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**DOCKET NO. D-2009-004 CP-2**

**DELAWARE RIVER BASIN COMMISSION**

**NSWCPD**

**Naval Surface Warfare Center Philadelphia Division  
Non-Contact Cooling Water Discharge Increase  
City of Philadelphia, Philadelphia County, Pennsylvania**

**PROCEEDINGS**

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) by the Naval Surface Warfare Center Philadelphia Division (NSWCPD or docket holder) on April 6, 2015 (Application), for review of an expansion to a non-contact cooling water discharge. The Pennsylvania Department of Environmental Protection (PADEP) issued the National Pollutant Discharge Elimination System (NPDES) Permit No. PA0036447 for the project on January 17, 2013.

The Application was reviewed for inclusion of the project in the Comprehensive Plan and approval under Section 3.8 of the *Delaware River Basin Compact*. The Philadelphia City Planning Commission has been notified of pending action. A public hearing on this project was held by the DRBC on February 15, 2017.

**A. DESCRIPTION**

**1. Purpose.** The purpose of this project is to approve an increase in the docket holder's existing discharge of non-contact cooling water (NCCW). The NSWCPD facility utilizes surface water for cooling purposes during the operation of land based test sites (LBTS) of ship systems, and discharges up to 36.0 million gallons per day (mgd) of NCCW from Outfall 001 to the Navy Reserve Basin (located in the tidal portion of Water Quality Zone 4 of the Delaware River) and 0.60 mgd of process water from Outfall 005 directly to Delaware River Water Quality Zone 4. The docket holder proposes to increase the maximum NCCW discharge from Outfall 001 from 36.0 mgd to 72.0 mgd. The discharge from Outfall 005 will remain at 0.60 mgd. The increase is being requested in order to run the tests at a higher daily flow rate and for a longer duration.

**2. Location.** The project discharges are located in the City of Philadelphia, Pennsylvania. The NSWCPD discharges to the Navy Reserve Basin (Outfall 001) which is connected by a

channel and tidally influenced by the tidal portion of the Schuylkill River, ½ mile upstream of the Schuylkill River's confluence with the Delaware River at River Mile 92.0 – 0.9. The NSWCPD also discharges directly to the Delaware River (Outfall 005) at River Mile 92.7. Both discharge locations are located in Delaware River Water Quality Zone 4.

The project outfalls are located in Delaware River Water Quality Zone 4 as follows:

OUTFALL NO.	LATITUDE (N)	LONGITUDE (W)
001 (Navy Reserve Basin)	39° 53' 39"	75° 10' 43"
005 (Delaware River)	39° 53' 14"	75° 10' 01"

NPDES Permit No. PA00643777 contains the following monitoring locations for process water effluent:

MONITORING POINT NO.	EFFLUENT MAKE-UP	OUTFALL NO.
MP 101	Building 633 NCCW	001
MP 301	Building 520 NCCW	001
MP 105	Building 77H Cooling wastewater	005

3. **Area Served.** The docket holder currently discharges NCCW and process water to two locations in Water Quality Zone 4 from the NSWCPD facility.

For the purpose of defining the 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 NSWCPD facility currently discharges up to 36.0 mgd of NCCW to the Navy Reserve Basin (Outfall 001), intermittently, as required for the operation of their LBTS operations. The docket holder proposes to increase the maximum discharge from Outfall 001 from 36.0 mgd to 72.0 mgd. Up to 0.55 mgd of NCCW and 0.045 mgd of fire pump test water (combined total of 0.60 mgd) is discharged directly to the Delaware River (Outfall 005). The discharge via Outfall 005 will remain at 0.60 mgd.

b. **Facilities.** The NSWCPD operates several types of LBTS of ship systems. The tests are performed on a temporary, intermittent, and as needed basis in order to evaluate operational and performance characteristics of the ship systems. The tests require water for cooling and/or operations of the systems. NCCW used for dissipating heat generated by the tests discharges at Outfall 001. The NSWCPD facility also intermittently discharges cooling tower NCCW and fire pump test water at Outfall 005.

