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DOCKET NO. D-1992-018 CP-4

DELAWARE RIVER BASIN COMMISSION

**Delaware County Regional Water Quality Control Authority
Western Regional Wastewater Treatment Plant
City of Chester, Delaware County, Pennsylvania**

PROCEEDINGS

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) on July 30, 2018 (Application) for renewal and modification of the approval of the docket holder's existing wastewater treatment plant (WWTP) and its discharge. National Pollutant Discharge Elimination System (NPDES) Permit No. PA0027103 for the facility discharge was issued by the Pennsylvania Department of Environmental Protection (PADEP) on **April 2, 2013 and amended on December 17, 2013.**

The Application was reviewed for continuation of the project in the Comprehensive Plan and approval under Section 3.8 of the *Delaware River Basin Compact*. The Delaware County Planning Commission has been notified of pending action. A public hearing on this project was held by the DRBC on February 13, 2019.

A. DESCRIPTION

- Purpose.** The purpose of this docket is to renew approval and to modify conditions of the DRBC approval of the docket holder's Western Regional WWTP and its discharge. This docket also renews approval of a project to re-rate the WWTP from 44 million gallons per day (mgd) to 50 mgd, which is conditioned upon the construction of a new outfall at the existing WWTP. The proposed outfall construction project and re-rate was approved by DRBC Docket No. D-1992-018 CP-3 on June 15, 2016, however, the project has yet to be constructed. The modification to the DRBC approval consists of an increase in the CBOD₂₀ allocation for the WWTP from 10,500 pounds per day (lbs/day) to 13,761 lbs/day (under 44 mgd operation) and to 15,638 lbs/day (under 50 mgd operation).
- Location.** The docket holder's Western Regional WWTP is located on West Front Street, adjacent to the Delaware River, approximately one mile south of the Commodore Barry Bridge in the City of Chester, Delaware County, Pennsylvania. The WWTP will continue to discharge to Water Quality Zone 4 of the Delaware River at River Mile 80.7.

The existing outfall and proposed outfall are located in the Delaware River Watershed as follows:

OUTFALL NO.	LATITUDE (N)	LONGITUDE (W)
001 (Existing)	39° 49' 25"	75° 23' 22"
001 (Proposed)	39° 49' 21"	75° 23' 18"

3. Area Served. The docket holder's Western Regional WWTP will continue to serve residential, commercial, and industrial users located within the City of Chester; the Boroughs of Marcus Hook, Brookhaven, Eddystone, Upland, Trainer, Parkside, and Rose Valley; the Townships of Nether Providence, Lower Chichester, and Chester; as well as users serviced by the Central Delaware County Authority, Southwest Delaware County Municipal Authority, Middletown Township Sewer Authority, and the Southern Delaware County Authority sewage collection systems.

The WWTP also receives trucked-in wastewater such as municipal sludge, landfill leachate, and residual waste from municipal treatment plants and industrial users outside the Western Regional WWTP's service area. The docket holder indicated in the application that the WWTP does not import 50,000 gallons per day (gpd) or greater of wastewater from outside the Delaware River Basin (DRB) for treatment at and discharge from the Western Regional WWTP. Prior to importing and/or treating 50,000 gpd or greater of wastewater from outside the DRB, the docket holder is required to apply for and obtain DRBC approval for the import.

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 existing 44 mgd WWTP utilizes an extended aeration / activated sludge treatment process. The docket holder proposes to re-rate the WWTP from 44 mgd to 50 mgd, with no modifications to the existing treatment facilities. DRBC's approval of the re-rate to 50 mgd is conditional upon construction of a new outfall for the WWTP discharge.

5. Facilities. The WWTP treatment processes consist of grit removal/screening, primary settling, secondary biological treatment via activated sludge, secondary settling, and disinfection via chlorine contact. The existing facilities consist of 2 grit chambers, a pre-aeration chamber, 8 primary settling tanks, 4 aeration tanks, 5 secondary settling tanks (final clarifiers), 2 activated sludge pump stations, 4 chlorine contact tanks, 2 gravity belt thickeners, 4 belt presses for sludge dewatering, and 2 incinerators.

The existing WWTP outfall configuration consists of a 45-ft long, 11-ft wide by 6-ft high rectangular concrete culvert connecting the WWTP to an outfall chamber that is located in a

concrete bulkhead on the shoreline of the Delaware River. The outfall chamber features three 42-inch diameter circular openings for discharge from the WWTP to the Delaware River. The invert elevation of the existing openings is -3.0 ft-NGVD. Mean Low Low Water (MLLW) elevation at the outfall is -1.8 ft-NGVD.

