PROJECT SNAPSHOT

Pilot Test at Diaz Chemical Superfund Site

TCH

Location: Holley, NY

Client: Confidential

Contamination: VOCs and SVOCs

Volume: 6,944 cy

Goal: Establish a basis of design for future full-scale implementation

Number of Heaters: 72

Duration: 3 months of operation

Mass Removed: 312 lbs.

WHAT MAKES THIS PROJECT UNIQUE?

Performance of a pilot study to evaluate the effects of in situ heating on the extraction and treatment of the various COCs. The pilot test included two heating stages. First, temperatures in the target treatment zone (TTZ) were elevated to 100°C for 60 days to evaluate the removal efficiency of VOCs. Next, the TTZ was heated to a maximum average temperature of 125°C to evaluate the removal of SVOCs. Half of the TTZ was located inside a building.

Important Project Details

- **Approach:** Site soil and groundwater were impacted with a variety of VOCs and non-standard SVOCs. Thermal Conduction Heating (TCH) was used to treat a targeted zone from 3 to approximately 28 feet below ground surface.
- **Challenges:** Heating the treatment zone located below the water table to 125°C required a detailed understanding of site geology and permeability and the design of a heating strategy to be able to deliver sufficient energy to overcome groundwater flux rates and efficiently boiloff the water.
- **Results:** The treatment volume was successfully heated to and held at both target temperatures of 100°C and 125°C. Heating times and energy use were within 6% of modeled projections and soil clean-up goals were reached in all TTZ confirmatory samples.

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