

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

A088442117

FACILITY: Verso Escanaba LLC		SRN / ID: A0884
LOCATION: 7100 COUNTY 426 M.5 ROAD, ESCANABA		DISTRICT: Upper Peninsula
CITY: ESCANABA		COUNTY: DELTA
CONTACT: WILLIAM R RACINE , ENVIRONMENTAL ENGINEER		ACTIVITY DATE: 10/18/2017
STAFF: Sydney Bruestle	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: Scheduled onsite inspection to verify compliance with MI-ROP-A0884-2016 and all other applicable state and federal air quality regulations		
RESOLVED COMPLAINTS:		

On October 18, 2017 I (Sydney Bruestle) performed a scheduled onsite inspection at Verso Escanaba located at 7100 County 426 M.5 Road Escanaba, MI. While onsite I met with Adam Becker (Air Quality Engineer, Verso) and Bill Racine (Environmental Manager, Verso). They gave me an overview of the processes onsite with a flow diagram and aerial view of the entire plant. Mr. Racine drove us around the site to look at the permitted equipment, pollution control devices, and control rooms. After the facility tour they showed me the system used to track the operation parameters or all the equipment, pollution control devices, and continuous emissions monitors.

Verso Facility Description:

Verso Escanaba operates an integrated pulp and paper mill. The existing facility includes the following general process operations: wood yard, refiner mechanical pulp (RMP) mill, Kraft pulp mill, chemical recover, recausticizing system, bleach plant, boiler house, and coated paper manufacturing operations.

Verso Escanaba is a major pollution source for Carbon Monoxide (CO), Nitrogen Oxides (NOx), Particulate Matter (PM), Sulfur Dioxide (SO2), and Volatile Organic Compounds (VOCs). The facility currently operates under MI-ROP-A0884-2016, which is a sectioned Renewable operating permit. Section 1 covers operations at Verso Escanaba and Section 2 covers Omya, Inc. Omya, Inc. operates a precipitated calcium carbonate plant (PCC) at the Verso Escanaba plant.

The required records were reviewed for the following emission units at Verso Escanaba and Omya Inc. Copies of some records are attached to this report, they are identified below. (SC = Special Condition from the ROP)

EU7B17- Boiler #7

Emission Unit	Unit Description	Material Limits (SC II)	Reporting (SC VII 1-3)	Other Requirements (SCIX)
EU7B17 (Boiler #7)	Riley boiler rated for 150,000 pounds of steam per hour (154 million BTU per hour heat input) Natural Gas and Fuel Oil	Fuel Oil Sulfur Content: 1.5 percent by weight, calculated based on 18,000 BTU/lb	Prompt Reporting of deviations Semiannual reporting of monitoring and deviations Annual certification	Shall comply with the provisions of the NESHAP DDDDD
<i>Review</i>	The facility does not have the ability to burn fuel oil in this boiler. The condition will be removed during the next ROP renewal			
<i>Compliance Status</i>	In Compliance with the ROP special conditions for EU7B17.			

NAME _____ DATE _____ SUPERVISOR _____

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<i>Review</i>	The facility does not have the ability to burn fuel oil in this boiler. The condition will be removed during the next ROP renewal			
<i>Compliance Status</i>	In Compliance with the ROP special conditions for EU7B17.			

EU8B13- Boiler #8

Emission Unit	Unit Description	Emission Limits (SC I. 1-3)	Material Limit (SC II. 1.)	Monitoring and Recordkeeping (SCVI. 1-6)	Reporting (SCVII.1-5)	Other Requirements (SC IX. 1.)
	Combustion Engineering Boiler rated for 450,000 pounds of	NOx 0.20 lbs./MMBtu (Ozone Season) When firing natural gas NOx 0.40 lbs./MMBtu	Fuel Oil Sulfur content 1.0	Obtain and keep records of the sulfur and BTU content of the fuel oil burned in #8 boiler Obtain lab analysis from supplier Record the date received, fuel oil grade, and source of fuel oil, gallons received, supplier info Measure NOx emissions using a NOx CEMS during ozone control period Keep records to	Prompt Reporting of deviations Semiannual reporting of monitoring and deviations	Comply with the

<p>EU8B13 (Boiler #8)</p>	<p>steam per hour (594 million BTU per hour heat input) Natural Gas and Fuel oil</p>	<p>(Ozone Season) when firing fuel oil NOx 0.35 lbs./MMBtu (30 Day rolling average) When firing natural gas or fuel oil</p>	<p>percent by weight, calculated based on 18,000 BTU/lb</p>	<p>demonstrate that the sum of the mass emissions during the ozone control period divided by the sum of the heat input during the period is less than or equal to the emission limitations specified in table 81 A new 30 day average shall be computed at the end of each calendar day in which the boiler operated Maintain records of all CEMs data, Stack test results, fuel usage, maintenance.</p>	<p>Annual certification Submit a summary report to AQD within 60 days after the end of each ozone control season</p>	<p>provisions of the NESHAP DDDDD</p>
<p><i>Reviewed</i></p>	<p>Yes, Boiler #8 has not burned fuel oil in several years.</p>					
<p><i>Compliance Status</i></p>	<p>In Compliance with the ROP special conditions for EU8B13.</p>					

EU11B68- Boiler #11

Unit Description: ABB Combustion Engineering combination fuel boiler rated for 750, 000 lbs. of steam per hour (1040 million btu per hour heat input) Burns: natural gas, solid fuels (coal, wood residue, wastewater treatment plant residuals), TDF, non-hazardous secondary material (NHSM) Pellets

Emission Limits (SC I. 1-6): CO- 0.50 lbs./MMBtu heat input NOx- 0.70 lbs./MMBtu heat input (30 day rolling average when firing solid fuels) NOx- Limits in table 81 of rule 801 (Ozone season) PM- 0.06 lb./MMBTU heat input (When firing solid Fuels) SO2 1.2 lbs./MMBtu heat input (10 Day rolling average when firing solid fuels) Mercury 7.1 lbs. (24-hour period when firing wastewater treatment plant residuals)

Material Limit (SC II. 1-7): Boiler Fuel- At least 45% by weight of fuel fired during normal operation is wood residue and or waste water treatment plant residuals measured as a percentage of wet weight of wood residue and/or wastewater treatment plant residuals per the total wet weight of all solid fuels Coal- Sulfur content average of 1.0 percent by weight calculated on the basis of 12,000 Btu/lb. TDF- 90 tons per day (Monthly Average)-32,220 tons per year Engineered non-waste fuel pellets: 88,700 tons per year Engineered non-waste fuel pellets: chlorine or total halogen content: 15,000 ppm Engineered non-waste fuel pellets- 20% heat input

Process Operational Restrictions (SC III. 1-3): Shall not use solid fuel to start up Boiler #11. Shall not operate Boiler 11 unless the multiclone and electrostatic precipitator are operating properly. Solid fuels feed to Boiler #11 shall be reduced immediately, consistent with safe operating procedures upon operating the electrostatic precipitator as single chambered unit during maintenance (May be increased when ESP is back online)

Monitoring/ Record Keeping (SC VI. 1-22): The permittee shall do the following:

- Monitor the opacity and oxygen from EU11B68 on a continuous basis
- Monitor and record the nitrogen oxides emission from EU11B68 on a continuous basis in a manner and with instrumentation acceptable to the AQD
- Measure NOx emissions using a NOx CEMS during the Ozone control period
- Monitor and record the percentage of wood residue and/or wastewater treatment plant residuals fired in EU11B68 to determine compliance with the limitation specified under Material Usage and Emission Limits
- Obtain and keep records of the sulfur, ash, and BTU content of the coal burned in EU11B68.
- Obtain from the supplier a laboratory analysis of the coal ash, sulfur, and BTU content for each bulk shipment.
- Obtain and keep records of sulfur, ash, and Btu content of the TDF burned in EU11B68. A minimum of twice per year the permittee shall obtain a laboratory analysis of the ash, sulfur, and Btu content. At least once per year the permittee shall have an analysis performed of the TDF for sulfur, ash, arsenic, cadmium, and total chromium, lead manganese, mercury, nickel, zinc, and Btu Content.
- Calculate and keep records of PM10, PM2.5, SO2, NOX, CO, H2SO4, and CO2e emission rates from EU11B68 in tones per year on a calendar basis.
- Obtain and keep records of chlorine (Or total Halogens) and Btu content of the engineered non-waste fuel pellets burned in EU11B68. When burning engineered non-waste fuel pellets, shall obtain a monthly laboratory analysis of the chlorine and BTU content.

- monitor and record the tons of engineered non-waste fuel pellets used as fuel on a monthly and 12 month rolling basis.
- Monitor and record the percent of engineered non-waste fuel pellets on a heat input basis used for fuel on a monthly and 12 month rolling basis.
- Keep and maintain all sampling and or testing results for a period of 5 years
- Utilize COM-recorded opacity as an indicator of the proper operation of the electrostatic precipitator. The indicator range of opacity is 0-20% An excursion is a departure from the range of 0-20% based on a 6-minute averaging time.

Reporting (SC VII. 1-11): The following reports are required for Boiler 11:

- Prompt Reporting of deviations
- Semiannual reporting of monitoring and deviations
- Annual certification report
- Quarterly reporting of the continuous emission monitoring for opacity and nitrogen oxides emissions from EU11B68
- Report annual emissions of PM10 PM2.5 NOx CO H2SO4 and CO2e in tons per year on a calendar year basis to the AQD permit section supervisor
- Monitor downtime
- CAM excursions and exceedances.

Compliance status/records review for Boiler #11: In Compliance with the ROP special conditions for EU11B68.

