

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

A088434213

FACILITY: ESCANABA PAPER COMPANY		SRN / ID: A0884
LOCATION: 7100 COUNTY 426 M.5 ROAD, ESCANABA		DISTRICT: Upper Peninsula
CITY: ESCANABA		COUNTY: DELTA
CONTACT: PAULA LAFLEUR , ENVIRONMENTAL ENGINEER		ACTIVITY DATE: 04/12/2016
STAFF: Joel Asher	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MAJOR
SUBJECT: CMS scheduled inspection of Escanaba Paper Company		
RESOLVED COMPLAINTS:		

On 4/12/2016 and 4/13/2016 an inspection of the Escanaba Paper Company was conducted. This facility is scheduled for an annual compliance inspection per the Compliance Monitoring Strategy (CMS) schedule. My contacts at the facility were Ms. Paula LaFleur and Mr. Todd Schmidt.

Upon arrival at the facility introductions were conducted. It was explained this inspection was conducted in accordance with the CMS schedule. It was explained the main context of this inspection would be to review recordkeeping conditions specified in the facility's Renewable Operating Permit. MI-ROP-A0884-2016, was issued to the facility on 2/26/2016. It is scheduled to expire on 2/26/2021. It was also discussed that all recordkeeping would be reviewed and a date of 2/14/2016 would be used to verify if appropriate records are kept.

EUB17 - #7 Boiler

SC VI.1 requires the facility to obtain and keep records of the sulfur and BTU content of the fuel oil burned in the #7 Boiler. The last shipment of fuel oil received was on 2/22/2016. 5604 gallons were delivered. The specifications of the oil were observed to be .819% Sulfur with a value of 154,390 BTU/gallon. The facility maintains a common 1,000,000 gallon tank for fuel oil. This tanks serves EUB17 (#7 Boiler), EU8B13 (#8 Boiler), EURF15 (Recovery Furnace), and EULK29 (Lime Kiln).

SC VI.6(c) requires the facility to maintain daily records of fuel usage and heat input. Records for 2/14/2016 were observed and 9,819 MMBtu of fuel were used. Calculations using the BTU/gallon value for the fuel oil shows 63,598 gallons of fuel oil were burned.

SC VI.6(e) requires the facility to maintain records of all major maintenance activities on the unit. Records show the last maintenance was on 2/16/2016 for an audit. A review shows maintenance records are kept back to 2011 as required (per SC VI.6 for the last 5 years). In October 2012 the facility started keeping electronic sharepoint data.

EU11B68 - #11 Boiler

SC III.1 specifies the facility may not use solid fuel to start up the boiler. Ms. LaFleur stated the boiler is only started on natural gas. It would not be possible to start the #11 Boiler on solid fuel.

SC VI.1 requires the facility to continuously monitor the opacity and oxygen from Boiler #11. The facility does this. Records for 2/14/2016 were observed. Opacity and O2 records were available. In December 2015 the facility went to a new system (VEM CEMLINK 6) this allows them to see instantaneous data. They plan to upgrade so all operators will be able to observe instantaneous data to observe how particular equipment is operating.

SC VI.2 requires the facility to monitor and record NOx emissions continuously from the #11 Boiler. This was observed for operations on 2/14/2016.

SC VI.4 requires the facility to keep records of the quantities of natural gas and solid fuels burned in the #11 Boiler. Records for 2/14/2016 showed the following amounts of each type of fuel were burned: natural gas, 5241 MMBTU; coal, 3514 MMBTU; TDF, 2160 MMBTU; bark, 7292; and sludge, 423 MMBTU.

SC VI.5 requires the facility to monitor and record the percentage of wood residue fuel and/or waste water treatment plant residuals fired in the #11 Boiler. On 2/14/2016, 80.79% of the fuels burned were of this type. This shows

compliance with the permitted limit specified in SC II.1 of at least 45%.

