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DOCKET NO. D-1993-060-2

DELAWARE RIVER BASIN COMMISSION

Drainage Area to Special Protection Waters

**NRG REMA LLC Portland Generating Station
Surface Water Withdrawal and Consumptive Use
Upper Mount Bethel Township, Northampton County, Pennsylvania**

PROCEEDINGS

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) on June 18, 2018 for renewal of an allocation of surface water and consumptive use for electric power production (Application). The docket holder's surface water withdrawal and consumptive use was approved by the Commission on October 27, 1993 (Docket No. D-93-60). This docket has been updated to reflect the current operations at the Portland Generating Station.

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

A. DESCRIPTION

1. Purpose. The purpose of this docket is to approve a surface water withdrawal of up to 67 million gallons per month (mgm) from the Delaware River for industrial processes including water for use as carrier fluid for the industrial wastewater treatment plant (IWT) and potential further deactivation projects involving dust control and cleaning and a consumptive use of up to 12.8 mgm for nitrogen oxides (NO_x) emissions control at the existing 169-megawatt Portland Electric Generating Station. The surface water allocation approved by this docket is a reduction of the previously approved total allocation of 9,580 million gallons per 30 days (mg/30 days) due to the deactivation of two coal-fired units and the associated non-contact cooling requirements. The consumptive use approved by this docket is an increase from the previously approved consumptive use of 3.3 mg/30 days to allow flexibility to operate the facility continuously at full load.

2. Location. The Portland Generation Station is located along the Delaware River approximately one mile south of Portland Borough in Upper Mount Bethel Township,

Northampton County, Pennsylvania. The surface water intake is located on the Delaware River at River Mile 206.2 in Water Quality Zone 1D. The Delaware River near at project site is designated by the Pennsylvania Department of Environmental Protection (PADEP) as supporting Warm Water Fishes and Migratory Fishes (WWF, MF).

Specific location information has been withheld for security reasons.

3. Area Served. The surface water withdrawals are used for nitrogen oxides (NO_x) emissions control at Unit 5 and industrial processes including carrier fluid for the IWTP system and potential future deactivation projects involving dust control and cleaning at the 190-acre Portland Generating Station site. The location of the Portland Generating Station is shown on a map entitled “Figure 1” submitted with the Application. For the purpose of defining Area Served, the Application is incorporated herein by reference consistent with conditions contained in Section C. DECISION.

4. Design criteria. The Portland Generating Station is operated as a peaking facility to provide power and frequency regulation to the regional electric system. The station utilizes three simple cycle combustion turbines (Units 3, 4 and 5) which are rated at 15 MW, 20 MW and 134 MW, respectively (a combined capacity of 169 MW). The Portland Station also has two retired coal-fired turbines (Units 1 and 2) that were taken out of service on June 1, 2014. Retired Units 1 and 2 were rated at 158 and 243 MW, respectively.

The primary water source for the Portland Generating Station continues to be the Delaware River. Portland Units 3 and 4 operate on either natural gas or oil, utilize air cooling and do not require any water for their operation. Unit 5 operates on oil and uses stored demineralized water injected into the burners to reduce NO_x emissions. Treated and stored demineralized water may be injected into the Unit 5 combustion turbine at a maximum rate of 286 gpm (12.8 mgm), although it is currently operated at lower injection rates. Domestic and sanitary water supply is obtained from two on-site wells. These wells are included in Docket D-78-16 approved by the Commission on October 25, 1978.

Current water demands are significantly lower than the facility’s previous demands. Prior to the deactivation of the coal-fired units, the facility required up to 319.33 million gallons per day (9,580 mgm) of non-contact cooling water and boiler make-up water. Since the coal units were shutdown, up to 1.75 million gallons per day and up to approximately 39.8 mgm of water has been used mainly for plant deactivation activities and carrier fluid for the (IWTP). This demand does not include the demands for Unit 5, which are described above. The docket holder requested an allocation based on the peak rate to continue operation of Unit 5 and pursue further deactivation projects at the facility.

5. Facilities. The Project facilities include power generating units, Delaware River intake and discharge structures and an IWTP. The existing wastewater treatment facilities and groundwater sources for potable supply are described in Dockets Nos. D-76-73, D-78-16, and D-86-25, approved by the DRBC on May 23, 1977, October 31, 1978, and April 27, 1988. respectively.

