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

B407266313

FACILITY: WestRock California, LLC		**SRN / ID:** B4072
LOCATION: 177 Angell St., BATTLE CREEK		**DISTRICT:** Kalamazoo
CITY: BATTLE CREEK		**COUNTY:** CALHOUN
CONTACT: Andrew Olfier , Safety/Environmental Manager		**ACTIVITY DATE:** 01/31/2023
STAFF: Amanda Cross	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT:		
RESOLVED COMPLAINTS:		

On January 30, 2023, Air Quality Division's Amanda Cross (staff) conducted an unannounced air quality inspection of WestRock California, LLC (SRN: B4072) located at 177 Angell Street, Battle Creek, Michigan 49015. The facility currently has two active permits, MI-ROP-B4072-2019 and PTI 120-22. The purpose of the inspection was to determine compliance with the Federal Clean Air Act, Article II, Part 55, Air Pollution Control Rules, of the Natural Resources and Environmental Protection Act, 1995 PA 451, as amended (Act 451); AQD administrative rules; and the above referenced permits.

I arrived on site about 10:00 am. Onsite during the inspection was myself and Mr. Andrew Olfier, Safety/Environmental Manager. I signed in at the guard shack and the guard contacted Mr. Olfier, who met me outside the main office and escorted me to his office. We discussed the inspection process and the records that are required to be kept by the facility. I requested those be emailed to me for in-depth review. The new boiler permitted under the General Permit 120-22 is currently being installed but is not yet operational. Anticipated date of initial start-up is April 2023. Mr. Olfier and I discussed submitting and M-001 form to roll PTI 120-22 into the ROP before the date of start-up. Mr. Olfier also told me that the facility was not currently operating due to a malfunction with the thickener on site. The facility hadn't been operational for about a week and he hoped the equipment would be repaired within a day or two and resume normal operation. In the meantime, the boiler temperatures had been turned down, but they remained operational, as a full shutdown and start-up is time consuming.

The facility is a 100% recycled paperboard plant and produces paper stock for consumer packaging products and shipping envelopes. The facility does not have any paperboard printing or converting operations. The facility is a major source of sulfur oxides (based on a 1.5% sulfur in fuel oil content limit and no restriction on oil usage), nitrogen oxides, and volatile organic compounds. They are a synthetic minor source for hazardous air pollutants and is permitted under the Title V program.

Major equipment on site includes one boxboard machine with associated coating application and steam dryer sections, a rewinding machine, and natural gas or fuel oil fired boilers. They are located in an industrial area approximately one mile west of downtown Battle Creek. There are some private residences located within 250 feet of the north and south facility property line. The last inspection was conducted on April 7, 2021 and the facility was in compliance with all state and federal regulations at that time.

Mr. Olfier and I walked the process, even though it was not operational at the time of the inspection. The process begins with the pulpers. There are three pulpers on site. One pulper's throughput is 25 tons/hour and two pulpers are 3 tons/hour. The pulpers take cardboard boxes

and paper, add them to water, and make a slurry or cardboard pulp. These also remove contaminants likes metal and plastic from the cardboard. This pulp is then sent through various screens to filter out the unwanted pieces that were not removed previously. The pulp is sent through a thickener to remove additional water, and then it is sent to the paper machine.

The paper machine was not in operation during the inspection. The machine adds 7 layers to the recycled paper which is sent through a dryer to remove the 50% moisture left in the paper from the wet end of the machine. Once it is dried, the recycled board is coated twice with a primer and a thicker cover coating. The finished paper is rolled and then put in the rewinder which cuts the roll to the appropriate size. It is sent to roll handling to be shipped out from the facility.

MI-ROP-B4072-2019

Source-Wide Conditions

All process equipment source-wide including equipment covered by other permits, grandfathered equipment, and exempt equipment.

