

DOCKET NO. D-1976-017-3

DELAWARE RIVER BASIN COMMISSION

**Southeastern Pennsylvania
Ground Water Protected Area**

**Glenn Springs Holdings, Inc.
Industrial Wastewater Treatment Plant Discharge and Groundwater Withdrawal
Lower Pottsgrove Township, Montgomery County, Pennsylvania**

PROCEEDINGS

This docket is issued in response to an Application submitted by Glenn Springs Holdings, Inc. to the Delaware River Basin Commission (DRBC or Commission) on April 30, 2013 for renewal of an industrial wastewater treatment plant (IWTP) and its related discharge and the renewal of allocation of groundwater and review of a groundwater water withdrawal project in the Ground Water Protected Area of Southeastern Pennsylvania (Application). The project was approved by the Commission on December 12, 2006 upon issuance of Docket No. D-76-17-2. The project discharge was most recently approved by the Pennsylvania Department of Environmental Protection (PADEP) National Pollutant Discharge Elimination System (NPDES) Permit No. PA0010944 Amendment No. 1 on May 23, 2012, effective on June 1, 2012.

The Application was reviewed for approval under Section 3.8 and for a withdrawal permit under Section 10.3 of the *Delaware River Basin Compact*. The Montgomery County Planning Commission has been notified of pending action on this docket. A public hearing on this project was held by the DRBC on March 11, 2014.

A. DESCRIPTION

1. Purpose. The purpose of this project is to renew the approval to withdraw, treat, and discharge up to 15.5 million gallons per month (mgm) of groundwater from 11 previously approved recovery wells and to approve the withdrawal from one additional existing recovery well and the minimal withdrawals, if required, from up to three new soil vapor extraction wells, into the Schuylkill River, via outfall No. 005. Occidental Chemical Corporation remains the owner of the property, but its affiliate, Glenn Springs Holdings, Inc. is the operator of the groundwater treatment facility. The existing groundwater withdrawal project is for CERCLA remediation purposes and not for use as potable or industrial water supply. No increase in groundwater withdrawal or treatment capacity is proposed.

2. **Location.** The groundwater remediation project is located south of State Route 422 at the former Occidental Chemical Corporation facility in Lower Pottsgrove Township, Montgomery County, Pennsylvania. The groundwater recovery wells are completed in the Brunswick Formation in the Schuylkill River Watershed in the Southeastern Pennsylvania Ground Water Protected Area. The Schuylkill River near the project site is designated by the Pennsylvania Department of Environmental Protection (PADEP) as supporting Warm Water Fishes (WWF).

Treated groundwater will continue to be discharged to the Schuylkill River at River Mile 92.47 – 50.9 (Delaware River – Schuylkill River) via Outfall No. 005 located, in an area that is conditionally designated as “Modified Recreational” in the Comprehensive Plan as follows:

OUTFALL NO.	LATITUDE (N)	LONGITUDE (W)
005	40° 13' 29"	75° 36' 28"

The project also contains three other outfalls (Outfall Nos. 003, 004 and 006), which only discharge stormwater from various parts of the site. Stormwater also mixes with treated groundwater prior to discharge through Outfall No. 5. With the exception of a minimal amount of stormwater that collects on the containment pads surrounding the groundwater treatment system components, stormwater is no longer treated prior to its discharge at the site. Also, Internal Monitoring Points 103 (Firewater Reservoir overflow) and 303 (oil water separator) included in the previous docket approval have been eliminated with the demolition of the firewater reservoirs and oil/water separator.

3. **Area Served.** The existing project withdrawals will be used only for the purpose of groundwater remediation at the at the former Occidental Chemical Corporation manufacturing facility as delineated on various figures included in the application. The groundwater treatment system will continue to only serve the docket holder’s groundwater remediation project.

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 docket holder’s groundwater treatment facility processes up to 0.5 mgd of groundwater containing volatile organic compounds (VOC’s) by a combination of equalization, sand filtration, carbon adsorption and air stripping facilities prior to discharging to the Schuylkill River through a stormwater sewer that served the former industrial site. In 2012 the combined withdrawals from all of the extraction wells averaged 0.226 million gallons per day.

The project wastewater treatment system was designed to produce an effluent quality that complies with docket and NPDES permit requirements. Groundwater extraction and treatment will continue until applicable groundwater quality criteria are attained. Although an additional existing recovery well (RW 2A) and up to three new soil vapor extraction wells intended to expedite the achievement of the groundwater quality criteria may be placed into

operation in 2014, no increase in the total groundwater withdrawal or treatment capacity is proposed.

b. Facilities. The project groundwater extraction treatment facilities consist of two influent well water holding tanks, four sand filters, two liquid-phase carbon adsorption units, two vapor-phase carbon adsorption units, an air-stripping unit and a liquid-phase carbon polishing unit. Treated groundwater will continue to be discharged to the Schuylkill River through existing Outfall No. 005.

