

DOCKET NO. D-1989-002-4

DELAWARE RIVER BASIN COMMISSION

**Rohm and Haas Chemicals, LLC
Industrial Wastewater Treatment Plant
Bristol Township, Bucks County, Pennsylvania**

PROCEEDINGS

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) on February 26, 2018 (Application) for renewal of the docket holder's existing industrial wastewater treatment plant (IWTP) and its discharge. National Pollutant Discharge Elimination System (NPDES) Permit No. PA0012769 for the facility discharge was issued by the Pennsylvania Department of Environmental Protection (PADEP) on July 31, 2013.

The Application was reviewed for approval under Section 3.8 of the *Delaware River Basin Compact*. The Bucks County Planning Commission has been notified of pending action. A public hearing on this project was held by the DRBC on May 15, 2019.

A. DESCRIPTION

- 1. Purpose.** The purpose of this docket is to renew approval of the docket holder's existing 3.7 million gallons per day (mgd) IWTP and the facility discharges of treated industrial wastewater effluent and non-contact cooling water (NCCW). This docket also renews approval of the periodic removal of water from Lake Idaline and its discharge to Otter Creek to manage lake water levels.
- 2. Location.** The docket holder's Bristol Manufacturing Area facility and its IWTP is located near River Road and State Road in Bristol Township, Bucks County, Pennsylvania. The IWTP will continue to discharge treated effluent to Hog Run Creek, which is a tidal tributary to Delaware River Water Quality Zone 2 at River Mile 117.2 – 0.3 (Delaware River – Hog Run Creek) via Outfall No. 009. The facility will also continue to discharge stormwater, steam condensate and NCCW to Otter Creek, which is a tidal tributary to Delaware River Water Quality Zone 2 at River Mile 118.87 – 0.4 (Delaware River – Otter Creek) and River Mile 118.8 – 0.6 (Delaware River – Otter Creek) via Outfalls Nos. 003 and 008, respectively.

The project outfalls are located in the Delaware River Watershed as follows:

OUTFALL NO.	LATITUDE (N)	LONGITUDE (W)
003	40° 05' 42"	74° 51' 56"
008	40° 05' 44"	74° 52' 10"
009	40° 05' 06"	74° 53' 04"

3. **Area Served.** The docket holder's IWTP will continue to serve the Bristol Complex manufacturing facility, located in Bristol Township, Bucks County, Pennsylvania. The facility operates a plant that manufactures a variety of finished materials for the docket holder's Architectural and Functional Coatings businesses. The IWTP will also continue to accept and treat up to 0.05 mgd of in-basin wastewater and 0.05 mgd of out-of-basin wastewater from other organic chemical, plastic, and/or synthetic fiber facilities at the IWTP. NCCW is generated by Arkema, Inc., an on-site industry.

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. **Design criteria.** The docket holder's 3.7 mgd IWTP treats industrial process wastewater generated from the Bristol Complex manufacturing operations utilizing chemical and biological treatment processes. Effluent limits in the NPDES permit for the IWTP discharge (Outfall No. 009) are based on a discharge rate of 1.716 mgd. Effluent limits in the NPDES permit for Outfall Nos. 003 and 008 are based on discharge rates of 0.515 mgd and 0.529 mgd, respectively.

5. **Facilities.** The existing IWTP facilities consist of headworks and tailworks operations. The headworks consist of a splitter box, 3 equalization tanks, an emergency spill tank, a skimmer tank (not currently in service), a chemical building, and associated pumps. The tailworks and biological treatment facilities consist of 2 combined circular aeration tanks/clarifier units, a splitter box, an aerobic digester, a sludge thickener unit (not currently in service), a blower building, a central building, a soda ash silo, a ferric ion storage tank, a final filtration system that includes 5 Dynasand continuous backwashing sand filter assemblies (not currently in service), a parshall flume, and associated pumps.

