DOCKET NO. D-2000-012 CP-2

DELAWARE RIVER BASIN COMMISSION

Calpine Mid-Atlantic Generation, LLC
Edge Moor and Hay Road Energy Centers
Electric Generating Facilities and Surface Water Withdrawal
City of Wilmington and New Castle County, Delaware

PROCEEDINGS

This docket is issued in response to an Application submitted by Calpine Mid-Atlantic Generation, LLC (Calpine or docket holder) to the Delaware River Basin Commission (DRBC or Commission) on May 7, 2012, for the renewal of an allocation of surface water and review of a surface water withdrawal project (Application). The surface water withdrawal was approved by the Delaware Department of Natural Resources and Environmental Control (DNREC) on October 27, 1987, last modified December 7, 2010 (Allocation Permit No. 87-0014M2).

The Application was reviewed for continued inclusion in the Comprehensive Plan and for approval under Section 3.8 of the *Delaware River Basin Compact*. The New Castle County Department of Land Use has been notified of pending action on this docket. A public hearing on this project was held by the DRBC on August 10, 2016.

A. DESCRIPTION

1. Purpose. The purpose of this project is to renew the approval to withdraw up to 8,763.7 million gallons per month (mgm) of surface water from the Pumphouse 2 Intake and up to 18,404.7 mgm of surface water from the Pumphouse 3 Intake from the Delaware River (total combined allocation of 27,168.4 mgm) for non-contact cooling, cooling tower makeup, fire suppression and intake screen backwashing at the existing Edge Moor and Hay Road Energy Centers. The allocation provided by this docket is based on the maximum water demands of the facility with all circulating, service water, fire suppression and intake screen backwash pumps in operation and represents a decrease from the allocation of 34,100 mgm (33,000 million gallons per 30 days) approved in the previous docket. This docket also updates project information and consolidates several previous DRBC approvals into a single docket. The docket holder's discharge approvals are described in a separate discharge docket also scheduled for the August 10, 2016 and September 14, 2016 DRBC hearing and business meeting.

2. Location. The Edge Moor and Hay Road Energy Centers are located along the Delaware River north of the Mouth of Shellpot Creek, in the City of Wilmington and in New Castle County, Delaware. The project intakes are located in DRBC Water Quality Zone 5 near River Mile 72.1. Specific location information has been withheld for security reasons.

3. **Area Served.** The Edge Moor and Hay Road Energy Centers provide electricity to the Pennsylvania-New Jersey-Maryland (PJM) Interconnection (the regional transmission organization). The surface water withdrawals serve only the Edge Moor and Hay Road Energy Centers. For the purpose of defining Area Served, the Application is incorporated herein by reference consistent with conditions contained in the DECISION section of this docket.

4. **Physical features.**

a. **Design criteria.** The Edge Moor Energy Center consists of three (3) boiler/turbine units (Units 3, 4 and 5). Units 1 and 2 operation ceased in 1983. The Edge Moor units are fueled by oil or natural gas. The units are load cycled, with maximum generation typically maintained during the day and lower loads at night. The generating capacity of the three units is 710 MW (nominal).

Hay Road Energy Center, located adjacent to the Edge Moor Energy Center, is a combined cycle power plant comprised of six (6) simple-cycle combustion turbines and heat recovery steam generator units (Units 1, 2, 3, 5, 6 and 7) and two (2) steam turbine units (Units 4 and 8). The combined cycle process utilizes the waste heat generated from the combustion turbines to generate steam and to power an additional steam turbine unit. This system allows for the production of supplemental electric capacity without the use of additional fuel combustion. The simple-cycle combustion units are fueled primarily by natural gas; however, low-sulfur liquid distillate (No. 2 fuel oil or kerosene) is used as a back-up fuel when natural gas is unavailable or uneconomical. The generating capacity of the Hay Road Energy Center is 1,100 MW (nominal).