- Opacity July 2017: 4-5% (6-minute averages)
- NOx Emissions Dec 2016 (30 Day Ave) 0.21 lb./MMBtu May 2017 0.22 lbs./MMBtu
- Records for Materials burned in boiler 11 are attached to inspection report
- TDF monthly usage 20-50 tons per day (less than 90 ton per day limit) TDF annual Usage 15,429 tons/yr in Sept 2017 (less than 32,000 ton per year limit)
- No longer burns Engineered nonhazardous waste fuel pellets
- Percentage of fuel burned that is wood residue and/or waste water treatment plant residuals per total weight of solid fuels December 2016: greater than 70% May 2017: Greater than 70 % (limit is greater than 45%)
- Sulfur content of coal 12/29/14 analyzed: 0.59% 03/25/15: 0.59% 01/07/16 analyzed: 0.62%
- Records of Sulfur, Ash, and Btu content of TDF burned (Records attached to this report): 02/28/2017 Sulfur: 2.19% Ash: 10.35% BTU: 14,909 BTU/lb. 08/29/17: Sulfur: 1.85% Ash: 15.13% BTU: 14,449 Btu/lb. 09/29/2017: Sulfur: 1.81% Ash: 15% BTU: 13,766 BTU/lb.
- Emission records for 2016 attached for PM10 2016: 42.1 tons PM2.5: 38.1 tons SO2: 689.1 tons NOx: 620.2 tons CO: 177.8 tons H2SO4: 52.8 tons

EUCS14- Chip Thickness Screening:

Emission Unit	Unit Description	Emission Limits (SC I. 1-4)	Testing/ Sampling (SC V. 1-2)	Monitoring / Record Keeping (SC VI. 1.)	Reporting (SCVII. 1-3)	Other Requirements (SC IX. 1.)
EUCS14 (Chip thickness screening)	Chip thickness screening system	PM 0.0075 gr/dscfm PM 5.58 pph PM10 0.0044 gr/dscfm PM10 3.29 pph	Verify PM emission rates within 3 years of permit issuance	Visually inspect and record observations of emissions from the cyclone exhausts while the process is operating	Prompt reporting of deviations Semiannual reporting of monitoring and deviations Annual Certification of compliance	Air Cleaning Devices maintained and operated in a satisfactory manner
Reviewed	Yes, Copies of the inspections for December 2016 and May 2017 are attached to this report					
Compliance Status	In Compliance with the ROP special conditions for EUCS14.					

EU2PD40-Pulp Dryer System:

Emission Unit	Unit Description	Monitoring/Record Keeping (SC VI. 1)	Reporting (SC VII. 1-3)
EU2PD40 (Pulp Dryer System)	The #2 Pulp Dryer system	On an annual basis the permittee shall calculate and report the actual emissions of each regulated air pollutant	Prompt reporting of deviations Semiannual reporting of monitoring and deviations Annual Certification of compliance
Reviewed	Yes, The Facility reported to MAERS. VOC emission are 1178 lbs.		

	for 2016
<i>Compliance Status</i>	In Compliance with the ROP special conditions for EU2PD40.

EUCOND- Condensate Collection and Treatment:

Unit Description: Grouping of equipment used to collect and treat kraft pulping process condensates

Pollution Control Equipment: Closed Collection System

Emission Limits (SC I.1.): Total HAP measured as methanol (operational restrictions)

Process/Operational Restrictions (SC III. 1-4): One of the following combinations of HAP-containing pulping process condensates generated, produced, or associated with the equipment listed in 40 CFR 63.446(b) shall be subject to the requirements of 40 CFR 63.446

All the pulping process condensates from the equipment systems specified in 40 CFR 63.446(b)(1) through (b)(5). (40 CFR 63.446(c)(1))

b. The combined pulping process condensates from the equipment systems specified in paragraphs 40 CFR 63.446(b)(4) and (b)(5), plus pulping process condensate stream(s) that in total contain at least 65% of the total HAP mass from the pulping process condensates from equipment listed in 40 CFR 63.446(b)(1) through (b)(3). (40 CFR 63.446(c)(2))

c. The pulping process condensates from equipment systems listed in 40 CFR 63.446(b)(1) through (b)(5) that in total contain a total HAP mass of 11.1 pounds or more of total HAP per ton of oven-dried pulp, based upon a 15-day rolling average. (40 CFR 63.446(c)(3))

3. The pulping process condensates from the equipment systems shall be conveyed in a closed collection system

Recycle the pulping process condensate to an equipment system specified in 40 CFR 443(a) meeting the requirements specified in 40 CFR 63.443(c) or (d); or (40 CFR 63.446(e)(1))

b. Discharge the condensate below the liquid surface of a biological treatment system meeting the requirement specified in 40 CFR 63.446(e)(3); or (40 CFR 63.446(e)(2))

c. Treat the pulping process condensate to reduce or destroy the total HAPs by at least 92% or more by weight; or (40 CFR 63.446(e)(3))

d. Treat the pulping process condensates to remove 10.2 pounds or more of total HAP per ton of oven-dried pulp, based upon a 15-day rolling average, or achieve a total HAP concentration of 330 parts per million or less by weight at the outlet of the control device. (40 CFR 63.446(e)(5))

Reporting (SC VII. 1-4): The following reports are required for EUCOND:

- Prompt reporting of deviations
- Semiannual reporting of monitoring and deviations
- Annual Certification of compliance

Other Requirements (SC IX. 1-2): The permittee must comply with the applicable requirements of 40 CFR Part 63, Subpart A – General Provisions, as indicated in 40 CFR Part 63, Table 1 to Subpart S – General Provisions Applicability to Subpart S. (40 CFR 63.440(g))

Each closed collection system used to comply with 40 CFR 63.446 requirements shall comply with the inspection requirements as specified in 40 CFR 63.453(k)

Compliance Status/Records Reviewed for EUCOND: In Compliance with the ROP special conditions for EUCOND.

The Facility is removing a greater than 13 lbs. (15-day average) or more of HAPS from the collected condensate. This demonstrates compliance with the ROP requirement of at least 10.2 lbs. of HAPs (to be removed). Monthly reports for December 2016 and May 2017 are attached to this inspection report

EURF15- Chemical Recovery Furnace:

Unit Description: The Chemical Recovery Furnace (EURF15) is used to regenerate chemicals used in the Kraft process. The #10 Recovery Furnace is rated for 565,000 pounds of steam per hour (approximately 950 million BTU per hour heat input), and burns black liquor, natural gas, #6 fuel oil, ultra-low sulfur diesel and used oil. Also, the #10 Recovery Furnace receives and incinerates HVLC no condensable gases from the Digester System, Brownstock System, Evaporator System, and Chemical Recovery Furnace System. The secondary air forced-draft air handling fan on the Recovery Furnace has been modified.

Pollution Control: Electrostatic Precipitator on #10 Recovery Furnace

Emission Limits (SC I.1-17): Arsenic: 0.004 mg/m3 (while burning used oil and or blend fuel oil)

- Cadmium: 0.038 mg/m3 (while burning used oil and/or blend fuel oil)
- CO: 2000 ppm by volume based on a 1 hr average; 1424 pph; 800 ppm by volume based on an 8 hr average

- Chromium 0.016 mg/m³ corrected to 70 degrees F and 29.92 in Hg
- HAP Metals Measured as PM: 0.044 gr/dscfm corrected to 8% oxygen
- NOx 400 ppm by volume; 468 pph
- PM 0.033 gr/dscfm; 60.5 pph
- Polychlorinated biphenyls: 0.014 mg/m³
- SO₂: 250 ppm by volume; 407 pph
- Total Reduced Sulfur 5 ppm corrected to 8% oxygen on a 12-hr average; 5.6 pph corrected to 8% oxygen on a 12-hour average

Materials Limit (SC II. 1-3): Used Oil: The concentration of the following materials in used oil shall not exceed the limits specified:

Arsenic: 4 ppmw; Cadmium: 2 ppmw; Chromium: 10 ppmw; Lead: 25 ppmw; Total Halogens: 300 ppmw; Polychlorinated Biphenyls: 3 ppmw; Used Oil: The minimum flash point temperature of the used oil burned shall be greater than 100 F; Used Oil: Not to exceed 15% of the total feed rate of the fuel oil blend

Process/Operational Restrictions (SC III.1-2): The EURF15 operating load shall be reduced to 77,600 pounds of Black Liquor Solids (BLS) per hour if any two electric fields of the electrostatic precipitator are placed out of service. Return to operation exceeding 77,600 pounds of solids per hour shall not commence unless the two fields are returned to service

The EURF15 operating load shall be reduced to 77,600 pounds of BLS per hour if any one of the two chambers of the electrostatic precipitator are down for maintenance, during which all other ESP fields are operating in the active chamber. Return to operation exceeding 77,600 pounds of solids per hour shall not commence unless the other chamber of the electrostatic precipitator is returned to service

Testing Sampling (SC V. 1-4): Shall verify carbon monoxide, nitrogen oxides, and particulate emission rates from EURF15-I by testing

Once within five years of permit issuance, and once every five-year period thereafter, the permittee shall verify the emission rates from the EURF15 by testing, to determine compliance with the emission limits specified in Section I

If the permittee burns used oil and/or blend fuel oil during sustained operation of the EURF15, the permittee shall verify arsenic, cadmium, chromium, and polychlorinated biphenyls emissions from the EURF15 by testing. Once within five years of permit issuance, and once every five-year period thereafter.

Monitoring and Record Keeping (SC VI. 1-15): The permittee shall complete the following:

- Complete all required calculations in a format acceptable to the AQD District Supervisor and make them available by the 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition
- Monitor and record the oxygen content, opacity, and total reduced sulfur of the exhaust gases from EURF15 on a continuous basis in a manner and with instrumentation acceptable to the AQD.
- Install, calibrate, maintain, and operate a COMS
- Monitor and record the black liquor feed rate to EURF15 on a continuous basis
- Monitor the electric current and/or voltage supplied to the twelve fields of the electrostatic precipitator on a continuous basis
- Monitor and record all occurrences when two fields of the electrostatic precipitator are taken out of service as specified under Operational Parameters below, the duration of each occurrence, and the black liquor solids firing rate during each occurrence
- Keep a log of #6 fuel oil deliveries including date of delivery, quantity of #6 fuel oil received, and an analysis of the #6 fuel oil.
- Keep a record of the percentage of used oil in the fuel oil blend burned in the Recovery Furnace to determine compliance with the 15 percent limitation
- Perform an annual analysis of the used oil prior to transferring the used oil to the one million-gallon #6 fuel oil storage tank shall be conducted to determine compliance with the material limits specified under Material Limits above
- Within 30 days after written notification by the AQD, the permittee shall submit an analysis of the used oil and blend fuel oil fired in EURF15.
- Implement corrective action, as specified in the SSM plan prepared under 40 CFR 63.866(a) when the average of ten consecutive 6-minute averages result in a measurement greater than 20 percent opacity
- The source will be considered in violation of the standards of 40 CFR 63.862 if opacity is greater than 35% for 6% or more of the operating time in any quarterly period
- Monitor on a continuous basis and record on a daily average, the horsepower (HP) to the motor on the secondary air forced-draft air handling fan on EURF15
- Each COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period

Reporting (SC VII. 1-9): The following reports are required for EURF15:

- Prompt reporting of deviations
- Semiannual reporting of monitoring and deviations
- Annual Certification of compliance
- Quarterly reporting of TRS continuous monitoring system performance and excess TRS emissions
- Semiannual reporting of excess emissions of opacity
- Quarterly excess emissions report if measured parameters meet any of the Conditions specified in 40 CFR 63.864(k)(1) or (2). When no exceedances of parameters have occurred, permittee shall submit a semiannual report stating that no excess emissions occurred during the reporting period

Other Requirements (SC IX. 1-3): Shall develop and implement a Startup, Shutdown, and Malfunction Plan

Compliance Status/Records Reviewed for EURF15: In Compliance with the ROP special conditions outlined under EURF15.