Pollutant	Limit	Time Period/Operating Scenario	Records
Each Individual HAP	Less than 9.0 tpy	12-month rolling determined at the end of each month	0.13 tons monthly (April/October 2022) 1.52 tons 12-month rolling (December 21 – January 22)
Aggregate HAP	Less than 22.5 tpy	12-month rolling determined at the end of each month	0.25 tons monthly (April/October 2022) 3.0 tons 12-month rolling (December 21 – January 22)

The records contain a breakdown of the accepted emission factor data of air toxics taken from the National Council for Air and Stream Improvement (NCASI) document for air toxics and hydrocarbon emissions data for pulp and paper mill sources. These are acceptable emission factors to use, as documented in the ROP. These are used to track HAP emissions at the facility.

For all records, the facility tracks the amount of each chemical and product used at the facility, by process. This is done monthly, in pounds per month. The percentage of VOC of each product is denoted in the column next to the product as well as the units (bulk, semi-bulk, drums), and the density of the product in pounds per gallon. VOCs and HAPs are tracked monthly, based on the

usages, and a 12-month rolling calculation is completed for the end of every month. The facility's highest emitting HAP is acetaldehyde followed by vinyl acetate.

Records were reviewed for 2021 and 2022.

FG-PAPERMAKING

Boxboard production including pulping and the wet end process on the paper machine, including felt wash. This includes EU-STOCKPREP and EU-PAPERMACHINE.

Pollutant	Limit	Time Period/Operating Scenario	Records
VOC	30.0 tpy	12-month rolling for pulping and wet end portion of FG-PAPERMAKING	19.88 tpy (March 2021-February 2022)
VOC	0.7 tpy	12-month rolling for felt wash portions of FG-PAPERMAKING	0.01 tpy (March 2021-February 2022)

Material	Limit	Time Period/Operating Scenario	Records
Maximum Paper Production	219,000 tpy	12-month rolling	145,005 tons 12-month rolling (December 2021 -January 2022)

There were no visible emissions from the stacks during the inspection. There was steam coming from the stacks, as the boilers were still operational, even though the machine itself wasn't running. There are no rain caps on the stacks.

The facility tracks the paperboard production in tons, monthly. The facility then adjusts the production based on the air-dry ton finished product (ADTFP), which subtracts the coating weight and adjusts to product moisture. They also track the actual recycled pulp, air dry ton pulp (ADTP) in tons. The ADTP includes any raw material that is included in the papermaking process and accounts for shrinkage factor, which is compensated for by adding the raw materials. A note included with the recordkeeping stated that National Council for Air and Steam Improvement (NCASI) are evaluated against the ADDTFP, which is conservatively assumed to be a 10% moisture

content. Therefore, the finished product weight is increased to a 10% moisture basis. The facility has the potential to produce finished product with a 6.5% moisture content.

The facility provided records for both the production, monthly and 12-month rolling, and VOC calculations for the wet end and felt making portions of the paper machine. Production records are discussed above. The facility tracks the usage of chemicals, in gallons, on the wet end and felt making portions separately. They use the noted VOC contents of the materials, and the amount of materials used, to determine VOC emissions for the wet end and felt making portions of the process.

EU-COATING

Application of coating in the dry end of the paper machine include the application of latex adhesive, which us used to bind the coating to the paperboard. Coatings are formulated from various liquids, slurries, solids, and dried in natural gas fired ovens. Kaolin usage in paper process has a separate exhaust system for particulate. This coating application is done at the dry end of the paper machine. The mixing and storage area of the coating portion of the operation was observed during the inspection, even though it was not currently running.

Roller coating or rod coating applications and an air-knife application are used on site (SC IV.1). The coating exhaust is a gooseneck that doesn't have a rain cap (SC VIII.5) and there were no visible emissions during the inspection.

The facility tracks the amount of each chemical and product used at the facility, by process. This is done monthly, in pounds per month.

Pollutant	Limit	Time Period/Operating Scenario	Records
VOCs	6.9 tpy	12-month rolling determined at the end of each month	0.42 tons monthly (October 2022) 4.76 tons 12-month rolling (December 2021-January 2022)
PM	0.10 lbs/1000 lbs of exhaust gas	Hourly from SVCoatDry5 portion of EU-COATING	Weekly VE Readings

The permit requires weekly six-minute visible emission checks during daylight hours under routine maximum operating conditions and during start-up conditions. Mr. Olfier supplied the visible emissions records for the rewind machine and air knife exhaust. No visible emissions were observed during 2022 while the equipment was operating at maximum capacity. Records include the initials of the observer, date, start time and end time of observation, if visible emissions were

observed (Yes or No), operating conditions, and a description of the emissions and notes. Notes include if the machine was down during that period.