The existing project recovery wells have the following characteristics:

WELL NO.	DEPTH	CASED DEPTH/ CASING DIAMETER	PUMP CAPACITY	YEAR DRILLED
RW A	105'	19' / 6"	16	1983/1998
RW B	130'	19' / 6"	25	1983/1998
RW C	160'	19' / 6"	45	1983/1998
RW 4	258'	50' / 10"	90	1945/1998
RW 5	240'	36' / 10"	100	1945/1998
RW 6	440'	200' 8"	120	1945/1998
RW 8	313'	135' / 8"	85	1945/1998
RW 8A	106'	42' / 8"	13	1945/1998
RW 9	285'	156' / 8"	30	1945/1998
RW 9A	144'	43' / 8"	30	1945/1998
RW 10A	433'	225' / 8"	85	1945/1998
RW 2A	130'	96' / 8"	10	1998

The groundwater treatment system and project recovery wells are outside of the 100-year floodplain.

All existing wells are metered. Any new wells with groundwater withdrawals will be metered.

Wells Nos. 1 and 1R, which were included in the previous docket, are used only for water level and water quality monitoring purposes.

The previously active surface water intake and its associated pump house still exist, but are not used. All utility connections to and from the pump house have been disconnected in preparation for its demolition.

c. Other. The former industrial facilities have been demolished and activities at the site are related only to the continuing site remediation efforts. Potable water to the remediation system office trailer is provided by the Pottstown Borough Authority (PBA) and commercially

bottled water. The PBA received approval under Section 3.8 of the Compact by DRBC Docket No. D-64-36 CP on July 22, 1964. DRBC staff are currently reviewing a renewal Application and Docket D-1964-036 CP-2 is expected to be issued to PBA shortly.

Domestic wastewater from the former industrial facility was serviced by PBA, which was most recently approved by DRBC Docket No. D-1989-055 CP-2 on July 14, 2010. PBA has submitted a renewal application which is currently under review by DRBC staff. The site sanitary sewer line is still intact; however, due to the location of the office trailer at some distance from this line and minimal volumes generated, sanitary waste is now handled by a commercial hauler.

Waste sludge is only generated after several years of groundwater treatment and is hauled off-site by a licensed hauler for disposal at a State-approved facility.

d. NPDES Permit / DRBC Docket. NPDES Permit No. PA0010944 A-1 was approved by the PADEP on May 23, 2012, and includes final effluent limitations for the groundwater remediation system discharge of 0.50 mgd to surface waters classified by the PADEP as WWF. The following average monthly effluent limits are among those listed in the NPDES Permit and meet or are more stringent than the effluent requirements of the DRBC.

EFFLUENT TABLE A-1: DRBC Parameters Included in NPDES Permit

Monitoring Point No. 105 (inside the treatment facility)		
PARAMETER	LIMIT	MONITORING
pH (Standard Units)	6 to 9 at all times	As required by NPDES Permit

In 2005, the concentration of total dissolved solids (TDS) in the treated effluent was 382 milligrams per liter (mg/l). Condition C.II.m of this docket requires that the docket holder collect monthly effluent samples for a period of 6 months commencing 60 days after the approval date of the docket for TDS to confirm that the TDS concentration has remained below the Commission's effluent limit of 1,000 mg/l. The docket holder shall submit the results of the TDS analysis to the Commission within 30 days of the completion of the final sampling event. If the TDS concentration is found to remain below the Commission's effluent limit of 1,000 mg/l TDS, no additional TDS sampling is required for the term of this docket.

e. Cost. There are no costs associated with this renewal project.

B. FINDINGS

The project is located within the Southeastern Pennsylvania Ground Water Protected Area delineated by the DRBC pursuant to *Compact* Section 10.2. The project is designed to conform to the requirements of the *Water Code*, *Water Quality Regulations* and *Ground Water Protected Area Regulations (GWPAR)* of the DRBC.

