

DOCKET NO. D-1999-017 CP-2

DELAWARE RIVER BASIN COMMISSION

**Borough of Kennett Square
Wastewater Treatment Plant Upgrade
Kennett Township, Chester County, Pennsylvania**

PROCEEDINGS

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) by Arro Consulting, Inc. on behalf of the Borough of Kennett Square (Kennett Square or docket holder) on April 2, 2018 (Application), for review of a wastewater treatment plant (WWTP) upgrade project. National Pollutant Discharge Elimination System (NPDES) Permit No. PA0024058 for the WWTP discharge was issued by the Pennsylvania Department of Environmental Protection (PADEP) on October 3, 2016. Issuance of a Water Quality Management (Part II) permit by PADEP for the project construction is pending.

The Application was reviewed for inclusion of the project in the Comprehensive Plan and for approval under Section 3.8 of the *Delaware River Basin Compact (Compact)*. The Chester County Planning Commission has been notified of pending action. A public hearing on this project was held by the DRBC on August 15, 2018.

A. DESCRIPTION

1. **Purpose.** The purpose of this docket is to renew and approve an upgrade to the docket holder's existing 1.1 million gallon per day (mgd) WWTP and its discharge. The upgrade consists of converting the current oxidation ditch/activated sludge treatment process to a Modified Ludzak-Ettinger (MLE) treatment process. The WWTP will remain designed for an annual average flow of 1.1 mgd.

2. **Location.** The docket holder's WWTP is located off West South Street in Kennett Township, Chester County, Pennsylvania. The WWTP will continue to discharge treated effluent to West Branch Red Clay Creek, which is designated as Delaware River Water Quality Zone C5, which is tributary to Red Clay Creek, which is tributary to White Clay Creek, which is tributary to the Christina River, at River Mile 70.7 - 10.0 - 2.6 - 13.4 - 3.3 (Delaware River - Christina River - White Clay Creek - Red Clay Creek - West Branch Red Clay Creek). The WWTP discharge is to Delaware River Water Quality Zone C5,

The project outfall is located in the Schuylkill River Watershed as follows:

OUTFALL NO.	LATITUDE (N)	LONGITUDE (W)
001	39° 50' 10"	75° 43' 30"

3. **Area Served.** The docket holder's WWTP will continue to serve Kennett Square Borough, and portions of Kennett Township and New Garden Township, in Chester 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 WWTP utilizes an oxidation ditch / activated sludge treatment process designed to treat an annual flow of 1.1 mgd and a maximum monthly average flow of 1.4 mgd. The proposed upgrade consists of replacing the existing treatment process with an MLE treatment process to reduce total nitrogen. The WWTP will remain designed for 1.1 mgd (annual average flow) and 1.4 mgd (monthly).

b. **Facilities.** The existing WWTP facilities consist of an aerated grit chamber, a fine screening unit, three influent pumps, two oxidation ditches, two final clarifiers, two ultraviolet light (UV) disinfection units, and two post-aeration tanks. Sludge handling is provided by a belt filter press, a sludge holding tank, and three aerobic digesters.

The proposed upgrade consists of converting the existing oxidation ditches and two abandoned primary clarifiers into an MLE process to provide denitrification and to allow for biological phosphorous removal.

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

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 water withdrawals are described in detail in Docket No. 2012-003 CP-1, approved on May 10, 2012.

d. **Effluent Requirements.** EFFLUENT TABLES A-1 & A-2 below contain effluent requirements for DRBC parameters that must be met as a condition of this approval (See DECISION Condition C.II.c.). PADEP issued NPDES Permit No. PA0024058 for the project discharge on October 3, 2016, which includes final effluent limitations for the project discharge of 1.1 mgd to surface waters classified by the PADEP as supporting trout stocking fishes (TSF) and migratory fishes (MF). The following average monthly effluent limits and monitoring requirements listed in EFFLUENT TABLE A-1 are for DRBC parameters listed in the NPDES permit that meet or are more stringent than the effluent requirements of the DRBC.