This docket holder submitted preliminary design plans for the proposed outfall consisting of an approximately 450-ft long 72-inch diameter pipe extension to the existing outfall pipe, which will run along the bottom of the Delaware River, perpendicular to the channel. The proposed outfall pipe extension will connect to the existing outfall chamber and feature a five-foot long reducer (nozzle) at the end of the new outfall pipe. The nozzle is six feet in diameter at the start of the reducer, tapering down to 5.7 feet in diameter at the end of the new outfall. In order to reduce plume interaction with the bottom of the river, the end of the outfall pipe/nozzle will be elevated approximately 5.4 feet above the river bottom, at an invert elevation of -22.6 ft-NGVD. The ambient water depth is approximately 26.2 feet below MLLW. The nozzle will increase the rate of diffusion and mixing of the effluent with the waters of the Delaware River. The final plans and specifications are required to be submitted to DRBC for approval by the Executive Director (see Condition C.4.). All of the details of the new outfall described above are subject to change prior to final design.

6. Water withdrawals. The potable water supply in the Western Regional WWTP service area is provided by Chester Water Authority, as described in detail in DRBC Docket No. D-1969-060 CP-1, approved on May 28, 1969.

7. NPDES Permit / DRBC Effluent Requirements. NPDES Permit No. PA0027103 issued by the PADEP April 2, 2013 and amended on December 17, 2013 includes final effluent limitations for the project discharge to surface waters classified by the PADEP as supporting warm water fishes / migratory fishes (WWF/MF). EFFLUENT TABLES C-1, C-2, C-3 & C-4 included in Section C.1. contains effluent requirements for DRBC parameters that must be met as a condition of this approval. EFFLUENT TABLES C-1 & C-2 contain effluent requirements for existing Outfall No. 001, based on discharge rate of 44 mgd. EFFLUENT TABLES C-3 & C-4 contain effluent requirements for proposed Outfall No. 001, based on discharge rate of 50 mgd.

8. Relationship to the Comprehensive Plan. The existing WWTP was added to the Comprehensive Plan by Docket No. D-1972-008 CP-1 on February 4, 1973. The WWTP was modified by Docket No. D-1973-031 CP-1 on February 28, 1973, Docket No. D-1992-018 CP-1 on April 28, 1993, and Docket No. D-1992-018 CP-2 on September 21, 2011. Docket No. D-1992-018 CP-3 renewed approval of the proposed re-rate and new outfall construction. This docket (D-1992-018 CP-4) renews approval of the proposed re-rate and new outfall construction, modifies the DRBC approval of the WWTP discharge, and continues the project in the Comprehensive Plan.

B. FINDINGS

This docket holder submitted an application to renew approval of a project to re-rate the WWTP from 44 million gallons per day (mgd) to 50 mgd, which is conditioned upon the construction of a new outfall at the existing WWTP. The application also includes a request to modify conditions of the DRBC approval, consisting of an increase in the WWTP's CBOD₂₀ allocation from 10,500 lbs/day to 13,761 lbs/day under 44 mgd operation (prior to operation of the new outfall), and to 15,638 lbs/day under 50 mgd operation (after operation of the new outfall).

1. Proposed Outfall Project / Re-rate to 50 MGD

The proposed outfall construction project and re-rate was approved by DRBC Docket No. D-1992-018 CP-3 on June 15, 2016, however, the project has yet to be constructed. The project is pending the results of a Long Term Control Plan that is being performed by the docket holder for the PADEP. The docket holder submitted preliminary design plans for the proposed outfall, however, final plans and specifications for the construction of the outfall have not been submitted.

This docket includes a condition providing that final plans and specifications for the new outfall construction must be submitted to the DRBC Executive Director for approval within one (1) year of receipt of PADEP approval of the Long Term Control Plan, and the docket holder is required to complete construction and place into operation the proposed outfall within three (3) years of receipt of PADEP approval of the Long Term Control Plan (See Condition C.4.).

The docket holder is required to notify the Executive Director after the proposed outfall goes into operation. After approval of the final plans and notification of the proposed outfall going into operation, the hydraulic flow rate increase from 44 mgd to 50 mgd is approved (See Condition C.5.).

