

Historic Building Achieves Site Closure Using Retro-Coat™ to Meet Environmental Screening Levels

Project Highlights

- Site achieves closure due to the successful Retro-Coat™ application
- Post-application indoor air data confirmed Retro-Coat compliance with residential and commercial ESLs
- Customized finish met building owner requirements
- The application of Retro-Coat achieved orders of magnitude reduction similar to those of Sub-Slab Depressurization (SSD) Systems without the need to operate and maintain finicky mechanical systems

Project Summary

Retro-Coat was selected to mitigate vapor intrusion within a structure built in 1907 that had been impacted by both a former underground storage tank and a local dry cleaner. Indoor air samples taken prior to application showed chlorinated solvent-based PCE and TCE levels above the Regional Water Quality Control Board Environmental Screening Levels (RWQCB ESL).

Existing wood flooring, CMU block walls, framing obstructions on the wall, and conduits penetrating both the basement floor and walls presented challenges to successfully providing vapor intrusion mitigation to the entire basement area. The age of the structure was also a factor because little was known about how the building was constructed or expansion/improvements made over the years. The building owner sought to provide the future occupants of the building with vapor intrusion protection using a durable and slip resistant coating. Retro-Coat was applied to the existing wall surface (CMU block walls) and across the floor. Additionally, a silica sand was broadcast across the floor during the Retro-Coat application to achieve a non-slip surface.

Upon completion of the Retro-Coat application, indoor air samples were collected. Because the building use was mixed use, indoor air concentrations needed to meet both residential and commercial screening levels. The application of Retro-Coat achieved orders of magnitude reduction similar to those of Sub-Slab Depressurization (SSD) Systems without the need to operate and maintain finicky mechanical systems.

Technology Description

Retro-Coat Vapor Intrusion Coating System is a complete product line that consists of chemically resistant materials to protect existing structures from the threat of contaminant vapor intrusion without the need for additional concrete protection. The Retro-Coat system has been subjected to rigorous testing procedures to prove its ability to combat the most aggressive chemical vapors. The system is rated for industrial use providing a durable finished surface suitable for vehicular traffic. Retro-Coat coating technology was specifically developed for vapor intrusion.



Site Details

Site Type: Former underground storage tank/dry cleaner

Contaminant of Concern: PCE, TCE,

Vapor Intrusion Solution: Vapor intrusion coating system

Treatment Area: 150,000 ft²

Technology Used: **Retro-Coat™**
Vapor Intrusion Coating



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