

DOCKET NO. D-2015-022 CP-1

DELAWARE RIVER BASIN COMMISSION

Discharge to a Tributary of Special Protection Waters

**United States Environmental Protection Agency, Region II
Groundwater Extraction Treatment System
Washington Borough, Warren County, New Jersey**

PROCEEDINGS

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) by the United States Environmental Protection Agency, Region II (“EPA” or “docket holder”) on November 30, 2015 (Application), for approval of a new groundwater extraction and treatment system and its discharge. The New Jersey Department of Environmental Protection (NJDEP) issued its New Jersey Pollutant Discharge Elimination System Discharge to Groundwater (NJPDES/DGW) authorization (Program Interest ID No. G000005662) for the new facility on December 28, 2015.

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 Warren County Planning Department has been notified of pending action. A public hearing on this project was held by the DRBC on May 11, 2016.

A. DESCRIPTION

1. Purpose. The purpose of this docket is to approve the docket holder’s new 0.101 million gallons per day (mgd) (hydraulic maximum) groundwater extraction treatment system and its discharge of remediated groundwater into the subsurface through an injection well. The treatment system will utilize air stripping and granular activated carbon to treat contaminated groundwater.

2. Location. The new groundwater extraction system, treatment facility and re-injection system will pump and treat groundwater within the Operable Unit 1 (OU1) tetrachloroethene (PCE) Plume at the Pohatcong Valley Groundwater Contamination Superfund Site, located on Park Avenue between State Highway 31 and Pohatcong Street in Washington Borough, Warren County, New Jersey. The treated groundwater will discharge into the subsurface through an

injection well located in the Upper Pohatcong Creek Watershed, in drainage area to the section of the non-tidal Delaware River known as the Lower Delaware, which is classified as Special Protection Water (SPW).

The project discharge is to an injection well located in the Upper Pohatcong Creek Watershed as follows:

OUTFALL NO.	LATITUDE (N)	LONGITUDE (W)
Well IW-03	40° 45' 23"	74° 58' 21"

3. Area Served. The proposed groundwater treatment facility will treat contaminated groundwater within the OU1 PCE Plume at the Pohatcong Valley Groundwater Contamination Superfund Site in Washington Borough, Warren County, New Jersey.

For the purpose of defining the Area Served, Section B (Type of Discharge) and D (Service Area) of the docket holder’s Application are incorporated herein by reference, to the extent consistent with all other conditions contained in the DECISION Section of this docket.

4. Physical Features.

a. Design Criteria. The docket holder’s new groundwater extraction and treatment system is designed to pump and treat contaminated groundwater within the OU1 PCE Plume at the Pohatcong Valley Groundwater Contamination Superfund Site. The system will feature a 0.101 mgd (70 gpm) groundwater treatment system utilizing air stripping and granular activated carbon to remove volatile organic compounds (VOCs), primarily PCE. The treated groundwater will be discharged into the subsurface via an injection well located on site. The groundwater treatment system was designed to treat groundwater at flows ranging from 20 gpm to 50 gpm, with a hydraulic maximum of 70 gpm. The time frame for this remedy assumes continuous operation of the system for 30 years or more.

b. Facilities. Contaminated groundwater will be pumped from up to 10 extraction wells (EW-01 through EW-10) screened in the weathered bedrock aquifer. The existing extraction wells have the following characteristics:

WELL NO.	DEPTH	SCREENED INTERVAL (BGS)	RATED PUMP CAPACITY	YEAR DRILLED
EW-01	130.5	30.5’-130.5’	5.5 gpm	2014
EW-02	130.5	30.5’-130.5’	1.5 gpm	2014
EW-03	130.0	30’-130’	3.5 gpm	2014
EW-04	130.0	30’-130’	1.5 gpm	2014
EW-05	126.6	26.6’-126.6’	1.5 gpm	2014
EW-06	130.2	30.2’-130.2	2.6 gpm	2014

WELL NO.	DEPTH	SCREENED INTERVAL (BGS)	RATED PUMP CAPACITY	YEAR DRILLED
EW-07	130.3	30.3'-130.3	1.5 gpm	2015
EW-08	130.7	30.7'-130.7'	8.5 gpm	2014
EW-09	130.4	30.4'-130.4'	4.8 gpm	2015
EW-10	130.4	30.4'-130.4'	15 gpm	2015

Water from the extraction wells is pumped from the extraction wells in double contained HDPE pipe into the treatment building containing an air stripping system, two granular activated carbon (GAC) liquid-phase absorbers and associated feed pumps. No chemical addition is anticipated for the treated wastewater; however, area for a pH adjustment system is included, which would use caustic soda in the event the effluent pH from the GAC liquid-phase absorbers is less than 6.5 s.u. Off gas from the air stripper will be treated through a GAC vapor-phase absorber prior to being discharged to the atmosphere. The GAC absorbers will be backwashed as necessary with municipal water which will be discharged to the public sewer system.