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

6. **Water withdrawals.** Potable and process water for the facility is provided by a surface water withdrawal operated by Aqua Pennsylvania, as described in detail in DRBC Docket No. D-1989-097 CP-1, approved on April 25, 1990.

7. **NPDES Permit / DRBC Effluent Requirements.** NPDES Permit No. PA0012769 was issued by the PADEP on July 31, 2013 and includes final effluent limitations for the project discharge to surface waters classified by the PADEP as supporting warm water fishes / migratory fishes (WWF/MF). The EFFLUENT TABLES included in the DECISION section of this docket, contain effluent requirements for DRBC parameters that must be met as a condition of this approval (See DECISION Condition C.1.). Effluent requirements for Outfall No. 009 (IWTP

discharge) are based on discharge rates of 1.716 mgd. Effluent requirements for Outfall Nos. 003 and 008 are based on discharge rates of 0.515 mgd and 0.529 mgd, respectively.

B. FINDINGS

This docket holder submitted an Application to renew approval of their existing 3.7 mgd IWTP and its discharge, along with the discharge of NCCW and steam condensate.

1. Lake Idaline Withdrawal and Discharge

The docket holder formerly withdrew process and cooling water from a surface water intake on Lake Idaline, which was at one time connected to the tidal Delaware River, and which now is a freshwater impoundment. In 2012 the docket holder ceased making withdrawals from Lake Idaline for use as process or NCCW for its facility, and therefore the docket holder is no longer permitted to withdraw water from Lake Idaline for process or cooling uses. The previous DRBC docket (D-1989-002-3) approved the docket holder to pump water from Lake Idaline and discharge to Otter Creek via Outfall No. 003 for the purpose of managing the water levels in Lake Idaline from stormwater runoff. The docket holder requested in the Application to discontinue discharge of Lake Idaline water from Outfall No. 003, and to re-open the formerly plugged Outfall No. 001 for discharge of Lake Idaline water to Otter Creek. DECISION Condition C.3. approves the docket holder to continue to pump water from Lake Idaline and discharge to Otter Creek via Outfall No. 001 for the purpose of managing the water levels in Lake Idaline. Since Lake Idaline is owned and maintained by the docket holder, the lake drawdown is not subject to Commission surface water charges.

2. Thermal Impacts

The sources of NCCW on-site are the docket's holder's operations, which discharges to Otter Creek via Outfall No. 003, and Arkema, Inc., which withdraws groundwater for cooling purposes from an on-site well and discharges to Otter Creek via Outfall No. 008. Docket No. D-1989-002-2 required the docket holder to submit a modeling analysis for the NCCW discharges from Outfall Nos. 003 and 008 to determine the thermal impact of the NCCW discharges on the receiving water body. The results of the modeling analysis indicated that as long as Arkema continues to use groundwater and the NCCW does not exceed 91°F in temperature, the discharge to Otter Creek will meet DRBC Zone 2 in-stream temperatures standards. Docket No. D-1989-002-2 included an effluent temperature limitation for Outfall Nos. 003 and 008 of 91°F, which is continued in this docket (See EFFLUENT TABLES C-4 and C-5 in DECISION section).

3. CBOD₂₀ Wasteload Allocation & Monitoring

The Commission's WQR provide for the allocation of the stream assimilative capacity where waste discharges would otherwise result in exceeding such capacity. It was determined in the 1960's that discharges to the Delaware Estuary be limited to a total of 322,000 lbs/day of carbonaceous biochemical (first stage) oxygen demand (CBOD₂₀). In accordance with the WQR, the assimilative capacity of each Delaware Estuary zone minus a reserve was originally allocated

in 1968 among the individual dischargers based upon the concept of uniform reduction of raw waste in a zone (Zones 2, 3, 4 and 5). The totals and percent reduction for each zone are given in Table 1 of the Commission's *Status of CBOD₂₀ Wasteload Allocations* (Revised October 1, 2000). The docket holder's IWTP discharge is located in Water Quality Zone 2 at River Mile 117.2 – 0.3 (Delaware River – Hog Run Creek). Zone 2 is allocated at 18,600 lbs/day of CBOD₂₀ and has a total reduction requirement of 88.5%.