SC VI.6 requires the facility to conduct an independent sample analysis of the coal received. This was completed on 2/25/2016 to show 7.98% ash, 11,266 BTU/pound, and .71% sulfur. All coal stays at the delivery dock and is trucked to the facility as needed. The last coal shipment to the dock was on 8/16/2015. It is anticipated there will be another delivery this fall.

SC VI.7 requires the facility to conduct an independent analysis of the Tire Derived Fuel (TDF) received. This shall be done twice per year for sulfur, ash, and BTU content. In actuality, this is done on a monthly basis. For February 2016 the results were: 1.78% sulfur, 6.25% ash, and 14,860 BTU/lb as received. This is conducted by taking samples once per week and compositing the weekly samples for a single monthly sample to be submitted for analysis. All other required criteria are independently analyzed once per year. The results from the latest analysis are as follows (in mg/kg): arsenic, <180; cadmium, <9; chromium, <46; lead, <180; manganese, <46; nickel, <46; and zinc, 17.524. Mercury was analyzed to be 14 ppb and the BTU value was found to be 14,462 BTU/lb.

SC VI.10 requires the facility to calculate and keep records of PM₁₀, PM_{2.5}, SO₂, NO_x, CO, H₂SO₄, and CO_{2e} in tons per year on a calendar year basis. A printout was provided by the facility. This record keeping if being conducted. A copy of the printout can be observed attached to this report.

SC VI.11 requires the facility to obtain and keep records of chlorine and BTU content of the engineered non-waste fuel pellets burned in the #11 Boiler. The non-waste fuel pellets were last burned in the #11 Boiler in January 2015. The facility's independent analysis shows the chlorine content to be 1614 mg/kg (.1614%) and a BTU value of 9628 BTU/lb as received. The last load of pellets was received at the facility on 1/20/2015. Copies of the pellet fuel supplier fuel analysis were supplied for calendar years 2014 and 2015.

SC VI.12 requires the facility to monitor and record the tons of engineered non-waste fuel pellets on a monthly basis. The pellets were last burned in January 2015. During that month they burned 428 tons of pellets.

SC VI.13 requires the facility to monitor and record the heat input basis of engineered non-waste fuel pellets on a monthly basis. Records observed show during January 2015 they burned 9428 MMBTU of engineered non-waste fuel pellets.

SC IX.1 requires the facility to conduct a Maintenance and Inspection Program. Weekly inspections are conducted by the operators to verify any outstanding issues with equipment. A copy of the inspection checklist for the #11 Boiler was obtained. All information documented by the operator is entered in the plant's Proficy system. Any maintenance issues are tracked to ensure needed repairs or issues are addressed. These inspections are conducted weekly. It was observed that an inspection was conducted on 2/15/2016.

EUCS14 - Chip Thickness Screening

SC VI.1 requires the facility to visually inspect and record observations of emissions from the cyclone exhausts on a weekly basis. This is conducted in the same manner and record keeping as that specified in EU11B68 SC IX.1.

EU2PD40 - Pulp Dryer

SC VI.1 requires the facility to calculate and report the actual emissions of the unit. This is completed with the submission of the MAERS report.

EUCOND - Condensate Collection and Treatment

SC III.2(c) the facility has determined to comply with SC III.2 with option c, to contain a total HAP mass of 11.1 pounds or more of total HAP per ton of oven-dried pulp, based on a 15 day rolling average. A printout was provided and included with this report for the month of February 2015. This shows an average of over 13 pounds.

EURF15 - Chemical Recovery Furnace

SC III.1 requires the facility to reduce the Black Liquor Solids (BLS) loading to 77,600 pounds per hour if any two electric fields of the electrostatic precipitator (ESP) are out of service. The electric fields for the ESP are monitored continuously by the operators. If the electric field is $> .5$ kV the field is considered to be in service. If the kV for a two fields drops below $.5$ kV an audible and visible alarm is automatically activated notifying the operators of the situation. The operator will then manually reduce the BLS loading rate.

