DOCKET NO. D-1987-032-4

DELAWARE RIVER BASIN COMMISSION

Stanley Black and Decker
Groundwater Treatment Plant Discharge and Groundwater Withdrawal
City of Reading, Berks County, Pennsylvania

PROCEEDINGS

This docket is issued in response to an Application submitted by Loureiro Engineering Associates, Inc. on behalf of Stanley Black and Decker (SB&D) to the Delaware River Basin Commission (DRBC or Commission) on March 5, 2014 (Application) for renewal of an groundwater treatment plant (GWTP) and its related discharge and the renewal of an allocation of groundwater and review of a groundwater water withdrawal project. This docket was previously approved by the Commission on December 3, 2003. The project discharge was most recently approved by the Pennsylvania Department of Environmental Protection (PADEP) National Pollutant Discharge Elimination System (NPDES) Permit No. PA0011371 Amendment No. 1 on December 12, 2011, effective on January 1, 2012.

The Application was reviewed for approval under Section 3.8 *Delaware River Basin Compact*. The Berks County Planning Commission has been notified of pending action on this docket. A public hearing on this project was held by the DRBC on September 9, 2014.

A. DESCRIPTION

1. Purpose. The purpose of this project is to renew the approval to decrease the withdrawal, treatment, and discharge of groundwater from 15.634 mgm to 14.663 mgm, from previously approved recovery well PW-5 and to approve the withdrawal from new recovery well PW-6. Wells Nos. PW-1 through PW-4 will be replaced with new Well No. PW-6. SB&D acquired Baldwin Hardware Corporation in 2013 and will assume responsibility for the operation and maintenance of the groundwater remediation system. The existing groundwater withdrawal project is for Resource Conservation Recovery Act (RCRA) (Permit No. RCRA-111-004-CA) remediation purposes and not for use as potable or industrial water supply.

2. Location. The groundwater remediation project is located on E. Wyomissing Boulevard at the former Baldwin Hardware Corporation facility in the City of Reading, Berks County, Pennsylvania. The groundwater recovery wells are completed in the Buffalo Springs Formation

in the Schuylkill River Watershed. The Schuylkill River near the project site is designated by the PADEP as supporting Warm Water Fishes (WWF) and Migratory Fishes (MF).

Treated groundwater will continue to be discharged to the Schuylkill River at River Mile 92.47 – 75.0 (Delaware River – Schuylkill River) via Outfall No. 001 located, in an area that is conditionally designated as "Modified Recreational" in the Comprehensive Plan as follows:

OUTFALL NO.	LATITUDE (N)	LONGITUDE (W)
001	40° 19' 36"	75° 56' 02"

3. Area Served. The existing project withdrawals will be used only to accomplish the groundwater remediation at the at the former Baldwin Hardware 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 0.473 mgd of groundwater containing chlorinated volatile organic compounds (VOCs) by air stripping facilities prior to discharging to the Schuylkill River through a stormwater sewer that served the former industrial site.

Modifications to the hydraulic containment system are necessary to ensure that the treatment facility continues to operate in accordance with the United States Environmental Protection Agency (USEPA) Consent Order. Modifications to the hydraulic containment system will include relocation of plumbing and electrical conduits to underground utility trenches, installation of fully automated controls and remote telemetry, replacement of the existing air stripping tower with a new low profile unit and consolidation of all controls and treatment system components within a new winterized enclosure in the southeast portion of the property.

As part of the proposed modifications, existing recovery wells PS-1, PS-2, PS-3 and PS-4 will be eliminated due to declining mass removal rates of chlorinated solvents in the groundwater. A new recovery well, PW-6 will be placed into operation and will replace the eliminated wells. Wells Nos. PW-5 and PW-6 will be pumped simultaneously at a combine rate of approximately 300 gallons per minute (gpm) in order to induce a capture zone for the groundwater purge system. Withdrawn groundwater is immediately directed to an air stripper unit for VOC removal. Treated groundwater will continue to be discharged to the Schuylkill River through existing Outfall No. 001.

