

PROJECT SNAPSHOT

Thermal Treatment of CVOCs in Overburden Bedrock

TCH

Location: New Jersey

Client: Confidential

Contamination: CVOCs (primarily PCE and TCE)

Volume: 14,687 cy

Goal: 19 mg/kg for PCE and 0.7 mg/kg for TCE

Number of Heaters: 255

Duration: 8 months of operation

Mass Removed: 10,999 lbs.

WHAT MAKES THIS PROJECT UNIQUE?

Thermal Conduction Heating (TCH) was selected to treat CVOCs from ground surface down into the top of two feet of weathered bedrock. The target treatment zone (TTZ) was located right next to a storm sewer which resulted in a gentle heating strategy around the sewer line.

Important Project Details

- **Approach:** A total of 255 TCH wells were used to heat the TTZ to an average temperature of approximately 100°C, except for an area subject to heat loss to a storm sewer that transects the northern portion of the TTZ from east to west.
- **Challenges:** The TTZ was located right next to a storm sewer. Heaters immediately adjacent to the storm sewer were operated with a “gentle heating” approach for much of operations to moderate temperatures to be protective of the original concrete pipe that was improved with a cured-in-place pipe (CIPP) liner prior to the start of ISTR operations.
- **Results:** A total of approximately 10,999 pounds (lbs) of contaminant mass was removed from the TTZ: 10,830 lbs in the vapor phase and 169 lbs in the liquid phase. By comparison, 118% of the original overall site mass estimate (9,339 lbs) was removed.



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