SC V.2 requires the facility to conduct analysis of any used oil and/or blend fuel oil burned in EURF15. The facility has not burned any used oil in many years. They have no plans to burn any used oil and/or blend fuel oil in the near future.

SC VI.2 requires the facility to continuously monitor and record the oxygen content, opacity, and total reduced sulfur of the exhaust gases from EURF15. Records were looked at for 2/14/2016. The average opacity for the day was 6.63, the oxygen was measured and recorded between 2.4 and 3.55%, and the total reduced sulfur (corrected for O_2) was 1.32 to 3.32 ppm.

SC VI.4 requires the facility to continuously monitor and record the black liquor feed rate to EURF15. Records for 2/14/2016 show the feed rate was recorded between 326.9 to 334 gpm throughout the day.

SC VI.13 requires the facility to continuously record the horsepower to the motor on the secondary air forced-draft air handling fan. This is being done. However, discussions were held regarding whether or not this condition should have remained in the ROP. It is likely this condition was part of a PTI that was revised. This condition should be reviewed prior to the next ROP renewal.

EUST15 - Smelt Dissolving Tank

SC VI.1 requires the facility to install, maintain, calibrate, and operate a continuous operating system to measure fan run status and scrubbing liquid flow rate every 15 minutes. Records for 2/14/2016 show the fan was running continuously and the scrubber liquid flow rate ranged from 326 to 334 gpm.

SC VI.6 requires the device used for monitoring the scrubbing liquid flow rate must be certified by the manufacturer to be accurate within $\pm 5\%$ of the design scrubbing liquid flow rate. A General Specifications sheet (GS 01E06D00-00E) was provide for the monitor showing the accuracy of the monitor to be $\pm 0.5\%$ of flow rate.

EUS29 - Reausticizing System

SC VI.1(b) the facility has chosen to comply with SC VI.1 by utilizing an operable water flow meter.

SC VI.2 requires the facility to continuously monitor the scrubber liquid flow rate and record for a 3 hour average. The flow rate will be used as parametric data to determine compliance through Compliance Assurance Monitoring (CAM). The recorded flow rate should be within the proper range as set by the facility's CAM plan, which indicates a minimum flow rate of 150 gpm based on 3 hour averaging. A printout was provided for 2/14/2016 showing a 3 hour averaging flow rate to be 160.0 to 160.3 gpm.

EUPB - Paint Spray Booth

SC III.1 requires the facility to keep filters in the paint spray booth whenever the booth is in operation. A visual inspection of the booth was conducted at the end of the records review. Discussions with the operator, Mr. Mike Hoffman, revealed the filters are changed every three months. Spare filter material was observed to be at the facility.

SC VI.1 requires the facility to maintain monthly records of all coatings used in the paint spray booth. This is done and kept in the paint booth area.

FG9B03 - #9 Boiler System

SC III.2 requires the facility to cease wood burning residue upon initiation of scrubber bypass. The monitoring system incorporates an automated alarm system to notify operators in the event a bypass situation occurs to immediately cease burning wood.

SC VI.1 requires the facility to equip each wet scrubber with a pressure drop indicator and flow meter. This is installed and used to verify SC VI.4 and 5.

SC VI.2 requires the facility to keep records of the quantities and BTU content of natural gas, wood residue, and paper cores burned in the #9 Boiler. The #9 Boiler was last operated 9/23/2015. For September 2015, the facility burned 17,967 MMBTU of natural gas and 128,606 MMBTU of wood residue.

SC VI.4 requires the facility to continuously monitor and record the pressure drop on the North and South scrubbers. On September 23, 2015, the pressure drop on the North scrubber was 6.0 "H₂O, the pressure drop on the South scrubber was 4.3 "H₂O.

SC VI.5 requires the facility to continuously monitor and record the scrubber liquid flow rate on the North and South scrubbers. On September 23, 2015, the scrubber liquid flow rate on the North scrubber was 1346 gpm, the scrubber liquid flow rate on the South scrubber was 1226 gpm.

