

DOCKET NO. D-2006-041-3

DELAWARE RIVER BASIN COMMISSION

Discharge to a Tributary of Special Protection Waters

**WestRock Converting Company
Industrial Wastewater Treatment Plant
Smithfield Township, Monroe County, Pennsylvania**

PROCEEDINGS

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) by WestRock Converting Company (WestRock or docket holder) on June 1, 2017 (Application) for renewal of the docket holder's existing industrial wastewater treatment plant (IWTP) and its discharge. The Pennsylvania Department of Environmental Protection (PADEP) issued National Pollutant Discharge Elimination System (NPDES) Permit No. PA0012963 for the NCCW discharge on November 23, 2015.

The Application was reviewed for approval under Section 3.8 of the *Delaware River Basin Compact*. The Monroe County Planning Commission has been notified of pending action. A public hearing on this project was held by the DRBC on November 14, 2018.

A. DESCRIPTION

1. Purpose. The purpose of this docket is to renew approval of the existing 0.06 mgd WestRock IWTP, and its discharges of treated industrial wastewater effluent and up to 0.2866 mgd of non-contact cooling water (NCCW). This docket also continues the approval of a total dissolved solids (TDS) determination consisting of effluent limits of 5,000 mg/l (average monthly) and 10,000 mg/l (daily maximum).

2. Location. The WestRock Coated Recycled Board Mill is located just north of Interstate-80, off of Paper Mill Road, in Smithfield Township, Monroe County, Pennsylvania. The facility will continue to discharge combined IWTP effluent and NCCW to Brodhead Creek, at River Mile 213.0 – 1.1 (Delaware River - Brodhead Creek), within the drainage area to the Middle Delaware Special Protection Waters (SPW).

The project outfall is located in the Brodhead Creek Watershed as follows:

OUTFALL NO.	LATITUDE (N)	LONGITUDE (W)
001	40° 59' 59"	75° 08' 52"

3. **Area Served.** The docket holder's IWTP will continue to serve the WestRock Coated Recycled Board Mill located in Smithfield Township, Monroe County, Pennsylvania.

For the purpose of defining the Area Served, Section B (Type of Discharge) and D (Service Area) of the docket holder's Application are incorporated herein by reference, to the extent consistent with all other conditions contained in the DECISION Section of this docket.

4. **Physical features.**

a. **Design criteria.** The docket holder's IWTP utilizes dissolved air flotation (DAF), screening, and a complete mix activated sludge treatment process to treat industrial process wastewater generated by recycled pulp production. The IWTP is designed to treat a monthly average flow of 0.06 mgd and a daily maximum flow of 0.1415 mgd. The facility also generates approximately 0.2886 mgd of NCCW (as a monthly average) from pulp production process wastewater cooling, which is combined with the treated IWTP effluent prior to discharge to the Brodhead Creek.

b. **Facilities.** The West Rock Coated Recycled Board Mill produces approximately 220 tons of recycled pulp per day, generated by mixing hot water with Old Corrugated Containers (OCC) in a pulper, which uses mechanical energy to convert the mix to pulp fibers. The recycled pulp passes through a series of cleaning steps to remove metals, plastics, and other impurities. The pulp is then fed through a paper machine, where water is removed using heat, vacuum and pressing in order to produce a dry sheet. Clean water is added via spray showers to the paper machine. The water that is drained from the paper machine (referred to as "whitewater") is pumped from the mill sump pit through hydra-sieves for removal of fibrous material to be sent back to the pulper. This "dirty" whitewater flows back to a 200,000-gallon "dirty" storage tank, where it is pumped to a vertical Poseidon DAF unit, where coagulants and flocculants are added to remove suspended solids. The DAF effluent then flows by gravity through a set of 120-mesh Sweco screens to further remove suspended solids. This "clean" whitewater is then pumped to a 100,000-gallon "clean" storage tank. This "clean" white water is pumped back to the mill for reuse.