The three units at the Edge Moor Energy Center utilize a once-through cooling system. Cooling water is withdrawn from the Delaware River via two (2) circulating water pumps per unit from two (2) shoreline pump houses (Pumphouses 2 and 3). Pump house 1 is no longer used. In addition to the circulating pumps that are used for condenser cooling, each pump house contains a service water pump that is used to cool auxiliary equipment, and a screen wash pump to clear debris from the traveling screens. The plant's fire suppression system is served by a fire water pump located in Pump house 2. Pump house 2 serves Edge Moor Units 3 and 4 and Pump house 3 serves Edge Moor Unit 5. Pumphouse 2 contains five (5) intake bays, each with outer curtain walls, trash racks and dual-flow screens with 3/16-inch square openings. Four (4) condenser pumps, two (2) service water pumps, two (2) fire pumps and two (2) screen wash pumps withdraw from Pump house 2 and have a combined pumping capacity of 282.7 million gallons per day (mgd). Pumphouse 3 contains eight (8) intake bays each with outer curtain walls, trash racks and dual-flow system modified Ristroph type, smooth mesh screens with ½-inch by 1/8-inch rectangular openings. Two (2) condenser pumps, two (2) service water pumps and two (2) screen wash pumps that withdraw water from Pump house 3 have a combined pumping capacity of 593.7 mgd. Condenser cooling water and service water from the Edge Moor facility is discharged to a canal that flows approximately 750 feet to the Delaware River just north of Shellpot Creek (Edge Moor Discharge Canal).

The Hay Road Energy Center utilizes a closed loop non-contact cooling water system with two (2) wet, mechanical-draft cooling towers for condenser cooling of the steam turbines (Hay Road Units 4 and 8). The maximum volume of water needed for cooling tower makeup water at the two Hay Road steam turbine units is 8.2 mgd (4.1 mgd per unit). Up to 7.8 mgd of the cooling tower makeup water is obtained from the Edge Moor Discharge Canal by means of an intake located at the head of the discharge canal (the "Hay Road Intake"). Additional cooling tower makeup water comes from sources at the facility. When the Edge Moor Units are not operating, a circulating pump at Edge Moor is operated to transfer water to the Hay Road Intake via the Edge Moor Discharge Canal. Boiler water necessary for the operation of the six (6) simple-cycle combustion units at the Hay Road Energy Center is supplied by United Water of Delaware.

The Edge Moor facility condenser cooling water demands depend primarily on ambient water temperatures. During cool weather months, each Edge Moor unit requires only one circulating pump for condenser cooling. As ambient water temperatures increase, typically in June, the second set of circulating pumps at Edge Moor Units 3 and 4 are operated to increase condenser and power generation efficiency. As ambient water temperatures increase to about 75 degrees F (typically July and August), the second circulating pump at Unit 5 is operated. The pumps operate at a constant rate and are not variable. Based on withdrawal data provided by Calpine to the DRBC for the period January 2012 through September 2015, Delaware River water usage for condenser cooling at Edge Moor ranges from 2,769 mgm to 17,797 mgm and averages 9,335 mgm (309 mgd). The maximum Edge Moor condenser cooling demand, with all circulating pumps and all units in operation is 837.1 mgd or 25,950.1 mgm. A maximum of 7.8 mgd (241.8 mgm) of water from the Edge Moor Discharge Canal is used for cooling tower makeup water for the Hay Road Energy Center purpose.

In addition to the withdrawals for Edge Moor condenser cooling purposes, during operation, two (2) service water pumps withdraw up to 28.4 mgd (11.3 mgd from Pumphouse 2 and 17.1 mgd from Pumphouse 3) of Delaware River water. Also, the intake screens are continuously cleaned and cleared of debris by backwashing with river water. A maximum of 1.1 mgd and 3.5 mgd is used for this purpose at Pumphouses 2 and 3, respectively. Currently, the service water, screen wash and fire suppression withdrawals are not reported to the Commission. Future reporting of these withdrawals is required (see Findings section of this docket).