Records of the oxygen content, opacity, and total reduced sulfur of the exhaust gases from EURF15 were requested for the month of December 2016 and May 2017. O₂ values ranged from 2-5% for both months. Total reduced sulfur ranged from 1-4.5 ppm. Opacity values ranged from 1-6% for both

December 2016 and May 2017. All the values reported demonstrate compliance with the permit limits.

As required by the ROP Verso monitors the black liquor feed rate for EURF15 on a continuous basis. I requested records of the black liquor feed rate for December 15, 2016 and May 15, 2017, I have attached these records to the hard copy of this report. Values were around 3.8 tons/hr (7600 lbs/hr) for December 15, 2016 and May 15, 2017. These values are well below the permit limit of 77,600 lbs. per hour.

Verso submitted records of the electric current/and or voltage supplied to the twelve fields of the electrostatic precipitator (ESP) for December 15, 2016 and May 15, 2017, these records are attached to the hard copy of this report. Verso also submitted records of the most recent two occurrences when two fields of the ESP are taken out of service. These records are required by the ROP.

The facility submitted records for the last two deliveries of fuel oil #6 received for the recovery furnace. These records are attached to the hard copy of this report. Verso no longer burns used fuel oil in the recovery furnace.

The facility submitted records for the daily average horsepower to the motor (for December 2016 and May 2017). The records are attached to this report.

EUST15- Smelt Dissolving Tank

Unit Description: Used to regenerate chemicals used in the kraft process. Receives smelt from the #10 Recovery furnace, mixes with weak wash to generate green liquor and is transported to the recausticizing system

Pollution Control: Wet Scrubber and mist eliminator

Emission Limits (SC I. 1-3): HAP metals measured as PM: 0.20 lb./ton of black liquor solids fired; PM 0.15 lb./1000 lbs. of exhaust gases; Total Reduced Sulfur (TRS) 0.0084 gr/kg of black liquor solids (12 hr average)

Testing/Sampling (SC V. 1-3): Shall verify particulate and TRS emission rates from EUST15 by testing Once within five years of permit issuance, and once every five-year period thereafter. Shall conduct performance tests for particulate matter per the applicable performance test requirements and test methods.

Monitoring/Record Keeping (SC VI. 1-6): Shall install, calibrate, maintain and operate a continuous monitoring system to measure fan run status and the scrubbing liquid flow rate at least once every successive 15-minute period

Shall maintain operating parameters within the range established according to 40 CFR 63.864(l). The source will be considered in violation of the standards in 40 CFR 63.862 if six or more 3-hour average parameter values within any semi-annual reporting period are outside the established operating range, always except during periods of SSM. No more than one exceedance will be attributed to any 24-hour period. Shall implement corrective action, as specified in the SSM plan.

The monitoring device used for continuous measurement of the scrubbing liquid flow rate must be certified by the manufacturer to be accurate within ±5 percent of the design scrubbing liquid flow rate.

Reporting (SC VII. 1-7): The following reports are required for EUST15:

- Prompt reporting of deviations
- Semiannual reporting of monitoring and deviations
- Annual certification of compliance
- Shall submit the applicable notifications and reports specified in 40 CFR 63.9 and 40 CFR 63.10. The permittee shall submit a quarterly excess emissions report if measured parameters meet any of the conditions.

Other Requirements (SC IX. 1-3): The air cleaning devices shall be maintained and operated in a satisfactory manner. The permittee shall develop and implement a Startup, Shutdown, and Malfunction Plan. The permittee shall comply with the applicable requirements of 40 CFR Part 63, Subpart A – General Provisions which are identified in 40 CFR Part 63, Table I to Subpart MM – General Provisions Applicability to Subpart MM.

Compliance Status/Records Reviewed for EUST15: In Compliance with the ROP special conditions for EUST15.

The facility submitted records of the scrubber liquid flow rate for December 15, 2016 and May 15, 2017. Values ranged from 327-352 gpm for both dates. The facility uses TRS data from the compliance stack test performed on March 3, 2011 to calculate TRS emissions.

EUS29-Recausticizing System

Unit Description: Lime Slaker (EUS29). In the slaker, calcium oxide from the Lime Kiln System (FGLK29) reacts with green liquor from the Smelt Dissolving tank (EUST15) to produce white liquor and lime mud. The reaction is carried out in the slaker and causticizers. The mixture is separated in two white liquor clarifiers. White liquor is used in the digesters as a cooking chemical. Lime mud is washed, dewatered and oxidized in the Lime Kiln System to regenerate calcium oxide for the slaking process.

Pollution Control: Wet Scrubber

Emission Limits (SC I. 1.): Particulate: 0.10 lb/ 1000 lbs. of exhaust gas

Testing/Sampling (SC V. 1-2): Test for Particulates according to procedures and test methods specified or approved by the AQD Verify particulate emission rates from EUS29 by testing at owner's expense, in accordance with Department requirements. Once within five years of permit issuance, and once every five-year period thereafter, the permittee shall verify the emission rates from the EUS29 by testing, to determine compliance with the emission limits specified in SC I.

Monitoring/Record Keeping (SC VI. 1-7): The permittee shall equip the Lime Slaker scrubber with at least one of the following:

- Operable water pressure gauge
- Operable water flow meter
- Viewport with pivoted cover or quick release hatch
- Scrubber drain with readily visible sump to verify scrubber water flow

Continuously monitor the scrubber liquid flow rate and record every 15 minutes for a 3-hour average as an indicator of proper operation of the venturi scrubber. The indicator range is a range determined during the last performance test approved by the Administrator and specified in the facility's Compliance Assurance Monitoring (CAM) Plan

Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions)

Maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions.

Reporting (SC VII. 1-8): The following reports are required for EUS29:

- Prompt reporting of deviations
- Semiannual reporting of monitoring and
- Annual certification of compliance
- Semiannual report of monitoring and deviations as specified under the CAM requirements shall include summary information on monitor downtime
- Semiannual report of monitoring deviations as specified under the CAM requirements shall include summary information on the number, duration, and cause of CAM exceedances/excursions in the reporting period; and the corrective actions taken in response

Other Requirements (SC IX. 1-3): The air cleaning devices—maintained and operated in a satisfactory manner. Comply with all applicable requirements of 40 CFR Part 64.

Compliance Status/Records Reviewed for EUS29: In Compliance with the ROP special conditions for EUS29.

The facility submitted records of the scrubber flow rate for December 15, 2016 and May 15, 2017. Flow rates for both dates were around 160 gallons per minute.

EUPB-Spray Paint Booth

Emission Unit	Unit Description	Pollution Control	Material Limits	Process Operational Restrictions	Monitoring/Record Keeping	Reporting
EUPB (Spray Paint Booth)	Maintenance Paint Spray Booths	Dry Exhaust Filters	200 gallons as applied per month	Keep all dry exhaust filters in place whenever EUPB is in operation	Keep a monthly record of the total quantity of coating used in EUPB minus water	Prompt reporting of deviations Semiannual reporting of monitoring and deviations Annual Certification of Compliance
Reviewed	Paint usage records for December 2016 and May 2017 are attached to the hard copy of this report. Values were below the limit of 200 gallons per month.					
Compliance Status	In compliance with ROP special conditions for EUPB					

FG9B03- Boiler #9 System

Group Description: The #9 Boiler System (FG9B03) has two emission units, the #9 Boiler and Wood Residue Surge Bin (EUSB03). The # 9 Boiler (EU9B03) is a Babcock & Wilcox boiler rated for 250,000 pounds of steam per hour (approximately 360 million BTU per hour heat input) that provides steam for mill processes and steam turbine-generators for producing electricity. The # 9 boiler burns primarily wood residue, but may also burn natural gas, and paper cores.

Pollution Control: Multiclone and two wet scrubbers on the #9 boiler Exhaust; Cyclone dust collector on wood residue surge bin.

Emission Limits (SC I. 1-5): NOx Limits specified in table 81 of rule 801; 0.27 lb/MMBtu

PM 0.50 lb/ 1000 lbs. exhaust gases (if wood residue heat input is >75% of the total heat input to the boiler; The fraction of total heat input from the wood residue times 0.67 lb/ 1000 lbs. exhaust gases If the wood residue heat input is < 75% of the total heat input; 0.10 lb/ 1000 lbs. exhaust

procedures, upon initiation of scrubber bypass. During a scrubber bypass, the permittee shall burn only natural gas in EU9B03. Wood residue fuel input shall not be restarted until the scrubber is back on line and functioning properly.

Testing/Sampling (SC V. 1-3): Shall verify PM emission rates from EU9B03 by testing at owner's expense, in accordance with Department requirements. Once within three years of permit issuance, the permittee shall verify the emission rates from the EU0B03 by testing, to determine compliance with the emission limits specified in Section I. 40 CFR Part 63, Subpart DDDDD emissions testing for these pollutants can be used to satisfy this requirement.

Monitoring/Recordkeeping (SC VI. 1-13):

- Equip each wet scrubber with a pressure drop indicator and a flow meter
- Keep records of the quantities and respective BTU content, of natural gas, wood residue, and paper cores burned in the # 9 boiler
- Continuously measure and record pressure drop on the North and South scrubbers as an indicator of proper operation of the scrubber. The indicator range for each scrubber is a range determined during the last performance test approved by the AQD and specified in the facility's Compliance Assurance Monitoring (CAM) Plan
- Continuously monitor and record the scrubber liquid flow rate on the North and South scrubbers as an indicator of proper operation of the scrubber. The indicator range for each scrubber is a range determined during the last performance test approved by the AQD and specified in the facility's Compliance Assurance Monitoring (CAM) Plan.
- The pressure drop indicator shall continuously monitor the scrubber pressure. The averaging period is based on a three-hour averaging time. The monitor shall be calibrated annually
- The liquid flow gauge shall continuously monitor the scrubber liquid flow rate. The averaging period is based on a three-hour averaging time. The monitor shall be calibrated annually
- An excursion is a departure from the scrubber pressure drop or liquid flow rate indicator range determined during the last performance test approved by the AQD and specified in the facility's Compliance Assurance Monitoring (CAM) Plan
- Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions).