The average and maximum demand is 0.432 million gallons per day (mgd) and 0.473 mgd, respectively. The docket holder does not expect an increase in the average or maximum daily demand over the next 10 years.

b. Facilities. The existing project recovery wells have the following characteristics:

WELL NO.	DEPTH	CASED DEPTH/ CASING DIAMETER	SCREENED INTERVAL	PUMP CAPACITY	YEAR DRILLED
PW-5	197	101'/ 10"	101' to 146'	250	1985
PW-6	125	98'/ 6"	95' to 125'	100	2013

All existing wells are metered.

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

Groundwater is treated by a packed bed air stripping column for VOC removal, prior to being discharged.

The docket holder's facility has an interconnection with the Reading Area Water Authority (RAWA) water distribution system for potable and sanitary water supply if the facility will need either in the future.

c. Other. The former industrial facilities have been decommissioned and activities at the site are related only to the continuing site remediation efforts. If operations begin again in the future potable and sanitary water to the facility will be provided by RAWA. RAWA received approval under Section 3.8 of the Compact by DRBC Docket No. D-2000-059 CP-2 on May 11, 2011.

Domestic wastewater from the former industrial facility was serviced by RAWA, which was most recently approved by DRBC Docket No. D-2010-009 CP-1 on September 15, 2010. The PADEP issued its most recent NPDES Permit No. PA0051781 on April 14, 2010 for this discharge.

d. NPDES Permit / DRBC Docket. NPDES Permit No. PA0011371 A-1 was approved by the PADEP on December 12, 2011, and includes final effluent limitations for the groundwater remediation system discharge of 0.473 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

Outfall No. 101 (Discharge to the Schuylkill River)		
PARAMETER	**LIMIT**	**MONITORING**
Total Dissolved Solids	Monitor and Report*	One Per Quarter*

* See Condition II.t. In the Decision Section.

B. FINDINGS

The former industrial wastewater discharge approval was issued by the Commission to Baldwin Hardware Manufacturing Corporation (Baldwin) via Docket No. D-1981-055 on November 20, 1981. Groundwater withdrawal from five wells to supply water to the manufacturing facility and groundwater remediation program as well as the discharge was approved via Docket No. D-1987-032 on August 5, 1987. The withdrawal from the five wells and the respective discharge was continued in Dockets Nos. D-1987-032 RENEWAL and D-1987-032 RENEWAL-2 which were approved on December 9, 1992 and December 3, 2003, respectively. Issuance of this docket will continue the groundwater withdrawal for the remediation program and its related discharge. Well Nos. PS-1, PS-2, PS-3 and PW-4 are removed from the docket and new Well No. PW-6 is added.

The former owner Baldwin entered into an Administrative Order on Consent (Consent Order) with the USEPA in 1987 to remediate chlorinated VOCs in the groundwater pursuant to RCRA Section 3008(h). Per the Consent Order, it is required for the owner to establish hydraulic control of hazardous constituents in the groundwater through continuous pumping of recovery wells at a minimum combined rate of 300 gpm or 0.432 mgd. A hydraulic containment system was activated in 1988 and must continue to operate until trichloroethylene (TCE) in the groundwater is reduced in concentration to less than 5 micrograms per liter. Groundwater from the hydraulic containment system is treated onsite using an air-stripping tower and discharged to the municipal storm drain approved under NPDES Permit No. PA0011371.

The docket holder has made modifications to the hydraulic containment system which include relocation of plumbing and electric conduits to underground utility trenches, installation of fully automated controls and remote telemetry, replacement of the existing air-stripping tower with a new low profile unit and consolidation of all controls and treatment system components within a new winterized enclosure in the southeast portion of the property.

24-Hour Pumping Test of Well No. PW-6

On August 5 and 6, 2013, a 24-hour constant rate pumping test was conducted to assess withdrawal capabilities of existing Well No. 9. The pumping test was also conducted to assess the underlying aquifer characteristics, and potential impacts to the local hydrologic system. The average pumping rate of the test on Well No. PW-6 was 110 gallons per minute (gpm). The initial pumping rate was set at 100 gpm. However, due to mineral fouling of the in-line flow meter, the pumping rate appeared to decline approximately five hours into the test. As a result of the flow-meter malfunction, the pumping rate was inadvertently increased to approximately 110 gpm and remained at that rate for the duration of the test. No measurable decline in water level was noted in Well No. PW-6 following the change in pumping rate. Discharge from the pumping well was directed away from the pumping, outside of the estimated area where recharge effects might be expected. Well No. PW-6 was pumped for a total period of 1,440 minutes.

