

CASE STUDY - CHLORINATED SOLVENT INVESTIGATION

Client - Dry Cleaner, Delaware

Workscope: Remedial Investigation of a Dry Cleaning Facility

Project Team:

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Project Value:

\$550,000

Goal: Successfully characterize conditions via a Remedial Investigation (RI) and Feasibility Study (FS) at the subject property. Soil, groundwater, and soil vapor were investigated to delineate impacts from tetrachloroethene (PCE). Further delineation is underway. Impacts include potable well contamination in a nearby residential neighborhood. This RI/FS was designed to comply with Delaware's Hazardous Substance Cleanup Act (HSCA) Guidance Manual (October 1994) and DNREC SIRS Screening Level Table (January 2013), developed by DNREC for the Delaware HSCA under 7 Del. C., Chapter 91.

Regulation:

DNREC, Hazardous Substance Cleanup Act Site

Problem:

Identified elevated concentrations of PCE in site soils and groundwater spreading to adjacent properties.



Setting:

The site is approximately 0.19 acres in size. It is situated between north and southbound lanes of a major urban highway and is surrounded by commercial properties.

Solution:

The investigation was conducted in accordance with the DNREC-approved Sampling and Analysis Plan (SAP) and a Site Specific Health and Safety Plan (HASP). Soil borings were completed on multiple properties at varying depths for soil and groundwater sampling. A Membrane Interface Probe (MIP) was utilized to create a log of several borings using multiple sensors to detect electrical conductivity and contamination in the subsurface media. The Hydraulic Profiling Tool (HPT) was used to measure the pressure needed to inject water into the subsurface soil, and hydrostatic pressure. These measurements are capable of showing soil permeability, potential contaminant flow paths, and groundwater producing zones. A dual tube sampler was utilized to log soil cores for lithologic characterization, field screening for the presence of volatile organic compounds (VOCs) using a photo-ionization detector (PID), and sample collection. Permanent monitoring wells will be installed to create a monitoring network for the contaminant source and affected properties. The RI Report will identify the degree and extent of contaminant impact to environmental media. The FS will identify and evaluate remedial alternatives to address the impacts.



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