2. Whole Effluent Toxicity

DRBC Water Quality Regulations (WQR) include stream quality objectives for Zone 4, including criteria to protect the taste and odor of ingested water and fish (Table 4 of WQR), to protect aquatic life (Table 5), and to protect human health (Tables 6 & 7). Toxicity in effluent is measured as Whole Effluent Toxicity (WET), and results from both acute and chronic exposures. The acute toxicity stream quality objective for Zone 4 is 0.3 Toxic Units (TU_a = 0.3). The chronic toxicity stream quality objective for Zone 4 is 1.0 Toxic Units (TU_c = 1.0).

During the review of the docket holder's application for Docket No. D-1992-018 CP-2, the docket holder performed an evaluation of their discharge for compliance with DRBC's acute stream quality objectives in October, 2009, entitled "DELCORA Mixing Zone Analysis" (Report). The results of the Report concluded that, at both the current design flow conditions (44

mgd) and the proposed re-rate design flow conditions (50 mgd), the existing Western Regional WWTP discharge was unable to demonstrate consistently meeting the acute stream quality objectives for copper and acute WET contained within Table 5.

In the Report, the docket holder evaluated the following three (3) alternatives to bring the WWTP discharge into compliance with DRBC regulations: 1) requesting an alternative mixing zone; 2) providing additional source control, including a Toxicity Reduction Evaluation; or 3) modifying the existing outfall configuration to provide improved mixing. In April, 2010, the docket holder was advised that DRBC staff could not recommend the approval of an alternative mixing zone based on the size and extent of the mixing zone necessary. The docket holder did not pursue an alternative mixing zone. Due to the relatively low toxicity in the WWTP effluent, the docket holder also concluded that performing a Toxics Reduction Evaluation and providing source control was infeasible. The docket holder elected to modify the existing outfall, submitting a revised evaluation in February, 2011 entitled "DELCORA Mixing Zone Analysis Revision A" (Report Revision A).

On August 5, 2011, the docket holder proposed the construction of new outfall, consisting of an extension to the existing outfall pipe, and which features a five-foot long single outlet reducer (nozzle) at the end of the extended outfall pipe. The reducer is 6 feet in diameter tapering down to 5.7 feet in diameter and is designed to increase the rate of diffusion and mixing of the effluent with the waters of the Delaware River. The proposed discharge location is approximately 20 feet deeper than the current outfall. The proposed outfall is designed to bring the WWTP discharge into compliance with DRBC in-stream water quality requirements both for the existing WWTP, hydraulically rated at 44 mgd, and the re-rated WWTP, hydraulically rated at 50 mgd.

3. Regulatory Mixing Zone (RMZ) and Associated Dilution Factor

Section 4.20.5.A.1. of the WQR states that:

"In establishing wasteload allocations and other effluent requirements, exceedances of stream quality objectives for the protection of aquatic life from acute effects may be permitted in small areas near outfall structures, provided that all of the following requirements are met:

a. As a guideline, the dimensions of the area where objectives are exceeded should be limited to the more stringent of the following structures:

- 1). A distance of 50 times the discharge length scale in any direction from the outfall structure, or*
- 2). A distance of 5 times the local water depth in any direction from the outfall structure.*

b. Stream quality objectives shall not be exceeded in areas designated as critical habitat for fish and benthic organisms.

- c. *Stream quality objectives shall not be exceeded where effluent flows over exposed benthic habitat prior to mixing with the receiving waters.*
- d. *A zone of passage for free-swimming and drifting organisms equal to 50% of the surface width of the river at the location of the discharge shall be provided.*
- e. *The total surface area of the Delaware River Estuary where stream quality objectives for the protection of aquatic life from acute effects are exceeded shall be limited to: 5% of the total surface area of Zone 2, 3 & 4.”*

The discharge length scale referred to in Item a. above is defined in Section 4.20.5.B.2. of the WQR as the square root of the discharge cross-sectional area. The outlet for the nozzle to be installed at the end of the outfall reducer is 5.7 feet in diameter. The discharge cross-sectional area of the nozzle is 25.5 ft². The tidally averaged, local water depth in any direction from the outfall structure is 29.0 ft (8.85 meters). The resulting dimensions for the guideline mixing zone, referred to as the regulatory mixing zone, or RMZ, are calculated as the more stringent of:

- 1). $50 * (\sqrt{25.5}) = 252 \text{ ft (77.0 meters)}$
or
- 2). $5 * 29 = 145 \text{ ft (44.3 meters)}$

Therefore, the local water depth is the controlling factor to the dimensions of the RMZ. The RMZ is a radius of 145 ft (44.3 meters) about the end of the nozzle. The total regulatory mixing area for the outfall is 66,052 ft² (or 6,165 m²) based on a circular area around the outfall; however, the actual predicted plume occupies half this area (the semicircle around the outfall located on the side of the direction of the discharge). DRBC staff concludes that the critical one hour dilution factor of 5.2 to 1 (4.2 parts ambient and 1 part wastewater) will be achieved by the proposed outfall for a flow of 50 mgd at the edge of the RMZ. The critical one hour dilution is the minimum one hour dilution over the tidal cycle, and occurs at the mid-ebb tide during the summer condition (see Condition C.5.).

