ENVIRONMENTAL ALLIANCE, INC.
Engineering • Remediation • Consulting

CASE STUDY
EPA REGION III
CERCLA SITE

Workscope:
Site Investigation, Feasibility Study, Treatability Study, Remedial Design, remediation program construction and operation.

Goal:
Define the extent and magnitude of chlorinated solvent impact; evaluate contaminant fate and transport and associated risks; evaluate most cost-effective, practical remediation solution.

Site Concerns:
Low TCE and 1,1,1-TCA concentrations in 40+ year old plume in complex, dipping fractured bedrock setting complicated source area identification and delineation.

Project Description:
Alliance was retained to evaluate the Record of Decision (ROD) for this Superfund Site and pursue efforts with EPA to change the ROD. Alliance reviewed all historical site data (20+ years of data) and presented an alternative evaluation of the site conceptual model and potential remedy. EPA agreed to reevaluate the site through a pre-design investigation.

Alliance surveyed a nearby quarry to identify bedrock structural patterns (fracture strikes and dips), excavated three test pits onsite to identify site-specific bedrock structural patterns and collected soil/groundwater samples near a former on-site waste solvent UST. Based on the quarry survey and test pit study, Alliance prepared a Work Plan (including QAPP, HASP, and SAP) for approval by EPA to delineate the horizontal and vertical extent of solvent impact, to refine bedrock structure for fate and transport modeling, and to evaluate source-area remediation alternatives. The Work Plan consisted of the installation of nine monitoring wells to approximately 300 feet bgs using rock-coring technology, downhole geophysical testing, packer testing, well construction, groundwater sampling and analysis, and bench and field treatability studies.

Project Completion:
Alliance has maintained long term (10 plus years) involvement with this Site, completing a Pre-Design Investigation, negotiating with EPA to amend the remedy selected in the first ROD, evaluating remedial alternatives, performing a MNA pilot study and completing potential source area investigations. Currently, at EPA's request, Alliance has begun a Pre-Remedial Design Investigation in order to support the implementation of the remediation strategy selected in the Amended Record of Decision.

Client
BAE Systems - Lansdale, Pennsylvania (North Penn Area 5 Superfund Site)

Project Team
Paul Miller, P.E., Chris Thoeny, P.G., Thomas Murphy

Regulation
Federal Superfund (NPL) project

Project Value
$350,000 to complete Pre-Design Investigation