

**DOCKET NO. D-1999-071-5**

**DELAWARE RIVER BASIN COMMISSION**

**Discharge to a Tributary of Special Protection Waters**

**Sanofi Pasteur, Inc.  
Swiftwater Industrial Waste Treatment Plant  
Pocono Township, Monroe County, Pennsylvania**

**PROCEEDINGS**

This docket is issued in response to an application submitted to the Delaware River Basin Commission (DRBC or Commission) on September 11, 2017 (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. PA0060071 for this discharge was issued by the Pennsylvania Department of Environmental Protection (PADEP) on October 26, 2017.

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 May 15, 2019.

**A. DESCRIPTION**

**1. Purpose.** The purpose of this docket is to renew approval of the docket holder's existing Swiftwater IWTP and its discharges of up to 0.55 million gallons per day (mgd) of treated industrial process wastewater to Swiftwater Creek, and up to 0.313 mgd of treated industrial process wastewater to land via spray irrigation. This docket also continues approval of a total dissolved solids (TDS) determination consisting of an average monthly effluent concentration limit of 1,200 mg/l and a daily maximum effluent concentration limit of 1,752 mg/l.

**2. Location.** The docket holder's Swiftwater vaccine production facility and its associated IWTP is located on Discovery Drive at its intersection with Pennsylvania Route 611 in Pocono Township, Monroe County, Pennsylvania. The IWTP will continue to discharge treated industrial wastewater effluent to Swiftwater Creek, at River Mile 213.0 – 11.4 – 4.4 – 3.5 (Delaware River – Brodhead Creek – Paradise Creek – Swiftwater Creek) within the drainage area to the Middle Delaware Special Protection Waters (SPW) area.

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

OUTFALL NO.	LATITUDE (N)	LONGITUDE (W)
001	41 ° 05' 37"	75 ° 19' 13"

3. **Area Served.** The docket holder's IWTP will continue to serve the Sanofi Swiftwater vaccine production facility located in Pocono 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. **Design Criteria.** The docket holder's Swiftwater facility generates organic and inorganic industrial wastewater streams from on-site activities associated with the research and manufacture of human vaccines. The Swiftwater IWTP utilizes a combination of conventional and advanced wastewater treatment processes and is comprised of two separate treatment systems. The first system designed to treat up to 0.8 mgd of organic (high BOD) wastewater. The second system is designed to treat up to 0.15 mgd of inorganic wastewater. The total treatment capacity is 0.95 mgd. The IWTP is permitted to discharge up to 0.55 mgd of treated industrial wastewater to Swiftwater Creek, to spray irrigate up to 0.313 mgd of treated wastewater, and to re-use up to 0.05 mgd of treated wastewater at the Swiftwater facility. Up to 0.35 mgd of the untreated organic wastewater stream generated at the Swiftwater facility is directed to the Brodhead Creek Regional Authority (BCRA) Stroudsburg WWTP for treatment and discharge to McMichael Creek.

5. **Facilities.** The IWTP facilities consist of an organic wastewater treatment train and an inorganic wastewater treatment train. The organic treatment train consists of a mechanical screen, an influent equalization tank, a fine screen, a membrane bioreactor (MBR) treatment process, an ultraviolet light (UV) disinfection system, a granular activated carbon (GAC) adsorption system, bag filters, and an ozone disinfection system.

The inorganic treatment train consists of an influent equalization tank, a physical/chemical gravity settler, a decant equalization tank, a UV disinfection system, a GAC adsorption system, bag filters, and an ozone disinfection system. The treated organic and treated inorganic wastewater streams are combined prior to conveyance to a cooling tower and heat exchanger system designed to reduce the temperature of the effluent prior to discharge to Swiftwater Creek.

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 two generators installed capable of providing standby power. (SPW)

The docket holder's wastewater treatment facility is staffed 24 hours per day and has a remote alarm system that continuously monitors plant operations, which meets the Commission's SPW requirements. (SPW)

The docket holder has prepared and implemented an emergency management plan (EMP) for the expanding/existing/new WWTP in accordance with Commission SPW requirements. (SPW)

The project facilities are not located in the 100-year floodplain.