4. Future Expansion Evaluation

Since the docket holder will be constructing the outfall to serve current and expected future needs of the Western Regional WWTP service area, the docket holder had requested that the DRBC review the docket holder's evaluations to establish a dilution factor at the edge of the RMZ for a potential future design flow of 60 mgd. The proposed outfall's hydraulic design flow is 60 mgd. In August, 2011, the docket holder submitted a second revised evaluation entitled "DELCORA Mixing Zone Analysis Revision B" (Report Revision B) that included the preliminary design of the proposed outfall. Report Revision B also included evaluations for the proposed outfall design at the potential future flow of 60 mgd. These evaluations were included in Report Revision B. DRBC staff reviewed this analysis for informational purposes only. The

outfall configuration included in the 60 mgd analysis is the same outfall configuration approved under this docket (including reducer). Since the dimensions of the RMZ are dependent on the outfall configuration, the dimensions of the RMZ for 60 mgd would not change from the evaluation at 50 mgd, unless the local water depth at the time of the future evaluation has changed. The associated dilution factor at the edge of the RMZ for a future build-out flow of 60 mgd under the proposed outfall configuration is 6.1 to 1 (5.1 parts ambient and 1 part wastewater). The dilution factor is greater for the higher flow (60 mgd vs. 50 mgd) due to increased exit velocities achieved from a larger flow over the same nozzle dimensions, resulting in increased mixing at the project discharge location and throughout the RMZ. However, prior to constructing any additional modifications to the WWTP or expanding beyond the approved design flow rate of 50 mgd, the docket holder must submit an application to the DRBC and receive Commission approval for the increased flow (see Condition C.6.).

5. CBOD₂₀ Wasteload Allocation

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 late 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 Regulations, 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 DELCORA WWTP is located in Zone 4 at river mile 80.7. Zone 4 is allocated at 91,000 lbs/day of CBOD₂₀ and has a minimum percent removal requirement of CBOD₂₀ of 89.25%. Currently, Zone 4 has 22,742 lbs/day of unused allocation (capacity).

The Commission approved a CBOD₂₀ allocation for the Western Regional WWTP of 10,500 lbs/day on December 10, 1976, via letter from the DRBC. The allocation is based on an assumed influent CBOD₂₀ load of 97,000 lbs/day and the required Zonal removal percentage of 89.25%. 97,000 lbs/day was calculated based on the population of the service area at the time of the allocation approval. Since the original allocation, the population of the service area has increased, and the WWTP has been expanded; however, the CBOD₂₀ allocation has not been increased to account for the population increase and WWTP expansion. The docket holder requested in the application increases from their current 10,500 lbs/day CBOD₂₀ allocation as follows: 1) increase to 13,761 lbs/day prior to the proposed outfall construction and re-rate approval (44 mgd design flow); and 2) increase to 15,638 lbs/day after the outfall construction and re-rate approval (50 mgd design flow). Since Zone 4 has the reserve capacity for the requested additional allocation, this docket approves the increases in CBOD₂₀ allocation. The Zone 4 reserve capacity after this docket approval will be 17,604 lbs/day, which is 19% of the total Zone 4 capacity of 91,000 lbs/day.

6. CBOD Allocation Compliance and Monitoring

Compliance with the 89.25% CBOD₂₀ Zone 4 reduction requirement can be demonstrated by meeting the 89.25% CBOD₅ removal requirement included in EFFLUENT TABLES C-2 & C-4 in Condition C.1. Compliance with the increased CBOD₂₀ allocations of 13,761 lbs/day (44 mgd design flow) and 15,638 lbs/day (50 mgd design flow) can be demonstrated by meeting the CBOD₅ effluent load limit of 9,174 lbs/day and 10,425 lbs/day contained in EFFLUENT TABLES C-2 & C-4. The CBOD₅ effluent load limits are calculated as the CBOD₂₀ allocations divided by the CBOD₂₀/CBOD₅ ratio of 1.5:1.

7. Other

There are no public water supply intakes downstream of the project discharge.