### **Navy Reserve Basin Discharge (Outfall 001)**

The NSWCPD facility includes a once-through cooling loop that supplies NCCW to test systems located in Building 633 and Building 824, as well as boiler condensers located in Buildings 633 and 520. There are two (2) cooling loops associated with the system; the Building 633/520 cooling loop and the Building 824 cooling loop. NCCW is supplied to the Building 633/520 cooling loop by three (3) 50,000 gallon per minute (gpm) pumps located at the intake; however, only two (2) of the pumps can be used at once and at an operational capacity of 75,000 gpm (108 mgd). NCCW is supplied to the Building 824 cooling loop by one (1) 700 gpm pump located at the intake on the Navy Reserve Basin. NCCW used at Buildings 633/520 discharges untreated back to the Navy Reserve Basin. NCCW used at Building 824 discharges untreated to the sanitary sewer system which conveys wastewater to the City of Philadelphia Water Department Southeast WWTP, which discharges treated sewage effluent to the Delaware River Water Quality Zone 3.

The existing Building 633/520 cooling loop system intermittently withdraws from and discharges to the Navy Reserve Basin at a maximum flow rate of 36.0 mgd. This docket approves an increase to the NCCW discharge associated with the 633/520 cooling loop system from a maximum of 36.0 mgd to a maximum of 72.0 mgd. Surface water will be supplied by the three (3) 50,000 gpm pumps located at the Navy Reserve Basin intake. The increase is being requested in order to run the tests at a higher daily flow rate and for a longer duration. The Building 824 cooling loop system will continue to withdraw a maximum of 1.008 mgd from the Navy Reserve Basin and discharge a maximum of 1.008 mgd to the sanitary sewer system and ultimately the City of Philadelphia Water Department Southeast WWTP.

### **Delaware River Discharge (Outfall 005)**

The NSWCPD also includes a cooling tower system associated with gas turbine generators in Building No.77H, and fire pumps that are part of the facility's fire suppression system. The source of the cooling tower NCCW make-up and fire pump test water is potable water from the Philadelphia Water Department. The cooling tower NCCW is discharged only during cooling tower maintenance. Fire pump tests of the facility's fire suppression system are performed approximately monthly. A maximum of 0.55 mgd of cooling tower NCCW and 0.045 mgd of fire pump water is discharged directly to the Delaware River (Water Quality Zone 4), for a combined maximum discharge of 0.60 mgd from Outfall 005.

The only treatment that occurs in the entire system is that the cooling tower make-up water is pretreated with a rust inhibitor, biocide, and algaecide.

c. **Water withdrawals.** The surface water withdrawal from the Navy Reserve Basin is described in detail in draft Docket No. D-2009-003-CP-2, which is scheduled for hearing at the February 15, 2017 Commission hearing. The potable water supply in the project service area is provided by the Philadelphia Water Department. Domestic waste generated at the project

facilities is also sent to the City of Philadelphia Water Department Southeast WWTP for treatment.

d. **NPDES Permit / DRBC Docket.** NPDES Permit No. PA0036447 A1 approved by PADEP on January 17, 2013, includes final effluent limitations for the existing project discharges to the Delaware Estuary Zone 4. Limitations were developed using an effluent flow rate of 36.0 mgd for Outfall 001, an effluent flow rate of 0.55 mgd for Monitoring Point 105 (Cooling Tower NCCW), and an effluent flow rate of 0.045 mgd for Outfall 005 (during fire pump test discharges only). The following average monthly effluent limits for a discharge up to 24.0 mgd via Outfall 001 are among those listed in the NPDES permit and meet or are more stringent than the effluent requirements of the DRBC.

**EFFLUENT TABLE A-1: DRBC Parameters Included in NPDES permit for Outfall 001 (Monitoring Points 101 & 301) for flow rate up to 24.0 mgd**

<b>MP 101 &amp; MP 301 (Building No. 633 NCCW &amp; Building No. 520 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
Temperature*	110 ° F (Instantaneous Maximum)	As required by NPDES permit

\* See EFFLUENT TABLES A-2 & A-5 below for additional temperature requirements

The following average monthly effluent limits for the proposed discharge greater than 24.0 mgd and up to 72.0 mgd via Outfall 001 are not listed in the NPDES permit and are effluent requirements of the DRBC.