Delaware River water flows into two water intake tunnels via gravity through the Delaware River intake screen. Water is withdrawn from the intake tunnels at the Portland station through five raw water pumps (three pumps at retired Unit 1 and two pumps at retired Unit 2). The raw water pumps can supply 375 gpm each (total of 1,875 gpm). There are also four fixed-speed circulating water pumps; two at 60,000 gpm per pump for retired Unit 2 and two at 49,000 gpm per pump for retired unit 1, which are no longer used.

Water used for emissions control is demineralized through a cation/anion demineralization trailer, which is brought on site as needed. The demineralized water is held in a 0.500 million gallon storage tank prior to injection for emissions control. Discharges of regenerate backwash no longer occur as a result of the use of the trailer demineralization system. All water withdrawn and demineralized for use in Unit 5 is consumptively used. However, the consumptive use for intermittent operations does not typically occur on the same day that the surface water is withdrawn from the Delaware River and placed into storage for NOx emissions control.

The existing project water source has the following characteristics:

INTAKE NO.	WITHDRAWAL WATER BODY	PUMP CAPACITY (GPM)	7Q10 FLOW AT INTAKE (CFS)	YEAR CONSTRUCTED
Intake	Delaware River	1,875*	1,038	1956

* does not include inactive circulating pumps.

Domestic and sanitary water supply is provided by two groundwater wells.

Withdrawals are not metered. Consumptive water usage (Unit 5) is measured and recorded based on the run time of the unit multiplied by the capacity of the pumps. Non-consumptive use is measured at the IWTP effluent discharge using a chart recorder.

With the exception of the intake and outfall structures, the Project facilities are not located in the flood hazard area.

6. Other. Process water, such as main building sumps is conveyed to the Portland Station’s IWTP most recently approved by DRBC Docket Nos. D-76-73 and D-86-25 on May 25, 1977 and April 27, 1988. Sanitary wastewater is directed to the facility’s sewage treatment plant which discharges to the Delaware River via Outfall 002 most recently approved by DRBC Docket No. D-76-73 on May 25, 1977. The Pennsylvania Department of Environmental Protection (PADEP) issued its most recent NPDES Permit No. PA0012475 on October 22, 2015 for the treatment facilities. The treatment facilities have adequate capacity to continue to receive wastewater from the project.

B. FINDINGS

1. Special Protection Waters

In 1992, the DRBC adopted Special Protection Waters 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 were 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.

On July 16, 2008, the DRBC approved amendments to its *Water Quality Regulations* that provide increased protection for waters that the Commission classifies as Special Protection Waters. The portion of the Delaware River and its tributaries within the boundary of the Lower Delaware River Management Plan Area was approved for Special Protection Waters designation and clarity on definitions and terms were updated for the entire program.

Article 3.10.3A.2.e.1). and 2). of the *Water Quality Regulations, Administrative Manual - Part III*, states that projects subject to review under Section 3.8 of the Compact that are located in the drainage area of Special Protection Waters must submit for approval a Non-Point Source Pollution Control Plan 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 Special Protection Waters. The Portland Generating Station is located within in the drainage area to the Special Protection Waters. Since this project does not entail additional construction and expansion of facilities or service areas there are not any new or increased non-point source loads associated with this approval. The non-point source pollution control plan requirement is not applicable at this time. Accordingly, Special Condition C.24. has been included in Section C. DECISION.

2. Consumptive Use

The project withdrawals used for the purpose of emissions control at Unit 5 results in a consumptive use of 100 percent of the total water use. The electric generating facility requires a maximum consumptive use of 0.412 mgd (12.8 mgm) under continuous operation at full load.

3. Consumptive Use Replacement Provision

Resolution No. 2018-5 requires that certain electric generating or cogenerating facilities develop or acquire sources of replacement water for use during critical hydrologic conditions as a condition of approval. The Project is subject to the consumptive use requirement as it a generating facility designed to consumptively use in excess of 100,000 gallons per day of water during any 30-day period and the primary source of water is surface water located upstream of River Mile 38.

The following provision from Resolution No. 2018-5 is included as Condition C.11. in Section C. DECISION:

“For the duration of a critical hydrologic condition as announced by the Commission, on a daily basis the docket holder shall cause to be released from a replacement water source approved by the Commission an amount of water equal to the amount consumptively used by the docketed facility, multiplied by the applicable relative effect factor, if assigned. For the duration of such critical hydrologic condition, the docket holder shall operate its facility only at a level commensurate with the amount of replacement water it is capable of causing to be released.”