FGFAHS68 - #11 Boiler Fuel and Ash Handling

SC III.2 requires the facility to maintain properly operating dust collection equipment for the handling and storage of solid fuels.

SC IX.1 requires the facility to carry out an Inspection and Maintenance Program on the air cleaning devices. Weekly observation inspections are done by the operators to ensure all equipment is operating properly.

FGSB14 - Chip Surge Bins

SC VI.1 requires the facility to visually inspect and record emissions from the cyclone exhausts on a weekly basis. These are completed by the operators (who are non-certified Visible Emissions readers). Records review shows the readings were completed and recorded for the week including 2/14/2016.

FGRMP - RMP System

SC III.2 limits the facility to not produce more than 113,150 tons of Refined Mechanical Pulp (RMP) per year on a 12 month rolling time period. Calculations have been made and it has been determined if the daily average RMP production for each month is less than 310 tons per day the facility will be less than 113,150 tons per year (310 tons per day * 365 days per year = 113,150 tons per year). A print off the RMP production for 2015 was provided showing the highest production month to be February with an average of 248 tons per day.

SC VI.1 requires the facility to visually inspect and record emissions on a weekly basis from the cyclone exhausts of EUCS61 (Chip Silo for the Refiner Mechanical System) and EUSB61 (Chip Surge Bin for the Refiner Mechanical System) while EURMP61 (Refiner Mechanical Pulping System) is operating. These are completed by the operators (who are non-certified Visible Emissions readers). Records review shows the readings were completed and recorded for the week including 2/14/2016. A copy of the Standard Operating Procedure describing the weekly inspection requirements was provided.

FGPAPER - Paper Machine Systems

SC VI.1 requires the facility to calculate and report emissions. This is done when the facility submits their MAERS reports.

SC VI.2 requires the facility to perform monthly calculations of the 12 month rolling average total VOC emission from EU3PM07 (#3 Paper Machine). Facility records indicate they are presently at a 12 month rolling average of

22.72 tons per year (TPY) of VOC. This is below the permitted limit of 27.51 TPY.

SC VI.3 requires the facility to maintain a Safety Data Sheet (SDS) for all chemical additives used on the #3 Paper Machine. A database is maintained. Any time a new supplier or chemical is added the database is updated.

SC VI.4 requires the facility to keep records of the paper production for EU4PM64 (#4 Paper Machine). A review of records show the #4 Paper Machine 12 month rolling average to be 241,173 TPY. This is below the permitted limit specified in FGPAPER SC II.1 of 268,650 TPY.

SC VI.5 requires the facility to perform monthly calculations of the 12 month rolling average total VOC emission from the #4 Paper Machine. Facility records indicate they are presently at a 12 month rolling average of 24.1 tons per year (TPY) of VOC. This is below the permitted limit of 26.9 TPY.

FGCOATER - Paper Machine Coaters

SC VI.5 requires the facility to calculate the monthly average VOC emissions from EU1C36 (#1 Coater System) , EU3C27 (#3 Coater System), and EU4C65 (#4 Coater System) to ensure compliance with the permitted limit specified in SC I.1. The specified permit limits are for a monthly average (lb VOC/lb of coating applied): #1 Coater System, .00037; #3 Coater System, .00027; #4 Coater System, .00021. A print out for 2015 was provided. For #1 Coater System the highest emissions were in April with an average of .000139 lb VOC/lb of coating applied. For #3 Coater System the highest emissions were in April with an average of .000096 lb VOC/lb of coating applied. For #4 Coater System the highest emissions were in April with an average of .000143 lb VOC:lb of coating applied. All coaters operated below permitted limits in 2015 for VOC emissions.

SC VI.6 requires the facility to maintain a Safety Data Sheet (SDS) for all raw materials used on the #3 Coater and #4 Coater. A database is maintained. Any time a new supplier or chemical is added the database is updated.