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

6. **Water withdrawals.** The potable water supply in the project service area is provided by BCRA. The water withdrawal is described in detail in Docket No. D-1991-001 CP-4, which was approved on September 13, 2017.

7. **NPDES Permit / DRBC Effluent Requirements.** NPDES Permit No. PA0060071 was issued by the PADEP on November 1, 2017 and includes final effluent limitations for the project discharge to surface waters classified by the PADEP as supporting high quality water (HQ) / cold water fishes (CWF). EFFLUENT TABLES C-1, C-2, & C-3 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. 001 are based on a discharge rate of 0.55 mgd.

## B. FINDINGS

The docket holder submitted an application to renew approval of the existing 0.95 mgd Swiftwater IWTP and its discharges of up to 0.55 million gallons per day (mgd) of treated industrial process wastewater to Swiftwater Creek, and up to 0.313 mgd of treated industrial process wastewater to land via spray irrigation. The facility also re-uses up to 0.05 mgd of treated industrial wastewater effluent and directs up to 0.35 mgd of untreated industrial wastewater to the BCRA WWTP for treatment and discharge to McMichael Creek. The docket holder also requested to continue approval of a TDS determination consisting of effluent concentration limits of 1,200 mg/l (average monthly) and 1,752 mg/l (daily maximum).

### 1. Special Protection Waters

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 docket holder's IWTP discharges to the drainage area to the Middle Delaware SPW. The docket holder's IWTP discharge is required to comply with the SPW requirements, as outlined in Article 3.10.3A.2. of the WQR.

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 and expansion of facilities/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.3. has been included in this docket.

## **2. Total Dissolved Solids (TDS) Determination**

Section 3.10.4.D.2 of the Commission's Water Quality Regulations (WQR) states the following:

*"Total dissolved solids shall not exceed 1000 mg/l, or a concentration established by the Commission which is compatible with designated water uses and stream quality objectives, and recognizes the need for reserve capacity to serve future dischargers."*

The Commission's basin-wide 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 Commission granted TDS determinations (variances to the 1,000 mg/l effluent limit and/or 133% of background criteria) for the Swiftwater IWTP discharge to Swiftwater Creek as a result of ongoing ecological studies of Swiftwater Creek indicating no impact to aquatic life due to the discharge. The docket holder has implemented an ecological monitoring program for Swiftwater Creek and has submitted annual reports to the Commission since 1996. The Commission approved the following TDS determinations:

Table B-1: Historic TDS Determination Summary Chart

DOCKET NO.	FLOW	CONCENTRATION LIMIT	LOAD LIMIT (LBS/DAY)	DATE
D-1990-092-1	0.12 mgd	670 mg/l (avg mo) 1,200 mg/l (daily max)	838 lbs/day	9/23/1992
D-1996-038-1	0.15 mgd	1,800 mg/l (avg mo)	2,250 lbs/day (avg mo) 3,375 lbs/day (daily max)	10/23/1996
D-1999-027-1	0.2 mgd	1,800 mg/l (avg mo) 2,700 mg/l (daily max)	2,250 lbs/day (avg mo) 3,375 lbs/day (daily max)	6/23/1999
D-1999-071-1	0.35 mgd	1,800 mg/l (avg mo) 2,700 mg/l (daily max)	2,453 lbs/day (avg mo) 3,581 lbs/day (daily max)	5/8/2003
D-1999-071-2 *	0.35 mgd	1,200 mg/l avg mo	2,657 lbs/day (avg mo) 3,879 lbs/day (daily max)	5/10/2006
	0.45 mgd	1,200 mg/l avg mo	2,792 lbs/day (avg mo) 4,076 lbs/day (daily max)	5/10/2006
	0.55 mgd	1,200 mg/l avg mo	2,927 lbs/day (avg mo) 4,273 lbs/day (daily max)	5/10/2006
D-1999-071-3 *	0.55 mgd	1,200 mg/l avg mo 1,752 daily max	2,927 lbs/day (avg mo) 4,273 lbs/day (daily max)	5/10/2006
	0.70 mgd	758 mg/l avg mo 1,107 daily max	4,428 lbs/day (avg mo) 6,465 lbs/day (daily max)	5/10/2006
	0.90 mgd	857 mg/l avg mo 1,251 daily max	6,430 lbs/day (avg mo) 9,388 lbs/day (daily max)	5/10/2006
D-1999-071-4 *	0.55 mgd	1,200 mg/l avg mo 1,752 daily max	2,927 lbs/day (avg mo) 4,273 lbs/day (daily max)	5/10/2006
	0.70 mgd	758 mg/l avg mo 1,107 daily max	4,428 lbs/day (avg mo) 6,465 lbs/day (daily max)	5/10/2006
	0.90 mgd	857 mg/l avg mo 1,251 daily max	6,430 lbs/day (avg mo) 9,388 lbs/day (daily max)	5/10/2006