The Commission approved a CBOD₂₀ allocation for the docket holder's facility of 386 lbs/day on December 8, 2011, and which is continued in this docket (D-1989-002-4). Compliance with the CBOD₂₀ allocation of 386 lbs/day can be demonstrated by meeting the BOD₅ effluent load limit of 343 lbs/day contained in EFFLUENT TABLE C-3 in the DECISION section of this docket. Compliance with the 88.5% CBOD₂₀ Zone 2 reduction requirement can be demonstrated by meeting 88.5% BOD₅ removal, included in EFFLUENT TABLE C-3 of this docket.

4. Out-of-Basin Wastewaters

The docket holder is approved to accept up to 50,000 gpd of out-of-basin wastewaters imported from other organic chemical, plastic, and/or synthetic fiber facilities including, but not limited to, the docket holder's other facilities. The imported wastewater characteristics are similar to the process waste currently treated at the facility IWTP. In accordance with Section 2.30 of the Commission's *Water Code*, no credit is given toward meeting wastewater treatment requirements for wastewater imported into the basin, and therefore 100% of the BOD₅ load attributable to out-of-basin wastes is required to be removed. The docket holder is permitted to demonstrate compliance with this requirement by achieving an equivalent increase above the Zone 2 88.5 % percent removal of BOD₅ required for in-basin wastewaters. The docket holder shall calculate the total BOD₅ removal across the IWTP and the weighted average BOD₅ removal requirement based on the waste source (88.5% for in-basin and 100% for out-of-basin). The docket holder shall maintain records demonstrating compliance with this requirement and submit a summary annually detailing the calculations (See DECISION Condition C.4.).

5. Other

At the discharge location for Outfall Nos. 003 and 008, Otter Creek is a tidal stream and has an estimated seven-day low flow with a recurrence interval of ten years of 0.12 mgd (0.19 cfs). The ratio of this low flow to the average design combined discharge from Outfall Nos. 003 and 008 is 0.12 to 1. At the discharge location for Outfall No. 009, Hog Run is a tidal stream whose estimated seven-day low flow with a recurrence interval of ten years (Q7-10) is less than 0.1 cubic feet per second (cfs) and therefore is classified by the Commission as an intermittent stream.

The nearest surface water intakes of record for public water supply are located on the Delaware River approximately 7 river miles below and 2 river miles above the project discharges. Those intakes are owned and operated by the City of Philadelphia Water Department and the Burlington City Water Department, respectively.

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 *Water Quality Regulations (WQR)*.

C. DECISION

Effective on the approval date for Docket No. D-1989-002-4 below, Docket No. D-1989-002-3 is terminated and replaced by Docket No. D-1989-002-4; and the project and the appurtenant facilities described in Section A. DESCRIPTION of this docket are approved pursuant to Section 3.8 of the *Compact*, subject to the following conditions:

Monitoring and Reporting

1. The docket holder shall comply with the requirements contained in the EFFLUENT TABLES below. 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. The following average monthly effluent limits are among those listed in the NPDES Permit and meet or are more stringent than the effluent requirements of the DRBC.

EFFLUENT TABLE C-1: DRBC Parameters Included in NPDES Permit for Outfall No. 003

Outfall No. 003 (Otter Creek)		
Parameter	Limit	MONITORING
pH (Standard Units)	6 to 9 at all times	As required by NPDES Permit

EFFLUENT TABLE C-2: DRBC Parameters Included in NPDES Permit for Outfall No. 008

Outfall No. 008 (Otter Creek)		
Parameter	Limit	MONITORING
pH (Standard Units)	6 to 9 at all times	As required by NPDES Permit
Total Suspended Solids	*	As required by NPDES Permit
Total Dissolved Solids	*	As required by NPDES Permit
Temperature	*	As required by NPDES Permit