**EFFLUENT TABLE A-2: DRBC Parameters Not Included in NPDES permit for Outfall 001 for proposed discharge rate greater than 24.0 mgd and up to 72.0 mgd**

<b>Outfall 001 (Building No. 633 NCCW &amp; Building No. 520 NCCW)</b>		
<b>PARAMETER</b>	<b>LIMIT</b>	<b>MONITORING</b>
pH (Standard Units)	6 to 9 at all times	Monthly
Effluent Temperature	110 ° F (Instantaneous Maximum)*	Continuous during test operations, record hourly
Intake Temperature	Monitor & Report*	Continuous during test operations, record hourly
Increase in Temperature (Effluent Temp. – Intake Temp.)	16 ° F *	Continuous during test operations, record hourly
Ambient In-Stream Temperature @ Navy Reserve Basin Lift Bridge**	Monitor & record daily minimum, daily maximum, and average daily temperature prior to and during operation of systems tests. Report after the test is concluded**	Continuous during test operations

\* See FINDINGS section and DECISION Condition II.g.

\*\* See EFFLUENT TABLE A-5, the FINDINGS section, and DECISION Conditions II.h. & i.

The following average monthly effluent limits for Monitoring Point 105 under existing and proposed conditions for a discharge of 0.55 mgd via Outfall 005 are among those

listed in the NPDES permit and meet or are more stringent than the effluent requirements of the DRBC.

**EFFLUENT TABLE A-3: DRBC Parameters Included in NPDES permit for Monitoring Point 105 (Outfall 005)**

<b>MP 105 (Building No. 77H 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
Temperature	110 ° F (Instantaneous Maximum)	As required by NPDES permit
Total Dissolved Solids*	750 mg/l	As required by NPDES permit

\* See DECISION Condition II.q.

The following average monthly effluent limits for Outfall 005 during the fire pump discharge tests under existing and proposed conditions for a discharge of 0.045 mgd are among those listed in the NPDES permit and meet or are more stringent than the effluent requirements of the DRBC.

**EFFLUENT TABLE A-4: DRBC Parameters Included in NPDES permit for Outfall 005 during fire pump discharge tests only**

<b>OUTFALL 005 (Fire Pump Discharge)</b>		
<b>PARAMETER</b>	<b>LIMIT</b>	<b>MONITORING</b>
pH (Standard Units)	6 to 9 at all times	As required by NPDES permit

The docket holder shall also comply with the following DRBC temperature restrictions requirements for the discharge from Outfall No. 001:

**EFFLUENT TABLE A-5: Additional temperature restrictions for Outfall 001**

<b>Outfall 001 (Building No. 633 NCCW &amp; Building No. 520 NCCW)</b>	
<b>Effluent Flow</b>	<b>Operational Restriction</b>
0 – 24.0 mgd	None
24.0 – 72.0 mgd	From June 1 <sup>st</sup> through September 15 <sup>th</sup> , if the Delaware River Zone 4 ambient average daily temperature at the Navy Reserve Basin Lift Bridge is above the Zone 4 average daily temperatures from 1961-1966 (See TABLE A-6 below) or a maximum daily temperature of 81° F, there shall be no discharge above 24.0 mgd. *

\* Delaware River Zone 4 ambient temperature shall be measured at a temperature monitoring gage required to be installed by the docket holder at the Navy Reserve Basin Lift Bridge within six (6) months of docket approval. The docket holder shall perform temperature monitoring and recording at the Lift Bridge within 48 hours prior to the commencement of any systems test that will result in a NCCW discharge greater than 24.0 mgd. During the time period June 1<sup>st</sup> through September 15<sup>th</sup>, if Lift Bridge monitoring indicates that the ambient average daily temperature exceeds TABLE A-6 temperature or a maximum daily temperature of 81° F, the systems test is required to be delayed until the Lift Bridge monitoring indicates that TABLE A-6 temperature is no longer being exceeded. If monitoring indicates that TABLE A-6 temperature is not being

exceeded, the test is permitted to commence and is permitted to run for the test's full duration (See FINDINGS section & DECISION Conditions II.h. & i.).

**TABLE A-6: Average Daily Temperatures (1961-1966)  
(Temperatures may be interpolated)**

DATE	Zone 4 Delaware Estuary From Big Timber Creek To Pennsylvania-Delaware State Line
January 1	42
February 1	36
March 1	40
April 1	47
May 1	58
June 1	72
July 1	80
August 1	81
September 1	78
September 15	76
October 1	70
November 1	60
December 1	50
December 15	45

e. **Relationship to the Comprehensive Plan.** The project discharge was added to the Comprehensive Plan via Docket No. D-2009-004 CP-1 on March 2, 2011.

