SANBORN HEAD

Use of High-Resolution Site Characterization at 500-acre Mixed-Use Complex Demonstrates Additional Source Remediation Is Not Needed

NEW YORK STATE

As part of our 20-year history at this 500-acre industrial and commercial facility, Sanborn Head conducted a Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) at a former tetrachloroethene (PCE) recycling plant. The purpose of the RFI was to assess potential sources of PCE in the subsurface, and to conduct a feasibility evaluation of remedial alternatives.

Key Components:

- High-Resolution Site Characterization
- Chlorinated Solvents
- Continuous Multichannel Tubing (CMT®) Multi-Level Groundwater and Soil Gas Monitoring Points
- 3-D Hydrogeologic Modeling

Sanborn Head used high-resolution site characterization methods (HRSC) for this project, including real-time sample analysis and an adaptive investigation approach (including the use of CMT® multi-level groundwater and soil gas monitoring points) to assess VOC concentrations in soil, bedrock, groundwater, and soil vapor at interior and exterior locations. State-of-the-art 3-D hydrogeologic modeling software was used to assess the complex geologic conditions, evaluate hydraulic gradients, and visualize remaining PCE plumes in soil, bedrock, groundwater, and soil vapor. The combination of HRSC with powerful data visualization software expedited both the investigation and analysis.

The results of the investigation showed that while PCE concentrations were elevated in the source areas, the contaminants were not particularly mobile. The contaminant mass discharge to groundwater was negligible compared to the total mass discharge being captured by the existing site-wide groundwater extraction and treatment system. Therefore, the data demonstrated that new remediation efforts at the former recycling plant would not appreciably improve upon the site's existing mass removal nor result in further overall risk reduction.

Sanborn Head recommended to the regulatory agency the continuation of the existing site remedial actions, and current engineering and institutional controls, which if approved, will save the client millions of dollars in additional remediation costs.

Related People

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Site Characterization & Remediation

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