SC IX.1 requires the facility to maintain no visible emissions except uncombined water vapor from the #1 Coater coating applications or their associated dryers. Discussions were held regarding whether or not this condition should have remained in the ROP. It is likely this condition was part of a PTI that was revised. This condition should be reviewed prior to the next ROP renewal.

FGSTARCH - Starch Handling and Make-Down

SC VI.1 requires the facility to visually inspect and record observations from the baghouse vents during starch transfer during daylight hours. These inspections are conducted by the operators. Printouts of the Visible Emissions checklists were provided. Inspections are done weekly. A review of records shows for the week including 2/14/2016 the inspections were completed.

FGBBKRAFT - Kraft Mill Subpart BB Systems

SC III.1 requires the facility to not operate the Digester System (EUBB22), Steam Stripping System (EUBB33), or Evaporator System (EUBB05) unless the gases are properly collected and oxidized in the Thermal Oxidizer (EUOC33) or as a backup in the Lime Kiln (EULK15). Valves are incorporated in the systems to monitor pressures. Any venting is reported through the semi-annual MACT reports. Very little venting occurs. The standard is <1% of operating time. If venting occurs alarms activate to alert the operators. The environmental program staff are notified of every venting occurrence.

FGLVHC - LVHC System

SC III.3(b) the facility has chosen to comply with SC III.3 by reducing the total HAP concentration at the outlet of the thermal oxidizer to 20 ppm or less by volume, corrected to 10% oxygen on a dry basis. Performance tests were conducted in July of 2015 to demonstrate compliance.

FGHVLC- HVLC Systems

SC III.3(d) The facility has chosen to comply with SC III.3 by reducing total HAP emissions by introducing the HAP emissions stream into the flame zone of the recovery furnace.

FGTO33 - Thermal Oxidizer System

SC III.1 requires a minimum temperature of 1200 degrees in the Thermal Oxidizer System when combusting noncondensable gasses from the Evaporator System, Steam Stripping System, and Digester System. A review of records shows an average for the month of February 2016 to be 1536.8 degrees.

SC III.2(b) the facility has chosen to comply with SC III.2 by reducing the total HAP concentration at the outlet of the Thermal Oxidizer to 20 ppm or less by volume, corrected to 10% oxygen on a dry basis. This is done by maintaining a minimum temperature of 1339 degrees as established during a compliance test. For the month of February 2016 the minimum temperature was 1356 degrees.

SC VI.1 the facility maintains monitoring devices to record the scrubber liquid feed rate, pH of the scrubbing liquid, and the differential pressure across the scrubber. On 2/14/2016 the scrubber liquid feed rate was 670-680 gpm for stage 1 and 570-580 gpm for stage 2. The pH was 7.1 for stage 1 and 8.9 for stage 2. The differential pressure was 1.2 " H₂O.

FGB25 - Bleaching System

SC III.2 requires the facility to have a properly operating chilled water tail gas scrubber in order to operate the modified chlorine dioxide plant. Per conversations, the chlorine dioxide plant can't operate without the chilled water tail scrubber. There is not an option of bypassing the chilled water tail scrubber, no other options are possible.

SC VI.1 requires the facility to continuously monitor the oxidation/reduction potential (ORP) of the scrubber effluent. A printout for 2/14/2016 was provided showing the oxidation reduction potential 2/14/2016 for Scrubber 1 to be between -172.7 and -402.4 mV, and for Scrubber 2 to be between -396.0 to -401.0 mV. The most recent test showed compliance with an ORP of -113 mV.

SC VI.2 requires the facility to continuously monitor and record the scrubber liquid flow rate to determine compliance with the most recent performance test. A printout was provided showing the flow rate on 2/14/2016 for Scrubber 1 to be between 333.0 and 333.5 gpm, and for Scrubber 2 to be between 350.2 and 351.8 gpm. The most recent test showed compliance with a flow of 216 gpm.