Reporting (SC VII. 1-11): The following reports are required for FG9B03:

- Prompt reporting of deviations; Semiannual reporting of monitoring and deviations
- Annual certification of compliance
- Applicable oxides of nitrogen reporting and compliance certification (specified in Rule 801, during years when the boiler meets the definition of a fossil fuel fired emission unit).
- Semiannual reports of monitoring and deviations (specified under the CAM shall include summary information on monitor downtime.)
- The owner/operator of Boiler 9 shall submit reports of any compliance test measuring NOx emissions from Boiler 9 within 60 days of the last day of the test. If the owner/operator commences operation of a continuous NOx emission monitoring system for Boiler 9, owner/operator shall submit reports for Boiler 9 as specified in 40 CFR 52.1183(I)(7)(i) to (iv).

Other Requirements (SC IX. 1-4): Air cleaning devices shall be maintained and operated in a satisfactory manner. Shall comply with all applicable requirements of 40 CFR Part 64. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the CAM Plan to address the necessary monitoring changes. The permittee shall comply with the provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart DDDDD, as they apply to EU9B03, by the initial compliance date.

Compliance Status/Records Reviewed for FG9B03: In Compliance with the ROP special conditions for FG9B03

The facility submitted records of the quantities and respective BTU content of natural gas, wood residue, and paper cores burned in the #9 boiler for December 2016 and May 2017. The records are attached to the hard copy of this report. Verso Escanaba no longer burns paper cores. The facility also submitted records of scrubber flow rate and pressure drop for December 15, 2016 and My 15, 2017, these records are attached to the hard copy of this report. Flow rates were around 1450 gpm for the North Scrubber and 1250 gpm for the South Scrubber for both months. Pressure drop values were around 8 in WC for the North scrubber and 5.5 in WC for the South scrubber. These values fall with in the parameters outlined in the CAM plan.

FGSB14-Chip Surge Bins

Flexible Group	Group Description	Pollution Control	Emission Limits	Monitoring/ Record Keeping	Reporting	Other Requirements
FGSB14 (Chip Surge Bins)	The Chip Surge Bin System (FGSB14) has two emission units: #1 Chip Surge Bin (EU1SB14) and #2 Chip Surge	#1 Chipper Cyclone, #2 Chipper Cyclone	PM: 0.10 lb/1000 lbs of exhaust gases (weekly)	Visually inspect and record observations of emissions from the cyclone exhausts while the process is operating. Conducted on a	Prompt reporting of deviations Semiannual reporting of monitoring and deviations Annual	Air cleaning devices shall be maintained and operated in a satisfactory manner

	Bin (EU2SB14).			weekly basis.	certification of compliance	
<i>Reviewed</i>	The facility submitted records of weekly inspections for the month of December 2016 and May 2017.					
<i>Compliance Status</i>	In compliance with ROP special conditions for FGSB14					

FGFAHS68-#11 Boiler and Ash Handling

Flexible Group	Group Description	Pollution Control	Emission Limits (SC I. 1-2)	Process Operational Restrictions	Reporting (SC VII. 1-3)	Other Requirements
FGFAHS68 (#11 Boiler Fuel and Ash Handling)	The #11 Boiler Fuel and Ash Handling System (FGFAHS68) includes the following emission units: Coal Handling (EUCH68), Fuel Handling including wood residue, wastewater treatment plant residuals, pellet fuel, and TDF (EUFH68), #1 Coal Silo (EU1S68), #2 Coal Silo (EU2S68), #3 Coal Silo (EU3S68), #1 Ash Silo (EU1AS68), and #2 Ash Silo (EU2AS68).	Individual Baghouses on #1, #2, and #3 Coal Silos; Baghouse on #2 Ash Silo; Pugmills for wetting ash from #1 and #2 Ash Silos prior to loading into trucks for disposal	PM: 0.03 gr/dscf (Each exhaust of FGFAHS68 equipment for handling and storage of wood residue, coal, wastewater treatment plant residuals, and ash) Visible Emissions: 5% Opacity (Instantaneous) (FGFAHS68 equipment for handling solid fuels and ash)	Do not operate the EU11B68 equipment for the handling and storage of solid fuels unless the dust collection equipment is operating properly. All coal handling and storage shall be totally enclosed or equipped with dust suppression or baghouse control equipment.	Prompt reporting of deviations Semiannual reporting of monitoring and deviations Annual certification of compliance	Air cleaning devices shall be maintained and operated in a satisfactory manner no visible emissions greater than 5% from the coal storage pile and the EU11B68 equipment for handling solid fuels and ash
<i>Reviewed</i>	The facility was able to provide records to demonstrate proper operation of the dust collection system					
<i>Compliance Status</i>	In compliance with ROP special conditions for FGFAHS68					

FGRMP- RMP System

Flexible Group	Group Description	Pollution Control	Emission Limits (SC I. 1.)	Process/ Operational Restrictions (SC III. 1)	Monitoring/ Recordkeeping (SC VI. 1-2)	Reporting (SC VII. 1-3)	Other Requirements (SC IX. 1)
	The Refiner Mechanical Pulping System (FGRMP)			Not produce more than 113,150 tons of Refined	Visually inspect and record observations of emissions from the cyclone exhausts of	Prompt reporting of	

FGRMP (RMP System)	has three emission units: The Chip Silo (EUCS61), the Chip Surge Bin (EUSB61), and Refiner Mechanical Pulping (EURMP61).	Chip Silo Cyclone, Chip Surge Bin Cyclone	PM 0.10 lb/1000 lbs of exhaust gas (weekly)	Mechanical Pulp (RMP) per year through EURMP61, as determined on a 12 month rolling time period basis.	EUCS61 and EUSB61 while EURMP61 is operating (conducted on a weekly basis) Monitor and record the amount of RMP produced monthly and on a 12 month rolling average.	deviations Semiannual reporting of monitoring and deviations Annual certification of compliance	The air cleaning devices shall be maintained and operated in a satisfactory manner
<i>Reviewed</i>	The facility provided records of weekly inspections and emission observations from the cyclone exhaust of EUCS61 and EUSB61 while EURMP61 is operating for the months of December 2016 and May 2017. Records are attached to the hard copy of this report. The facility submitted records for RMP produced (12 month rolling average) for December 2016 and May 2017 (attached to hard copy of report). The RMP value for 2016 was 81,000 tons per year, the value for 2017 (through September) was 83,000 tons per year (in compliance with the 113,150 ton per year limit)						
<i>Compliance Status</i>	In Compliance with the ROP special conditions for FGRMP.						

FGPAPER- Paper Machine System

Flexible Group	Group Description	Emission Limits (SC I.1-2)	Material Limits (SC II. 1)	Process/ Operational Restrictions (SC III. 1)	Monitoring/ Recordkeeping (SC VI. 1-6)	Reporting (SC VII. 1-3)
FGPAPER (Paper Machine Systems)	Paper Machine Systems (FGPAPER) includes the #1 Paper Machine (EU1PM32) and associated stock preparation equipment, the #3 Paper Machine (EU3PM07) and associated stock preparation equipment and the #4 Paper Machine (EU4PM64) and associated preparation equipment	VOC (including additives and or cleaning solvents): 27.51 tpy (EU3PM07) VOC including additives and/or cleaning solvents 26.9 tpy (EU4PM64)	Paper: 268, 650 tpy (EU4PM64)	The permittee shall use only mill supply water, non-direct contact condensates, well water, or white water as sources for EU3PM07.	Calculate and report the actual emissions of each regulated air pollutant Monthly calculations of the 12-month rolling average total VOC emission from EU3PM07 expressed in tons per year to determine compliance with the limitation specified under Emission Limits above Keep Material Safety Data Sheet and/or a material specification sheet for all chemical additives used by EU3PM07. Monthly and 12-month rolling time period paper production from EU4PM64. Monthly and 12-month rolling time period VOC emission calculation records for EU4PM64. Maintain a current listing from the manufacturer of the chemical composition of each chemical additive used by EU4PM64, including the weight percent of each component.	Prompt reporting of deviations Semiannual reporting of monitoring and deviations Annual certification of compliance
<i>Reviewed</i>	The facility submitted VOC emission records for EU3PM07 and EU4PM64. EU3PM07-May 2017 VOC emissions were 20.45 tons per year (permit limit is 27.51 tons per year) December 2016 VOC emissions were 22.86 tons per year. EU4PM64- May 2016 VOC emissions were 22.4 tons per year. December 2016 VOC emissions were 24.6 tons per year. (permit limit for EU4PM64 is 26.9 tons per year). The facility submitted monthly records of paper produced for December 2016 and May 2017; Values were 20779 tons for December and 20705 tons for May (permit limit is 268,650 tons per year)					
<i>Compliance Status</i>	In compliance with the ROP special conditions for FGPAPER					