To control build-up of TDS in the whitewater, a sidestream (approximately 50,000 gpd) of the "clean" whitewater is diverted from the recirculation system for further treatment in the activated sludge treatment process. This process consists of a 200,000-gallon

aeration tank, two 75-HP rotary lobe positive displacement blowers, a DAF secondary clarifier, return activated sludge (RAS) pumps to return mixed liquor to the aeration tank, a nutrient feed system, and a waste sludge holding tank.

In the activated sludge treatment process, the 50,000 gpd of the “clean” whitewater is aerated and fed nutrients (nitrogen and phosphorous) to promote microorganism growth to meet BOD5 requirements. The wastewater then flows to the DAF secondary clarifier, where polymer is added to achieve a good separation of the mixed liquor solids from the effluent. Effluent is monitored at Internal Monitoring Point 101 prior to combining with NCCW and discharging via Outfall No. 001 to the Brodhead Creek. The mixed liquor solids are sent by the RAS pumps back to the aeration, tank, where periodically a portion of the mixed liquor solids are wasted to the waste sludge holding tank.

The docket holder’s wastewater treatment facility discharges to waters classified as SPW and is required to have available standby power. The existing IWTP has a diesel generator installed capable of providing standby power. (SPW)

The docket holder’s wastewater treatment facility is staffed 24 hours per day and has a PI system installed that continuously monitors plant operations. (SPW)

The docket holder has prepared and implemented an emergency management plan (EMP) for the IWTP in accordance with Commission SPW requirements. (SPW)

Several of the WWTP facilities are located in the 100-year floodplain. The WWTP facilities located in the floodplain are not located in the floodway and are flood proofed up to the flood protection elevation (one foot above the 100-year flood elevation).

Waste sludge will continue to be hauled off-site by a licensed hauler for disposal at a state approved facility.

c. Water withdrawals. The potable water supply in the project service area is provided by groundwater wells owned and operated by the docket holder. The NCCW is provided by an onsite surface water withdrawal from the Brodhead Creek owned and operated by the docket holder. The ground and surface water withdrawals are described in detail in Docket No. D-1980-025-2, approved on December 10, 2014.

d. Effluent Requirements. EFFLUENT TABLES A-1, A-2, A-3, and A-4 below contain effluent requirements for DRBC parameters that must be met as a condition of this approval (See DECISION Condition C.II.c.). NPDES Permit No. PA0012963 was issued by the PADEP on November 23, 2015 and includes final effluent limitations for the project discharges of 0.627 mgd (Combined IWTP effluent and NCCW; Outfall No. 001) and 0.145 mgd (IWTP effluent; Internal Monitoring Point No. 101) to surface waters classified by the PADEP as

supporting trout stocking and warm water fishes (TSF/WWF). The following average monthly effluent limits and monitoring requirements are among those listed in the NPDES permit and meet or are more stringent than the effluent requirements of the DRBC.

EFFLUENT TABLE A-1: DRBC Parameters Included in NPDES permit for Internal Monitoring Point No. 101

Internal Monitoring Point No. 101 (IWTP effluent)		
PARAMETER	LIMIT	MONITORING
pH (Standard Units)	6 to 9 at all times	As required by NPDES permit
Total Suspended Solids	220 lbs/day (average monthly) 440 lbs/day (daily maximum)	As required by NPDES permit
CBOD (5-Day at 20° C)	220 lbs/day (average monthly) 440 lbs/day (daily maximum)	As required by NPDES permit
Total Dissolved Solids*	5,000 mg/l (average monthly) 10,000 mg/l (instantaneous maximum)	As required by NPDES permit
Ammonia-Nitrogen	See EFFLUENT TABLE A-2 below	As required by NPDES permit
Nitrate as Nitrogen	Monitor & Report	As required by NPDES permit
Total Phosphorous	Monitor & Report	As required by NPDES permit
Dissolved Oxygen	Monitor & Report	As required by NPDES permit

* See Condition C.II.s. in DECISION section

EFFLUENT TABLE A-2: DRBC Parameters Included in NPDES permit for Outfall No. 001

Outfall No. 001 (Combined IWTP effluent and NCCW, Brodhead Creek)		
PARAMETER	LIMIT	MONITORING
pH (Standard Units)	6 to 9 at all times	As required by NPDES permit
Fecal Coliform (5/1 – 9/30) (10/1 – 4/30)	200 colonies per 100 ml, 2,000 colonies per 100 ml	As required by NPDES permit

The following average monthly effluent limits and monitoring requirements at Internal Monitoring Point No. 101 and Outfall No. 001 are DRBC requirements that are not included in the NPDES permit.