After passing through the liquid-phase GAC absorbers, treated effluent will be directed to injection well IW-03 to be re-injected back into the regional aquifer. Extraction Well IW-03 is constructed with 30 feet of 20-slot wire stainless steel screened at a depth of approximately 290 to 320 feet bgs in the deeper portion of the carbonate aquifer. Based on the rated pump capacities, the effluent injection rate will be a maximum of approximately 46 gpm (66,000 gpd). Well IW-03 was tested at injection rates of up to 75 gpm.

The docket holder's groundwater treatment facility will discharge to waters classified as SPW and is required to have available standby power. The new groundwater treatment system does not have standby power; however, a controlled system shut-down will occur in the event of loss of power. If power is interrupted, the system's programmable logic controller (PLC) will automatically stop all extraction well pumps and GAC feed pumps; therefore, no groundwater is pumped through nor discharged from the system. Following the resumption of power, the system will require a manual restart.

The groundwater treatment system will not be staffed 24 hours per day and shall have a remote alarm system that continuously monitors facility operations in accordance with the Commission's SPW requirements. The treatment system will be highly automated for control, monitoring, alarms, and shutdowns. The facility equipment will be primarily monitored and controlled via a control panel located in the treatment building. This panel will be equipped with a PLC system to execute automatic control logic and an operator interface terminal to display equipment status and alarms and input/output diagnostics, to enter operational parameters (operating mode, set points, etc.) to trend data, and to historically log data. The system can be remotely accessed via a secure internet connection. If an alarm occurs that shuts down the system, this alarm will be transmitted to the system operator via email and text message, and requires a response from the plant operator within 4 hours.

The docket holder has prepared an emergency management plan (EMP) for the project in accordance with Commission SPW requirements

Wasted sludge will be hauled off-site by a licensed hauler for disposal at a state approved facility.

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

c. Water withdrawals. Groundwater treated at the new remediation system will be pumped from up to 10 extraction wells at rates between approximately 20 gpm and 50 gpm. This water withdrawal is classified as a Category WA-1 Project “No DRBC Review Required” according to the March 2015 Administrative Agreement between DRBC and NJDEP as the daily average gross withdrawal during any 30 consecutive days does not exceed 100,000 gallons.

d. NJPDES/DGW Authorization / DRBC Docket. NJDEP issued its NJPDES/DGW authorization (Program Interest ID No. G00005662) for the new facility on December 28, 2015, which includes effluent limitations for the project discharge of up to 70 gpm to groundwater.

e. Cost. The overall cost of this project is estimated to be \$8,600,000.

f. Relationship to the Comprehensive Plan. The new groundwater extraction treatment facility and discharge will be included in the Comprehensive Plan upon the approval of this docket. (See DECISION Condition I.c.). Upon the permittee’s submission of an application for renewal of its NJPDES/DGW authorization, the renewal request will be subject to the One Process/One Permit Rule approved by the Commission on December 10, 2015.

B. FINDINGS

The project is being constructed as part of the Pohatcong Valley Groundwater Contamination Superfund Site OU1 remedial action related to groundwater contaminated with PCE at the former Tung-Sol Tubing location. The PCE portion of OU1 covers about 73 acres in Washington Borough and comingles with the TCE portion of OU1, which is a larger area of groundwater contamination located in Washington Borough, Washington Township, Franklin Township and Greenwich Township encompassing about 6,367 acres. The USEPA selected a remedy in 2006 to address both the PCE and TCE groundwater contamination separately. The remedy selected by the USEPA for the PCE portion of OU1 of the Pohatcong Valley Groundwater Contamination Superfund Site includes the installation of groundwater extraction wells, the treatment of extracted groundwater to the meet the New Jersey Groundwater Quality Standards (NJ GWQS) using air stripping and GAC and the discharge of treated groundwater via reinjection back into the deeper carbonate aquifer. A separate groundwater treatment system was constructed and is operating at a different location to address groundwater primarily contaminated with TCE at the OU1 TCE portion of the site.