FGCOATER- Paper Machine Coaters

Flexible	Group	Emission Limits	Monitoring / Recordkeeping	Reporting	Other Requirements
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Group	Description	(SC I. 1-7)	(SC VI. 1-7)	(SC VII. 1-4)	(SC IX. 1)
FGCOATER <i>(Paper Machine Coaters)</i>	The Paper Machine Coaters (FGCOATER) includes 3 emission units: the #1 Coater (EU1C36), the #3 Coater (EU3C27), and the #4 Coater (EU4C65). These coaters are subject to 40 CFR Part 63, Subpart JJJJ.	VOC (EU1C36): 7.8 pph monthly average VOC (EU1C36): 0.00037 lb/ lb of coating solids applied monthly average VOC including additives and or cleaning solvents (EU3C27): 28 tpy VOC (EU3C27): 0.00027 lb/ lb oc coating solids applied (monthly average) VOC including additives and or solvents (EU4C65): 31.5 tpy VOC (EU4C65): 0.00021 lb/ lb of coating solids applied HAP (EU1C36, EU3C27, EU4C65): No more than 20% of the mass of coating applied for each month (monthly average)	Keep monthly records of all coating usage amounts and VOC contents and the hours of operation of EU1C36 perform calculations of the VOC emission rate from EU1C36 expressed in pounds of VOC per hour to determine compliance with the limitation specified under Emission Limits above. monitor and record the raw material usage rate and the VOC content of each raw material used for EU3C27 and EU4C65 perform monthly calculations of the 12-month rolling average total VOC emission from EU3C27 and EU4C65 expressed in tons per year to determine compliance with the limitation specified under Emission Limits above perform monthly calculations of the monthly average VOC emission from EU1C36, EU3C27 and EU4C65 expressed in pounds of VOC per pound of coating solids applied Keep a Material Safety Data Sheet and/or a material specification sheet for all raw materials used by EU3C27 and EU4C65. Maintain records specified in 40 CFR 62.10(b)(2) for all measurements needed to demonstrate compliance with 40 CFR Part 63, Subpart JJJJ, including monthly average coating material usage, volatile organic content and coating solids content. The as applied volatile organic content and coating solids content shall be determined using the methodologies identified in 40 CFR 63.3360	Prompt reporting of deviations Semiannual reporting of monitoring and deviations Annual certification of compliance	no visible emissions except uncombined water vapor from the #1 Coater coating applicators or their associated dryers
<i>Reviewed</i>	The facility submitted records of coating usage amounts, VOC contents, hours of operation, and VOC emission rate for EU1C36 for December 2016 and May 2017 (attached to the hard copy of this report). December 2016 VOC emissions: 1773.7 lbs. May 2017: 1195 lbs VOCs. VOC emission rate (calculated for December 2016): 3.99 lbs/hr; Calculated for May 2017: 3.24 lbs/hr (Permit Limit: 7.8 pph). Records of Raw material usage and Monthly VOC calculations (tons per year and average lb VOC/lb dry coating) (December 2016 and May 2017) from EU3C27 and EU4C65 are attached to the hard copy of this report. EU3C27: December 2016: VOC: 0.575 tons/year 0.00012 lbs VOC/ Lb Coating (limit: 0.00018) May 2017: VOC : 0.410 ton/year 0.00015 lb VOC/Lb Coating EU4C65: December 2016: 0.584 ton/year VOC 0.000073 lbs VOC/lb Coating (limit: 0.00015) May 2017: 0.193 ton/year VOC 0.000025 lb VOC/lb. Coating				
<i>Compliance Status</i>	In Compliance with ROP special conditions for FGCOATER				

FGSTARCH- Starch Handling and Make down equipment:

Flexible Group	Group Description	Pollution Control	Emission Limits (SC I. 1.)	Process/ Operational Restrictions (SC III. 1)	Monitoring/ Recordkeeping (SC VI. 1)	Reporting (SC VII. 1-3)	Other Requirements (SC IX. 1)
	Equipment for handling and makedown of starch for paper machines and coaters:	#1 Coater Dry Starch System: Individual baghouse dust collectors serving #1, #2 Starch					

<p>FGSTARCH-Starch Handling and Make-down</p>	<p><u>#1 Coater Dry Starch System equipment (EUSS43):</u> #1, #2 Starch Silo, #1, #2 Starch Day Bins, and #1, #2 Starch Wet Out Tanks. <u>#3 Paper Machine Dry Starch System equipment:</u> #1 Starch Silo (EU1SS08) #1 Starch Makedown Tank (EU1M08). <u>The #3 Coater Dry Starch System:</u> #2 Starch Silo (EU2SS08), #3 Starch Silo (EU3SS08), and #2 Starch Makedown Tank (EU2M08). <u>#4 Coater System includes Starch Storage (EUSS66)</u> consisting of #1, #2 Starch Silos.</p>	<p>Silos, common baghouse serving #1, #2 Starch Day Bins, and common baghouse serving #1, #2 Starch Wet Out Tanks. #3 Paper Machine: baghouse dust collectors serve #1 Starch Silo and #1 Starch Makedown Tank. #3 Coater Dry Starch System: baghouse dust collectors serve #2 Starch Silo, #3 Starch Silo, #2 Starch Make down Tank. #4 Coater System: Individual baghouse dust collectors serve the #1, #2 Starch Silos.</p>	<p>PM 0.10 lb/1000 lbs. exhaust</p>	<p>not operate the starch handling equipment unless the baghouse dust collectors are operating properly</p>	<p>Visually inspect and record observations of emissions from the baghouse vents during starch transfer when the process occurs during daylight hours. conducted on a weekly basis</p>	<p>Prompt reporting of deviations, Semiannual reporting of monitoring and deviations, Annual certification of compliance</p>	<p>air cleaning devices shall be maintained and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control Rules and existing law. The permittee shall carry out an Inspection and Maintenance Program, including keeping of records of inspections done, problems found, repairs done, and/or corrective action taken.</p>
<p><i>Reviewed</i></p>	<p>Records of weekly inspections and observations of emissions from the baghouse vents during starch transfer for December 2016 and May 2017 are attached to the hard file of this report.</p>						
<p><i>Compliance Status</i></p>	<p>In Compliance with the ROP special conditions for FGSTARCH</p>						

FGBBKRAFT-Kraft Mill Subpart BB Systems

Flexible Group	Group Description	Pollution Control	Emission Limits (SC I. 1.)	Process/ Operational Restrictions (SC III. 1)	Reporting (SC VII. 1-3)
<p>FGBBKRAFT-</p>	<p>Kraft Pulp Mill Subpart BB Systems (FGBBKRAFT) include the following: The Digester System (EUBB22) consists of batch digesters, blow tanks, and a blow heat condensing system. The Brownstock System (EUBB23) processes brown pulp from the digester blow tanks and includes the knotters, brownstock washers, and associated vacuum pumps and filtrate tanks. The Brownstock System is used for final treatment of Kraft pulping process condensates regulated under the Standards for Kraft Pulping Process Condensates 40 CFR 63.446 (see EUCOND - Condensate Collection and Treatment System). The Steam</p>	<p>Gases from the EUBB22 Digester System, the EUBB33 Steam Stripping System, and the EUBB05 Evaporator System are routed to the EULVHC closed vent gas collection system and destroyed in the Thermal Oxidizer (EUOC33) or the</p>	<p>Total Reduced Sulfur- 5 ppm by</p>	<p>Do not operate the EUBB22, EUBB33, or EUBB05 Systems unless the gases are properly collected and oxidized in a properly installed and operated control system consisting of either the Thermal Oxidizer (EUOC33) followed by the</p>	<p>Prompt reporting of deviations, Semiannual</p>

<p>Kraft Mill Subpart BB Systems</p>	<p>Stripping System (EUBB33) consists of a steam stripper column and reflux condenser used to strip total reduced sulfur (TRS) compounds from condensate streams from various processes in the Kraft pulp mill. The Steam Stripping System is also used to pre-treat kraft pulping process condensates regulated under the Standards for Kraft Pulping Process Condensates 40 CFR 63.446 (see EUCOND - Condensate Collection and Treatment System). The Evaporator System (EUBB05) consists of a multiple-effect evaporator and associated condensers and hot well used to concentrate the spent cooking liquid that is separated from the pulp (black liquor).</p>	<p>Lime Kiln (EULK15) as a backup. Gases from the EUBB23 Brownstock System and the EUBB22 Digester System digester domes and capping valves are routed to the EUHVLC closed vent gas collection system and destroyed in Chemical Recovery Furnace (EURF15).</p>	<p>volume (dry basis), corrected to 10% oxygen based upon a 12-hour average</p>	<p>packed scrubber or the Lime Kiln (EULK15) as a backup incineration device. EUBB23 Brownstock System gases and EUBB22 Digester System gases from the digester domes and capping valves must be properly collected and combusted in the #10 Recovery Furnace (EURF15).</p>	<p>reporting of monitoring and deviations, Annual certification of compliance</p>
<p>Compliance Status</p>	<p>In Compliance with the ROP Special conditions for FGBBKRAFT</p>				

FGLVHC-LVHC-LVHC and FGHVLC- HVLC System:

Group Description FGLVHC: The LVHC System (FGLVHC) consists of a collection of equipment regulated by 40 CFR Part 63, Subpart S including the digesters, turpentine recovery, evaporator, steam stripping system, and associated equipment which vent to the LVHC gas collection system. Emission Units include: Evaporator NSPS Devices (EUBB05), Digester Other Devices (EUOT22), Digester NSPS Devices (EUBB22), and Miscellaneous Turpentine Handling Devices (EUMT22), Steam Stripping NSPS Devices (EUBB33) and Miscellaneous Condensate Stripping System Devices (EUMC33).

Pollution Control Equipment FGLVHC: LVHC gases from FGLVHC are collected in a closed vent collection system and incinerated in the Thermal Oxidizer (EUOC33) or the Lime Kiln (EULK15) as a backup incineration device.

Group Description FGHVLC: The HVLC System (FGHVLC) consists of a collection of equipment regulated by 40 CFR Part 63, Subpart S including the following: knotters, brownstock washers, brownstock filtrate tanks, digester fugitive gases, and black liquor storage and processing tanks. Emission Units include: EUBB22 digester capping valves, Brownstock NSPS Devices (EUBB23) and Miscellaneous Evaporator System Devices (EUME05).

Pollution Control Equipment FGHVLC: HVLC gases from FGHVLC are collected in a closed vent system and destroyed in the Chemical Recovery Furnace (EURF15).

Emission Limits (SC I. 1): Total HAP measured as methanol (limited by process/operational restrictions)

Process/Operational Restrictions (SC III. 1-4): Total HAP emissions from FGLVHC must be enclosed and vented into a closed vent system, then routed to a control device. Must meet the applicable requirements specified in "Standards for Enclosures and Closed Vent Systems". Maintain records for all periods of excess emissions (Periods of excess emissions from FGLVHC are not violations of 63.443(c) and (d) provided that the time of excess emissions divided by the total process operating time in a semiannual reporting period does not exceed one (1) percent for control devices used to reduce the total HAP emissions from FGLVHC.

The control device must meet one of the following requirements:

- Reduces total HAP emissions by 98% or more by weight
- Reduces the total HAP concentration at the outlet of the thermal oxidizer to 20 parts per million or less by volume, corrected to 10% oxygen (dry basis).
- Reduces total HAP emissions using a thermal oxidizer designed and operated at a minimum temperature of 1600°F and a minimum residence time of 0.75 seconds
- Reduces total HAP using a boiler, lime kiln, or recovery furnace by introducing the HAP emission stream with the primary fuel or into the flame zone.