Groundwater response monitoring was conducted in the pumping well (Well No. PW-6) and twenty-nine (29) observation wells and piezometers during the pumping test. All wells were

monitored using continuous dataloggers. Observation wells ranged in distance from the pumping well from 20 feet to 1,425 feet away.

Prior to the start of the pumping test, Well No. PW-6 had a static water level of 58.7 feet below top of casing. Maximum drawdown observed at the pumping well after the first 24 hours was 41.1 feet (water level was 97.2 feet below top of casing). Drawdown ranged from approximately 0.5 to 2.5 feet in shallow and intermediate-depth bedrock observation wells. Approximately 1 foot of draw-down was recorded 585 feet southwest of Well No. PW-6 in bedrock piezometer PZ-50I. Approximately 0.5 feet of drawdown was recorded in piezometer PZ-50D. Total drawdown of approximately 1.5 and 0.25 feet was recorded 480 feet northeast of Well No.PW-6 at piezometers PZ-20S and PZ-20D, respectively. No response was observed in piezometer PZ-20I. No measurable draw-down from the pumping of Well No. PW-6 was recorded in shallow bedrock wells located within the central and northern portions of the site, including observation wells MW-01, MW-03, MW-04, MW-17, MW-18, MW-19 and OW-2. The water level in observation well MW-03 rose throughout the 24-hour constant-rate test, suggesting that groundwater elevations were continuing to rebound in portions of the site following deactivation of the hydraulic containment system. Rising water levels were noted in up gradient bedrock observation well MW-01 and piezometer PZ-70I located in the northwestern portion of the Site.

The recovery phase of the pumping test began on August 6, 2013, immediately following the conclusion of the pumping test. The hydrograph indicated that the pumping well recovered 95% of drawdown, within 30 seconds of the conclusion of the test.

The observed drawdown in Well No. PW-6 was used to calculate aquifer parameters to characterize the underlying aquifer. The estimated average aquifer transmissivity (based on Time-Drawdown and Time-Recovery) for the Well No. PW-6 test data was 9,200 gpd/ft for the test rate of 110 gpm. A storage coefficient of 2.3×10^{-4} was calculated from the drawdown data observed at Well No. PW-5.

The Commission has reviewed the hydrogeological report for the pumping test of Well No. PW-6. No adverse impacts are expected to occur to the local hydrologic system due to pumping from Well No. PW-6.

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 96 mgd (160 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 (96 mgd / 0.473 mgd) from the 0.473 mgd plant is 203 to 1.

The nearest surface water intake of record for public water supply is located approximately 18 river miles downstream on the Schuylkill River and is operated by Pottstown Borough Authority.

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-1987-032-4 below, Docket No. D-1987-032 RENEWAL 2 is terminated and replaced by Docket No. D-1987-032-4.

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 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 electronically to the DRBC Project Review Section via email **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/application/index.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.

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. 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.

i. During any month, the combined withdrawal from all well sources shall not exceed 14.663 million gallons. No well shall be pumped above the maximum instantaneous rate and monthly allocation as indicated below:

WELL NO.	MAXIMUM INSTANTANEOUS RATE (GPM)	MONTHY ALLOCATION (MILLION GALLONS)
PW-5	300	10.947
PW-6	100	3.716

j. 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.

k. 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.

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

m. 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.

n. 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.

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 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.

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 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.

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.

t. 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.

u. The docket holder is prohibited from treating/pre-treating any hydraulic fracturing wastewater from sources in or out of the Basin at this time. Should the docket holder wish to treat/pre-treat hydraulic fracturing wastewater in the future, the docket holder will need to first apply to the Commission to renew this docket and be issued a revised docket allowing such treatment and an expanded service area. Failure to obtain this approval prior to treatment/pre-treatment will result in action by the Commission.

BY THE COMMISSION

APPROVAL DATE: **September 10, 2014**

EXPIRATION DATE: **September 10, 2024**