The total allocation of 27,168.4 mgm (8,763.7 mgm from Pumphouse 2 Intake and 18,404.7 mgm of surface water from Pumphouse 3 intake) provided by this docket is sufficient to meet the peak surface water demands of the existing units at the Edge Moor and Hay Road Energy Centers.

b. <u>Facilities.</u> The primary electric generating equipment consists of three (3) boiler turbine units at the Edge Moor Energy Center. The Hay Road Energy Center has two (2) blocks of generation capacity, consisting (each) of three (3) combustion turbines, three (3) heat recovery steam generators units, one (1) steam turbine and a multi-cell cooling tower.

The project's existing steam electric and combined cycle generators have the following characteristics:

UNIT NO.	COOLING SYSTEM	MAXIMUM COOLING WATER RATE (MGD)	YEAR INSTALLED
EM Unit 3	Once through	103.7	1954
EM Unit 4	Once through	160.3	1966
EM Unit 5	Once through	573.1	1973
HR Unit 4	ECT	4.1	1993
HR Unit 8	ECT	4.1	2001

EM: Edge Moor
HR: Hay Road
ECT: Evaporative Cooling Tower

The project's existing intakes have the following characteristics:

INTAKE ID	WATER BODY	PUMP	PUMP CAPACITY	7Q10 FLOW AT INTAKE	YEAR BUILT
Pumphouse 2 (DNREC ID No. 8207)	Delaware River	Circulating Pumps (2 pump operation)	264.0 mgd	4,110 CFS (2,656 mgd)	1954
		Service Water Pump	11.3 mgd		
		Fire Water Pump	6.3 mgd		
		Screen Wash Pump	1.1 mgd		
Pumphouse 3 (DNREC ID No. 8218)	Delaware River	Circulating Pumps (2 pump operation)	573.1 mgd	4,110 CFS (2,656 mgd)	1972
		Service Water Pump	17.1 mgd		
		Screen Wash Pump	3.5 mgd		
Hay Road Intake	Edge Moor Discharge Canal	Cooling Tower Pump	7.8 mgd	Not applicable	2002

The Edge Moor Energy Center calculates the Delaware River surface water withdrawals based upon pump runtime and known pump discharge rates. Hay Road Energy Center withdrawals from the Edge Moor Discharge Canal are metered.

Cooling water withdrawn from the Delaware River is not treated, prior to use at the Edge Moor Energy Center.

Cooling system makeup water withdrawn from the Edge Moor Discharge Canal is chlorinated for algae control prior to use at the Hay Road Energy Center.

Delaware River water is also used for fire suppression purposes on an as needed basis for testing and fire suppression. The fire system pumps are located in Pumphouse 2 and when needed, withdraw water from the Pumphouse intakes.

Though portions of the project facilities are located in the 100-year floodplain, the Commission's *Flood Plain Regulations* (*FPR*) do not apply to tidal sections of the basin. Therefore, the docket holder is not subject to the *FPR*.

Process water, primarily for use as boiler makeup water, and potable water for use at the Edge Moor and Hay Road Energy Centers is supplied by United Water Delaware through the City of Wilmington distribution system. The majority of the process water is demineralized prior to use in the boilers.

c. Other. Non-contact cooling water and boiler blow down from the Edge Moor Energy Center and cooling tower blowdown from the Hay Road Energy Center is discharged to the Edge Moor Discharge Canal, which collectively discharges to the Delaware River (Outfall No. 001). Screen and strainer backwash from the project intakes are discharged to the Delaware River via separate Outfalls Nos. 006 and 007. The Edge Moor cooling water discharges were approved in DRBC Docket No. D-70-225, on May 31, 1973. The Cooling tower blowdown discharges from Hay Road Units 1, 2, 3 and 4 were approved by DRBC Docket No. D-90-45 CP on September 26, 1990. The cooling tower blowdown for Hay Road Energy Center Units 5, 6, 7 and 8 was approved in DRBC Docket No. D-2000-12 CP on September 28, 2000. DNREC issued its most recent NPDES Permit No. DE000558 for the project discharges on June 1, 2001. The Commission's previous project discharge approvals have been consolidated and are described in draft Docket No. D-1981-020 CP-2, which is scheduled for hearing at the August 10, 2016 Commission hearing.