## **B. FINDINGS**

The NSWCPD currently operates several types of LBTS of ship systems. The tests are performed on a temporary, intermittent, and as needed basis in order to evaluate operational and performance characteristics of the systems. Several of these systems require water for cooling and/or operations of the systems that discharges after use to surface waters of the Delaware River Basin. NCCW and process water used by the NSWCPD test systems discharge at two locations: Outfall 001 and Outfall 005. The facilities are described in the Section A.4. of this docket.

The NSWCPD facility currently intermittently discharges up to 36.0 mgd of NCCW to the Navy Reserve Basin (Outfall 001) and up to 0.55 mgd of NCCW and up to 0.045 mgd of fire pump test water (combined total of 0.60 mgd) to the Delaware River (Outfall 005). Both outfalls are located in Delaware River Water Quality Zone 4. The docket holder submitted an Application to expand the Outfall 001 flow from 36.0 mgd to 72.0 mgd for the purposes of running the systems tests for a longer duration which will require additional NCCW for cooling purposes and result in the higher discharge flow rate of NCCW. This docket approves the expansion, conditioned upon the docket holder meeting several requirements prior to the proposed discharge expansion (See DECISION Condition II.h. of this docket).

**Thermal Impact Assessment – NCCW Discharge Expansion to 72.0 MGD - Navy Reserve Basin Outfall (Outfall 001)**

The NSWCPD discharges to the Navy Reserve Basin, which is connected by a channel and tidally influenced by the tidal portion of the Schuylkill River, approximately ½ mile upstream of the confluence of the Schuylkill River and Delaware River. The confluence of the Delaware and Schuylkill Rivers is located at Delaware River Mile 92.0, in Water Quality Zone 4 of the Delaware River. Water Quality Zone 4 includes the tidal portions of the Schuylkill River, including the Navy Reserve Basin.

Section 4.30.6.C. of the Commission's Water Quality Regulations 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 (see TABLE A-6 in Section A.4.d. of this docket), or a maximum of 86° F (30.0° C), whichever is less.

*Previous Thermal Impact Assessment*

During the review of the previous docket application (D-2009-004 CP-1), the docket holder submitted a thermal discharge model study performed by Woodard and Curran, entitled *Modeling and Simulation of Thermal Discharge for Electric Drive Project (P-205)*, dated April 29, 2005 (Woodward and Curran Report). The Woodward and Curran Report contained the results of several studies to determine the anticipated thermal impacts to the receiving waterbody from the NCCW discharge at the Navy Reserve Basin outfall (Outfall 001) that would result from an increase in NCCW discharge from 24.0 mgd to 36.0 mgd. They concluded that “a cooling tower would not be needed if the mixing zone boundary was in the Schuylkill River, and it might be needed if the boundary were located in the Reserve Basin”.

An analysis performed by DRBC staff entitled *Recommendation for Allowable Heat Dissipation Area for Navy Yard Thermal Discharges*, dated March 2, 2005, concluded that the heat dissipation area (mixing zone) for the Outfall 001 (Building No. 633) discharge and all other discharges to the Navy Reserve Basin be limited to “the area within the Reserve Basin east of the Lift Bridge”. The Lift Bridge spans the channel that connects the Navy Reserve Basin to the Schuylkill River. Therefore, the allowable heat dissipation area for the Navy Reserve Basin outfall does not include the Schuylkill River. This docket continues the approval of a heat dissipation area for the NCCW discharge at Outfall 001, limited to the Navy Reserve Basin, east of the Lift Bridge (See DECISION Condition II.r.).

In the DRBC's 2008 *Integrated Assessment Water Quality Report*, DRBC indicated that water quality criteria for temperature is being violated in Zone 4 of the estuary. DRBC concluded that any additional thermal load to Zone 4 should be mitigated to the greatest degree practicable, and that the period June 1<sup>st</sup> through September 15<sup>th</sup> is the critical period for in-stream biota.

The docket holder submitted operations and temperature sampling data for the years 2004-2006. The data indicated dates of operation for each month during this time period, total

hours of operation for each month, and the maximum temperature during one sampling event per month.