\* Docket Nos. D-1999-071-2, D-1999-071-3, and D-1999-071-4 approved phased re-rates of the Swiftwater IWTP, with TDS effluent limits corresponding to the phased design flows

Docket Nos. D-1999-071-3 and D-1999-071-4 required the docket holder to connect to the Pocono Township regional sanitary sewer line when the portion of the regional sewer line adjacent to the Swiftwater facility was constructed. The docket holder now directs up to 0.35 mgd of its generated wastewater to the sewer line for conveyance to and treatment at the BCRA Stroudsburg WWTP, which discharges to McMichael Creek. The permitted Swiftwater IWTP discharge to Swiftwater Creek was reduced to a maximum of 0.55 mgd (the Swiftwater facility connected to the regional sewer line in 2015).

Based on the design discharge rate of 0.55 mgd, the daily maximum effluent concentration limit of 1,752 mg/l, the background in-stream TDS concentration of 63 mg/l, and the in-stream flow under Q7-10 flow conditions of 2.65 mgd, the resultant maximum instream increase in TDS as a result of the discharge is 353 mg/l, which is 560% of background. However, a review of Swiftwater IWTP effluent data from 2015 - 2018 indicates that the average monthly discharge

exceeded 1,000 mg/l five out of 48 months from 2015-2018. Effluent data also indicates that the average monthly instream increase in TDS (assuming background in-stream concentration of 63 mg/l and Q7-10 flow conditions) between 2015 and 2018 was 137.7%, which just exceeds the 133% of background requirement.

This docket (D-1999-071-5) continues approval of the TDS determination granted by Docket Nos. D-1999-071-3 and D-1999-071-4 for a flow of 0.55 mgd, consisting of an average monthly effluent concentration limit of 1,200 mg/l, and a daily maximum effluent concentration limit of 1,752 mg/l. The docket holder is required to continue to perform ecological studies as described below.

### **3. Ecological Assessment**

This docket (D-1999-071-5) continues the requirement included in the previous DRBC approvals to conduct an annual ecological assessment of water quality, macroinvertebrates and fish communities from three locations (Stations Nos. 1, 2 and 3) along Swiftwater Creek. These assessments are conducted to determine the effects of treated wastewater discharge from the Swiftwater IWTP. The assessments were first conducted in December 1996 and continue to the present. The annual assessments typically consist of three sampling events (e.g. April, July, and December). Habitat quality was re-assessed for Stations 1 and 2 to incorporate stream improvements over time (construction of six check-dams, bank stabilization, and stream-side plantings on the docket holder's property). Water quality and biotic results have been consistent and show that the discharges have been treated in a manner sufficient to maintain Swiftwater Creek as a High Quality Cold Water Fishery (HQ-CWF). The annual ecological assessments will continue to be a docket requirement and will be used to confirm that the discharge from the docket holder's IWTP is not degrading the receiving stream (See DECISION Condition C.2.).

### **4. Other**

At the docket holder's IWTP discharge location, the Swiftwater Creek has an estimated seven-day low flow with a recurrence interval of ten years ( $Q_{7-10}$ ) of 2.65 mgd (4.1 cfs). The ratio of this low flow to the IWTP design wastewater discharge of 0.55 mgd is approximately 5 to 1.

