

**WASHINGTON DEPARTMENT OF ECOLOGY
MAIL STOP 47600
OLYMPIA, WASHINGTON 98504**

IN THE MATTER OF AIR EMISSIONS FROM:

WestRock CP LLC)	NOC ORDER No. 15833
801 Portland Ave)	
Tacoma, WA 98421)	

DESCRIPTION

WestRock CP LLC (WestRock) operates a Kraft pulp and paper mill located in Tacoma, Washington. The mill is an existing major source under the Prevention of Significant Deterioration (PSD) program and currently operates under Air Operating Permit (AOP) 000092-2 issued by the Washington Department of Ecology (Ecology) on January 17, 2007 and reissued on April 28, 2010. This Order approves a project to improve the transfer of wood chips and increase yield through improved efficiency.

The project will consist of improvements to the chip conveyers. The new system will have belt conveyors with a dust collection cyclone specifically designed to control particulate matter emissions to replace two less efficient existing pneumatic chip conveying cyclones at the Kamyr digesters. As a result of the proposed project chip processing in the screening system is predicted to increase from 2,278 bone dry tones (BDT) per day to 2,369 BDT per day.

FINDINGS

Pursuant to the Requirements for Replacement or Substantial Alteration of Emission Control Technology at an Existing Stationary Source in the Washington Administrative Code (WAC) 173-400-114 and based upon the complete Notice of Construction (NOC) application submitted by WestRock and the technical analysis performed by Ecology, Ecology now finds the following:

1. A NOC application dated March 2, 2018 was submitted by WestRock for the chip thickness screening project. Ecology reviewed the application and after receiving additional information found the documentation complete on May 9, 2018.
2. The proposed project will reduce knots introduced to the digesters, increase pins and fines removal, and improve digester yield. The Kamyr digesters, pulp dryers, and Paper Machine #14 are included as affected sources. However, the hourly maximum rate of these units will not change. Additionally, no increase in black liquor production and firing, bleached pulp production, or steam utilization is expected due to the proposed project.
3. The only air pollution control equipment associated with the project will be a dust collection cyclone specifically designed to control particulate matter. This will replace two less efficient existing pneumatic chip conveying cyclones at the Kamyr digesters. As such, this

project is subject to the requirements of WAC 173-400-114, Requirements for Replacement or Substantial Alteration of Emission Control Technology at an Existing Stationary Source.

4. As a result of the proposed project, throughput of the chip screening system is projected to increase by 91 bone dry tons per day (from 2,278 to 2,369 BDT/day). This is the only unit that is being modified for this project, as defined by WAC 173-400-030.
5. Other units affected by this project include the Kamyr digester and Paper Machine #14. The daily throughput of chips at the Kamyr digester is projected to increase by the same amount, or 31,850 tons per year, assuming 8,400 hours of mill operation per year. The expected increased production rates at the pulp dryer is 14,000 air dried tons of finished product per year (ADTFP/year) and at the Paper Machine #14 is 9,450 ADTFP/yr. As a result of these increases, the project is estimated to increase total production at the mill by a total of 23,450 air dried tons of finished product.
6. Emissions from the chip screening system are expected to increase due to an increase in chip processing upon completion of the project. There is also expected to be an associated increase in emissions from the Kamyr digesters, due to increases in pulp yield, and from the pulp dryers and Paper Machine #14, due to increases of annual throughput from those units. No other emissions increases are projected from other emission units at the mill. The projected maximum emissions increases from the proposed project is summarized in Table 1 below:

Table 1. Projected Maximum Emissions Increase from the Proposed Project

Pollutant	Projected Maximum Emissions Increase (tons/yr)	Chip Screening System Emission Increase (ton/year)
Total Suspended Particulate (TSP)	0.33	0.05
Particulate Matters less than 10-micron in diameter (PM10)	0.30	0.05
Particulate Matters less than 2.5-micron in diameter (PM2.5)	0.23	0.05
Total Reduced Sulfur (TRS)	0.00	0.0
Volatile Organic Compound (VOC)	3.9	0.00
Toxic Air Pollutants (TAPs)	15.59	0.00

Ecology notes that the VOC and TAP increases are attributed to increased production from the pulp dryers and Paper Machine #14. As discussed below, these units are not being modified to accommodate this increase in throughput.

7. The WestRock mill has the potential to emit greater than 100 tons per year (TPY) for at least one PSD pollutant. The mill is therefore classified as a major stationary source under the PSD permitting program and is subject to PSD permitting consideration under WAC 173-400-720 and 40 CFR 52.21.

