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

B407257599

FACILITY: WestRock California, LLC		**SRN / ID:** B4072
LOCATION: 177 Angell St., BATTLE CREEK		**DISTRICT:** Kalamazoo
CITY: BATTLE CREEK		**COUNTY:** CALHOUN
CONTACT: Andrew Olifer , Safety/Environmental Manager		**ACTIVITY DATE:** 04/07/2021
STAFF: Amanda Chapel	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MAJOR
SUBJECT:		
RESOLVED COMPLAINTS:		

Records Review:

On March 15, 2021, Air Quality Division's (AQD) Amanda Chapel (staff) received the records for WestRock California, LLC as required by MI-ROP-B4072-2019 and PTI No. 113-20. Due to the ongoing COVID-19 pandemic, to help ensure safety and social distancing protocols, the Department of Environment, Great Lakes, and Energy (EGLE) has authorized inspectors to do virtual records reviews as part of a full compliance inspection at a facility. The records review is being completed virtually and will be part of the full compliance inspection for WestRock California located in Battle Creek, Michigan.

The facility is a 100% recycled paperboard plant and produces paper stock for consumer packaging products and shipping envelopes. The facility does not currently 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 MI-ROP-B4072-2019. A temporary boiler was installed in 2020 and received PTI No. 113-20, a general permit for boilers. This boiler is in the process of being removed from site.

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 boundary. The last inspection conducted on 7/30/2019 determined that the facility was in compliance with all state and federal regulations.

MI-ROP-B4072-2019

Source-Wide Conditions

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

The last page of the records contains 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. This are acceptable emission factors to use, as documented in the ROP. These are used to track HAPs at the facility.

The facility tracks all HAPs at the facility and provided quarterly reports for 2019 and 2020. They are tracking HAPs for the entire facility. In December 2020, the facility reported 2.2 tpy of

individual HAP and 10.42 tpy aggregate HAP. This is in compliance with their 9.0 tpy individual and 22.5 tpy aggregate HAP limits. High emitting HAPs are acetaldehyde, biphenyl, and methanol. These are emitted across multiple process

The facility tracks usage of all chemicals and products in the facility by process. These records were provided for review. The facility appears to be tracking approximately 30 HAPs. High emitting HAPs are acetaldehyde, biphenyl, and methanol. These are emitted across multiple processes in the facility. HAPs are tracked both monthly and on a 12-month rolling basis.

EU-COATING

Application of coating in the dry end of the paper machine includes the application of latex adhesive, which is 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.

As stated above, 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 VOC of each product is denoted in the column next to the product. VOCs and HAPs are tracked, monthly, based on the usages and percentage of VOC denoted in the sheet. September 2020 had the highest VOC emissions with 1.13 tons.

The 12-month rolling total for VOCs was available in the quarterly reports which summarizes the previous 12 months. The facility showed they were above the 6.9 tpy 12-month rolling VOC limits on December 2020. Facility reported emissions of 7.3 tpy VOC on a 12-month rolling basis. The exceedance was attributed to a change in the SDS from the supplier showing that the VOC content was higher than originally reported due to inclusion of water in the percentage calculations of VOC content. The facility has applied for a new PTI to increase VOC emissions in EU-COATING to increase VOC emission limits. Since the facility was proactive in addressing the exceedance and a PTI application is in house, no VN will be sent for the exceedance.

The facility provided the weekly VE records which are being kept in an excel spreadsheet. The emissions observations are noted with date, time, observer initials, if emissions were observed, operating conditions, and any notes. All supplied records show normal operation.

EU-FIRE-PUMP-ENGINE

Emergency fire pump engine used to provide power to pump water for fire suppression or protection.

The facility provided a copy of the annual maintenance on the engine which is completed by WW Williams. The most recent inspection was done on 6/30/2020. The oil, oil filer, and fuel filter were changed. The engine was inspected and determined to be in good operational condition. The hours meter read 88.5 and it was noted that it was a newer hours meter.

Fuel purchase records were supplied by the facility. The fuel purchased is denoted as "diesel dyed 15 ppm". According to the spec sheet supplied by Buckeye Partners, LP, the total maximum sulfur content on delivery was 11 ppm, which meets the requirement to use only 15 ppm or less diesel fuel.

The facility provided the engine hours meter readings last completed on 3/6/21. The hours meter read 112.7 hours and was started for testing. The hours meter appears to have been changed on 6/16/19 when the old reader said 200 hours of operation. All operation of the engine appears to be for 30-minute weekly testing.

EU-REW-0001

A machine that performs the winding of final product onto rolls for shipment (Building 23).

The facility provided the weekly VE records which are being kept in an excel spreadsheet. The emissions observations are noted with date, time, observer initials, if emissions were observed, operating conditions, and any notes. All supplied records show normal operation.