The nearest surface water intake of record for public water supply is located on the Brodhead Creek approximately 16 River Miles downstream of the docket holder's IWTP, and is operated by the Brodhead Creek Regional Water Authority,

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-1999-071-5 below, the project described in Docket No. D-1999-071-4 is removed from the Comprehensive Plan to the extent that it is not included in Docket No. D-1999-071-5; Docket No. D-1999-071-4 is terminated and replaced by Docket No. 1999-071-5; 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](mailto: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**

<b>OUTFALL 001 (Discharge to Swiftwater Creek)</b>		
<b>PARAMETER</b>	<b>LIMIT</b>	<b>MONITORING</b>
pH (Standard Units)	6 to 9 at all times	As required in the NPDES permit
Total Suspended Solids	22 mg/l	As required in the NPDES permit
BOD (5-Day at 20° C)	44 mg/l	As required in the NPDES permit
Dissolved Oxygen	6.0 mg/l (minimum at all times)	As required in the NPDES permit
Fecal Coliform (5-1 to 9-30) (10-1 to 4-30)	200 / 100 ml as a geo. avg. 338 / 100 ml as a geo. avg.	As required in the NPDES permit
Ammonia Nitrogen (5-1 to 10-31) (11-1 to 4-30)	2.4 mg/l; 11.2 lbs/day 7.35 mg/l; 33.7 lbs/day	As required in the NPDES permit
Phosphorus	1.3 mg/l; 6.0 lbs/day	As required in the NPDES permit
Total Dissolved Solids *	1,200 mg/l (Average Monthly) 1,752 mg/l (Daily Max) 2,927 lbs/day (Average Monthly) 4,273 lbs/day (Daily Max)	As required in the NPDES permit
Total Kjeldahl Nitrogen	Monitor & Report	As required in the NPDES permit
Total Nitrogen	Monitor & Report	As required in the NPDES permit

\* See DECISION Condition C.6

The following monitoring requirements and average monthly effluent limits are for DRBC parameters not listed in the NPDES Permit.

**EFFLUENT TABLE C-2: DRBC Parameters Not Included in NPDES Permit**

<b>OUTFALL 001 (Discharge to Swiftwater Creek)</b>		
<b>PARAMETER</b>	<b>LIMIT</b>	<b>MONITORING</b>
BOD <sub>5</sub> (at 20° C)	85 % Minimum Removal	Monthly
BOD <sub>5</sub> (at 20° C)	Monitor & Report Influent	Monthly, paired with BOD <sub>5</sub> effluent monitoring sample
Nitrate + Nitrite as N	83.0 lbs/day*	Monthly

\* NPDES permit contains Monitor & Report only until November 1, 2019. On November 1, 2019, the DRBC effluent limit will be superseded by the PADEP NPDES effluent limits included in EFFLUENT TABLE C-3 below.

**EFFLUENT TABLE C-3: DRBC Parameters Included in NPDES Permit, to go into effect on November 1, 2019**

<b>OUTFALL 001 (Discharge to Swiftwater Creek)</b>		
<b>PARAMETER</b>	<b>LIMIT</b>	<b>MONITORING</b>
Nitrate + Nitrite as N	7.5 mg/l 34.4 lbs/day*	As required in the NPDES permit

\* NPDES permit contains Monitor & Report for Nitrate + Nitrite as N until November 1, 2019. DRBC effluent limit of 83.0 lbs/day included in EFFLUENT TABLE C-2 above will be superseded by these limits on November 1, 2019.

2. The docket holder shall continue to implement the water quality and biomonitoring program on Swiftwater Creek as detailed in the FINDINGS section of this docket, as originally approved by Docket No. D-1996-38, and renewed, as modified, in Docket No. D-1999-071-2 and continued in Docket Nos. D-1999-071-3 and D-1999-071-4.

### **Other Conditions**

3. 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.

4. Prior to the docket holder initiating any substantial alterations or additions to the existing WWTP as defined in Section 3.10.3A.2.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.

5. 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.

**6.** 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.

**7.** 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.

**8.** 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.

**9.** 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.

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

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

**12.** 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.

**13.** 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.

**14.** 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.

- 15.** 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).
- 16.** 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.
- 17.** 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).
- 18.** 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).
- 19.** 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).
- 20.** 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.
- 21.** 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**

**APPROVAL DATE:            June 12, 2019**

**EXPIRATION DATE:        October 31, 2022**