissions (CEM)	Compliance	<p>1st Quarter CEMS/COMS Report from Jan. 1, 2022 to March 31, 2022. Monitor downtime and excess emissions report for No. 10 Recovery Furnace: opacity, No. 11 Power Boiler: opacity, No.10 Recovery Furnace: TRS and oxygen, Lime Kiln: TRS and oxygen, No. 11 Power Boiler: NOx and oxygen, and No. 8 Power Boiler: NOx and oxygen.</p>
05/05/2022	Stack Test	Compliance	<p>No. 10 Recovery Furnace Compliance Test Report for NOx, CO, SO2, PM from Jan 1, 2022 to Dec 31, 2022. All emission rates passed for the respected emission limits tested for. An extension was granted for the testing of the CO 8-hour average limits. The company will either test for these limits or submit a permit application to modify the limits and averaging times.</p>

Activity Date	Activity Type	Compliance Status	Comments
03/24/2022	ROP Annual Cert	Compliance	Annual Report Certification from 1/1/21 to 12/31/21 for MI-ROP-A0884-2021, Section 1, certified by RO, Michael Glodowski. Deviations included for EURF15 - Chemical Recovery Furnace opacity, TRS CEMS, and liquor flow rate; EU11B68 - #11 Boiler opacity; EUS29 - Reausticizing scrubber flow; FGLK29 - Lime Kiln System scrubber flow; FGTO33 - Thermal Oxidizer System low flow of white liquor. Dates, reasons, and corrective actions documented.
03/24/2022	ROP SEMI 2 CERT	Compliance	Semi-Annual Report Certification from 7/1/21 to 12/31/21 for MI-ROP-A0884-2021, Section 1, certified by RO, Michael Glodowski. Deviations included for EURF15 - Chemical Recovery Furnace opacity, TRS CEMS, and liquor flow rate; EU11B68 - #11 Boiler opacity; EUS29 - Reausticizing scrubber flow; FGLK29 - Lime Kiln System scrubber flow; FGTO33 - Thermal Oxidizer System low flow of white liquor. Dates, reasons, and corrective actions documented.
03/24/2022	CAM Excursions/Exceedances	Compliance	Compliance Assurance Monitoring (CAM) Excursion Summary Report from July 1, 2021 to December 31, 2021. Lime kiln baghouse dP, Lime Slaker scrubber flow, Boiler #9 scrubber dP and scrubber flow, boiler #11 opacity, Thermal Oxidizer stage 1 pH, stage 2 pH, stage 1 circulation pump, stage 2 circulation pump, and scrubber dp exceedances reported.
03/24/2022	CAM monitor downtime	Compliance	Compliance Assurance Monitoring (CAM) Monitor Downtime Report from July 1, 2021 to December 31, 2021. EUOC33-thermal oxidizer, #9 Boiler, Lime Slaker, Lime Kiln System, and #11 Boiler had monitor downtimes. Causes and corrective actions listed.
03/22/2022	Stack Test Observation	Compliance	Performance test on the Recovery Furnace for PTI No. 184-16A.
03/03/2022	CEM RATA	Compliance	CEMS Relative Accuracy Test Audit No. 10 Recovery Boiler from Jan 1, 2021 to Dec. 31, 2021

Activity Date	Activity Type	Compliance Status	Comments
03/03/2022	ROP Annual Cert	Compliance	Omya Inc - Annual Compliance from Jan 1, 2021 to Dec. 31, 2021
03/03/2022	ROP SEMI 2 CERT	Compliance	Omya Inc Semi-Annual Report Certification from July 1, 2021 to Dec. 31, 2021
02/24/2022	Excess Emissions (CEM)	Compliance	4th Quarter CEMS/COMS Report from October 1, 2021 to December 31, 2021. No. 10 Recovery Furnace - Opacity, No. 11 Power Boiler - Opacity, No. 10 Recovery Furnace - TRS and O2, Lime Kiln - TRS and O2, No. 11 Power Boiler - NOx and O2, No. 8 Power Boiler - NOx and O2.
02/24/2022	ROP Other	Compliance	40 CFR 63 Subpart S Semi-Annual Report from 7/1/21 to 12/31/21
02/24/2022	ROP Other	Compliance	40 CFR 63 Subpart MM Semi-Annual Report from 7/1/21 to 12/31/21.
02/24/2022	ROP Other	Compliance	40 CFR 63 Subpart JJJJ Semi-Annual Report from 7/1/21 to 12/31/21
02/24/2022	ROP Other	Compliance	40 CFR 63 Subpart DDDDD Semi-Annual Report 7/1/21 to 12/31/21
01/14/2022	Rule 912		Rule 912 Notification - TRS (5 ppm) exceedance during 12/07/2021 on EURF15. TRS spiked to 6.50 ppm on a 12-hour average. Increased tertiary air to the furnace and reduced black liquor flow rate.
12/15/2021	ROP Other	Compliance	R336.1801 2020 No. 8 Boiler Ozone Season Summary Report from May 1, 2021 to Sept 30, 2021. Actual Ozone Season heat input from natural gas was 683,684 MMBtu/hr and the actual emission rate for the ozone season was 0.148 lbs NOx/MMBtu.
11/29/2021	Stack Test	Compliance	No. 11 Power Boiler testing for HCl and Hg limits established through MACT DDDDD. Source is in compliance with the established limits.
11/29/2021	CEM RATA	Compliance	Boiler 8 and 11 NOx/O2 RATA Testing on 8/17/2021 and 8/18/2021. All relative accuracies were below 20% of the mean reference value.
11/24/2021	MACT (Part 63)	Compliance	Notification of Compliance Status - Boiler MACT for No. 11 Power Boiler.

Activity Date	Activity Type	Compliance Status	Comments
11/24/2021	Excess Emissions (CEM)	Compliance	3rd Quarter CEMS/COMS Excess Emissions and Monitor Downtime Report from July 1, 2021 to Sept. 30, 2021.
11/15/2021	Rule 912	Compliance	Rule 912 Notification - TRS (5 ppm) exceedance during 10/08/2021 through 10/16/2021 on EURF15. New Air System Upgrade (PTI No. 184-16A) on EURF15. While operating the new system, operations struggled with maintain TRS limit while ramping BLS firing rate to projected production rate. Corrective actions included reducing BLS firing rate and consulting with company who completed the ASU project.

Name: Michael Kaplan

Date: 9/30/2022

Supervisor: Michael Kaplan