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-1992-018 CP-4 below, the project described in Docket No. D-1992-018 CP-3 is removed from the Comprehensive Plan to the extent that it is not included in Docket No. D-1992-018 CP-4; Docket No. D-1992-018 CP-3 is terminated and replaced by Docket No. D-1992-018 CP-4; and the project and the appurtenant facilities described in Section A "DESCRIPTION" of this docket shall be continued in the Comprehensive Plan. The project and appurtenant facilities as described in Section A 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 existing Outfall No. 001, in effect PRIOR TO operation of proposed outfall, based on a flow of 44 mgd

EXISTING OUTFALL NO. 001 (44 MGD DESIGN FLOW)		
PARAMETER	LIMIT	MONITORING
pH (Standard Units)	6 to 9 at all times	As required by NPDES permit
Total Suspended Solids	30 mg/l	As required by NPDES permit
Fecal Coliform	200 colonies per 100 ml	As required by NPDES permit
CBOD (5-Day at 20° C)*	*	As required by NPDES permit
Ammonia Nitrogen	**	As required by NPDES permit
Total Dissolved Solids	***	As required by NPDES permit
Acute WET LC50 Stat 96 hr (P. promelas)	Monitor & Report	As required by NPDES permit
Acute WET LC50 Stat 48 hr (C. dubia)	Monitor & Report	As required by NPDES permit
Chronic WET IC25 Statre 7 day (P. promelas)	Monitor & Report	As required by NPDES permit
Chronic WET IC25 Statre 7 day (C. dubia)	Monitor & Report	As required by NPDES permit
Total Cadmium	Monitor & Report	As required by NPDES permit
Total Copper	Monitor & Report	As required by NPDES permit
Total Cyanide	Monitor & Report	As required by NPDES permit
Total Lead	Monitor & Report	As required by NPDES permit
Total Zinc	Monitor & Report	As required by NPDES permit
PCBs	Monitor & Report	As required by NPDES permit

* The NPDES permit includes CBOD₅ average monthly effluent limits of 19 mg/l, 7,000 lbs/day, and 85 % minimum removal. EFFLUENT TABLE C-2 below includes DRBC effluent limits for CBOD₅ prior to the re-rate from 44 to 50 mgd.

** The PADEP NPDES permit requires effluent monitoring and reporting only for ammonia prior to the re-rate from 44 to 50 mgd. EFFLUENT TABLE C-2 below includes DRBC effluent limits for ammonia prior to the re-rate from 44 to 50 mgd

*** The PADEP NPDES permit requires effluent monitoring and reporting only for total dissolved solids (TDS). EFFLUENT TABLES C-2 & C-3 below include DRBC effluent limits for TDS.

EFFLUENT TABLE C-2: DRBC Parameters not included in NPDES permit for existing Outfall No. 001, in effect PRIOR TO operation of proposed outfall, based on a flow of 44 mgd

EXISTING OUTFALL NO. 001 (44 MGD DESIGN FLOW)		
PARAMETER	LIMIT	MONITORING
CBOD (5-Day at 20° C)	9,174 lbs/day 89.25 % minimum removal	Monthly
Ammonia Nitrogen	35 mg/l	Twice per Month
Total Dissolved Solids *	1,000 mg/l	Twice per Month
True Color (Platinum-Cobalt Scale)	100 Pt-Co Units	Quarterly

*See DECISION Condition C.10.

EFFLUENT TABLE C-3: DRBC Parameters Included in NPDES permit for proposed Outfall No. 001, to go into effect AFTER operation of proposed outfall, based on a flow of 50 mgd,

PROPOSED OUTFALL NO. 001 (50 MGD DESIGN FLOW)		
PARAMETER	LIMIT	MONITORING
pH (Standard Units)	6 to 9 at all times	As required by NPDES permit
Total Suspended Solids	30 mg/l	As required by NPDES permit
Fecal Coliform	200 colonies per 100 ml	As required by NPDES permit
CBOD (5-Day at 20° C)	*	As required by NPDES permit
Ammonia Nitrogen (5/1 – 10/31) (11/1 – 4/30)**	23 mg/l **	As required by NPDES permit
Total Dissolved Solids***	1,000 mg/l	As required by NPDES permit
Acute WET LC50 Stat 96 hr (P. promelas)	****	****
Acute WET LC50 Stat 48 hr (C. dubia)	****	****
Chronic WET IC25 Statre 7 day (P. promelas)	Monitor & Report	As required by NPDES permit
Chronic WET IC25 Statre 7 day (C. dubia)	Monitor & Report	As required by NPDES permit
Total Cadmium	Monitor & Report	As required by NPDES permit
Total Copper	0.027 mg/l (avg monthly) 0.053 mg/l (daily maximum)	As required by NPDES permit
Total Cyanide	Monitor & Report	As required by NPDES permit
Total Lead	Monitor & Report	As required by NPDES permit
Total Zinc	Monitor & Report	As required by NPDES permit
PCBs	Monitor & Report	As required by NPDES permit