The docket holder’s approved replacement source is the Merrill Creek Reservoir. As approved by the DRBC, the Merrill Creek Reservoir, located on Merrill Creek in Harmony Township, Warren County, New Jersey, provides supplemental storage from which releases are made during drought conditions to compensate for freshwater equivalent consumptive use of designated steam electric and combined-cycle generating units owned by members of the Delaware River Basin Electric Utilities Group. Portland Unit No. 5 is included in Attachment 2, Exhibit III, as a “Designated Unit” in DRBC Docket No. D-1977-110 CP-19, approved on September 13, 2018. The consumptive use stored for release by Merrill Creek for Portland Unit 5 is 0.72 cfs (0.465 mgd) and meets or exceeds the maximum consumptive use of 12.8 mgm (0.412 mgd) approved by this docket.

The docket holder is considering alternative replacement sources for water withdrawn for consumptive use during critical hydrologic conditions. Prior to any change to the approved replacement source described above, the docket holder must submit a Consumptive Use Replacement Plan in accordance with Resolution No. 2018-5 to the Commission and receive written approval from the DRBC Executive Director.

4. Metering and Surface Water Charges

The docket holder shall pay for surface water use in accordance with the provisions of Basin Regulations – Water Supply Charges 18 CFR Part 420, as described in Condition C.6. in Section C. DECISION.

Currently, water usage is measured and recorded based on unit run time multiplied by the capacity of the pumps. Within 90 days of the approval date of this docket, the docket holder shall begin to measure and record all withdrawals by means of an automatic continuous recording device, flow meter, or other method to the required performance standards as described in Conditions C.2. and C.3. in Section C. DECISION.

5. Other Findings

In its application, the docket holder requested 13.7 mg/30 days for use at Unit 5 and indicated that is rate was based on the original maximum permitted injection rate of 286 gpm, all of which is consumptive. The maximum consumptive use approved in this docket is limited to 12.8 mgm, which is based on the continuous injection rate of 286 gpm. Additionally, the total allocation approved by this docket is based on the peak daily demand of 1.75 mgd (54.3 mgm) for the Station (not including Unit 5) and the total consumptive use of 12.8 mgm at Unit 5 (total of 67 mgm).

The project is designed to conform to the requirements of the *Water Code Water Quality Regulations* of the DRBC.

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.

C. DECISION

Effective on the approval date for Docket No. D-1993-060-2 below, Docket No. D-93-60 is terminated and replaced by Docket No. D-1993-060-2. The project and appurtenant facilities as described in in Section A.4. (Design Criteria) and A.5. (Facilities) are approved subject to the following conditions, pursuant to Section 3.8 of the *Compact*:

Monitoring and Reporting

1. The docket holder shall continue to report to the PADEP all surface and groundwater sources described in this docket in accordance with Pennsylvania Regulation (Title 25 - Environmental Protection, [25 PA. CODE CH. 110], Water Resources Planning).

2. Within 90 days of the approval date of this docket, the docket holder shall notify the Commission in writing that the project withdrawals are being metered in accordance with the provisions of 18 CFR Part 410 Section 2.50.2 and summarized in Condition C.3. below. The notice shall include a description of the metering device and the date it is placed into operation.

3. The project withdrawals shall be metered by means of an automatic continuous recording device, flow meter, or other method, and shall be measured to within 5 percent of actual flow. An exception to the 5 percent performance standard, but no greater than 10 percent, may be granted for surface water withdrawals by the designated agency (PADEP) if maintenance of the 5 percent performance is not technically feasible or economically practicable. Meters or other methods of measurement shall be subject to approval and inspection by the PADEP as to the type, method, installation, maintenance, calibration, reading and accuracy. A record of daily withdrawals shall be maintained, and monthly totals shall be reported to the PADEP annually and shall be available at any time to the Commission if requested by the Executive Director.

Other Conditions

4. Surface water shall not be withdrawn above the maximum rate and monthly allocation as indicated below:

INTAKE ID	MAXIMUM RATE (GPM)	MONTHLY ALLOCATION (MGM)
Delaware River	1,875 gpm	67 MGM

5. Consumptive use may not exceed 12.8 mgm (0.412 mgd) for use at the electric generating facility.

6. The docket holder shall pay for surface water use in accordance with *Basin Regulations – Water Supply Charges (18 CFR Part 420)*.