SC VI.3 requires the facility to continuously monitor the vent gas flow rate by using fan motor amperage to determine compliance with the most recent performance test. A printout was provided showing the fan motor status is monitored as 0 for on and 1 for off. On 2/14/2016 the fan status was monitored to be continuously on.

SC IX.1 requires the facility to maintain no visible emissions except uncombined water vapor from the Bleaching Stage Equipment (EUS25) or the Chlorine Dioxide Plant (EUB25). Discussions were held regarding this whether or not this condition should have remained in the ROP. This condition should be reviewed prior to the next ROP renewal.

FGLK29 - Lime Kiln Systems

SC VI.1 requires the facility to continuously monitor and record the total reduced sulfur concentration from the EULK29 exhaust gases. A review of records was conducted and a printout was provided for emissions on 2/14/2016. The facility is well below permitted values specified in SC I.5.

SC VI.2 requires the facility to continuously monitor the pressure drop and scrubber liquid flow rate across the scrubber. A review of records was conducted and a printout was provided for emissions on 2/14/2016.

SC VI.9 requires the device used for monitoring the scrubbing liquid flow rate must be certified by the manufacturer to be accurate within +/- 5% of the design scrubbing liquid flow rate. A General Specifications sheet (GS 01E20D01-01E) was provide for the monitor showing the accuracy of the monitor to be +/- 0.35% of reading.

FGSIRICE - SI RICE Units

SC IV.1 requires a non-resettable hour meter to be installed on each SI RICE unit. After records review a visual observation of all SI RICE Units was conducted and hour meters were verified on all units.

SC VI.1 requires the facility to keep records of hours of operation of each SI RICE unit. A printout was received for each unit. The visual inspection of each unit showed the following hourly readings: EULKSIRICE, 90.8; and EUEOCISRICE, 535.4. These readings correspond to the values reported in the records provided.

FGCIRICE - CI RICE Units

SC IV.1 requires a non-resettable hour meter to be installed on each SI RICE unit. After records review a visual observation of all CI RICE Units was conducted and hour meters were verified on all units.

SC VI.1 requires the facility to keep records of hours of operation of each SI RICE unit. A printout was received for each unit. The visual inspection of each unit showed the following hourly readings: EUE1CIRICE, 227; EUFW1CIRICE, 543; EUFW2CIRICE, 774.8; and EUTTGCIRICE, 18. These readings correspond to the values reported in the records provided.

FGEVAPORATORMOD

SC VI.2 requires the facility to maintain records of emissions. Records were reviewed and verified the facility is keeping the required records.

FGRFMOD

SC VI.3 requires the facility to record the horsepower to the motor on the secondary air forced-draft air handling fan. This is being done. However, discussions were held regarding whether or not this condition should have remained in the ROP. It is likely this condition was part of a PTI that was revised. This condition should be reviewed prior to the next ROP renewal.

SC VII.5 requires the facility to submit records to the AQD if the actual emissions exceed the baseline emissions for CO, total GHG, and CO₂e. Records of emissions are kept by the facility. They have not exceeded the baseline emissions therefore they are not required to submit these records to the AQD.

FG4PM

SC VI.2 requires the facility to calculate and keep records of PM, PM₁₀, PM_{2.5}, SO₂, NO_x, CO, and VOC emission rates from the FG4PM project emissions. A review of records was conducted. Records are kept.

SC VI.3 requires the facility to monitor and record the amount of steam delivered per calendar month, to EU4PM64 (#4 Paper Machine). This is being recorded and a printout was provided.

SC VI.4 requires the facility to keep records of BTU per ton of paper produced. These records are being kept and are part of the printout provided for SC VI.3.

During the inspection conducted on 4/12 and 13/2016 all aspects of MI-ROP-A0884-2016 were observed to be in compliance. No violations were observed.

NAME 

DATE 4/24/16

SUPERVISOR 