EU-REW-001

The rewind machine performs the winding of the final product onto rolls for shipment. The rewinder works with the slitter to cut the rolls to size for the customer. Mr. Olfier stated that the machine is capable of doing rolls as small as 5 ¾ inches to 80 inches in length. This was not running during the inspection. The stack emits horizontally, as noted in the permit, with no obstruction (SC VIII.1). There were no visible emissions during the inspection as the equipment was not running.

The permit requires weekly six-minute visible emission checks during daylight hours under routine maximum operating conditions and during start-up conditions. Mr. Olfier supplied the visible emissions records for the rewind machine and air knife exhaust. Records are discussed above, in EU-COATING.

FG-BOILERS

This flexible group has two natural gas-fired boilers with back up fuels as No. 2 fuel oil, yellow grease, and No. 6 fuel oil. The maximum rated heat input for each boiler is 107 MMBTU/hour. Emission units are EU-BLR-0001 and EU-BLR-0002. The nameplates read Springfield Boilers with a date of 1947 for both boilers and stated the capacity was 600 pounds at 6000 square feet.

These boilers were running during the inspection, at decreased capacity, since the facility's paper machine was not running. Mr. Olfier said that shutting down and starting up the boilers was a long process and as they were no sure when then equipment would be repaired, they wanted to be ready to begin production quickly once they were able to.

The boilers have never been fired on yellow grease and the last time fuel oil was used was in about 2003. They run exclusively on natural gas and are not tuned to run on fuel oil at all. The facility provided records from 2022 showing that the boilers have not run on No. 2 fuel oil of No. 6 fuel oil in the past year. The facility is tracking VOC, HAP, and metals emissions from the boilers on a 12-month rolling basis. They also provided records for the monthly natural gas usage in the boilers. Fuel oil is listed in the tracking sheet, but none was purchased or used so all rows have a 0. Based on the records provided, March 2022 used the most natural gas at 79,872 Mscf of natural gas.

The facility has particulate matter limits for each boiler, when firing yellow grease. The facility also has material limits limiting the sulfur content in fuel oil, by weight and tons of yellow grease fired. Since these fuels were not used in the boilers, no records were provided for these (SC I.1 and 2, SC II.1 and 2).

The boilers are subject to 40 CFR Part 63, Subpart JJJJJJ (6J) for all existing, industrial, commercial, and institutional boilers located at an area source of HAPs. A tune-up of the boiler biennially to demonstrate continuous compliance is required and must be conducted no more than 25 months

after the previous tune up. The facility provided records for the tune-up and compliance certification for each boiler. As a note: the paperwork states it's for 40 CFR Part 63, Subpart DDDDD (5D) which is for a boiler at a major source of HAPs. The tune-up documentation appears to meet the requirements as specified in 6J.

Documentation shows the tune-up was completed on August 1, 2022 by a third-party contractor. The tune-up includes inspecting the burner, flame patter, sir-to-fuel ratio system, optimize emissions of CO, and measure CO and O2 levels in exhaust before and after tune-up. O2 volume for boiler 1 is tuned to 6.65% and boiler 2 is tuned to 8.2%. No CO was found in the exhaust.

EU-FIRE-PUMP-ENGINE

This emission unit is an emergency fire pump engine used to provide power to pump water for fire suppression or protection. This fire pump is subject to 40 CFR Part 63, Subpart ZZZZ for Stationary Reciprocating Internal Combustion Engines (RICE). This regulation stipulates that any sources subject to this is subject to 40 CFR Part 60, Subpart IIII for compression ignition engines. Therefore, the permittee shall comply with 40 CFR Part 63, Subpart ZZZZ by complying with all applicable provisions of 40 CFR Part 60, Subpart IIII.