DRBC staff cross-referenced the sampling data with Zone 4 ambient temperature monitoring data and determined that of the 171 days that the test systems were in operation, 71 days of operation occurred when no Zone 4 temperature data was collected (unable to assess vs. Zone 4 temperature criteria) and 100 days of operation occurred when Zone 4 temperature data was available. Of the 100 days of operation when Zone 4 ambient temperature data was available, Zone 4 ambient temperature exceeded Zone 4 temperature criteria on 28 days and therefore did not meet DRBC criteria.

Of the 28 days when Navy systems were in operation and Zone 4 temperature exceeded temperature criteria, 6 days were reported where the maximum NCCW Outfall 001 discharge temperature exceeded Zone 4 ambient temperature (22 of the 28 days occurred where the Outfall 001 maximum temperature was lower than the Zone 4 ambient temperature).

DRBC staff concluded that the discharge from Outfall 001 may be contributing to temperature criteria exceedences occurring in Zone 4 of the Estuary reported in DRBC's 2008 *Integrated Assessment Water Quality Report*. DRBC staff also concluded that any additional thermal load to Zone 4 should be mitigated to the greatest degree practicable. Since the facility was operating at 24.0 mgd prior to the approval to expand the flow from 24.0 mgd to 36.0 mgd granted by Docket No. D-2009-004 CP-1, the flow of 24.0 is considered "grandfathered" and is permitted without heat restrictions other than the instantaneous maximum effluent temperature of 110 °F. In order to mitigate the additional thermal load from a discharge greater than 24.0 mgd, the Commission is placing restrictions on additional heat load during the time period of June 1st to September 15th for discharges greater than the discharge of 24.0 mgd.

*Current Thermal Impact Assessment (Proposed Expansion to 72.0 mgd)*

The docket holder submitted a thermal discharge analysis study performed by Environmental Resources Management (ERM), entitled *Non-Contact Cooling Water Discharge Thermal Modeling Analysis, Navy Reserve Basin Building 633*, dated October 3, 2014 (ERM Report). The ERM Report evaluated four (4) proposed discharge scenarios, each at a discharge rate of 72.0 mgd. The scenarios consist of proposed heat loads of 45, 122, 205, and 401 million British Thermal Units per hour (MMBTU/hr). The corresponding change in temperature ( $\Delta T$ ) between the intake water temperature and the effluent temperature calculated for each of the four scenarios were 1.8 °F; 4.9 °F, 8.0 °F, and 16 °F, respectively. The ERM report concluded that for the four scenarios, the maximum instantaneous in-stream temperature increase at the edge of the mixing zone (the Navy Reserve Basin Lift Bridge) is 3.9 °F, and the maximum 24-hour average maximum temperature increase is 3.3 °F at the Navy Reserve Basin Lift Bridge. Since the maximum increase is less than the Zone 4 ambient criteria of a 5 °F increase over the average 24-hour temperature gradient displayed during the 1961-1966 period (TABLE A-6 temperatures), Zone 4 criteria is not expected to be exceeded as a result of the 72.0 mgd NCCW discharge.

The docket holder is required to install a temperature monitoring gage at the Navy Reserve Basin Lift Bridge that continuously monitors ambient in-stream temperature at the edge



of the Navy Reserve Basin within six (6) months of docket approval (See DECISION Condition II.h.). Within 48 hours prior to the initiation of a systems test requiring a NCCW discharge from Outfall 001, ambient temperature shall be monitored and daily minimum, daily maximum, and average daily temperature recorded (see EFFLUENT TABLES A-2 & A-5 in Section A.4.d.).

During the time period June 1st through September 15th, if Navy Reserve Basin Lift Bridge monitoring indicates that the ambient average daily temperature exceeds the TABLE A-6 temperature or a maximum daily temperature of 81° F, the docket holder is not permitted to commence a systems test that would result in a discharge greater than 24.0 mgd. If monitoring indicates that the TABLE A-6 temperature is not being exceeded, the systems test is permitted to commence. Once a systems test has commenced under these conditions, the test is permitted to run for the test's full duration (See DECISION Conditions II.h. & i.).

### **Thermal Impact Assessment – Outfall 005**

The thermal impact of the existing discharge to the Delaware River outfall (Outfall 005) is currently mitigated with a cooling tower, and therefore does not require any additional measures to reduce the heat load generated by this system.