Sanitary effluent and certain non-process wastewaters are conveyed to the City of Wilmington sewage treatment facility most recently approved by DRBC Docket No. D-98-26 CP on November 15, 2000. DNREC issued its most recent NPDES Permit No. DE0020320 on September 17, 2014 for this treatment facility. The treatment facility has adequate capacity to continue to receive wastewater from the project.

d. Cost. There are no construction costs associated with this renewal docket.

e. Relationship to the Comprehensive Plan. Edge Moor Units 3, 4 and 5 were included as "Designated Units" in table A (Revised) of DRBC Docket No. D-77-110 CP (Amendment 1) ("The Merrill Creek Owners Group Docket") approved on May 23, 1990. Hay Road Unit No. 4 and Unit No. 8 were included as "Designated Units" in the Merrill Creek Owners Group Docket on September 26, 1990 (D-77-110 CP (Amendment 2)) and on April 19, 2001 (D-77-100 CP (Amendment 12)), respectively. The Hay Road Units 1 through 4 were previously included in the Comprehensive Plan by the Commission in Docket No. D-90-45 CP on September 26, 1990. Hay Road Energy Center Units 5 through 8 were previously included in the Comprehensive Plan by the Commission in Docket No. D-2000-12 CP on September 28,

2000. The Edge Moor Energy Center and Hay Road Energy Center and surface water withdrawals will continue to be included in the Comprehensive Plan on the approval date of this docket.

B. FINDINGS

Previous Dockets

The Commission has previously issued multiple dockets for the Edge Moor and Hay Road Energy Centers. Dockets were issued in response to the addition of power generating units or treatment facilities and included descriptions of the generation units, water demands and project discharge information. Edge Moor Units 1 through 4 were approved by DRBC Docket No. D-64-17 on May 27, 1964. Edge Moor Unit 5, the cooling water discharges for all units and the Edge Moor Discharge Canal were approved by DRBC Docket No. D-70-225 on May 31, 1973. Existing industrial wastewater treatment facilities at the Edge Moor Energy Center were approved by Docket No. D-77-24 on April 27, 1977. Docket D-81-20, issued on June 17, 1981, approved the modification and construction of new facilities to collect and treat stormwater runoff from a proposed coal storage area. The Hay Road Units 1 through 4 were approved by DRBC Docket D-90-45 CP on September 26, 1990 and the Hay Road Units 5 through 8 were approved by DRBC Docket No. D-2000-12 CP on September 28, 2000.

The water demands and allocations provided by the previous DRBC Dockets included water usage for Edge Moor Units 1 and 2. Edge Moor Units 1 and 2 have since been retired and cooling water for these units is no longer necessary. The total surface water allocation of 27,168.4 mgm approved by this docket is based on the maximum Edge Moor water demand. Because cooling water for the Hay Road Units is obtained from the Edge Moor cooling water discharge, no additional allocation of water is necessary for Hay Road's withdrawals from the Edge Moor Discharge Canal.

As required by the DRBC, the Merrill Creek Reservoir, located on Merrill Creek in Harmony Township, Warren County, New Jersey, provides supplemental storage from which releases will be 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 (DRBEUG). Calpine's Edge Moor Units 3, 4 and 5 and Hay Road Units 4 and 8 are included in Attachment 2, Exhibit III, as a "Designated Unit" in DRBC Docket No. D-1977-110 CP-18, approved on March 10, 2015.

The DNREC water allocation is valid for a period of 30 years from date of issue, with review every five years. The DNREC Water Allocation permit will expire on October 27, 2017. The Water allocation permit approved a 24-hour allocation of 1,065,000,000 gallons, a 30-day allocation of 33,000,000,000 gallons and a 12-month allocation of 396,000,000,000 gallons from the two Delaware River intakes.

