

# Projects

ERRG performed excavation of petroleum hydrocarbon impacted soils at the Pacific Gas and Electric (PG&E) Antioch Natural Gas Terminal at 5900 Bridgehead Road in Oakley, California. The project location was an active natural gas terminal which posed a challenge to equipment delivery, slide rail shoring installation, and waste load out due to stub ups, high-pressure gas lines in the subsurface, and vibratory/work restrictions due to subsurface piping. Air knifing was performed to assist in underground utility location due to the increased possibility that lines could be in the proposed excavation



area as well as the location for slide rail posts. A PG&E representative was on site during all subsurface activity.

After air knifing the proposed excavation area, the Shoring Plan needed to be revised based on utilities found. Excavation work then followed in three phases to ease the installation of slide rail shoring as per the ERRG Shoring Plan. Contaminated soil was characterized prior to excavation start and was stockpiled adjacent to each phase

to facilitate waste load out. Approximately 3,600 tons of contaminated soil was removed and taken to Altamont Landfill. Slide rail shoring was installed simultaneously with excavation work. Confirmation samples were collected.

Groundwater was encountered in some areas and bridged with drain rock and lined with geofabric prior to backfilling. The areas were then brought back to original grade.

Following backfill and compaction of excavated areas, four 10-foot deep trenches for injection manifolds were installed, four 15-foot long and 10-foot tall L-shaped PVC pipes (slotted along bottom section) were installed along the edges of the excavation and completed with monitoring wellheads. Bedding sand was used around the piping, and the trenches were backfilled and compacted to original grade.

## Excavation of Petroleum Hydrocarbon Impacted Soils at PG&E Antioch Gas Terminal Oakley, California

### SUMMARY

Owner  
Pacific Gas and Electric (PG&E)

Location  
Oakley, California

Award Date  
September 2007

Completion Date  
November 2007

Award Amount  
\$481,401

Final Contract Price  
\$568,668

Services Provided  
Preparation of Shoring Plan,  
Erosion Control Plan,  
and Health and Safety Plan  
Air Knifing for Utility Location  
Shoring Design and Installation  
Excavation and Load Out of Impacted  
and Stockpile Soil  
Transport and Disposal of Waste Soil  
Site Restoration



Engineering/Remediation Resources Group, Inc.

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