



Project Name: Phase II Environmental Assessment

Client: Confidential Real Estate Developer

Agency: Regional Water Quality Control Board

Location: Southern California

Chemical of Concern: Petroleum Hydrocarbons

Project Goal

The goal of this project was to rapidly investigate a several square mile oil field property designated for residential development containing over 200 identified areas of concern.

Waterstone's Role

Waterstone's role was to identify areas of concern and to screen and characterize current and former oil field operations areas.

Project Challenges

The main challenge of this project was determining a time and cost effective screening and sampling plan that could be implemented at hundreds of potential areas of concern without delaying proposed residential development.

Scope of Work

Waterstone utilized a Rapid Optical Screening Tool (ROST) deployed by a cone penetration testing (CPT) rig to screen many of the areas of concern (primarily former oil field sumps) to determine if petroleum hydrocarbon contamination was present in the subsurface. Confirmation soil samples were collected at several initial ROST screening locations to further ensure that the ROST results correlated with actual concentrations in the soil from laboratory analysis. A soil sampling plan was developed based on the ROST screening results.

Project Successes

Over one hundred separate areas of concern were successfully screened using ROST in a short time frame. The results of the ROST screening process were utilized to develop a focused soil sampling plan targeting the areas and specific depths where ROST indicated the presence of hydrocarbon impact. The use of ROST saved Waterstone's client months of time and over a million dollars in field sampling and analytical costs. In addition, the ROST pinpointed the depth intervals where petroleum impact occurred which could have been missed with traditional environmental sampling methods. These project methods allowed for the accurate characterization of contaminated areas and the determination future remediation costs.