Environmental Assessment and Remediation

Former Pharmaceutical Manufacturing Facility, Monroe, North Carolina

PROJECT DESCRIPTION

Soil contaminated by tetrachloroethene (PCE) was discovered during the removal of a diesel spill on land once owned by a pharmaceutical manufacturing company. The owner at the time excavated the soil and requested the previous owners (our Client) assume responsibility for the site. Groundwater, surface water, and soil contamination were discovered during the resultant investigations and environmental mitigation activity at the site. The contaminants of concern are Volatile Organic Compounds (VOCs), primarily PCE and its breakdown products.

ROGERS & CALLCOTT SERVICES

Conduct RCRA Emergency Removal: Approximately 1,500 tons of soil was removed under RCRA Hazardous Waste Cleanup provisions. It was characterized and disposed in accordance with North Carolina Department of Environment and Natural Resources (now NCDEQ) regulations. In addition, standing water in the open excavation trench was addressed through an interim solution developed to mitigate the potential migration of the water.

Perform CERCLA Remedial Investigation: A complete CERCLA investigation was conducted. The investigation included six groundwater monitoring wells, three soil borings, hydraulic and chemical testing, and a review of agency files pertaining to a Phase I RI. During the course of the investigation, several constituents were found that did not originate at the site or were not associated with PCE. These other sources, identified through a thorough historical and physical search, have been excluded from the investigation, thereby limiting Client exposure.

Design and Implement Groundwater Remediation System: The presence of fractured bedrock at the site and the lack of options for discharge of treated water presented a remedial challenge for effectively treating and discharging groundwater. To achieve the goal of undetectable contaminants in treated groundwater samples, Rogers & Callcott designed an innovative closed-loop pump and treat system with an infiltration gallery. Subsequently, treated groundwater was diverted to the public sewer per an agreement with the local POTW. Highlights of the system include the following.

- Originally designed as an interim solution, the system is functioning as the full remedy
- Full automation with built-in safeguards against malfunctions
- Aquifer pumping has resulted in significant contaminant removal

Ongoing Monitoring: Rogers & Callcott continues to maintain the system, performing all ongoing monitoring, analysis, reporting, and permitting. In-house laboratory services offered by Rogers & Callcott have reduced the cost of shipping, analysis, and sample tracking typically associated with these types of projects.

The existing system has affected 90% contaminant mass reduction from groundwater. Rogers & Callcott is currently evaluating innovative in-situ treatment technologies that would bring the site to closure in a cost-effective and timely manner.