Nítra-Seal®

Nitra-Seal Project Snapshot

New California Residences Safeguarded from Benzene and PCE in Soil Gas

Nitra-Seal Combines Efficiency and Durability for Long-Lasting Protection

Highlights

- New Apartment Complex on Former UST Site
- Benzene and PCE in Soil Gas
- Nitra-Seal and Passive Venting Offered Lowest-Cost, Long-Term Solution

Project Summary

In Central California, a former commercial site that previously housed underground storage tanks (USTs) is being redeveloped into a new apartment complex. Benzene, tetrachloroethene (PCE), and naphthalene contaminants were detected in the soil gas, creating a potential vapor intrusion (VI) risk. In response, the development team sought a preemptive VI mitigation solution that would not only meet regulatory standards but also be cost-effective and timely to implement. After weighing the available remediation options, Land Science's Nitra-Seal passive vapor intrusion mitigation system (VIMS) was selected due to its low cost, ease of implementation, and long-term effectiveness.

Application

Nitra-Seal, a multi-layer composite system made up of high-density polyethylene (HDPE) and a spray-applied nitrile asphaltic latex core, was installed before pouring the concrete slab by a Land Science Certified Applicator, who ensured proper installation and tight sealing of the numerous utility penetrations and conduits into the building. Vent risers were strategically placed within the building wall to safely convey any soil vapors beneath the vapor barrier to the roof. Quality assurance/control testing (QA/QC) via smoke testing was completed by the Land Science Certified Inspector validating the integrity of the installation.

Results

The implementation of the Nitra-Seal VI mitigation system has preemptively eliminated the VI risk to future apartment residents, ensuring a safe and healthy living environment. This solution enabled the redevelopment to proceed on schedule while increasing the availability of much-needed housing in the area.

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