7. The docket holder is permitted to provide the water approved in this docket to the areas included in Section A.3. Area Served of this docket. Any expansion beyond those included in Section A.3. Area Served is subject to DRBC review and approval in accordance with Section 3.8 of the *Compact*.

8. 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.

9. 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 401.35).

10. 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 401.35).

11. For the duration of a critical hydrologic condition as announced by the Commission, on a daily basis the docket holder shall cause to be released from a replacement water source approved by the Commission an amount of water equal to the amount consumptively used by the docketed facility, multiplied by the applicable relative effect factor, if assigned. For the duration of such critical hydrologic condition, the docket holder shall operate its facility only at a level commensurate with the amount of replacement water it is capable of causing to be released.

12. Prior to any change to the approved replacement source described in Section B.3, the docket holder shall submit a Consumptive Use Replacement Plan in accordance with Resolution No. 2018-5 to the Commission and receive written approval from the DRBC Executive Director.

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

14. The facilities shall be operated at all times to comply with the requirements of the *Water Code* and *Water Quality Regulations* of the DRBC.

15. No water 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 docket holder shall implement to the satisfaction of the PADEP, a drought or other water supply emergency plan.

17. No new water service connections shall be made to premises connected to sewerage systems which are not in compliance with all applicable effluent limits contained in State permits and the *Water Quality Regulations* of the Commission.

18. 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.

19. The docket holder shall be subject to applicable DRBC regulatory program fees, in accordance with duly adopted DRBC resolutions and/or regulations. (see 18 CFR 401.43).

20. The issuance of this docket approval shall not create any private or proprietary rights in the water of the Basin, and the Commission reserves the rights to amend, alter or rescind any actions taken hereunder in order to insure the proper control, use and management of the water resources of the Basin.

21. If the monitoring required herein or any other relevant data or information demonstrates that the operation of this project is interfering with or otherwise impairing existing uses of ground or surface water, or if the docket holder receives a complaint from an existing ground or surface water user within the zone of influence of the withdrawal alleging such interference or impairment, the permit holder shall immediately notify the Executive Director, and

unless excused by the Executive Director, shall investigate the demonstrated or alleged impacts. For purposes of this condition, notification shall mean either (a) electronic transmittal of written notice to the Executive Director via email (using addresses posted on the DRBC website); or (b) written notice to the Executive Director and a telephone call to the Project Review Section at 609-883-9500, ext. 216. (Oral notification must always be accompanied by immediate written notification directed to the Executive Director.) In addition, the docket holder shall provide written notice to all potentially affected water users of the docket holder's responsibilities under this condition. **Any well or surface water supply that is impaired as a result of the docket holder's project withdrawal shall be repaired, replaced or mitigated at the docket holder's expense.** The scope of the options to consider for repair, replacement and/or mitigation shall not be limited solely to those that are owned, operated, or controlled by the project sponsor. An investigation report and/or mitigation plan prepared and certified by a licensed professional engineer and/or a licensed professional geologist shall be submitted to the Executive Director as soon as practicable following notice of the demonstrated or alleged impairment consistent with this paragraph. The Executive Director shall make the final determination regarding the scope and sufficiency of the investigation and the extent of any mitigation measures that may be required. Where ground and surface waters are rendered unavailable, unusable, or unsuitable for the pre-existing use, the Executive Director may direct the docket holder to take interim actions to mitigate such impacts, pending completion of the investigative report and any long-term repair, replacement or mitigation.

22. The Executive Director may modify or suspend this approval or any condition thereof, or require mitigating measures pending additional review, if in the Executive Director's judgment such modification or suspension is required to protect the water resources of the Basin.

23. For the duration of any drought emergency declared by either Pennsylvania or the Commission, water service or withdrawal by the docket holder pursuant to this approval shall be subject to the prohibition of those nonessential uses specified by the Governor of Pennsylvania, the Pennsylvania Emergency Management Council, PADEP, or the Commonwealth Drought Coordinator to the extent that they may be applicable, and to any other emergency resolutions or orders adopted hereafter by the Commission.

24. 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 Non-Point Source Pollution Control Plan (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.

25. 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:

EXPIRATION DATE: March 13, 2029

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