The docket holder estimates that the project withdrawals, used for the purpose of once through cooling at the Edge Moor Energy Center, results in a consumptive use on average of 0.5 percent of the total water use. Withdrawals used for cooling tower makeup at the Hay Road

Energy Center results in a consumptive use of up to 82 percent of the total water use at this facility. Recent water usage data submitted by the docket holder shows that consumptive use at the Edge Moor Energy Center and the Hay Road Energy Center ranges from approximately 0.1 to 0.3 percent and 79 to 85 percent, respectively. Based on the usage data, the combined consumptive use of water used for cooling at the Edge Moor and Hay Road Energy Centers ranges from 0.9 to 1.8 percent (average of 1.5 percent) of the total water withdrawal from the Delaware River. The DRBC definition of consumptive use is defined in Article 5.5.1.D of the *Administrative Manual – Part III – Basin Regulations – Water Supply Charges,* 18 CFR 420.1.

Drought Management and Contingency Plan (DMCP)

Section 2.3.5.1 C. of the Commission's *Rules of Practice and Procedure* (*RPP*), 18 CFR 401.36(c), requires industrial and commercial water withdrawals in excess of one million gallons per day to develop a contingency plan including emergency conservation measures to be instituted in the event of a Commission declared drought or other water shortage. Resolution No. 83-14 amended the Commission's *Water Code* (Section 2.1.4) to include the conservation goal of a 15 percent reduction in depletive use during drought conditions. Hereafter referred to as drought management and contingency plans (DMCPs), DMCPs must contain the following: source of water supply; the average daily and monthly peak water withdrawal; average daily and peak monthly consumptive use (difference between quantity withdrawn and quantity returned to the ground or surface waters of the basin); description of recycling and conservation measures; point of discharge (where water is returned or discharged); types of products produced; normal employment levels (numbers); and estimated employment (numbers) and economic impact for curtailment of water usage for the following levels of curtailment: 10%; 25%; 35%; 50% and 100%. In addition, for this facility the DMCP must include the alternative water sources that the facility has investigated and considered to meet its consumptive use demands. The docket holder submitted a DMCP for the Edge Moor and Hay Road Energy Centers as part of the surface water withdrawal application, and its generating units have previously been included as designated units in the Merrill Creek Reservoir docket.

Surface Water Charges

DRBC Certificate of Entitlement No. 171 issued to Delmarva Power and Light Company on July 15, 1976 allowed the facility to withdraw without charge quantities of water that could lawfully have been withdrawn prior to the Commission’s formation in 1961. As noted in DRBC correspondence dated November 4, 2011 to the docket holder, the certificate of entitlement was deemed terminated effective on the date of the acquisition of Conectiv by Calpine on July 1, 2010. The docket holder shall pay for surface water in accordance with the Administrative Manual – Part III Basin Regulations – Water Supply Charges, 18 CFR part 420, as described in Condition C.II.f. in the Decision section of this docket. Currently, the docket holder only reports the volume of water used for cooling purposes at the Edge Moor and Hay Road Energy Centers. The docket holder is required to continue to report its non-consumptive and consumptive water used for cooling purposes at the Edge Moor and Hay Road Energy Centers on a quarterly basis, and beginning with the first quarter of 2017 (the usage period running from January 1 through March 31, 2017, for which a report is due by April 30, 2017), must begin reporting the non-consumptive and consumptive use of all other surface water withdrawals approved by this

docket, including the water withdrawals made by the service water pumps, screen wash pumps and the fire suppression pumps (see Condition C.II.g).

Other

At the withdrawal location, the Delaware River is tidal. The Trenton low flow target is 2,500 cfs (1.62 billion gallons per day). The addition of the tidal tributaries upstream of the withdrawal location at their Q7-10 flow and the low flow Trenton target results in a low-flow of approximately 4,110 cfs (2.66 billion gallons per day) for the Delaware River at the withdrawal location.

The project is designed to conform to the requirements of the *Water Code* and *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

I. Effective on the approval date for Docket No. D-2000-012 CP-2 below:

a. The projects described in Docket Nos. D-90-45 CP and D-2000-12 CP are removed from the Comprehensive Plan to the extent that they are not included in Docket No. D-2000-012 CP-2; and

b. Docket Nos. D-64-17, D-90-45 CP and D-2000-12 CP are terminated and replaced by Docket No. D-2000-012 CP-2.

c. The project and the appurtenant facilities described in Section A.4 "Physical features" shall be added to the Comprehensive Plan.