Review and analysis of the application pursuant to Section 6.D. of the *GWPAR* result in the following:

1. The withdrawal is consistent with the Commission's Comprehensive Plan and the policies and purposes of these regulations.
2. Opportunities to satisfy water requirements on a timely basis from existing available supplies and facilities have been explored and found infeasible. *Withdrawals are for the purpose of groundwater remediation. This requirement is not applicable to this project.*
3. The withdrawal, in conjunction with other withdrawals in the applicable ground water basin, should not exceed withdrawal limits of the ground water basin, aquifer or aquifer system. *As described in the FINDINGS section of this docket, the groundwater withdrawals, in conjunction with other withdrawals in the subbasin do not exceed the withdrawal limits of the groundwater basin.*
4. The withdrawal should not significantly impair or reduce the flow of perennial streams in the area. *Groundwater is withdrawn, treated and discharged back into the Schuylkill River at the project site with virtually no consumptive loss.*
5. Existing ground and surface water withdrawals should not be adversely impacted, or will be otherwise assured of adequate supplies in accordance with the requirements of Section 10 of the *GWPAR*. *There are no known or reported water supply wells within the projected area of influence from the project withdrawals.*
6. The withdrawal should not cause substantial, permanent adverse impact to the overlying environment. *Operation of the groundwater extraction, the soil vapor extraction system and treatment system removes VOC's from the groundwater and maintains hydraulic control of the groundwater plume.*
7. The docket holder adopted and will implement conservation and management programs as required by Section 7 of the *GWPAR*. *The project withdrawals have decreased from a daily average of 0.413 mg in 2006 to 0.226 mg in 2012. The EPA requires a minimum pumping rate of 0.144 mgd to maintain hydraulic control of the groundwater plume. In the event of emergency situations, the docket holder could, with the approval of the EPA, reduce the withdrawal rate to this minimal amount. Also, as stated above, all water withdrawn is returned to the Schuylkill River with virtually no depletive loss.*

The docket holder's groundwater remediation project is located in the Schuylkill-Sprogels Run subbasin, where total net annual groundwater withdrawal (535 mgy) is less than the withdrawal limit set in Section 6.I of the *GWPAR* (1,455 mgy). The docket holder's allocation of 15.5 mgm equates to an annual allocation of 182 million gallons and is already accounted for in the total subbasin withdrawals. Therefore, the continued withdrawals from the groundwater remediation project, in conjunction with other withdrawals in the subbasin, are in accordance with the requirements of Section 6.I of the *GWPAR*.

The former industrial wastewater and cooling water discharge approvals were issued by the Commission to Firestone Tire and Rubber (Firestone) via Docket Nos. D-71-157 and D-76-17 on September 26, 1973 and September 30, 1976, respectively. Firestone was also issued DRBC Certificate of Entitlement No. 280 on July 15, 1976 for its Schuylkill River surface water withdrawal. On April 14, 1981, Docket No. D-76-17 was transferred from Firestone to Hooker Chemical and Plastics Corporation (Hooker). The docket was later transferred from Hooker to Occidental Chemical Corporation (Occidental) on February 24, 1984. Docket D-76-17-2 was issued to Glenn Springs Holdings, an affiliate of Occidental on December 12, 2006. By this time, the industrial operations had ceased and this docket approved the withdrawals, treatment and discharges related to the continuing groundwater remediation activities. Because the discharges approved in the previous dockets issued for the project were no longer active, Docket D-76-17-2 terminated all previous docket approvals. Additionally, although the Certificate of Entitlement Issued to Firestone was no longer valid upon the transfer of ownership to Hooker, Docket D-76-17-2 formally terminated Certificate of Entitlement No. 280. This docket (D-1976-017-3) renews the approval of the groundwater withdrawals, treatment and discharges related to the ongoing groundwater remediation activities at the site.

In 1988, the project site was placed on the National Priorities List, a federal register of polluted places, due to the amount of trichloroethylene and related VOC's in the soil and groundwater. OxyChem, under EPA oversight, performed remedial action at the site and completed construction in 2008. Groundwater continues to be pumped, treated and discharged to remove VOC's from the groundwater and maintain hydraulic control of the impacted groundwater. An Explanation of Significant Differences that changed the groundwater performance standard, added two contaminants to the groundwater contaminant of concern list, and describes the site institutional controls was issued in 2013.

The DRBC estimates that the project withdrawals, used for the purpose of groundwater remediation, result in a consumptive use of approximately 0 percent of the total water withdrawal. 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*.

At the project site, the Schuylkill River has an estimated seven-day low flow with a recurrence interval of ten years of 181.6 mgd (281 cfs). The flow was calculated using U.S. Geological Survey, 2012, The StreamStats Program for Pennsylvania, online at <http://water.usgs.gov/osw/streamstats/pennsylvania.html>. The ratio of this low flow to the average design wastewater discharge from the 0.5 mgd plant is 363 to 1.

The nearest surface water intake of record for public water supply is located approximately 5 river miles on the Schuylkill River and is operated by Pennsylvania American Water Company.

The withdrawal project is located in the Southeastern Pennsylvania Ground Water Protected Area where drought emergency plans are required. Commission staff recommend approval of the project without a drought emergency plan. The EPA requires a minimum pumping rate of 0.144 mgd to maintain hydraulic control of the groundwater plume. In the event of emergency situations, the docket holder could, with the approval of the EPA, reduce the

withdrawal rate to this minimal amount. Also, as stated above, all water withdrawn is returned to the Schuylkill River with virtually no depletive loss.