EFFLUENT TABLE A-3: DRBC Monitoring Requirements Not Included in NPDES Permit for Internal Monitoring Point No. 101

Internal Monitoring Point No. 101 (IWTP effluent)		
PARAMETER	LIMIT	MONITORING
CBOD (5-Day at 20° C)	85% minimum removal	Weekly
Ammonia-Nitrogen	20 mg/l*	Weekly
Total Inorganic Nitrogen	5 lbs/day	Monthly
Nitrate + Nitrite as Nitrogen	Monitor & Report	Monthly

Internal Monitoring Point No. 101 (IWTP effluent)		
PARAMETER	LIMIT	MONITORING
Total Kjeldahl Nitrogen	Monitor & Report	Monthly
Total Suspended Solids Influent	Monitor & Report	Monthly
Total Suspended Solids % Removal	Monitor & Report	Monthly

*NPDES Permit requires monitoring only for Ammonia

EFFLUENT TABLE A-4: DRBC Monitoring Requirements Not Included in NPDES Permit for Outfall No. 001

Outfall No. 001 (Combined IWTP effluent and NCCW, Brodhead Creek)		
PARAMETER	LIMIT	MONITORING
Temperature	Monitor & Report	Monthly
Total Dissolved Solids*	Monitor & Report	Monthly

* See Condition C.II.s. in DECISION section

B. FINDINGS

The docket holder submitted an Application to renew approval of the existing 0.06 mgd WestRock IWTP, and its discharges of treated industrial wastewater effluent and NCCW. The Application requested continuation of the approval of a TDS determination consisting of effluent limits of 5,000 mg/l (average monthly) and 10,000 mg/l (daily maximum).

In 1992, the DRBC adopted SPW requirements, as part of the DRBC *Water Quality Regulations (WQR)*, designed to protect existing high water quality in applicable areas of the Delaware River Basin. One hundred twenty miles of the Delaware River from Hancock, New York downstream to the Delaware Water Gap has been classified by the DRBC as SPW. This stretch includes the sections of the river federally designated as "Wild and Scenic" in 1978 -- the Upper Delaware Scenic and Recreational River and the Delaware Water Gap National Recreation Area -- as well as an eight-mile reach between Milrift and Milford, Pennsylvania which is not federally designated. The SPW regulations apply to this 120-mile stretch of the river and its drainage area. (Upper/Middle SPW)

On July 16, 2008, the DRBC approved amendments to its WQR that provide increased protection for waters that the Commission classifies as SPW. The portion of the Delaware River and its tributaries within the boundary of the Lower Delaware River Management Plan Area was approved for SPW designation and clarity on definitions and terms were updated for the entire program. (Upper/Middle SPW)

The WestRock facility and its discharge are located in the drainage area to the Middle Delaware SPW area. Article 3.10.3A.2.e.1). and 2). of the Commission's *WQR* states that projects subject to review under Section 3.8 of the Compact that are located in the drainage area

of SPW must submit for approval a Non-Point Source Pollution Control Plan (NPSPCP) that controls the new or increased non-point source loads generated within the portion of the docket holder's service area which is also located within the drainage area of SPW. The service area of the docket holder is located in the drainage area to the SPW. Since this project does not entail additional construction, or expansion of facilities or service area, and there are no new or increased non-point source loads associated with this approval, the NPSPCP requirement is not applicable at this time. Accordingly, DECISION Conditions C.II.k. has been included in this docket.

TDS Determination

Section 3.10.4.D.2 of the DRBC's WQR includes the Commission's basin-wide TDS effluent concentration limit of 1,000 mg/l. The Commission's in-stream TDS criteria is that the receiving stream's resultant TDS concentration be less than 133% of the background (WQR Section 3.10.3.B.1.b.). The 133% of the background TDS requirement is for the protection of aquatic life.