A PSD permit is required if the project is a “major modification” (i.e. if the net emissions increase resulting from the modification is greater than the PSD Significant Emission Rate (SER) threshold for any regulated pollutant). Long term emission changes in tons per year (TPY) for listed pollutants are calculated and compared to the appropriate SER. WestRock included such an analysis in its application that concluded that the project is not a major modification and a PSD Permit is not required for the project. There will be no physical changes to equipment subject to or potentially subject to New Source Performance Standards (NSPS) so the applicability of the NSPS standards will not change with regard to those units.

8. In accordance with WAC 173-400-110(1)(d), new source review (NSR) of a modification is limited to the emission unit proposing to be modified and the air contaminants whose emissions would increase as a result of the modification. As presented in Table 2 below, there are no criteria pollutants that trigger NSR because the projected maximum emission increases associated with the chip screening system do not exceed the de minimis criteria set forth in WAC 173-400-110(5).

Table 2. NOC Emissions Screening – Criteria Pollutants for the Modified Unit

Pollutant	Emissions Increase (ton/yr)	WAC 173-400-110 De Minimis Rate (ton/yr)	Below Exemption Level?
TSP	0.05	1.25	Yes
PM10	0.05	0.75	Yes
PM2.5	0.05	0.5	Yes
SO2	0.00	2.0	Yes
NOx	0.00	2.0	Yes
CO	0.00	5.0	Yes
VOC	0.00	2.0	Yes
Lead	0.00	0.005	Yes

9. In order for a project to be subject to the NSR requirements, the project must either be a new source or a modification to an existing source and the applicable emission increases must be above the exemption thresholds. This project will not be a new source. With respect to a modification, WAC 173-400-030(48) provides the definition for a modification that would qualify as a new source and indicates that the term shall be construed consistent with the definition of modification in Section 7411, Title 42, United States Code and with rules implementing that section. There are two definitions of modification to consider for this project: “major modification” as defined by 40 CFR 51.165 and “modification” as specified

by 40 CFR 60.14. As discussed below, based on the information provided in the NOC application, the project does not meet the definition of a “major modification”. Additionally, the emission increases associated with the modified unit are below the exemption levels specified by WAC 173-400-110(5). As such, Ecology has determined that the project is not subject to NSR, as prescribed in WAC 173-400-110.

10. In accordance with WAC 173-400-113, BACT is required for new or modified sources for all air contaminants that will increase as a result of the proposed project. Similarly, WAC 173-460 requires Toxics BACT (tBACT) for TAPs. The modified source for this project is the chip screening system. The air pollutants of concern from the chip screening system are PM, PM₁₀, and PM_{2.5}. The emission increases of PM, PM₁₀, and PM_{2.5} would not trigger the NOC requirement and therefore, the proposed modification would not be subject to BACT. WestRock is proposing to install a dust collection system for the proposed new chip screening system to control emissions of PM, PM₁₀, and PM_{2.5}. There are no toxics emissions associated with the proposed chip screening system.
11. New or modified sources of toxic air pollutants (TAPs) are subject to the requirements of WAC 173-460-070 which require that the increase in emissions associated with modification are sufficiently low to protect human health and safety. As with the NSR requirements, new source review of a modification is limited to the emission unit or units proposed to be modified and the TAPs whose emissions would increase as a result of the project. Per WAC 173-460-080, compliance may be assessed using de minimis emission values, acceptable source impact levels (ASILs) using dispersion modeling or small quantity emission rates (SQERs). The chip screening system will not have an increase in TAP emissions.
12. The facility is not subject to WAC 173-460, however, there are TAP emission increases associated with the project. The facility evaluated those emission increases to demonstrate that they were either below the SQERs or ASILs. The SQERs for the eight species whose project emissions exceed the de minimis levels are shown in Table 3 and compared to the project emissions. TAPs with an emission increase below the corresponding de minimis levels do not require further analysis. Dispersion modeling is performed to assess the concentration impacts of the emissions of the pollutants listed in Table 3 which exceed their respective SQER. The results are presented in Table 4. The results show that the emissions meet the requirement that project associated TAPs are sufficiently low to protect human health and safety.