This project consists of an existing withdrawal of groundwater from Recovery Wells A, B, C, 4, 5, 6, 8, 8A, 9, 9A and 10A and a proposed new withdrawal from existing recovery well RW 2A, and up to three new soil vapor extraction wells without an increase in the total system allocation. The docket holder has requested allocations for the wells based on existing water use or pump capacity. These rates are provided in Decision Condition II.j. in the Decision Section of this docket. As the existing water withdrawals have already been realized by the local hydrologic system, there should be no significant impacts from continued withdrawals from the existing system wells.

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* 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-1976-017-3 below, Docket No. D-76-17-2 is terminated and replaced by Docket No. D-1976-017-3.

II. The project and appurtenant facilities as described in the Section A “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 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 docket holder shall continue to report to the PADEP all surface and groundwater withdrawals described in this docket in accordance with the Pennsylvania Regulations (Title 25 - Environmental Protection, [25 PA. CODE CH. 110], Water Resources Planning).

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

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

e. 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 directly to the DRBC Project Review Section. 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.

f. 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.

g. 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.

h. The discharge of wastewater shall not increase the ambient temperatures of the receiving waters by more than 5°F, nor shall such discharge result in stream temperatures exceeding 87°F. (Non-tidal, Non-trout Waters).

i. 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.

j. During any month, the combined withdrawal from all well sources shall not exceed 15.5 million gallons. No well shall be pumped above the maximum instantaneous rate and monthly allocation as indicated below:

WELL NO.	MAXIMUM INSTANTANEOUS RATE	MONTHLY ALLOCATION
RW A	16 gpm	0.714 mgm
RW B	25 gpm	1.116 mgm
RW C	45 gpm	2.009 mgm
RW 4	90 gpm	4.018 mgm
RW 5	100 gpm	2.232 mgm
RW 6	120 gpm	2.232 mgm
RW 8	85 gpm	3.794 mgm
RW 8A	13 gpm	0.580 mgm
RW 9	30 gpm	1.339 mgm
RW 9A	30 gpm	1.339 mgm
RW 10A	85 gpm	2.232 mgm
RW 2A	10 gpm	0.446 mgm

k. The wells shall be equipped with readily accessible capped ports and minimum ½ inch inner diameter (ID) drop pipes so that water levels may be measured under all conditions. Existing wells are to be similarly equipped, where possible, with readily accessible ports and ½ inch ID drop pipes as repairs or modifications are made at each existing well.

l. The project withdrawals shall be metered with an automatic continuous recording device that measures 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. 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.

m. The docket holder shall collect monthly effluent samples for a period of 6 months commencing 60 days after the approval date of the docket for TDS analysis to confirm that the TDS concentration remains below the Commission's effluent limit of 1,000 mg/l. The docket holder shall submit the results of the TDS analysis to the Commission within 30 days of the completion of the final sampling event. If the TDS concentration is found to remain below the Commission's effluent limit of 1,000 mg/l TDS, no additional TDS sampling is required for the term of this docket.

n. Sound practices of excavation, backfill and reseedling shall be followed to minimize erosion and deposition of sediment in streams from any new facilities or repair related construction.

o. 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.

p. 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.

q. 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.

r. If the monitoring required herein, or any other data or information demonstrates that the operation of this project significantly affects or interferes with any domestic or other existing uses of ground or surface water, or if the docket holder receives a complaint by any existing ground or surface water users within the zone of influence of the withdrawal, the docket holder shall immediately notify the Executive Director of any complaints by any ground or surface users within the zone of influence of the withdrawal, and unless excused by the Executive Director, shall investigate such complaints. The docket holder should direct phone call notifications of potential well or surface water interference or complaints of interference to the DRBC Project Review Section at 609-883-9500, extension 216. Oral notification must always be followed up in writing directed to the Executive Director. In addition, the docket holder shall provide written notification to all potentially impacted users of wells or surface water supplies of the docket holder's responsibilities under this condition. Any ground or surface water user which is substantially adversely affected, rendered dry or otherwise diminished as a result of the docket holder's project withdrawal, shall be repaired, replaced or otherwise mitigated at the expense of the docket holder. A report of investigation and/or mitigation plan prepared by a hydrologist shall be submitted to the Executive Director as soon as practicable. The Executive Director shall make the final determination regarding the validity of such complaints, the scope or sufficiency of such investigations, and the extent of appropriate mitigation measures, if required.

s. 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.

t. For the duration of any drought emergency declared by either Pennsylvania 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 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.

u. 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: March 12, 2014

EXPIRATION DATE: August 31, 2019