

Vapor mitigation system utilizing EVOH technology as solution to TCE contamination

Prior land use was for “El Centro Motors”, an automobile dealership and service facility. There was some contamination in the soil & groundwater due to underground storage tanks (USTs).



PROJECT DETAILS

El Centro Regional Medical Clinic

Engineer: GeoKinetics, Inc.

General Contractor: Erickson-Hall Construction Co.

Certified Installer: Advanced Construction Technologies

LOCATION

El Centro, California, USA

PRODUCTS USED

LIQUID BOOT® PLUS spray-applied vapor barrier

VI-20™ geomembrane

GEOVENT™ venting system

Images left to right: Installation of the VI-20™ geomembrane with EVOH technology over the low-profile GEOVENT™ gas venting system; LIQUID BOOT® spray-applied vapor barrier installation over the VI-20™ geomembrane; completed installation of the LIQUID BOOT® PLUS vapor barrier.

CHALLENGE:

The contaminant of concern in the soil and groundwater was TCE. A subsurface assessment of the project site identified elevated concentrations of TCE, in both the soil and groundwater beneath, and upgradient, of the proposed building. A reliable and cost effective solution for mitigating the potential human health risk to future occupants of the building was required.

SOLUTION:

In addition to conducting source removal in the area of the former underground storage tanks (USTs), it was recommended that a gas vapor membrane and passive ventilation system be installed beneath the footprint of the building. This solution ultimately provided a more timely and cost effective solution to an alternative recommendation approved by the Regional Water Quality Control Board—monitoring concentrations of VOCs over time, prior to construction of the proposed building, in order to confirm whether or not concentration levels reached equilibrium and would remain low enough not to present a health risk after construction of the building was complete.

Gas vapor mitigation system utilizing EVOH technology as solution to TCE contamination

Not only was the installation of a gas vapor membrane and passive ventilation system a more timely and cost effective solution, but it provided an additional measure of mitigation than the alternative as well. It was decided that LIQUID BOOT® PLUS vapor barrier was the best assembly for use as the gas vapor membrane and that installation of GE-OVENT™ low-profile vent piping would best be used for the passive ventilation system.

RESULT:

Advanced Construction Technologies' long-term experience spraying LIQUID BOOT® vapor barrier allowed their team to finish each phase ahead of schedule to ensure the following subcontractors could mobilize on schedule. The customer was very happy with the professional manner and level of technical support that the LIQUID BOOT® vapor barrier installer and CETCO provided.