At the project discharge site, the Delaware River is tidal and its flow is regulated by upstream reservoir releases. The Trenton low flow target is 2,500 cfs (1.62 billion gallons per day). The addition of the tidal tributaries upstream of the discharge location at their Q7-10 flow and the low flow Trenton target results in a low-flow of approximately 3,524 cfs (2.27 billion gallons per day) for the Delaware River at the discharge location (River Mile 92.47).

The ratio of this low flow to the design NCCW discharge from Outfall No. 001 (72.0 mgd) is 32 to 1. The ratio of this low flow to the design NCCW discharge from Outfall No. 005 (0.60 mgd) is 3780 to 1.

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

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, where applicable.

The project is designed to produce a discharge meeting the effluent requirements as set forth in the *Water Quality Regulations* (WQR) of the DRBC.

### C. DECISION

I. Effective on the approval date for Docket No. D-2009-004 CP-2 below:

a. The project described in Docket No. D-2009-004 CP-1 is removed from the Comprehensive Plan to the extent that they are not included in Docket No. D-2009-004 CP-2; and

b. Docket No. No. D-2009-004 CP-1 is terminated and replaced by Docket No. D-2009-004 CP-2; and

c. The project and the appurtenant facilities described in Section A “Physical Features” of this docket shall be added to 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. Docket approval is subject to all conditions, requirements, and limitations imposed by the PADEP in its NPDES permit, and such conditions, requirements, and limitations are incorporated herein, unless they are less stringent than the Commission’s.

b. The facility 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 DRBC WQR.

d. 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](mailto: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.

e. 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*.

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. During the performance of tests, a record of daily effluent flows and hourly intake and hourly effluent temperatures shall be maintained, and shall be available at any time to the Commission if requested by the Executive Director. An annual report shall be submitted to the Commission detailing the daily effluent flow, daily intake temperature, and daily effluent temperature records by January 31 of each year.

h. The docket holder shall install an in-stream ambient temperature monitoring gage that continuously monitors and records temperature at the Navy Reserve Lift Bridge within six (6) months of docket approval (by September 15, 2017). The docket holder shall record daily minimum, daily maximum, and average daily temperature data at the Lift Bridge within 48 hours prior to the commencement of any systems test that will result in a NCCW discharge greater than 24.0 mgd. During the time period June 1<sup>st</sup> through September 15<sup>th</sup>, if Lift Bridge monitoring indicates that the ambient average daily temperature exceeds the TABLE A-6 temperature or a maximum daily temperature of 81 °F, the docket holder is not permitted to commence a systems test that will result in a discharge greater than 24.0 mgd. If monitoring indicates that TABLE A-6 temperature is not being exceeded, the test is permitted to commence and is permitted to run for the systems test's full duration. A record of daily minimum, daily maximum, and average daily temperature data at the Lift Bridge shall be maintained, and shall be available at any time to the Commission if requested by the Executive Director. An annual report shall be submitted to the Commission detailing the Lift Bridge temperature data by January 31 of each year.

i. During the operation of any of the docket holder's systems tests performed between June 1<sup>st</sup> and September 15<sup>th</sup>, if the ambient monitoring at the Navy Reserve Lift Bridge indicates that the ambient average daily temperature exceeds 5 °F above the average 24-hour temperature gradient displayed during the 1961-1966 period (see TABLE A-6 in Section A.4.d. of this docket), or a daily maximum temperature of 86 °F, the docket holder is required to notify the DRBC Executive Director within ten (10) days of the exceedance and report the results of the ambient monitoring to the DRBC within 30 days of the exceedance.

j. The docket holder is permitted to 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.

k. The docket holder shall discharge wastewater 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.

l. Nothing in this docket approval shall be construed as limiting the authority of DRBC to adopt and apply charges or other fees to this discharge or project.

m. 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.

n. Unless the docket holder requests an extension 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 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.

p. 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.

q. 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.

r. This docket approves a heat dissipation area for the NCCW discharge at Outfall 001, limited to the Navy Reserve Basin, east of the Lift Bridge.

**BY THE COMMISSION**

**DATE APPROVED:**

**EXPIRATION DATE:           January 31, 2023**