

FORMER DEFENSE SUPPLY CENTER PHILADELPHIA

SITE CLEANUP PROGRESS UPDATE



Environmental cleanup of soil and groundwater continues at the former Defense Supply Center Philadelphia, (DSCP) located at 2800 South 20th Street, Philadelphia, PA. Owned and operated by the United States Department of Defense from 1918 to 1999, the DSCP managed procurement and distribution of food, clothing and medical supplies for the armed forces. Production of finished textile products continued at DSCP from the 1940s to 1994. In 1993, the Base Realignment and Closure (BRAC) Commission recommended closure of the DSCP. In 1999, all operations at the facility ceased.

Earlier environmental investigations in 1987 detected light non-aqueous phase liquid (LNAPL) or petroleum contamination in groundwater at the site. Due to known groundwater impacts and resulting remediation efforts; air rights at the site, defined as 10 feet below ground surface and above, were transferred to the Philadelphia Authority for Industrial Development (PAID) in 2001. While the United States Army retained subsurface property rights, PAID transferred the air rights for redevelopment opportunities.

The former DSCP area is now a mixed industrial and residential area, commonly referred to as Quartermaster Plaza. A large refinery, closed in 2019, is located to the west. To the east, are residential areas. To the north, are industrial and commercial facilities. The Philadelphia Housing Authority (PHA) previously owned the former military housing area called Passyunk Homes to the south. This property was sold for redevelopment, though an office and storage facility are still operated by PHA.

CONTAMINATION AT THE FORMER DSCP

A LNAPL plume is in the shallow aquifer below the site. Historically, the plume extended underneath the Schuylkill Expressway and was present in areas beneath the former Passyunk Homes area. Where present, the LNAPL layer resides at the water table, which is located at a depth ranging from 22 feet below ground surface in the center of the former DSCP to 12 feet below ground surface in the southern portion of the former Passyunk Homes area. LNAPL thickness ranges from 6"-1 foot and historically covered 41 acres at its maximum extent. The LNAPL plume today is much smaller historically due to remediation efforts. The Plume remains in the shallow aquifer underneath the Quartermaster Plaza area.

REMEDIATION TIMELINE SUMMARY

Mobile skimmer pumps were used to remove LNAPL floating on the groundwater beginning in 1996. In 1999, permanent remediation systems were installed at the DSCP and the former Passyunk Homes.

In 2005, a vacuum-enhanced skimming (VES) system was installed to increase the LNAPL recovery rates. Petroleum vapors were collected by the VES system and destroyed via thermal oxidizers located at the treatment system building. Operations are regulated by a current air emission permit with the City of Philadelphia.

The original skimming system, which began operations in 1996, incorporated 18 recovery wells. The VES configuration enables the recovery of LNAPL from up to 46 recovery wells. Today, many recovery wells no longer contain recoverable LNAPL since the plume has drastically shrunk over time.

In 2011, an optimization study of the remediation strategy was conducted. In 2012, soil vapor extraction (SVE) was added to the VES system, and recovery improved significantly. The VES system was later expanded in 2014, and additional recovery wells were installed to capture LNAPL from less easily accessible zones of the shallow aquifer.

In 2019, a six-month biovent and biosparge (BV/BS) pilot study was conducted. The BV/BS injects oxygen into the subsurface to accelerate the process of LNAPL biodegradation. The oxygen stimulates microorganisms in the subsurface soil to naturally break down LNAPL. Several positive changes observed during the pilot study continue today. The BV-BS system continues to operate and is evaluated regularly.

The technical team continues to optimize remediation efforts today.

LNAPL RECOVERY TO DATE

As of the end of 2023, more than 1 million gallons of LNAPL have been recovered since remediation began. In addition, the remaining LNAPL plume is being successfully degraded by the BS/BV system and the VES system. Subsurface bioremediation is estimated to have removed another 510,000 gallons of LNAPL from 2013 through the end of 2023.

COMMUNITY INVOLVEMENT

Upon closure of the former DSCP, a Community Involvement Plan was developed, and community outreach evolved over the years as remediation progressed. A Restoration Advisory Board (RAB) was created to provide communities and individuals a framework for participating in the environmental remediation process. RAB public meetings were held regularly from 1996 through 2011, when RAB members determined meetings were no longer needed.

A Public Involvement Plan (PIP) was developed in 2004 as part of the remediation efforts. Under the Pennsylvania Land Recycling and Environmental Standards Act or Act 2 Program, community outreach continued with various communications and fact sheets. At present, community involvement consists of providing interested stakeholders and property owners impacted by the remediation efforts quarterly progress reports.

REMEDIAL INVESTIGATION REPORT & CLEANUP PLAN

In 2017, the Defense Logistics Agency (DLA) issued a public notice and submitted to the Pennsylvania Department of Environmental Protection (PADEP) an updated Notice of Intent to Remediate (NIR) in accordance with the Act 2 Program. The NIR specified the combination of site-specific standards and pathway elimination for impacted media (soils, groundwater, and vapor intrusion) to achieve the release of liability or site closure under Act 2.

In response to the NIR, the City of Philadelphia Public Health Department requested that DLA submit a PIP update and conduct a public meeting to allow for public involvement in the RIR/CP review. The RIR/CP is available for public review

and comment via the website below. Public comments will be incorporated into a revised RIR/CP for approval by PADEP and the United States Environmental Protection Agency (USEPA).



The RIR/CP summarizes data collection at the former DSCP since 1996, illustrates the Conceptual Site Model (CSM) for all media of concern, and describes the mitigation strategy. In addition, the RIR/CP presents the path forward to achieve the release of liability under Act 2 by meeting remediation standards defined in the 2017 NIR.

ADDITIONAL INFORMATION

An electronic copy of the draft RIR/CP and other documents are available for download or review at:

https://www.dla.mil/HQ/InstallationManagement /DoingBusinessWithInstallationManagement/Enviro nmental Documents/

The RIR/CP is also available for review in-person at the Library of Philadelphia: Thomas F. Donatucci, Sr. Library at 1935 Shunk Street.

Two virtual public meetings will be held to present the RIR/CP to the public. Meeting notices will be posted in publicly circulated newspapers and on the website above. Please refer to these specific notices for additional information on the public meetings.

Questions or comments concerning the former DSCP RIR/CP should be sent via email to the Defense Logistics Agency at DLAEnvPC@dla.mil. DLA will not accept comments via telephone, U.S. mail, or social media platforms at this time.

Additional information regarding the Act 2 Program and other PADEP requirements can be found at: https://www.dep.pa.gov/Business/Land/LandRecy cling /Pages/default.aspx