FG-COLDCLEANERS

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 provided the SDS for the cold cleaner solvent. The solvent is SW-3 OzzyJuice from ChemFree Corporation. The SDS identifies that 90-100% of the solution is water and 1-3 percent is surfactant blend and tetrapotassium pyrophosphate respectively. Percent volatile is identified as 90.8%.

As stated in previous inspection reports, the part one rule definition of "cold cleaner" under R336.1103(aa) is a tank containing organic solvent with a VOC content of 5% of 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 or 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.

FG-BOILERS

Two natural gas fired boilers with back-up fuels as No. 2 fuel oil, yellow grease, and No. 6 fuel oil. Maximum rated heat input for each boiler is 107 MMBTU per hour. EU-BLR-0001 and EU-BLR-0002.

The facility provided records from 2019 and 2020 showing that the boilers have not run on No. 2 fuel oil, No. 5 fuel oil, or yellow grease in the past two years. The boilers have only run on natural gas. The facility is tracking VOC, HAP, and metals emissions from the boilers on a 12-month rolling basis. Based on records, February 2020 had the highest natural gas usage at 82,319 Mscf. No fuel oil was used. Sulfur content of the fuel was documented as less than 11 ppm. No VEs were completed because the facility did not fire any yellow grease.

The facility provided copies of the June 2019 40 CFR Part 63 Subpart JJJJJ certifications detailing the boiler tune up as required by the MACT. Boiler 1 and boiler 2 both had the measured CO and O2 reduced during the tune up to 4.0% and 4.2% respectively.

FG-PAPERMAKING

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

The facility tracks the paperboard production in tons, monthly. The facility then adjusts 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. Based on records, March 2021 had the highest production of paperboard at 13,752 tons. 12-month rolling totals are accounted for in the quarterly reports. In December 2020, the rolling total was 143,944 tons of paperboard produced, minus coating. Actual ADTP tons equaled 166,157 tons, which includes coating.

A note included with the recordkeeping which states that National Council for Air and Steam Improvement (NCASI) are evaluated against the ADTFP, which is conservatively assumed to be a 10% moisture content. Therefore, the finished product weight is increased to a 10% moisture basis. The site states the facility has a potential to produce finished product with a 6.5% moisture content.

The facility is tracking the 12-month rolling VOC calculations in the quarterly reports. Records show that in December 2020, the facility had emitted 19.79 tpy VOC on a 12-month rolling basis which is below their permit limit of 30.0 tpy VOC.

Records for the felt wash portion of FG-PAPERMAKING are kept separately, as required by the permit. Records show that in December 2020, the facility emitted 0.0 tpy on a 12-month rolling basis VOC from the felt wash portion of the flexible group. The permitted limit is 0.7 tpy 12-month rolling VOC. The felt wash portion uses four different chemicals in the process, one of which contains 1.5% VOC. Usage of each of these chemicals is tracked, monthly, in pounds. The VOC weight percent was determined from the manufacturer's data sheet, determined by Method 24. Glycol ethers are the only HAP of concern in this portion of the process, which are tracked with the facility-wide HAPs.

The facility currently has a breakouts of all the VOCs, HAPs, and chemicals contained in the process chemicals in the quarterly reports. This is broken out by emission unit or flexible group. The facility also tracks air toxics and chemicals, specifically in FG-PAPERMAKING, monthly, and maintains a 12-month rolling total, per chemical.

PTI No. 113-20 (General Permit for Temp Boiler)

FG-BOILERS

One or more propane or natural gas-fired boilers, each with a maximum rated heat input of 100 million Btu per hour, and each controlled by a low-NOx burner.

Facility provided records for the daily fuel usage in the rental boiler, placed on site in December 2020 and removed from service in March, 2021. They provided daily, monthly, and total usage of fuel. There were no reported malfunctions, so no records were provided for malfunctions or maintenance. The

The facility appears to be in compliance with all recordkeeping requirements in MI-ROP-B4072-2019 and PTI No. 113-20.

On-Site Inspection:

On April 7, 2021, Air Quality Division's (AQD) Amanda Chapel (staff) arrived at 177 Angell Street, Battle Creek Michigan at 9:30 am to conduct an announced air quality inspection of WestRock California, LLC. The inspection was announced due to the ongoing COVID-19 pandemic and directive to conduct inspections while maintaining social distance. Also due to this, the records were reviewed separately from the inspection. The purpose of this inspection was to determine compliance with MI-ROP-B4072-2019 and a temporary boiler permit, PTI No. 113-20, and all other applicable state and federal regulations.

Staff first went to the guard shack and then to the COVID screening tent for a temperature check. The Environmental Contact is Mr. Andrew Olfier who provided his phone number to call and meet in the parking lot after the COVID screening.

