

## PROJECT SNAPSHOT

# ERH and TCH Treatment Beneath an Active Railway at Jackson Ceramix Superfund Site, EPA Region 3

ERH | TCH

**Location:** Falls Creek, Pennsylvania

**Technologies:** ERH and TCH

**Client:** EA Engineering

**Number of Heaters:** : 98  
electrodes and 21 TCH heaters

**Contamination:** CVOCs, with PCE

**Duration:** 269 Days

**Volume:** 13,728 cy

**Mass Removed:** 10,000 lbs

## WHAT MAKES THIS PROJECT UNIQUE?

Thermal treatment was deployed beneath and along both sides of an active rail line, maintaining rail operations while addressing contamination in both overburden and shallow bedrock. A specially designed horizontal vapor extraction network ensured strong pneumatic control under shallow groundwater conditions. When localized dewatering and dryout limited ERH heating efficiency, the project rapidly transitioned to a dual-technology ERH plus TCH configuration to recover performance in underheated zones.

## Important Project Details

- **Approach:** The approach combined baseline sampling and rapid CSM refinement, resulting in a 19% increase in the treatment area, installation of an ERH wellfield beneath and alongside the railway, horizontal vapor extraction for pneumatic control, and the adaptive addition of 21 TCH heaters to address underheating caused by site dewatering and dryout.
- **Challenges:** The project was completed beneath an active railway with limited access, required expansion of the treatment area after additional contamination was identified, and needed rapid field modifications when unexpected dewatering and dryout reduced ERH heating efficiency.
- **Results:** The project met its primary performance objectives, achieving greater than 99% PCE reduction, removing just over 10,000 pounds of contaminant mass, and is expected to continue improving through temperature enhanced attenuation processes.



Drone imaging provided by EA Engineering, Science, and Technology, Inc., PBC

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