The Commission approved a monthly average TDS variance of 5,000 mg/l in a letter dated May 17, 1984, for the docket holder's IWTP. TDS is generated from the pulping process. The previous docket (Docket No. D-2006-041-1) continued approval of the monthly average of 5,000 mg/l for the IWTP discharge and included PADEP's daily maximum TDS effluent limitation of 10,000 mg/l as included in NPDES Permit No. PA0012963.

The estimated Q_{7-10} flow of the Brodhead immediately upstream of the Rock-Tenn IWTP discharge is 51.1 cfs (33 mgd). The background TDS concentration for the Brodhead Creek is estimated to be 84 mg/l.

Commission staff calculated that at a discharge flow of 0.06 mgd from the IWTP (Monitoring Point No. 101) and a maximum daily concentration of 10,000 mg/l of TDS at Q_{7-10} conditions results in an in-stream TDS concentration of 102 mg/l. 102 mg/l is 121% of the background TDS concentration for the Brodhead Creek. Using a discharge flow of 0.06 mgd from the IWTP (Monitoring Point No. 101) and an average monthly concentration of 5,000 mg/l of TDS at Q_{7-10} conditions results in an in-stream TDS concentration of 93 mg/l. 93 mg/l is 111% of the background TDS concentration for the Brodhead Creek. Under the average monthly and maximum daily IWTP discharge, the discharge will not result in an exceedance of 133% of background TSD.

This docket continues the approval of a TDS determination of 5,000 mg/l (average monthly) and 10,000 mg/l (daily maximum) from the IWTP effluent monitoring point (Monitoring Point No. 101).

Thermal Analysis

The Commission requires that discharges shall not increase the ambient temperatures of Delaware River Water Quality Zone 1D (Zone 1D) by more than 5°F until stream temperatures reach 50°F, nor by more than 2°F when stream temperatures are between 50°F and 58°F, nor shall such discharge result in stream temperatures exceeding 58°F. The WestRock discharge to Brodhead Creek is located 1.1 miles upstream of the Brodhead Creek's confluence with Zone 1D. Docket No. D-2006-041-2 required that the docket holder demonstrate compliance with the temperature requirement. The docket holder submitted a report on March 23, 2009 which included calculations characterizing the thermal impact on the receiving waters (Brodhead Creek) and concluded that at the maximum discharge flow and temperature, Brodhead Creek in-stream temperature would rise 0.009 degrees F. Based on the distance from the discharge to Zone 1D, it does not appear that Zone 1D in-stream temperature criteria will be exceeded as a result of the discharge from Outfall No. 001 (See DECISION Condition C.II.X).

BOD and TSS Effluent Limits

The docket holder is classified under Part 430 of the 40 CFR Pulp, Paper and Paperboard Point Source Category, Subpart E – Paperboard from wastepaper. The facility best fits the Non-corrugating Medium Finish Subdivision. During renewal of the NPDES permit, PADEP determined that the technology based CBOD₅ effluent is 220 lbs/day as a monthly average and the water quality based effluent limit for CBOD₅ is 311 lbs/day. 220 lbs/day is the more stringent and therefore the technology based limit is used in the NPDES permit for the facility. The technology based limits for TSS are Best Practical Control Technology (BPT) and are based on the performance of the docket holder's IWTP. The production based technology derived TSS limits are more stringent than the BPT limits, therefore the production based technology limit for TSS (220 lbs/day) is used in the NPDES permit.

DRBC Flood Plain Regulations

A portion of the existing WestRock facility are located in the flood hazard area (FEMA-designated 100-year flood zone) of Brodhead Creek. The docket holder has submitted plans indicating that the facilities located in the flood hazard area are located outside the floodway, in the flood fringe, and are flood-proofed up to the flood protection elevation by setting the elevations of the tops of the proposed tanks above the flood protection elevation. Section 6.3.4 of the Commission's *Flood Plain Regulations (FPR)* allows certain uses, including waste treatment facilities, within the flood fringe to be authorized by special permit. The existing IWTP is designed to comply with the Commission's *FPR*. Docket No. D-2006-041-2 granted special permit approval under Section 6.4 of the Commission's *FPR*. In accordance with Section 6.3.4.B.5 of the *FPR*, the docket holder prepared and submitted a Flood Emergency Plan (dated January 2014), which includes plans and procedures for actions to be taken in the event of flooding at the IWTP site.