The facility has approximately 160 employees at this location. They operate 24 hours a day in three shifts. They try to operate 364 days a year but there are occasional down days where maintenance is performed. The boxboard that the facility produces is mainly used as outer packaging in the food industry or as shipping envelopes. At the time of the last inspection, on July 30, 2019, the facility was determined to be in compliance.

During the on-site tour, we walked the process from beginning to end. The facility has three pulpers which were in operation during the inspection. These pulp the recycled paper that is received via trucks on site. These also remove contaminants like metal and plastic from the cardboard. The pulp is then sent through various screens to filter out the unwanted pieces that were not removed previously. The pulp is sent through a densifier to remove water, and then it is sent to the paper machine.

The paper machine was 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 and it is sent to roll handling to be shipped out from the facility.

FG-PAPERMAKING

Boxboard production including pulping and the wet end process on the paper machine including felt wash. EU-STOCKPREP and EU-PAPERMACHINE are part of this flexible group. This was in operation during the inspection. Mr. Olfier and I walked up to the roof to observe visible emission from the stacks on site. There were no rain caps or visible emissions from any of the stacks associated with FG-PAPERMAKING.

EU-COATING

Application of coating in the dry end of the paper machine includes the application of latex adhesive, which is used to bind the coating to the paperboard. Coatings are formulated from various liquids, slurries, solids, and dried in natural gas-fired ovens. The mixing and storage area for the coating portion of the operation was observed during the inspection.

The coating operation was running during the inspection. Mr. Olfier confirmed that roller coating applicators are used on site. The coating exhaust is a gooseneck. There was no rain cap on the stack and there were no visible emissions observed.

EU-REW-0001

A machine that performs the winding of final product onto rolls for shipment. The rewinder works with the slitter to cut the rolls to size for the consumer. This was running during the inspection. The stack emits horizontally, as noted in the permit, with no obstruction. No visible emissions were seen during the inspection.

FG-BOILERS

One or more propane or natural gas-fired boilers, each with a maximum rated heat input of 100 million Btu per hour, and each controlled by a low-NOx burner. This is contained in PTI No. 113-20 which is a general permit for temporary boilers.

As stated previously, this boiler was rented to supply backup steam to the facility while the existing boilers were undergoing an upgrade. This was disconnected from service in March 2021 and is currently sitting on a trailer, ready to be removed from the site. Because of this, the current hours meter reading and boiler name plate was not able to be observed during the inspection. The existing piping is still installed but the boiler is not. Because of this, the facility was advised they can apply to void this permit.

FG-BOILERS

Two natural gas fired boilers with back-up fuels as No. 2 fuel oil, yellow grease, and No. 6 fuel oil. Maximum rated heat input for each boiler is 107 MMBTU per hour. EU-BLR-0001 and EU-BLR-0002.

Both boilers were operating during the inspection. The boilers both have nameplates identifying they were built in 1947. According to Mr. Olfier, the boilers have never been fired on yellow grease and the last time fuel oil used was maybe 2003. He said the boiler hasn't used fuel oil within the last decade at least. These boilers exclusively run on natural gas. Records reviewed support this. According to the boiler maintenance supervisor, the facility completes annual maintenance for about 4 days on the boilers in June or July.

The facility tracks natural gas usage by recording the gas meter reading, every shift. Each boiler has a dedicated gas meter, so the facility knows exactly how much gas is used, in each boiler, per shift. These are recorded for records requirements and emissions are calculated based on this information. The stacks emit vertically unobstructed upward with no rain caps. No visible emissions were observed during the inspection.

EU-FIRE-PUMP-ENGINE

Emergency fire pump engine used to provide power to pump water for fire suppression or protection.

The fire pump was not operating during the inspection. The hours meter reading was 114.5 hours. The pump is manually tested, every Sunday, for 30 minutes. The required yearly maintenance is contracted out and records were provided for review. The pump will also run if

the water pressure is low, to maintain proper water pressure. The nameplate on the pump read 110 max brake horsepower (BHP).

FG-COLDCLEANERS

There are two identical, CRC Smart Washer cold cleaners on site; one located in the fork truck shop and one in the maintenance shop. Both are operational but not in use during the inspection. The design of these cold cleaners do not include lids. The parts are washed in a basin and all liquid is rinsed below and contained in a tub, which is covered by the basin. The notation on the side indicated that the solvent is non-hazardous, non-flammable, non-corrosive, and non-polluting. Operational instructions are posted above the cleaners. The SDS for the cleaning solvent was provided in the records request.

During the closeout meeting with the mill manager, Mr. Olfier, and Ms. Anu Nathan, via teams, the records exceedance was discussed. It was noted to the facility that they took proactive action to submit a PTI application when the overage was discovered and no VN would be issued as the facility already took the steps required to address the issue.

The facility appears to be in compliance with all requirements contained in the applicable permits and state and federal regulations.

NAME [signature] DATE 4/8/21 SUPERVISOR RIL 4/14/21