The proposed discharge from the PCE plant into the deeper carbonate aquifer via the injection well shall meet the requirements of DRBC WQR Section 3.40. As the proposed treatment system: 1) is designed to reduce pollutants in groundwater by pumping, treating, and re-injecting groundwater back into the aquifer, 2) is expected to result in improvement of the aquifer's water quality; and 3) will not degrade water quality further; the discharge is consistent with WQR Section 3.40.

In 1992, the DRBC adopted SPW 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 has been 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. (Upper/Middle SPW)

On July 16, 2008, the DRBC approved amendments to its *Water Quality Regulations (WQR)* that provide increased protection for waters that the Commission classifies as SPW. The portion of the Delaware River and its tributaries within the boundary of the Lower Delaware River Management Plan Area was approved for SPW designation. (Lower SPW)

The project is located in the drainage area to the Lower Delaware SPW. Article 3.10.3A.2.e.1). and 2). of the Commission's *WQR* states that projects subject to review under Section 3.8 of the Compact that are located in the drainage area of SPW must submit for approval a Non-Point Source Pollution Control Plan (NPSPCP) 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 SPW. The service area of the docket holder is located within in the drainage area to the SPW. Since this project does entail additional construction of facilities and there are new or increased non-point source loads associated with this approval, the NPSPCP requirement is applicable at this time. The Warren County Soil Conservation District approved the Soil Erosion Control Plan for the project via letter dated July 23, 2014. Washington Borough has adopted and implemented a stormwater ordinance in accordance with the NJDEP model stormwater ordinance. Therefore, the docket holder has satisfied the NPSPCP requirements of the Commission.

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 NJPDES/DGW authorization 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 *Water Quality Regulations (WQR)*.

C. DECISION

I. Effective on the approval date for Docket No. D-2015-022 CP-1 below:

a. 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 NJDEP in its NPDES/DGW 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 Commission’s *WQR* and Flood Plain Regulations (*FPR*).

d. Except as otherwise authorized by this docket, if the docket holder seeks relief from any limitation based upon a DRBC water quality standard or minimum treatment requirement, the docket holder shall apply for approval from the Executive Director or for a docket revision in accordance with Section 3.8 of the *Compact* and the *Rules of Practice and Procedure*.

e. If at any time the receiving treatment plant proves unable to produce an effluent that is consistent with the requirements of this docket approval, no further connections shall be permitted until the deficiency is remedied.

f. Nothing herein shall be construed to exempt the docket holder from obtaining all necessary permits and/or approvals from other State, Federal or local government agencies having jurisdiction over this project.

g. Sound practices of excavation, backfill and reseedling shall be followed to minimize erosion and deposition of sediment in streams.

h. Within 30 days of completion of construction of the approved project, the docket holder is to submit to the attention of the Project Review Section of DRBC a Construction Completion Statement (“Statement”) signed by the docket holder’s professional engineer for the project. The Statement must either confirm that construction has been completed in a manner

consistent with any and all DRBC-approved plans or explain how the as-built project deviates from such plans.

i. This docket approval shall expire three years from date below unless prior thereto the docket holder has commenced operation of the subject project or has expended substantial funds (in relation to the cost of the project) in reliance upon this docket approval.

j. The docket holder is permitted to treat and discharge wastewaters as set forth in the Area Served Section of this docket, which incorporates by reference Sections B (Type of Discharge) and D (Service Area) of the docket holder's Application to the extent consistent with all other conditions of this DECISION Section.

k. 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.

l. 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).

m. 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.

n. 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.

o. Unless an extension is requested and 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.

p. 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.

q. 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.

r. Prior to the docket holder initiating any substantial alterations or additions to the existing WWTP as defined in Section 3.10.3A2.a.16) of the Commission's *WQR*, an application must be submitted and approved by the Commission. Such an application shall be submitted prior to final design to ensure that the Commission can provide the docket holder with draft effluent limitations for SPW specific parameters as guidance for design as to not require duplication of work or cause a substantial expenditure of public funds without Commission approval. The docket holder is encouraged to contact the Commission staff during the planning stages to identify the potential effluent limitations required to meet the no measurable change parameters under SPW.

BY THE COMMISSION

DATE APPROVED: June 15, 2016

EXPIRATION DATE: June 15, 2026