The fire pump was not in operation during the inspection. The date on the fire pump was May 2008 with a rating of 110 brake horsepower (BHP). Hours meter reading was 184.0. This is a new hours meter which was installed on 6/16/19, as noted in the previous inspection report. The fuel filter had a date written on it, indicating the last time it was changed. The date was June 3, 2022 and the hours meter readings at the time of change was 166.5 hours. The pump is manually tested, every Sunday, for 30 minutes. The pump will also run automatically if the water pressure is low, to maintain proper operating pressure. The required yearly maintenance is contracted out and records were provided for review.

The most recent inspection of the fire pump was on June 3, 2022, as was noted on the oil filter, and completed by WW Williams. A checklist of all pieces of the fire pump was provided. The report noted that the air filter and radiator cap need to be replaced. Fuel purchase records were provided. Fuel is supplied by EM Sergeant Company and it is denoted as dyed ultra-low sulfur diesel fuel (ULSD). This type of fuel is required to be below the 15 ppm, which meets the requirement of SC II.1.

FG-COLDCLEANERS

This flexible group covers any cold cleaner that is grandfathered or exempt from Rule 201, pursuant to Rule 278, Rule 278a, and Rule 281(2)(h) or Rule 285(2)(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.

The facility maintains three, identical cold cleaners on site. There is one located in the powerhouse and two are in the maintenance area/fork truck shop. They are operational but were not in use during the inspection. The design of these cold cleaners, CRC Smart Washer, do not have lids. The parts are washing in a basin and all liquid is rinsed below and contained in a tub,

which is covered by the basin. No exposed liquid is left in the basin. The notation on the side indicates the liquid, Ozzy Juice SW-7, is non-hazardous, non-flammable, non-corrosive, and non-polluting. Operational instructions are posted above the cleaners. Clean Harbors services the cleaners quarterly.

Facility provided the SDS of the cold cleaner liquid for review. The cleaner is Ozzy Juice SW-7 from CRC SmartWasher. The SDS provided states the ingredients are 90-100% water, 1-3% proprietary surfactant blend, and 1-3% tetrapotassium pyrophosphate which is not listed on the EPA list of VOCs. Percent volatile is listed as 93.2%. Since water and the tetrapotassium pyrophosphate are not VOCs, the highest percent VOC the liquid could be is 3%.

As stated in previous inspection reports, the part one rule definition of "cold cleaner" under R336.1103(aa) us a tank containing organic solvent with a VOC content of 5% or more, by weight. Since the Ozzy Juice product does not meet this definition, the parts washers are not currently subject to the Part 7 rules of the requirements of the flexible group found in the ROP. If the facility were to change to another cleaning product, or the formulation of the current product changed to contain VOC, the Part 7 rules and associated conditions would apply.

PTI No. 120-22

FG-BOILERS

This permit is a general permit for one or more natural gas-fired boilers, each with a maximum rated heat input of 100 million BTU per hour, and each controlled by a now-NOx burner. This is a general permit for boilers.

The facility is currently installing this boiler. It will serve as a permanent boiler on site to replace the need for a temporary boiler when one is shut down for prolonged maintenance. The boiler being installed is a Todd Combustion boiler from about 1998. It is currently bolted down into the intended installation location on site and the piping is still being connected. A low-NOx burner will be installed. The anticipated start-up date is April 2023.

Exempt Equipment

In the maintenance area, the facility has welding, grinding, and fabricating equipment that is used for maintenance and repair of equipment at the facility. These are exempt under Rule 285(2)(l)(vi)(B).

In the closeout meeting, EGLE staff discussed the condition on PTI No. 120-22 that establishes a fuel usage limit for the new boiler. At present, the natural gas meter reads all natural gas that is sent the boilers. The facility should install a separate natural gas meter on the new boiler in order to show compliance with the fuel usage requirement. If the facility maintains one meter for all boilers, actual usage by the new boiler will be impossible to determine as all gas to all boilers is being measured.

Based on the records review and on-site inspection, the facility appears to be in compliance with MI-ROP-B4072-2019 and PTI 120-22, all AQD administrative rules, and the Federal Clean Air Act, Article II, Part 55, Air Pollution Control Rules, of the Natural Resources and Environmental Protection Act, 1995 PA 451, as amended (Act 451).

NAME Annette Cross DATE 2/9/23 SUPERVISOR RJL 2/9/23