Monitoring/Record Keeping (SC VI. 1-2): Inspect closed vent system and enclosures as required by 40 CFR 63.450

Reporting (SC VII. 1-4): The following reports are required for FGLVHC:

- Prompt Reporting of deviations
- Semiannual reporting of monitoring/deviations
- Annual Certification of compliance

Other Requirements (SC IX. 1): Comply with applicable requirements of 40 CFR Part 63 Subpart A and Subpart S.

Compliance Status/Records Reviewed for FGLVHC: In Compliance with the ROP special conditions for FGLVHC

The facility submitted a semiannual report verifying compliance with Subpart S on July 27, 2017.

FGB25- Bleaching System

Unit Description: The Bleaching System (FGB25) has four emission units: Bleaching Stage Equipment (EUS25) which includes the bleaching stage equipment where chlorine dioxide is applied and removed, the Chlorine Dioxide Plant (EUB25), Extraction Devices (EUED25), and Methanol Storage (EUM25). The Bleaching System is used to whiten Brownstock pulp for papermaking. Bleaching is accomplished using chemicals, bleaching towers, extraction towers, and washers. Chlorine dioxide is used for bleaching, and is manufactured on site.

Pollution Control Equipment: Gases from the pulp bleaching stages are routed in a closed vent collection system to the Bleach Plant Scrubber System which consists of two packed scrubbers in series. Off-gases from the chlorine dioxide generator and storage tanks are scrubbed with chilled water in a tail gas scrubber prior to being scrubbed in the Bleach Plant Scrubber system.

Emission Limits (SC I. 1-3): Chlorine: 789 mg/m³ (corrected to 70 F and 29.92-inch Hg Chlorine Dioxide: 79 mg/m³ (Std. temp pressure) Chlorinated HAPs: Treatment device outlet concentration of 10 ppmv or less of total chlorinated HAP.

Process/Operational Restrictions (SC III. 1-6): Scrubbers must be operated properly during process operation. Do not operate unless the chilled water tail gas scrubber is operating properly. Direct all exhaust gases from the chilled water tail gas scrubber to the combine scrubbers. Bleaching stage equipment must be enclosed and vented to a closed vent system and routed to a control device.

Testing/Sampling (SC V. 1-3): Initial emissions tests for chlorinated HAPs. Repeat performance tests for chlorinated HAPs shall be conducted at five year intervals (60 months).

Monitoring/ Recordkeeping (SC VI. 1-5): Continuously monitor and record oxidation/ reduction potential or pH of the scrubber, scrubber flow rate, and vent gas flow rate. Record methanol storage tank dimensions and capacity.

Reporting (SC VII. 1-7): The following reports are required for FGB25:

- Prompt reporting of deviations
- Semiannual reporting
- Annual certification

Other Requirements: (SC IX. 1-4): Maintain and operate air cleaning devices properly. Comply with the applicable requirements of 40 CFR Part 63, Subpart A and Subpart S. Comply with applicable requirements of 40 CFR 63.445 Standards for the Bleaching Stage Equipment (EUS25) always. No visible emissions except uncombined water vapor from the Bleaching Stage Equipment (EUS25) or the Chlorine Dioxide Plant (EUB25).

Compliance Status/Records Reviewed for FGB25: In Compliance with the ROP special conditions for FGB25

The facility submitted records for the following (Record dates December 15, 2016 and May 15, 2016):

- Oxidation/Reduction potential Scrubber 1 and 2 (ORP) (copy in hard file): December 15, 2016: Scrubber 1: ~360 MV Scrubber 2 ~-465 MV May 15, 2017: Scrubber 1: 350 MV Scrubber 2: ~-400 MV
- Scrubber Liquid effluent rates Scrubber 1 and 2 (copy in hard file): December 15, 2016: Scrubber 1: ~326 gpm Scrubber 2: ~375 gpm May 15, 2017: Scrubber 1: ~327 gpm Scrubber 2: ~380 gpm
- Vent Gas flow rate: Verso uses fan status to monitor vent gas flow rate. The fan was continuously running.
- Methanol storage tank dimension and capacity records. Records attached to the hard file of this report.

FGLK29-Lime Kiln System:

Group Description: The Lime Kiln System (FGLK29) includes the Lime Kiln (EULK29) and two Lime Storage Bins (EULKI29), one for hot lime storage, one for purchased lime storage. The Lime Kiln System processes lime mud from the Reausticizing System to regenerate calcium oxide. Evaporator condensate is used for lime mud washing. Filtrate from lime mud washing, known as weak wash, is used in the Bleaching System and the Chemical Recovery Furnace System as an air scrubbing medium. Lime mud is mixed, washed, and fed to the Lime Kiln where it is converted to calcium oxide. Calcium oxide is conveyed by bucket elevator to the lime storage bin. From the storage bins, calcium oxide is utilized in the Reausticizing Process. The Lime Kiln is fired with natural gas and/or fuel oil. The Lime Kiln acts as a backup incineration device for the Thermal Oxidizer System.

Pollution Control: Venturi scrubber and mist eliminator on EULK29. A common baghouse dust collector serves EULKI29.

Emission Limits (SC I. 1-5): HAP metals (Measured as PM): 0.064 gr/dscf (corrected to 10%); PM: 0.02 lb/1000 lbs. exhaust gases PM: 0.10 lb/1000 lbs. exhaust gas; SO₂: 9 pph; TRS: 20 ppmv (corrected to 10% oxygen)

Process/Operational Restrictions (SC III. 1.): Must operate venture scrubber and mist eliminator during process operation.

Testing/Sampling Requirements: Conduct a PM performance test (40 CFR Subpart MM)

Monitoring/Recordkeeping (SC VI. 1-14): Record the total reduced sulfur concentration from EULK29 exhaust gases on a continuous basis. Measure the pressure drop and liquid flow rate across the scrubber on a continuous basis. Implement corrective action, as specified in the SSM plan. Continuously measure pressure drop and record for a daily average as an indicator of proper operation of the EULKI29 baghouse. Record and report excursions and exceedances (as required by CAM Part 64).

Reporting (SC VII. 1-9): The following reports are required for FGLK29:

- Prompt reporting of deviations
- Semiannual reporting
- Annual certification of compliance
- Quarterly excess emission reports

- CAM reports: Monitor downtime, excursions, exceedances
- Test Protocol and Test reports

Other Requirements (SV IX. 1-5): Develop and implement a Startup, Shutdown, and Malfunction Plan as specified in 40 CFR Part 63, Subpart MM.

Compliance Status/Records Reviewed for FGLK29: In Compliance with the ROP special conditions for FGLK29

The facility submitted records for the following (Record dates December 15, 2016 and May 15, 2016) (attached to the hard copy of this report):

- Total Reduced Sulfur (TRS) concentration from EULK29: December 15, 2016: ~2.5-4.5 ppm May 15, 2017: ~1.3-1.6 ppm
- Pressure drop across the scrubber: December 15, 2016: ~13 in H2O May 15, 2017: ~13.5 in H2O

FGTO33-Thermal Oxidizer System

Flexible Group	Group Description	Pollution Control	Emission Limits (SC I. 1-7)	Process/Operational Restrictions (SC III. 1-3)	Testing/Sampling (SC V. 1-3)	Monitoring/Record Keeping (SC VI. 1-11)	Reporting (SC VII. 1-9)	Other (SC IX. 1-4)
FGTO33- Thermal Oxidizer System	Two emission units: Thermal Oxidizer (EUOC33) (a dedicated incineration device for gases from the FGLVHC System and the Soda Ash Storage Tank (EUSA33)).	Exhaust from TO is routed through a packed scrubber which utilizes a soda ash scrubbing solution to control SO2 emissions	PM: 0.10 lb/1000 lbs exhaust gas SO2: 55 ppm; 12.0 pph (12 hr averaging time) TRS: 0.58 lbs/h (12 hr ave) VE: no visible emissions	Minimum operating TO operating temp: 1200 F HAPs must vent to a control device Only burn natural gas a supplemental fuel	Initial emissions tests for total HAPs Repeat performance test for total HAPs five-year intervals (60 months from date of previous test)	measure: scrubber liquid feed rate, pH scrubbing liquid, pressure drop scrubber, TO temperature continuous CAM records	Prompt reporting of deviations Semiannual reporting of monitoring and deviations Annual certification of compliance CAM reports include: monitor downtime, excursions	Air cleaning devices operated properly Comply with applicable requirements of 40 CFR Part 64
<i>Review</i>	The facility submitted temperature records for the TO and pressure drop, pH, and liquid flow rate records for the scrubber (December 2016 and May 2017) Recorded TO temperatures were around 1400 F for both months (minimum temp required: 1200 F) December 15, 2016: Differential pressure: ~ 1.5 in H2O, Scrubber flow: ~900 gpm, pH: 6.8 May 15, 2017: Differential pressure: 1.5 in H2O, Scrubber flow: ~690 gpm, pH: 6.8							
<i>Status</i>	In Compliance with the ROP special conditions for FGTO33							

FGB25- Bleaching System

Unit Description: The Bleaching System (FGB25) has four emission units: Bleaching Stage Equipment (EUS25) which includes the bleaching stage equipment where chlorine dioxide is applied and removed. the Chlorine Dioxide Plant (EUB25), Extraction Devices (EUED25), and Methanol Storage (EUM25). The Bleaching System is used to whiten Brownstock pulp for papermaking. Bleaching is accomplished using chemicals, bleaching towers, extraction towers, and washers. Chlorine dioxide is used for bleaching, and is manufactured on site.

Pollution Control Equipment: Gases from the pulp bleaching stages are routed in a closed vent collection system to the Bleach Plant Scrubber System which consists of two packed scrubbers in series. Off-gases from the chlorine dioxide generator and storage tanks are scrubbed with chilled water in a tail gas scrubber prior to being scrubbed in the Bleach Plant Scrubber system.

Emission Limits (SC I. 1-3): Chlorine: 789 mg/m3 (corrected to 70 F and 29.92-inch Hg Chlorine Dioxide: 79 mg/m3 (Std. temp pressure) Chlorinated HAPs: Treatment device outlet concentration of 10 ppmv or less of total chlorinated HAP.

Process/Operational Restrictions (SC III. 1-6): Scrubbers must be operated properly during process operation. Do not operate unless the chilled water tail gas scrubber is operating properly. Direct all exhaust gases from the chilled water tail gas scrubber to the combine scrubbers. Bleaching stage equipment must be enclosed and vented to a closed vent system and routed to a control device.

Testing/Sampling (SC V. 1-3): Initial emissions tests for chlorinated HAPs. Repeat performance tests for chlorinated HAPs shall be conducted at five year intervals (60 months).