Table 3. Associated Toxic Air Pollutant Emission Increases with Annual Standards

Pollutant	Total Project Emissions Increase (lb/yr)	WAC 173-460-150 SQER (lb/yr)⁽¹⁾	Below SQER?
Acetaldehyde	736.00	71.00	No
Benzene	18.10	6.62	No

Pollutant	Total Project Emissions Increase (lb/yr)	WAC 173-460-150 SQER (lb/yr)⁽¹⁾	Below SQER?
Chloroform	0.47	8.35	Yes
Formaldehyde	460.68	32.00	No
Methylene Chloride	101.75	192.00	Yes
Naphthalene	1.23	5.64	Yes
Tetrachloroethylene	126.67	32.40	No
Trichloroethylene	78.59	95.90	Yes

Table 4. AERSCREEN Modeling Results

Pollutant	Pulp Dryers Contribution (µg/m³)	Kamyr Digester Contribution (µg/m³)	PM14 Contribution (µg/m³)	Total (µg/m³)	ASIL (µg/m³)	Below ASIL?
Acetaldehyde	0.00	0.00	0.15	0.15	0.37	Yes
Benzene	0.004	0.000	0.001	0.005	0.035	Yes
Formaldehyde	0.097	0.000	0.030	0.127	0.167	Yes
Tetrachloroethylene	0.027	0.000	0.008	0.035	0.169	Yes

13. An environmental checklist was submitted with the NOC Application which considered environmental impacts of the project as required by chapter 43.21C of the Revised Code of Washington (RCW), also known as the State Environmental Policy Act (SEPA). Ecology reviewed the checklist and made a Determination of Nonsignificance (DNS) which was signed on May30, 2018 and made available for public comment at the same time as the order.
14. The proposed project meets all applicable federal and state rules and regulations implemented by Ecology including: General Regulations for Air Pollution Sources, Chapter 173-400 WAC, 40 CFR Part 60, New Source Performance Standards, 40 CFR Part 61 and National Emission Standards for Hazardous Air Pollutants (NESHAPs) 40 CFR Part 63.
15. WAC 173-300-110 (Operation and Maintenance) applies to this project as it is an operation affecting air quality. Proper O&M for this project focuses on the operation of the dust collection cyclone for particulate collection with the expectation that the cyclone be in operation when chips are conveyed.

THEREFORE, it is ordered that the project, as described in said NOC permit application and other information submitted to the Ecology in reference thereto, is approved subject to the conditions listed below.

CONDITIONS

1. The high efficiency cyclone system is designed for dust collection while chips are being transferred to the digesters and must be monitored by the mill's distributed control system. If the cyclone becomes inoperable, corrective action must be initiated within 24 hours and completed as soon as practicable. Ecology must be notified if the cyclone will be inoperable for more than 72 hours and chips will continue to be transferred to the digesters.
2. Any activity or operation, which is undertaken by WestRock or others, in a manner which is inconsistent with the initial notice of construction application dated March 2, 2018, other information submitted to Ecology in reference thereto, and this order, shall be subject to Ecology enforcement under applicable regulation. Nothing in this order shall be construed so as to relieve WestRock of its obligations under any state, local, or federal laws or regulations.
3. This approval shall become void if construction is not commenced within eighteen (18) months after receipt of this approval, or if construction of the project is discontinued for a period of eighteen (18) months.

YOUR RIGHT TO APPEAL

You have a right to appeal this Order to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do both of the following within 30 days of the date of receipt of this Order:

- File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

Your appeal alone will not stay the effectiveness of this Order. Stay requests must be submitted in accordance with RCW 43.21B.320.

ADDRESS AND LOCATION INFORMATION

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	Department of Ecology Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
Pollution Control Hearings Board 1111 Israel RD SW STE 301 Tumwater, WA 98501	Pollution Control Hearings Board PO Box 40903 Olympia, WA 98504-0903

MORE INFORMATION

- **Pollution Control Hearings Board**
www.eho.wa.gov/Boards_PCHB.aspx
- **Chapter 43.21B RCW, Environmental Hearings Office – Pollution Control Hearings Board**
<http://apps.leg.wa.gov/RCW/default.aspx?cite=43.21B>
- **Chapter 371-08 WAC – Practice and Procedure**
<http://apps.leg.wa.gov/WAC/default.aspx?cite=371-08>
- **Chapter 34.05 RCW – Administrative Procedure Act**
<http://apps.leg.wa.gov/RCW/default.aspx?cite=34.05>
- **Chapter 70.94 RCW, Washington Clean Air Act**
<http://apps.leg.wa.gov/RCW/default.aspx?cite=70.94>
- **Air Quality Rules**
www.ecy.wa.gov/laws-rules/ecywac.html#air

SIGNATURES

Reviewed by:

Signature Authority:

Stephanie Ogle, P.E.
Environmental Engineer
Solid Waste Management Program

James DeMay, P.E.
Industrial Section Manager
Solid Waste Management Program

Date

Date