

**DOCKET NO. D-1992-066 CP-4**

**DELAWARE RIVER BASIN COMMISSION**

**Constellation Energy Generation, LLC  
Eddystone Generating Station  
Industrial Wastewater Treatment Plant & Non-Contact Cooling Water Discharge  
Eddystone Borough, Delaware County, Pennsylvania**

**PROCEEDINGS**

This docket is issued in response to an application submitted to the Delaware River Basin Commission (DRBC or Commission) on August 30, 2024 (Application), for renewal of the existing Eddystone Generating Station industrial wastewater treatment plant (IWTP) and its discharge. The Pennsylvania Department of Environmental Protection (PADEP) issued National Pollutant Discharge Elimination System (NPDES) Permit No. PA0013714 A-1 for this discharge.

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 May 7, 2025.

**A. DESCRIPTION**

- 1. Purpose.** The purpose of this docket is to renew approval of the docket holder's existing 3.045 million gallons per day (mgd) Eddystone Generating Station IWTP and its discharge. The facility also discharges 832.179 mgd of non-contact cooling water (NCCW) from its once-through cooling system along with a small amount of process water.
- 2. Location.** The docket holder's Eddystone Generation Station IWTP is located on Industrial Highway in Eddystone Borough, Delaware County, Pennsylvania. The facility monitors treated industrial wastewater effluent from its IWTP at Monitoring Point No. 108 (MP 108) prior to combining with NCCW and boiler blowdown/intake screen backwash, followed by discharge via existing Outfall No. 008 to the Delaware River Water Quality Zone 4 at River Mile 84.8. Additionally, the facility discharges condensate storage tank overflow along with stormwater, groundwater seepage and hydrostatic tank testing water via existing Outfall No. 010 to the Delaware River adjacent to Outfall No. 008.

The location of the outfalls and monitoring points in the Lower Delaware River Watershed is as follows:

<b>OUTFALL NO.</b>	<b>LATITUDE (N)</b>	<b>LONGITUDE (W)</b>
008 (IWTP/NCCW)	39° 51' 23"	75° 19' 29"
010 (Condensate overflow)	39° 51' 23"	75° 19' 28"
<b>MONITORING POINT</b>	<b>LATITUDE (N)</b>	<b>LONGITUDE (W)</b>
MP 108 (IWTP)	39° 51' 23"	75° 19' 27"

**3. Area Served.** The docket holder's IWTP will continue to serve the Eddystone Generating Station located in Eddystone Borough, Delaware County, Pennsylvania. Power produced at the facility serves the Pennsylvania-Jersey-Maryland (PJM) Grid. For the purpose of defining the Area Served, the Type of Discharge and the Service Area sections from the docket holder's Application are incorporated herein by reference, to the extent consistent with all other conditions contained in Section C. DECISION of this docket.

**4. Design Criteria.** The docket holder's 3.045 mgd IWTP treats industrial process wastewater generated by the Eddystone Generating Station. The electric and steam generating station is peak power generating facility nominally rated at 790-megawatt (MW), consisting of 2 natural gas-fired electric/steam generation units (Units 3 and 4). The IWTP utilizes an oil water separator for treatment of process water from the generating units and other facility operations. The facility utilizes a once-through cooling system which generates NCCW. This NCCW, along with boiler blowdown and intake screen backwash, combines with IWTP effluent and is discharged at a flow rate up to 835.08 mgd to the Delaware River. The facility also discharges condensate storage tank overflow via Outfall No. 010 to the Delaware River. The overflow would only occur during a failure of the tank level control system which has not occurred in the last 25 years.

The generating station was formerly fueled by coal, #6 fuel oil and natural gas, and contained four generating units operating 24 hours per day. However, two coal-fired units were shut down in 2012 (Units 1 and 2) and the remaining units (Units 3 and 4) were converted to #2 fuel oil and/or natural gas as the fuel source. With the shutdown of Units 1 and 2, the facility switched to a peak power production facility, generating power only during high demand, which is typically the coldest days in winter and the hottest days in summer. The facility can operate with several combinations of fuel oil and natural gas. The facility performs maintenance activities on equipment such as hydrostatic testing of oil-storage tanks, which it discharges from the facility at Outfall Nos. 008 or 010.