Just downstream of the project discharge location at USGS Gage No. 01442500 (Brodhead Creek at Minisink Hills), the Brodhead Creek has an estimated seven-day low flow with a recurrence interval of ten years (Q_{7-10}) of 33.0 mgd (51.1 cfs). The ratio of this low flow to the average design discharge (0.3466 mgd or 0.54 cfs) from the WestRock facility is 95:1.

The nearest surface water intake of record for public water supply is located on the Delaware River approximately 28 miles downstream of the docket holder's IWTP, and is operated by the City of Easton.

The project does not conflict with the Comprehensive Plan and is designed to prevent substantial adverse impact on the water resources related environment, while sustaining the current and future water uses and development of the water resources of the Basin.

The effluent limits in the NPDES Permit are in compliance with Commission effluent quality requirements, where applicable.

The project is designed to produce a discharge meeting the effluent requirements as set forth in the Commission's *WQR*.

C. DECISION

I. Effective on the approval date for Docket No. D-2006-041-3 below, Docket No. 2006-041-2 is terminated and replaced by Docket No. 2006-041-3; and

II. The project and appurtenant facilities as described in the Section A "Physical features" of this docket are approved pursuant to Section 3.8 of the *Compact*, subject to the following conditions:

a. The facility and operational records shall be available at all times for inspection by the DRBC.

b. The facility shall be operated at all times to comply with the requirements of the Commission's *WQR* and *FPR*.

c. The docket holder shall comply with the requirements contained in the EFFLUENT TABLES in Section A.4.d. of this docket. The docket holder shall submit the required monitoring results electronically to the DRBC Project Review Section via email aemr@drbc.state.nj.us on the **Annual Effluent Monitoring Report Form** located at this web address: <http://www.state.nj.us/drbc/programs/project/pr/info.html>. The monitoring results shall be submitted annually, absent any observed limit violations, by January 31. If a DRBC effluent limit is violated, the docket holder shall submit the result(s) to the DRBC within 30 days of the

violation(s) and provide a written explanation that states the action(s) the docket holder has taken to correct the violation(s) and protect against any future violations.

d. Except as otherwise authorized by this docket, if the docket holder seeks relief from any limitation based upon a DRBC water quality standard or minimum treatment requirement, the docket holder shall apply for approval from the Executive Director or for a docket revision in accordance with Section 3.8 of the *Compact* and the *Rules of Practice and Procedure*.

e. If at any time the receiving treatment plant proves unable to produce an effluent that is consistent with the requirements of this docket approval, no further connections shall be permitted until the deficiency is remedied.

f. Nothing herein shall be construed to exempt the docket holder from obtaining all necessary permits and/or approvals from other State, Federal or local government agencies having jurisdiction over this project.

g. The discharge of wastewater shall not increase the ambient temperatures of Delaware River Water Quality Zone 1D by more than 5°F until stream temperatures reach 50°F, nor by more than 2°F when stream temperatures are between 50°F and 58°F, nor shall such discharge result in stream temperatures exceeding 58°F.

h. The docket holder is permitted to treat and discharge wastewaters as set forth in the Area Served Section of this docket, which incorporates by reference Sections B (Type of Discharge) and D (Service Area) of the docket holder's Application to the extent consistent with all other conditions of this DECISION Section.

i. The docket holder shall discharge wastewater in such a manner as to avoid injury or damage to fish or wildlife and shall avoid any injury to public or private property.

j. No sewer service connections shall be made to newly constructed premises with plumbing fixtures and fittings that do not comply with water conservation performance standards contained in Resolution No. 88-2 (Revision 2).