Monitoring/ Recordkeeping (SC VI. 1-5): Continuously monitor and record oxidation/ reduction potential or pH of the scrubber, scrubber flow rate, and vent gas flow rate. Record methanol storage tank dimensions and capacity.

Reporting (SC VII. 1-7): The following reports are required for FGB25:

- Prompt reporting of deviations
- Semiannual reporting

Annual certification

Other Requirements (SC IX. 1-4): Maintain and operate air cleaning devices properly. Comply with the applicable requirements of 40 CFR Part 63, Subpart A and Subpart S. Comply with applicable requirements of 40 CFR 63.445 Standards for the Bleaching Stage Equipment (EUS25) always. No visible emissions except uncombined water vapor from the Bleaching Stage Equipment (EUS25) or the Chlorine Dioxide Plant (EUB25).

Compliance Status/Records Reviewed for FGB25: In Compliance with the ROP special conditions for FGB25

The facility submitted records for the following (Record dates December 15, 2016 and May 15, 2016):

- Oxidation/Reduction potential Scrubber 1 and 2 (ORP) (copy in hard file): December 15, 2016: Scrubber 1: ~360 MV Scrubber 2 ~ -465 MV May 15, 2017: Scrubber 1: 350 MV Scrubber 2: ~ -400 MV
- Scrubber Liquid effluent rates Scrubber 1 and 2 (copy in hard file): December 15, 2016: Scrubber 1: ~326 gpm Scrubber 2: ~375 gpm May 15, 2017: Scrubber 1: ~ 327 gpm Scrubber 2: ~ 380 gpm
- Vent Gas flow rate: Verso uses fan status to monitor vent gas flow rate. The fan was continuously running.
- Methanol storage tank dimension and capacity records. Records attached to the hard file of this report.

FGLK29-Lime Kiln System:

Group Description: The Lime Kiln System (FGLK29) includes the Lime Kiln (EULK29) and two Lime Storage Bins (EULKI29), one for hot lime storage, one for purchased lime storage. The Lime Kiln System processes lime mud from the Reausticizing System to regenerate calcium oxide. Evaporator condensate is used for lime mud washing. Filtrate from lime mud washing, known as weak wash, is used in the Bleaching System and the Chemical Recovery Furnace System as an air scrubbing medium. Lime mud is mixed, washed, and fed to the Lime Kiln where it is converted to calcium oxide. Calcium oxide is conveyed by bucket elevator to the lime storage bin. From the storage bins, calcium oxide is utilized in the Reausticizing Process. The Lime Kiln is fired with natural gas and/or fuel oil. The Lime Kiln acts as a backup incineration device for the Thermal Oxidizer System.

Pollution Control: Venturi scrubber and mist eliminator on EULK29. A common baghouse dust collector serves EULKI29.

Emission Limits (SC I. 1-5): HAP metals (Measured as PM): 0.064 gr/dscf (corrected to 10%); PM: 0.02 lb/1000 lbs. exhaust gases PM: 0.10 lb/1000 lbs. exhaust gas; SO₂: 9 pph; TRS: 20 ppmv (corrected to 10% oxygen)

Process/Operational Restrictions (SC III. 1.): Must operate venture scrubber and mist eliminator during process operation.

Testing/Sampling Requirements: Conduct a PM performance test (40 CFR Subpart MM)

Monitoring/Recordkeeping (SC VI. 1-14): Record the total reduced sulfur concentration from EULK29 exhaust gases on a continuous basis. Measure the pressure drop and liquid flow rate across the scrubber on a continuous basis. Implement corrective action, as specified in the SSM plan. Continuously measure pressure drop and record for a daily average as an indicator of proper operation of the EULKI29 baghouse. Record and report excursions and exceedances (as required my CAM Part 64).

Reporting (SC VII. 1-9): The following reports are required for FGLK29:

- Prompt reporting of deviations
- Semiannual reporting
- Annual certification of compliance
- Quarterly excess emission reports
- CAM reports: Monitor downtime, excursions, exceedances
- Test Protocol and Test reports

Other Requirements (SV IX. 1-5): Develop and implement a Startup, Shutdown, and Malfunction Plan as specified in 40 CFR Part 63, Subpart MM.

Compliance Status/Records Reviewed for FGLK29: In Compliance with the ROP special conditions for FGLK29

The facility submitted records for the following (Record dates December 15, 2016 and May 15, 2016) (attached to the hard copy of this report):

- Total Reduced Sulfur (TRS) concentration from EULK29: December 15, 2016: ~2.5-4.5 ppm May 15, 2017: ~1.3-1.6 ppm
- Pressure drop across the scrubber: December 15, 2016: ~13 in H₂O May 15, 2017: ~13.5 in H₂O

FGSIRICE- S1RICE Units:

Flexible Group	Group Description	Process/Operational Restrictions (SC III. 1)	Design/Equipment Parameters (SC IV. 1)	Monitoring/Record Keeping (SC VI. 1-2)	Reporting (SC VII. 1-3)	Other Requirements (SC IX. 1-4)
	The Spark Ignition Emergency Engine Group (FGSIRICE) consists of 2 spark ignition engines,	Emergency: unlimited hours Non-emergency:				Change engine oil

FGSIRICE-SIRICE Units	The Lime Kiln Emergency Drive Motor (EULKSIRICE) and the EOC Back-up Generator (EUEOCIRICE). The engines are used to provide mechanical work or power a generator in emergency situations. Both engines are 4 stroke lean burn <250 HP.	50 Hours Maintenance Checks and Readiness testing: 100 hours Emergency Demand Response: 100 hours Periods of voltage or frequency deviation >5 % of standard	Install Non-resettable hour meter on each engine	Keep records of the hours of operation and what the hours operated were for (i.e. emergency, non-emergency)	Prompt reporting of deviations, Semiannual reporting, annual compliance certification	filters every 500 hours inspect spark plugs every 1000 hours or annually whichever sooner, inspect and replace belts and hoses every 500 hour or annually.
Review	Verso submitted operation records for 2016 and 2017. There were no emergency operations reported. Readiness testing was done 6 times in 2016 and 3 times in 2017 for less than a total of 2 hours each year.					
Compliance Status	In compliance with the ROP special conditions for FGSIRICE.					

FGCIRICE- CIRICE units

Flexible Group	Group Description	Process/ Operational Restrictions (SC III. 1)	Design/ Equipment Parameters (SC IV. 1)	Monitoring/Record Keeping (SC VI. 1-2)	Reporting (SC VII. 1-3)	Other Requirements (SC IX. 1-4)
FG-CIRICE CIRICE units	The Compression Ignition Emergency Engine Group (FGCIRICE) consists of 4 compression ignition engines: the E1 Emergency Lift Pump (EUE1CIRICE), the Water Treatment Building Emergency Fire Water Pump (EUFW1CIRICE), the Administrative Building Emergency Fire Water Pump (EUFW2CIRICE), and the Turbine Turning Gear Back-up Generator (EUTTGIRICE). The engines are used to provide mechanical work and to power pumps (e.g., fire water pump).in emergency situations. All engines are 4 stroke lean burn <250 HP	Emergency: unlimited hours Non-emergency: 50 Hours Maintenance Checks and Readiness testing: 100 hours Emergency Demand Response: 100 hours Periods of voltage or frequency deviation >5 % of standard	Install Non-resettable hour meter on each engine	Keep records of the hours of operation and what the hours operated were for (i.e. emergency, non-emergency)	Prompt reporting of deviations, Semiannual reporting, annual compliance certification	Change engine oil filters every 500 hours inspect spark plugs every 1000 hours or annually whichever sooner, inspect and replace belts and hoses every 500 hour or annually.
Review	Verso submitted operation records for 2016 and 2017. All engine operations were for maintenance, readiness checks, or emergencies. One engine was run for 6 hours as emergency use on February 18, 2016. Operation records are attached to the hard file of this report					
Compliance						

Status	In compliance with the ROP special conditions for FGCIRICE
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FGEVAPORATORMOD- Evaporator System

Group Description: The Evaporator System consists of equipment used to concentrate weak black liquor as a part of the chemical recovery process for Kraft pulping liquor. The preheat falling intermediate solids concentrator (ISC) portion of the evaporator system was replaced with a Reynolds Enhanced Crystallizer (REX) design. Based on the actual-to-projected-actual applicability test, this is a minor modification for purposes of major source review for both attainment area and nonattainment area regulations.

Pollution Control: The LVHC non-condensable gases from the Evaporator System are enclosed and vented into a closed-vent system and incinerated in the Thermal Oxidizer (EUOC33) or the Lime Kiln (EULK29) as a backup incineration device. Tank breathing losses are collected and incinerated in the #10 Recovery Furnace (EURF15).

Testing/Sampling (V.1): Within 270 days of issuance of this permit, the permittee shall verify PM, PM10, PM2.5, NOx, and CO emission rates from the #10 Recovery Furnace (EURF15) of the FGEVAPORATORMOD by testing at owner's expense, in accordance with Department requirements.

Monitoring/Recordkeeping (VI.1-2): Calculate and keep records of PM, PM10, PM2.5, SO2, NOx, CO, VOC, H2SO4, TRS, H2S, Pb, Total GHG and CO2e emission rates from FGEVAPORATORMOD, in tons per year on a calendar year basis. The permittee shall calculate and keep records throughputs in tons from FGEVAPORATORMOD on a monthly and calendar year basis for the following:

- Aired dry tons of bleached pulp (ADTP BL)
- Aired dry tons of unbleached pulp (ADTP UNBL)
- Oven dried tons of unbleached pulp (ODTP UNBL)
- Calcium oxide (CaO)
- Wet chips
- Paper
- Coating
- Recovery Furnace black liquor solids fired (RF BLS Fired)
- Natural gas usage in MMBtu for the thermal oxidizer

Reporting (SC VII. 1-5): The following reports are required for FGEVAPORATORMOD:

- Prompt reporting of deviations
- Semiannual reporting of monitoring and deviations
- Annual certification of compliance
- The permittee shall submit records of PM, PM10, PM2.5, SO2, NOx, CO, VOC, H2SO4, TRS, H2S, Pb, Total GHG and CO2e emissions from FGEVAPORATORMOD in tons per calendar year to both the AQD Permit Section Supervisor and the AQD District Supervisor within 60 days following the end of each calendar year identified in FGEVAPORATORMOD SC VI.2 if both of the following apply: The calendar year actual emissions of either PM, PM10, PM2.5, SO2, NOx, CO, VOC, H2SO4, TRS, H2S, Pb, Total GHG or CO2e exceed the baseline actual emissions (BAE) by a significant amount, and...The calendar year actual emissions differ from the pre-construction projection. The pre-construction projection is the sum of the projected actual emissions from each existing emission unit included in the Actual-to-Projected-Actual Applicability Test used for FGEVAPORATORMOD. The report shall contain the name, address, and telephone number of the facility; the annual emissions as calculated pursuant to FGEVAPORATORMOD, SC VI.5, and any other information the owner or operator wishes to include (i.e., an explanation why emissions differ from the pre-construction projection).