**5. Facilities.** The IWTP utilizes oil water separation for treatment. Since the decommissioning of the coal fired boilers, the use of clarifiers, vacuum filters and pH adjustment system equipment was no longer needed and removed.

Wasted sludge will continue to be hauled off-site for disposal in accordance with the NPDES Permit No. PA0013714.

6. **Water Withdrawals.** Industrial process and cooling water for the facility is withdrawn from the Delaware River at the docket holder's surface water intake, as described in detail in Docket No. D-2008-038 CP-3, which was approved on June 5, 2024. Potable water for the facility is provided by Aqua Pennsylvania.

7. **NPDES Permit / DRBC Effluent Requirements.** NPDES Permit No. PA0013714 A-1 issued by the PADEP 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 and C-2 included in Section C. DECISION Condition C.1. of this docket, contain effluent requirements for DRBC parameters that must be met as a condition of this approval. Effluent requirements for MP 108 (IWTP effluent) and Outfall 008 (IWTP and NCCW) are based on discharge rates of 3.045 mgd and 835.2 mgd, respectively

8. **Relationship to the Comprehensive Plan.** The Eddystone Generating Station was incorporated into the Comprehensive Plan upon issuance of Docket No. D-2008-038 CP-1 on July 15, 2009. Docket No. 1992-066 CP-2 added the IWTP and NCCW discharge to the Comprehensive Plan on September 14, 2014. Docket D-1992-066 CP-3 continued approval of the IWTP and NCCW discharge in the Comprehensive Plan. Issuance of this docket will continue the WWTP and its discharge in the Comprehensive Plan.

## **B. FINDINGS**

The docket holder applied to renew approval of the existing 3.045 mgd IWTP and its discharge.

### **1. Heat Dissipation Area**

Section 4.30.6.C. of the Commission's *Water Quality Regulations (WQR)* require that discharges to Zone 4 shall not result in an induced temperature increase of 5°F (2.8°C) above the average 24-hour temperature gradient displayed during the 1961-1966 period, or a maximum of 86°F (30.0°C), whichever is less. Section 4.30.6F.3. of the Commission's *WQR* allows for heat dissipation areas up to 3,500 feet in length, two-thirds the surface width, and a maximum cross section up to one-quarter of the cross-sectional area of the stream in Zone 4.

Docket No. D-1992-066-1, approved by the DRBC on August 10, 1994, established a Heat Dissipation Area (HDA) of 400 feet wide and 1,200 feet both upstream and downstream (400 feet by 2,400 feet total) for former Outfall No. 007 and current Outfall No. 008. The HDA was based on the analysis of the four historic power generating units operating with a maximum flow (1,439.11 mgd) and temperature (110 °F). After the decommissioning of Units 1 and 2, and during the review of Docket No. D-1992-066 CP-2, the docket holder's engineer, Environmental Resources Management (ERM), performed a CORMIX modeling study that determined that during maximum flow from Outfall No. 008 (835.08 mgd), and a temperature rise of 21°F (Outfall No. 008 effluent temperature minus intake water temperature), the HDA required is 400 feet wide and 210 feet both upstream and downstream (400 feet by 420 feet total) of Outfall No. 008. This HDA was approved via Docket No. D-1992-066 CP-2 on September 10, 2014. This docket

continues approval of the HDA consisting of 400 feet by 420 feet from Outfall No. 008 into the Delaware River (See DECISION Condition C.3.).

## 2. Other

Previously, NCCW from the sample coolers (0.075 mgd) was discharged from Outfall No. 010. In 2020, around the time of the previous docket approval, the docket holder rerouted the NCCW from the sample coolers previously discharging through Outfall 010 to Outfall 008. The NCCW was routed to the sumps located within the area of Units 3 and 4 boilers and then to the industrial wastewater treatment plant before passing through monitoring point 108. NCCW is no longer discharged from Outfall No. 010. Effluent monitoring for temperature at Outfall No. 010 is no longer included in this docket.