k. The issuance of this docket approval shall not create any private or proprietary rights in the waters of the Basin, and the Commission reserves the right to amend, suspend or rescind the docket for cause, in order to ensure proper control, use and management of the water resources of the Basin.

l. Prior to allowing connections from any new service areas or any new developments, the docket holder shall either submit and have approved by the Executive Director of the DRBC a NPSPCP in accordance with Section 3.10.3.A.2.e, or receive written confirmation from the Executive Director of the DRBC that the new service area is in compliance with a DRBC approved NPSPCP.

m. The docket holder is responsible for timely submittal to the DRBC of a docket renewal application on the appropriate application form including the appropriate docket application filing fee (see 18 CFR 401.43) at least 6 months in advance of the docket expiration date set forth below. The docket holder will be subject to late filed renewal surcharges in the event of untimely submittal of its renewal application, whether or not DRBC issues a reminder notice in advance of the deadline or the docket holder receives such notice. In the event that a timely and complete application for renewal has been submitted and the DRBC is unable, through no fault of the docket holder, to reissue the docket before the expiration date below, the terms and conditions of the current docket will remain fully effective and enforceable against the docket holder pending the grant or denial of the application for docket approval.

n. The docket holder shall be subject to applicable DRBC regulatory program fees, in accordance with duly adopted DRBC resolutions and/or regulations (see 18 CFR 401.43).

o. This approval is transferable by request to the DRBC Executive Director provided that the project purpose and area served approved by the Commission in this docket will not be materially altered because of the change in project ownership. The request shall be submitted on the appropriate form and be accompanied by the appropriate fee (see 18 CFR 401.43).

p. The docket holder shall request a name change of the entity to which this approval is issued if the name of the entity to which this approval is issued changes its name. The request for name change shall be submitted on the appropriate form and be accompanied by the appropriate fee (see 18 CFR 401.43).

q. The Executive Director may modify or suspend this approval or any condition thereof, or require mitigating measures pending additional review, if in the Executive Director's judgment such modification or suspension is required to protect the water resources of the Basin.

r. Any person who objects to a docket decision by the Commission may request a hearing in accordance with Article 6 of the Rules of Practice and Procedure. In accordance with Section 15.1(p) of the Delaware River Basin Compact, cases and controversies arising under the Compact are reviewable in the United States district courts.

s. The docket holder may request of the Executive Director in writing the substitution of specific conductance for TDS. The request should include information that supports the effluent specific correlation between TDS and specific conductance. Upon review, the Executive Director may modify the docket to allow the substitution of specific conductance for TDS monitoring.

t. Nothing in this docket constitutes a defense to any penalty action for past conduct of the docket holder or ongoing activity not authorized by this approval. In particular, renewal of this docket does not resolve violations – whether in the past or continuing – of provisions of the Delaware River Basin Compact (“Compact”) or any rule, regulation, order or approval duly issued by the Commission or the Executive Director pursuant to the Compact. The Commission reserves its right to take appropriate enforcement action against the docket holder, including but not limited to recovery of financial penalties consistent with Section 14.17 of the Compact, for any and all such prior or continuing violations.

u. The docket holder is prohibited from treating/pre-treating any hydraulic fracturing wastewater from sources in or out of the Basin at this time. Should the docket holder wish to treat/pre-treat hydraulic fracturing wastewater in the future, the docket holder will need to first apply to the Commission to renew this docket and be issued a revised docket allowing such treatment and an expanded service area. Failure to obtain this approval prior to treatment/pre-treatment will result in action by the Commission.

v. Prior to the docket holder initiating any substantial alterations or additions to the existing discharge, as defined in Section 3.10.3A2.a.16) of the Commission’s *WQR*, an application must be submitted and approved by the Commission. Such an application shall be submitted prior to final design to ensure that the Commission can provide the docket holder with draft effluent limitations for SPW specific parameters as guidance for design as to not require duplication of work or cause a substantial expenditure of public funds without Commission approval. The docket holder is encouraged to contact the Commission staff during the planning stages to identify the potential effluent limitations required to meet the no measurable change parameters under SPW.

BY THE COMMISSION

DATE APPROVED:

EXPIRATION DATE: May 31, 2023