PROJECT SNAPSHOT

ERH TCH SEE HT LT IPTD®

Remediation of Former Dry Cleaners and Beneath Adjacent Store

Location: Jacksonville, NC

Client: U.S. EPA

Contamination: CVOCs

Volume: 11,688 cy

Goal: Reduce PCE to below 0.0063 mg/kg Number of Heaters: 109 TCH and 11 SEE Wells

Duration: 6 months of operation

Mass Removed: 2,437 lbs.

WHAT MAKES THIS PROJECT UNIQUE?

The target treatment zone (TTZ) encompassed an area of approximately 8,692 ft², including 2,200 ft² beneath the adjacent occupied retail store, and extending from ground surface to variable depths from 20 to 66 ft below ground surface (bgs). The complex geology and high-permeability zones required careful design, precise control, and adaptive strategies to protect the building while achieving stringent cleanup goals.

IMPORTANT PROJECT DETAILS

- Approach: Steam enhanced extraction (SEE) was combined with thermal conduction heating (TCH) to the CVOCs in complex subsurface conditions. This strategy targeted contamination beneath both the former dry cleaner and the occupied retail store, using directional drilling and advanced monitoring systems to control temperatures and maintain safety.
- **Challenges:** The project faced challenges such as complex geology, high-permeability zones, and the need to remediate beneath an occupied retail building. Precise temperature and hydraulic control were essential to ensure safety, minimize disruption, and achieve successful contaminant removal.
- **Results:** The project successfully removed over 2,400 lbs. of CVOCs, achieving cleanup goals with minimal disruption to the surrounding community. Soil sampling confirmed the effectiveness of the thermal remediation, with nearly all contaminants reduced below target levels.



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