



GROUNDWATER WELL MONITORING AND SOIL SAMPLING

PROJECT DESCRIPTION

Applied Ecology, Inc. (AEI) was contracted by the USCG to conduct groundwater and soil sampling at the USCG Base Miami Beach, Florida (FDEP Facility ID #13/8622089). The Site is a former fueling facility including three former underground storage tanks. The Site has been undergoing site assessment and remediation since 1990. USCG contracted AEI to perform additional assessment to assist with achieving a No Further Action Alternative (NFA).

AEI installed a monitoring well in a former excavation and sampled the groundwater for analysis of multiple analytes, including lead, polycyclic aromatic hydrocarbons, semi-volatile organic compounds, total recoverable petroleum hydrocarbons (TRPH), and volatile organic compounds. Isopropylbenzene was detected in the groundwater sample at a concentration exceeding the Florida Department of Environmental Protection (FDEP) groundwater cleanup target level (GCTL) per Chapter 62-777 Florida Administrative Code (FAC). DERM requested resampling of the monitoring well, as well as sampling four additional monitoring wells. AEI was able to successfully negotiate reducing the requested sampling to two monitoring wells. AEI also performed a soil boring outside the excavation and collected a soil sample for analysis of lead and TRPH. The TRPH concentration exceeded the FDEP soil cleanup target level (SCTL) per Chapter 62-777 FAC. Miami-Dade County Department of Regulatory and Economic Resources, Environmental Resources Management (DERM) requested completion of two confirmation soil borings for analysis of TRPH and TRPH speciation, if needed. AEI successfully negotiated the completion of only one confirmation soil boring. AEI also collected depth-to-water measurements at several monitoring wells and developed a map of the potentiometric surface at the Site and evaluated groundwater flow direction. AEI's field effort involved coordination of multiple subcontractors, including utility locators, a licensed driller, an analytical laboratory, a licensed surveyor, and a transportation and disposal contractor.

In addition to the assessment activities, AEI noted that a comprehensive well construction table had not previously been prepared for the Site. This table would be required to properly abandon the wells. AEI reviewed historical reports dating back to 1990 to develop a well construction table for the Site, including monitoring wells, recovery wells, air sparge wells, soil vapor extraction wells, and a vapor monitoring point. The tabulated data included installation date, well construction details, surveyed top-of-casing elevations, and status. AEI also plans to prepared comprehensive soil and groundwater analytical data tables, since reports over the previous 10 years had only included analytical data from the most recent sampling events.

PROJECT DETAILS

PROJECT CLIENT:

United States Coast Guard (USCG), Civil Engineering Unit Miami

PROJECT LOCATION:

USCG Base Miami Beach, FL

SERVICE LINE AREAS:

 Environmental Remediation

EXPERTISE:

- Soil sampling
- Groundwater sampling
- Site assessment
- Surveying
- Monitoring well installation