* The NPDES permit includes CBOD₅ average monthly effluent limits of 17 mg/l, 7,000 lbs/day, and 85 % minimum removal. EFFLUENT TABLE C-4 below includes DRBC effluent limits for CBOD₅ after the re-rate from 44 to 50 mgd

** PADEP requires the WWTP discharge to meet an ammonia effluent limit of 69 mg.l from 11/1 to 4/30. EFFLUENT TABLE C-4 below includes DRBC effluent limits for ammonia after the re-rate from 44 to 50 mgd

*** See DECISION Condition C.10.

**** The PADEP NPDES permit requires effluent monitoring and reporting only for acute WET. EFFLUENT TABLE C-4 below includes DRBC effluent limits for acute WET after the re-rate from 44 to 50 mgd

EFFLUENT TABLE C-4: DRBC Parameters Not Included in NPDES permit for proposed Outfall No. 001, to go into effect AFTER operation of proposed outfall, based on a flow of 50 mgd,

PROPOSED OUTFALL NO. 001 (50 MGD DESIGN FLOW)		
PARAMETER	LIMIT	MONITORING
CBOD (5-Day at 20° C)	10,425 lbs/day 89.25 % minimum removal	Monthly
Ammonia Nitrogen (11/1 – 4/30)	35 mg/l	Twice per Month
Acute WET LC50 Stat 96 hr (<i>P. promelas</i>)	1.6 TUa (Daily Max)	Quarterly
Acute WET LC50 Stat 48 hr (<i>C. dubia</i>)	1.6 TUa (Daily Max)	Quarterly
Color (Platinum-Cobalt Scale)	100 Pt-Co Units	Quarterly

2. Within 10 days of the date that construction of the project has started, the docket holder shall notify the DRBC of the starting date and scheduled completion date. Within 30 days of the date of project completion, the docket holder shall notify the DRBC of the project completion date.

3. The docket holder is required to notify the Executive Director after the proposed outfall goes into operation. After Executive Director approval of the final plans and docket holder notification of the outfall going into operation, the hydraulic flow rate increase from 44 mgd to 50 mgd is approved, the WWTP is permitted to discharge beyond the hydraulic design rate (monthly average) of 44 mgd, and the effluent limits in EFFLUENT TABLES C-3 and C-4 shall apply.

Additional DRBC Approvals

4. The docket holder shall submit final constructions plans and specifications for the proposed outfall for Executive Director approval within one (1) year of receipt of PADEP approval of the Long Term Control Plan. The docket holder shall construct the proposed outfall in accordance with the plans approved by the Executive Director. Subject to the receipt of all necessary permits and approvals, and assuming no delays beyond the docket holder’s control, the construction of the proposed outfall shall be completed and placed in operation within three (3) years of receipt of PADEP approval of the Long Term Control Plan.

Other Conditions

5. Upon construction of the proposed outfall, this docket approves a regulatory mixing zone (RMZ) consisting of a radius of 145 ft (44.3 meters) about the end of the reducer (nozzle) on the outfall. The total regulatory mixing area for the outfall is 66,052 ft² (or 6,165 m²). The dilution factor at the edge of the RMZ is 5.2:1.

6. This docket approves the project to construct a new outfall for the existing WWTP, and re-rate the WWTP from 44 mgd to 50 mgd. Prior to the docket holder constructing any additional modifications to the WWTP or discharging greater than the proposed hydraulic design rate (monthly average) of 50 mgd, an application must be submitted and approved by the Commission. The docket holder is encouraged to contact the Commission staff during the planning stages to identify the potential effluent limitations or other DRBC requirements.

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. 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).

9. 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).

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. Sound practices of excavation, backfill and reseeded shall be followed to minimize erosion and deposition of sediment in streams.

13. 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.

14. 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.

15. 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.

16. 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.

17. 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.

18. 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).

19. 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.

20. 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).

21. 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*.

22. 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.

23. 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.

24. 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:

EXPIRATION DATE: April 30, 2023