II. The project and appurtenant facilities as described in Section A.4 "Physical features" are approved pursuant to Section 3.8 of the *Compact*, subject to the following conditions:

a. Docket approval is subject to all conditions, requirements, and limitations imposed by the DNREC in its Water Allocation Permit, and such conditions, requirements, and limitations are incorporated herein, unless they are less stringent than the Commission's.

b. The facility, intakes and operational records shall be available at all times for inspection by the DRBC.

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

d. During any month, the combined withdrawal from the Delaware River intakes shall not exceed 27,168.4 million gallons. No intake shall be pumped above the maximum instantaneous rate and monthly allocation as indicated below:

INTAKE NO.	MAXIMUM INSTANTANEOUS RATE	MONTHLY ALLOCATION
Pumphouse 2	196,320 gpm	8,763.7 mgm
Pumphouse 3	412,292 gpm	18,404.7 mgm

e. The project withdrawals shall be measured 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 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 DNREC as to type, method, installation, maintenance, calibration, reading, and accuracy if and to the extent required by DNREC's water allocation permit. A record of daily withdrawals shall be maintained, and monthly totals shall be reported to the DNREC annually and shall be available at any time to the Commission if requested by the Executive Director.

f. The docket holder shall pay for surface water use in accordance with Administrative Manual – Part III Basin Regulations – Water Supply Charges, 18 CFR part 420, except when water is released from Merrill Creek Reservoir to compensate for consumptive water use of Designated Units of the Merrill Creek Project.

g. The docket holder shall continue to report its non-consumptive and consumptive water used for cooling purposes at the Edge Moor and Hay Road Energy Centers on a quarterly basis, and beginning with the first quarter of 2017 (the usage period running from January 1 through March 31, 2017, for which a report is due by April 30, 2017), shall begin reporting the non-consumptive and consumptive use of all other surface water withdrawals approved by this docket, including the water withdrawals made by the service water pumps, screen wash pumps and the fire suppression pumps.

h. Whenever the Commission's Drought Management Plans (present or future) indicate that storage levels in the Delaware River Basin have fallen below normal conditions for five consecutive days, and the daily mean Equivalent Flow" (as measured at the Trenton USGS gage plus the releases in excess of conservation rates from Blue Marsh Reservoir minus the previous day's release from Merrill Creek Reservoir) is below 3,000 cfs and is forecast to remain below 3,000 cfs for the next day, the docket holder shall operate the project at a level corresponding to the equivalent consumptive use that the docket holder can replace on a daily basis, or as otherwise approved by the Executive Director of the DRBC.

i. The docket holder shall implement to the satisfaction of the DNREC, the continuous program to encourage water conservation in all types of use within the facilities served by this docket approval. The docket holder will report to the DNREC on the actions taken pursuant to this program and the impact of those actions as requested by the DNREC.

j. 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 Commission Resolution No. 88-2 (Revision 2).

k. The docket holder shall implement to the satisfaction of the DNREC, a drought or other water supply emergency plan.

l. 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.

m. 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*.

n. Unless the docket holder requests an extension and that is approved by the Commission in advance, in accordance with paragraph 11 of the Commission's Project Review Fee schedule (Resolution No. 2009-2), the docket holder is responsible for timely submittal of a docket renewal application on the appropriate DRBC application form at least 12 months in advance of the docket expiration date set forth below. The docket holder will be subject to late charges 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 (or the later date established by an extension that has been timely requested and approved), 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.

o. 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.

p. If relevant data 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 docket 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 permit holder's project withdrawal shall be repaired, replaced or mitigated at the permit 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.

q. 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.

r. For the duration of any drought emergency declared by either Delaware or the Commission, water service or use by the docket holder pursuant to this approval shall be subject to the prohibition of those nonessential uses specified by the Governor of Delaware to the extent that they may be applicable, and to any other emergency resolutions or orders adopted hereafter by the Commission.

s. 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: September 14, 2016

EXPIRATION DATE: September 14, 2026