* See EFFLUENT TABLE C-5 below

EFFLUENT TABLE C-3: DRBC Parameters Included in NPDES Permit for Outfall No. 009

OUTFALL 009 (Hog Run Creek)		
Parameter	Limit	MONITORING
pH (Standard Units)	6 to 9 at all times	As required by NPDES Permit
BOD (5-Day at 20° C)	24 mg/l 343 lbs/day 88.5% minimum removal	As required by NPDES Permit
BOD (5-Day at 20° C)	Influent monitoring	As required by NPDES Permit
Total Suspended Solids	*	As required by NPDES Permit
Ammonia Nitrogen	35 mg/l	As required by NPDES Permit
Total Dissolved Solids**	1,000 mg/l	As required by NPDES Permit
PCBs	Monitor & Report	As required by NPDES Permit
Acute & Chronic Toxicity	Monitor & Report	As required by NPDES Permit

* See EFFLUENT TABLE C-6 below

* See Condition C.8. below

The following are DRBC effluent requirements for the project discharges are not listed in the NPDES Permit.

EFFLUENT TABLE C-4: DRBC Parameters Not Included in NPDES Permit for Outfall No. 003

Outfall No. 003 (Otter Creek)		
Parameter	Limit	MONITORING
Temperature	91°F (Maximum)*	2/month

* NPDES permit includes an instantaneous maximum effluent limit of 110°F

EFFLUENT TABLE C-5: DRBC Parameters Not Included in NPDES Permit for Outfall No. 008

OUTFALL 008 (Otter Creek)		
Parameter	Limit	MONITORING
Total Suspended Solids*	30 mg/l average monthly 45 mg/l average weekly	2/month
Total Dissolved Solids (TDS)	1,000 mg/l**	1/quarter
Temperature	91°F (Maximum)***	2/month

* NPDES permit requires monitor and report only for TSS

** NPDES permit requires monitor and report only for TDS. See Condition C.8. below.

*** NPDES permit includes an instantaneous maximum effluent limit of 110°F

EFFLUENT TABLE C-6: DRBC Parameters Not Included in NPDES Permit for Outfall No. 009

OUTFALL 009 (Hog Run Creek)		
Parameter	Limit	MONITORING
Total Suspended Solids	30 mg/l monthly average* 45 mg/l weekly average	Weekly

* NPDES permit includes an average monthly effluent limit for TSS of 40 mg/l

2. The docket holder shall continue to submit Polychlorinated Biphenyl (PCB) monitoring data and PMP Annual Reports to the Commission's Science & Water Quality Management Branch as required in the existing NPDES Permit.

Other Conditions

3. The docket holder is permitted to pump water from Lake Idaline and discharge to Otter Creek via Outfall No. 001 for the purpose of managing the water levels in Lake Idaline.

4. The docket holder is required to remove 100% of the BOD₅ load attributable to out-of-basin wastes received and treated at the IWTP. The docket holder is permitted to demonstrate compliance with this requirement by calculating the total BOD₅ removal across the IWTP and the weighted average BOD₅ removal requirement based on the waste source (88.5% for in-basin and 100% for out-of-basin). The docket holder shall maintain records demonstrating compliance with this requirement and submit a summary annually detailing the calculations.

5. 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.

6. The discharge of wastewater shall not increase the ambient temperatures of the receiving waters by more than 5°F above the average 24-hour temperature gradient displayed during the 1961-1966 period, nor shall such discharge result in stream temperatures exceeding 86°F .

7. 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*.

8. 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.

9. 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.

10. The docket holder is permitted to treat and discharge wastewater 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.

11. 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.

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

13. The facility shall be operated at all times to comply with the requirements of the Commission's WQR.

14. 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.

15. 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.

16. 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.

17. 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).

18. 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.

19. 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).

20. 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).

21. 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).

22. 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.

23. 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.

BY THE COMMISSION

DATE APPROVED: June 12, 2019

EXPIRATION DATE: November 30, 2023