

Remedial Investigation/Feasibility Study –Remedial Design/Remedial Action

Pharmaceutical Manufacturing Facility, Monroe, NC

Site Description

Soil contaminated by tetrachloroethene (PCE) was discovered during the removal of a diesel spill on land owned by this pharmaceutical manufacturing company. The owner excavated the soil and requested that the previous owners (Client) assume responsibility for the site. Ensuing investigations and environmental mitigation activity at the site uncovered groundwater, surface water, and soil contaminated with Volatile Organic Compounds (VOCs).



Rogers & Callcott Services and Results

Conduct RCRA Emergency Removal - 1500 tons of soil was removed quickly, and under RCRA Hazardous Waste Cleanup provisions. The soil was brought to the Client's attention several weeks after it had been excavated, therefore a brief extension was negotiated with the North Carolina Department of Environment and Natural Resources (NCDENR) in order to characterize and adequately dispose of the soil. 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 review of agency files pertaining to Phase I RI. During the course of the investigation, several other 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 non-detect readings in groundwater samples collected after implementation, Rogers & Callcott designed an innovative closed-loop pump and treat system with an infiltration gallery. Currently, treated water is discharged to the public sewer as 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

Perform On-Going Monitoring - Rogers & Callcott continues to maintain the system, performing all on-going 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.