

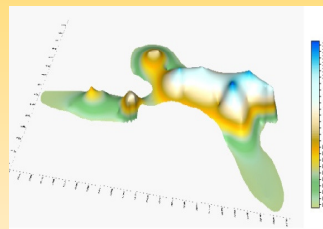
NAPL Fuel Oil Site

OIL FORENSIC APPLICATIONS

Ambient Engineering, Inc. (Concord, MA) used Sitelab to investigate and remediate a former tank farm along Boston Harbor contaminated by a large, subsurface plume of commingled diesel fuel and No. 6 fuel oil. Loading racks (above) are suspected to have contributed to most of the site's contamination. Non Aqueous Phase Liquids (NAPL) collected from 40 monitoring wells were tested using the UVF-3100 analyzer on-site to fingerprint the types of petroleum in order to design a recovery system.



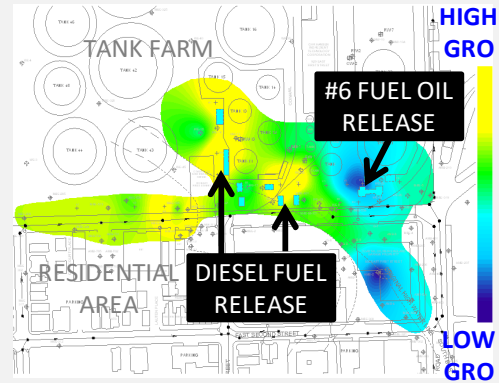
South Boston oil terminal (1940s). Now closed, the site has a plume of commingled oil 7 acres in size.



Product thickness of oil in wells was measured and mapped by client

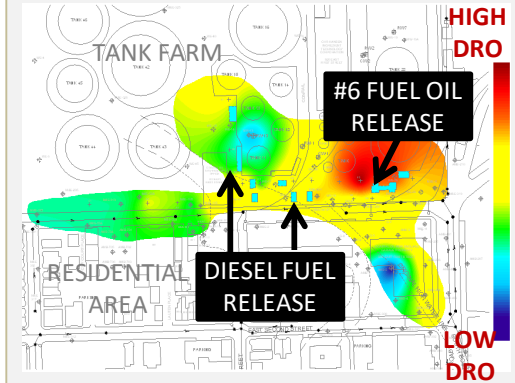
Maps created by customer using UVF-3100 GRO and DRO data

UVF Oil Response for Gasoline Range Hydrocarbons



NAPL in monitoring wells near the diesel fuel loading racks exhibited higher proportions of GRO.

UVF Oil Response for Diesel Range Hydrocarbons



NAPL in monitoring wells near the No. 6 fuel oil loading racks exhibited higher proportions of DRO.

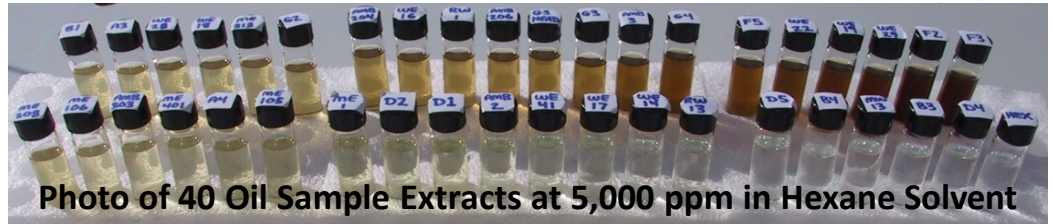


Photo of 40 Oil Sample Extracts at 5,000 ppm in Hexane Solvent
Samples contaminated with heavy fuel oil and weathered diesel are dark in color due to high proportions of PAH compounds. Samples with fresher diesel fuel are lighter in color as they contain fewer PAH compounds.



Oils are extracted in solvent and dilutions are made for analysis using a high precision micro pipette.



CAL-025



CAL-042

Sitelab's popular GRO and EDRO calibration kits are used to test oils on UVF-3100 analyzer.