Compliance Status/Records Reviewed for FGEVAPORATORMOD: In Compliance with the ROP special conditions for FGEVAPORATORMOD

The facility submitted calendar year records for 2016. The records are attached to the hard copy of this report. Records of 2015 and 2016 throughputs are attached to the hard file of this report.

FGRFMOD- Secondary air forced-draft air handling fan motor for the #10 recovery furnace

Group Description: Operation of the secondary air forced-draft air handling fan motor (with new fan shaft, impeller, impeller housing, and VFD) for the #10 Recovery Furnace. The larger motor design will safely handle the in-rush of current during startup.

Pollution Control Device: Electrostatic Precipitator on #10 Recovery Furnace (EURF15).

Monitoring/Record Keeping (VI. 1-3): Calculate and keep records of CO, Total GHG, and CO2e emission rates from FGRFMOD, in tons per year on a calendar year basis. Begin on the first day of the month during which the EURF15 and any of the affected emission units commences trial operation with the FGRFMOD (May 13, 2014) and shall continue for 5 years (May 13, 2019). Monitor, calculate, and record, in a satisfactory manner, the horsepower to the secondary air forced-draft fan on the EURF15 daily.

Reporting (VII. 1-6): The following reports are required for FGRFMOD:

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

- Submit records of CO, Total GHG, and CO₂e emissions from FGRFMOD in tons per calendar year to both the AQD Permit Section Supervisor and the AQD District Supervisor within 60 days following the end of each calendar year identified in FGRFMOD Conditions VI.2, VI.3 and VI.4 if both of the following apply:
 - o The calendar year actual emissions of either CO, Total GHG, or CO₂e exceed the baseline actual emissions (BAE) by a significant amount, and
 - o The calendar year actual emissions differ from the pre-construction projection. The pre-construction projection is the sum of the projected actual emissions from each existing emission unit included in the Actual-to-Projected-Actual Applicability Test used for FGRFMOD.

Compliance Status/Records Reviewed for FGRFMOD: In Compliance with the ROP special conditions for FGRFMOD

The facility submitted records of CO, total GHG, and CO₂e emission rates for 2016. A copy of the records is attached to the hard file of this inspection report. Daily records of the horsepower to the secondary air forced draft fan (Recovery furnace 10) for December 15, 2016 and May 15, 2017 are attached to the hard file of this report.

FG4PM-Number 4 paper machine system

Group Description: Operation of EU4PM64 No. 4 Paper Machine System to revise production above year 2001 permitted limits through tracking records of emissions and heat input.

Monitoring/ Recordkeeping (VI. 1-4): Calculate and keep records of PM, PM₁₀, PM_{2.5}, SO₂, NO_x, CO, and VOC emission rates from FG4PM project emissions, in tons per year on a calendar year basis. Monitor and record, in a satisfactory manner, the amount of steam delivered, on an MMBtu basis, per calendar month to EU4PM64 of FG4PM. Calculate and keep records of Btu per ton of paper produced from EU4PM64 of FG4PM, on a 12-month rolling time basis.

Reporting (VII. 1-6): The following reports are required for FG4PM:

- Prompt reporting of deviations
- Semiannual reporting of monitoring and deviations
- Annual certification of compliance
- Submit records of emissions, for FG4PM, as described in SC VI.2, to both the AQD Permit Section Supervisor and the AQD District Supervisor within 60 days following the end of each calendar year, if the calendar year actual emissions of PM, PM₁₀, PM_{2.5}, SO₂, NO_x, VOC or CO exceed the baseline actual emissions (BAE) by a significant amount.

Compliance Status/Records Reviewed for FG4PM: In Compliance with the ROP special conditions for FG4PM

The facility submitted records of PM, PM₁₀, PM_{2.5}, SO₂, NO_x, CO, and VOC emission rates from FG4PM for calendar year 2016. The records are attached to the hard file of this inspection report. Records of the amount of steam delivered (MMBtu/ calendar month) and Btu per ton of paper produced from EU4PM64 for December 2016 and May 2017 are attached to the hard file of this inspection report.

Section 2- Omya

Process Description: Omya produces precipitated calcium carbonate (PCC) for Verso Escanaba. The production of PCC is a multistep batch process that involves slaking lime, reacting the lime (calcium oxide-CaO) with carbon dioxide (CO₂), and final processing of the product. The final product is used as a filler and whitening agent for paper and is added to paper machine raw stock to improve the optical properties of the formed sheet of paper.

EUCARBONATORS: Three carbonators, two may be used at a time for PCC production

Pollution Control: Gas from the lime kiln will be pre-treated with a packed water spray scrubber/gas cooler which removes more particulate than added by the carbonation process. The exhaust from EUCARBONATORS is treated with a de-mister before reaching the PCC stack.

Design/Equipment Parameters (SC IV. 1-2) : Do not operate EUCARBONATORS using combustion gas from the Lime Kiln unless the wet scrubber treating the Lime Kiln exhaust is installed, maintained, and operated in a satisfactory manner. Do not operate EUCARBONATORS unless the demisters located downstream from the carbonators are installed, maintained, and operated in a satisfactory manner.

Testing/Sampling (V. 1): Perform weekly non-certified visible opacity, (non-water vapor), observations as an indicator of proper operations of the process wet scrubber and demisters.

Monitoring/Record Keeping (SC VI. 1): Keep records of all visible opacity emission readings for EUCARBONATORS.

Reporting (SC VII. 1-3): The following reports are required for EUCARBONATORS:

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

Compliance Status/Records Reviewed for EUCARBONATORS: In Compliance with the ROP special conditions for EUCARBONATORS

PM emission rate records for EUCARBONATORS are attached to the hard file of this inspection report.

EULIME- Lime silos

Unit Description: Lime silos used in the precipitated calcium carbonate process to store lime prior to use.

Pollution Control: Fabric Filter Baghouse

Process/Operational Restrictions (SC III. 1-2): Do not operate EULIME unless the emissions are routed to a baghouse. Do not route silo emissions to the baghouse for more than 12 hours per day.

Testing/ Sampling (SC V. 1): Perform weekly non-certified visible opacity observations as an indicator of proper operations of the baghouse.

Monitoring/Recordkeeping (SC VI. 1-3): Maintain a record of the baghouse filter vendor's certification of the grain loading factor for the bags being used in the baghouse for EULIME. Record hours that EULIME emissions are routed to the baghouse. Record all visible emission readings for EULIME.

Reporting (SC VII. 1-3): The following reports are required for EULIME:

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

Compliance Status/Records Reviewed for EULIME: In Compliance with the ROP special conditions for EULIME

EUCOOLTWR-draft cooling tower

Unit Description: Mechanical induced draft cooling tower used to reduce the temperature of the Lime Kiln exhaust gases and carbonators.

Process/Operational Restrictions (SC III. 1): Maintain the total dissolved solids (TDS) concentration of the circulating water to below 1,656 ppm.

Design/Equipment Parameters (SC IV. 1): Equip and maintain the cooling tower in EUCOOLTWR-2 with drift eliminators with a vendor-certified maximum drift rate of 0.01 percent or less.

Monitoring/Recordkeeping (SC VI. 1-3): Maintain a record of the vendor's cooling tower design basis for the life of the cooling tower, EUCOOLTWR. Monitor the following for the cooling tower in EUCOOLTWR, using a method acceptable to the AQD District Supervisor: On a weekly basis, parameters needed to determine the total dissolved solids concentration of the circulating water. Monthly, parameters needed to determine the cooling loop flowrate. Calculate the PM and PM-10 emission rates from the cooling tower in EUCOOLTWR monthly, for the preceding 12-month rolling time.

Reporting (SC VII. 1-3): The following reports are required for EUCOOLTWR:

- Prompt reporting of deviations
- Semiannual reporting of monitoring and deviations

Compliance Status/Records Reviewed for EUCOOLTWR: In Compliance with the ROP special conditions for EUCOOLTWR

PM emission rate records for EUCOOLTWR are attached to the hard file of this inspection report.

EUROAD- Fugitive emissions

Unit Description: Fugitive emissions increase at the facility roads due to PCC Plant.

Reporting (SC VII. 1-3): The following reports are required for EUROAD:

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

Compliance Status/Records Reviewed for EUROAD: In Compliance with the ROP special conditions for EUROAD

PM emission rate records for EUROAD are attached to the hard file of this inspection report.

FGPCCPLANT

Group Description: All process equipment utilized to produce precipitated calcium carbonate. Emission Units: EUCARBONATORS, EULIME, EUCOOLTWR, EUROAD

Emission Limits (SC I. 1-2): PM10: 6.46 tpy PM2.5: 6.4 tpy

Monitoring/Recordkeeping (SC VI. 1-3): Maintain a record of the number and weight of trucks transporting material to and from the emission units in FGPCCPLANT. Calculate and keep records of the annual emissions of PM10 and PM2.5 from EUCARBONATORS, EULIME, EUCOOLTWR, and EUROAD in tons per year on a calendar year basis. Calculate and keep records of the annual emissions of PM10 and PM2.5 from EULK29 per in tons per

year on a calendar year basis.

Reporting (SC VII. 1-4): The following reports are required for FGPCCLANT:

- Prompt reporting of deviations
- Semiannual reporting of monitoring and deviations
- Annual certification of compliance
- Submit records of PM2.5 and PM10, emissions from EUCARBONATORS, EULIME, EUCOOLTWR, EUROAD, and EULK29 in tons per calendar year

Compliance Status/Records Reviewed for FGPCCLANT: In Compliance with the ROP special conditions for FGPCCLANT

PM emission rate records for FGPCCLANT are attached to the hard file of this inspection report.

At the time of my inspection and record review Verso Escanaba and Omya Inc. were compliant with MI-ROP-A0884-2016 and all other applicable state and federal air quality regulations.

NAME Singh Bani

DATE 01/08/18

SUPERVISOR Ed