



CASE STUDY

SVE/AS System Installation

DESCRIPTION

Installing a 36-well Soil Vapor Extraction (SVE) remediation 12-well Air Sparge (AS) System to optimize the clean-up of our client's high-profile project. This site required more than a standard remediation system installation – incorporating additional trenching, building rehabilitation, tank and pipe installations, crash barriers, parking lot resurfacing, and the excavation of VOC contaminated soils into the original scope.

MAIN TASKS

- SVE/AS systems installation.
- Significant lengths of trenching and saw-cutting – through 12" thick, reinforced concrete.
- Installation of 5,000ft of welded HDPE and 10,000ft of 2" to 12" diameter PVC conveyance lines.
- Rehabilitation of a 60' x 60' x 40' building to house the equipment including the installation of steel piping (carbon, stainless, and galvanized), all mechanical elements, and a PID room
- Equipment installation, including (2) 10,000lb carbon tanks, knockout pots, compressors, and receivers.
- Generator refurbishment and relocation.
- Mechanical and electrical work, including 2000' fiber optic runs and PLC system installation.
- 30,000 square feet of asphalt paving and additional concrete forming / pouring.
- Excavation and disposal of 1,000+ cu yds of contaminated soil.

CHALLENGES

Cutting Through Reinforced Concrete – Initially, one of the biggest challenges was saw-cutting and the subsequent removal of a large quantity of 18" thick, heavily reinforced concrete. Special attention was

given to safety because of heavy rebar. Disposal of the concrete required extra effort to separate this rebar adequately from concrete.

Undocumented Utility Lines – While trenching and saw-cutting, E&E discovered multiple undocumented underground lines and utilities. E&E's team was subsequently asked to perform exploratory excavations in various locations – resulting in the discovery and removal/capping of 30 lines. E&E's highly skilled equipment operators and spotters found and exposed all 30 lines without a single break!

Unexpected VOCs – During excavation, E&E Excavation and Spotter crews detected discolored soils and odors. This discovery ended up requiring further excavation, isolation and removal of over 1,000 tons of highly contaminated VOC soils. E&E managed the safe disposal of the soils and the subsequent import, backfilling and compaction of certified clean fill.

Traffic Controls – This project was located in a high on-site traffic area, which required strict traffic control and sitewide notifications to ensure the safety of all staff and the surrounding community.

INTERESTING POINTS

The success of this high-profile installation – and our team's ability to safely and efficiently implement solutions to a plethora of unexpected circumstances – resulted in E&E being awarded the ongoing operations & maintenance contract for this system. This project also initiated the subsequent award of multiple high visibility and high-value construction and remediation projects for the corporate client.



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