EFFLUENT TABLE A-1: DRBC Parameters Included in NPDES permit

OUTFALL 001 (West Branch Red Clay Creek)

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
CBOD (5-Day at 20° C)		
5/1 – 10/31	17 mg/l (85 % minimum removal)	As required by NPDES permit
11/1 – 4/30	25 mg/l (85 % minimum removal)	
Ammonia-Nitrogen		
5/1 – 10/31	2.0 mg/l	As required by NPDES permit
11/1 – 4/30	6.0 mg/l	
Fecal Coliform	200 colonies per 100 ml as a geo. avg..	As required by NPDES permit

The requirements in EFFLUENT TABLE A-2 are not listed in the NPDES Permit, but are Commission requirements that must be met as a condition of this docket approval.

EFFLUENT TABLE A-2: DRBC Parameters Not Included in NPDES permit

OUTFALL 001 (West Branch Red Clay Creek)		
PARAMETER	LIMIT	MONITORING
Total Dissolved Solids*	Monitor & Report	Quarterly

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

e. Relationship to the Comprehensive Plan. The existing WWTP was added to the Comprehensive Plan by Docket No. D-1972-019 CP-1 on June 28, 1972 and upgraded / expanded by Docket No. D-1973-067 CP-1 on September 26, 1973 and D-1999-017 CP-1 on August 18, 1999. This docket (D-1999-017 CP-2) approves an upgrade to the WWTP and continues the project in the Comprehensive Plan.

B. FINDINGS

The docket holder submitted an Application to approve an upgrade to the existing 1.1 mgd Kennett Borough WWTP, consisting of converting the existing oxidation ditch / activated sludge treatment process to an MLE treatment process.

Near the project WWTP discharge location, West Branch Red Clay Creek has an estimated seven-day low flow with a recurrence interval of ten years (Q_{7-10}) of 0.5 mgd (1.1 cfs). The ratio of this low flow to the average design discharge (1.4 mgd) from the project WWTP is approximately 0.35:1.

The nearest downstream surface water intake of record for public water supply is located approximately 17 miles downstream of the docket holder's WWTP on the White Clay Creek and is owned and operated by Suez Environmental - United Water Delaware.

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 limits in the NPDES Permit are in compliance with Commission effluent quality requirements.

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-1999-017 CP-2 below:

a. The projects described in Docket Nos. D-1972-019 CP-1, D-1973-067 CP-1, and D-1999-017 CP-1 are removed from the Comprehensive Plan to the extent that they are not included in Docket No. 1999-017 CP-2; and

b. Docket Nos. D-1972-019 CP-1, D-1973-067 CP-1, and D-1999-017 CP-1 are terminated and replaced by Docket No. 1999-017 CP-2; and

c. The project and the appurtenant facilities described in Section A "Physical Features" of this docket shall be continued in the Comprehensive Plan.

II. The project and appurtenant facilities as described in 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 Flood Plain Regulations (*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 the receiving waters 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. Sound practices of excavation, backfill and reseeding shall be followed to minimize erosion and deposition of sediment in streams.

i. 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.

j. Within 30 days of completion of construction of the approved project, the docket holder is to submit to the attention of the Project Review Section of DRBC a Construction Completion Statement (“Statement”) signed by the docket holder’s professional engineer for the project. The Statement must (1) either confirm that construction has been completed in a manner consistent with any and all DRBC-approved plans or explain how the as-built project deviates from such plans; and (2) indicate the date on which the project was (or is to be) placed in operation.

k. The project construction shall be completed within three years of docket approval (December 12, 2021) or the docket holder shall demonstrate to the Executive Director that it has expended substantial funds (in relation to the cost of the project) in reliance upon this docket approval. If the modifications have not been completed prior to docket expiration and the docket holder does not submit a cost analysis demonstrating substantial funds have been expended, Commission approval of the project construction shall expire. If the docket expires under this condition, the docket holder shall file a new application with the Commission and receive Commission approval prior to initiating construction of any modifications.

l. 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.

m. The docket holder shall make wastewater discharge in such a manner as to avoid injury or damage to fish, wildlife, and/or other aquatic life and shall avoid any injury to public or private property.

n. 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).

o. 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.

p. 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.

q. 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).

r. 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).

s. 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).

t. 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.

u. 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.

v. 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.

w. 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.

BY THE COMMISSION

DATE APPROVED: September 13, 2018

EXPIRATION DATE: October 31, 2026