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 *WQR*.

## C. DECISION

Effective on the approval date for Docket No. D-1992-066 CP-4 below, the project described in Docket No. D-1992-066 CP-3 is removed from the Comprehensive Plan to the extent that it is not included in Docket No. D-1992-066 CP-4; Docket No. D-1992-066 CP-3 is terminated and replaced by Docket No. D-1992-066 CP-4; and the project and the appurtenant facilities described in Section A "DESCRIPTION" of this docket shall be included 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.gov](mailto:aemr@drbc.gov) on the **Annual Effluent Monitoring Report Form** located at this web address: <https://www.nj.gov/drbc/programs/project/docket-app-info.html#3>. 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 Monitoring Point (MP) 108**

<b>MP 108 (IWTP EFFLUENT)</b>		
<b>PARAMETER</b>	<b>LIMIT</b>	<b>MONITORING</b>
pH (Standard Units)	Monitor and Report	As required by NPDES Permit
Total Suspended Solids	30 mg/l	As required by NPDES Permit
Total Dissolved Solids*	1000 mg/l	As required by NPDES Permit
PCB's	Monitor and Report	As required by NPDES Permit

\* See DECISION Condition C.XX

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

<b>OUTFALL NO. 008 (IWTP Effluent and NCCW)</b>		
<b>PARAMETER</b>	<b>LIMIT</b>	<b>MONITORING</b>
pH (Standard Units)	6 to 9 at all times	As required by NPDES Permit
Total Suspended Solids (Net)	30 mg/l	As required by NPDES Permit
Ammonia-Nitrogen	Monitor & Report	As required by NPDES Permit
Temperature (Effluent)	Monitor & Report	As required by NPDES Permit
Temperature (Intake)	Monitor & Report	As required by NPDES Permit
Temperature Delta (Effluent minus Intake)	21°F	As required by NPDES Permit

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/proposed NPDES/NJPDES Permit.

### **Other Conditions**

3. 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, except within an assigned heat dissipation area consisting of a length of 400 feet wide and 210 feet upstream and 210 feet downstream of Outfall No. 008.

4. 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*.
5. The docket holder may request permission from the Executive Director to perform specific conductance monitoring in lieu of TDS monitoring. The request shall be made in writing and shall include information that supports the effluent specific correlation between TDS and specific conductance. Upon review, the Executive Director may modify the docket to allow specific conductance monitoring in lieu of TDS monitoring.
6. This approval shall expire on the expiration date set forth below unless prior thereto the docket holder has applied to the Commission to renew or extend this approval.
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 C.F.R. 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 DRBC issues a reminder notice in advance of the deadline or the docket holder receives such notice. If 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 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 the Type of Discharge and Service Area sections of the docket holder's Application to the extent consistent with all other conditions of this section. Any expansion beyond that included in Section A.3. Area Served is subject to DRBC review and approval in accordance with Section 3.8 of the Compact.
9. In accordance with the Commission's regulations at 18 C.F.R. Part 440, the docket holder is prohibited from discharging wastewater from high volume hydraulic fracturing ("HVHF") or HVHF-related activities to waters or land within the Basin. The docket holder is further prohibited from discharging hydraulic fracturing wastewater, whether treated or untreated, from sources within or outside the Basin, without obtaining the Commission's prior review and express approval in the form of a revised docket. Violation of this or any condition of this docket approval may result in enforcement, including the risk of financial penalties, pursuant to Section 14.17 of the Delaware River Basin *Compact* and Section 2.7.8 (18 CFR 401.98) of the Commission's Rules of Practice and Procedure.
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, 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 C.F.R. 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 C.F.R. 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 C.F.R. 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 (RPP)*. 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:**

**EXPIRATION DATE: September 30, 2030**