

Detroit Redevelopment Project Awarded the Brownfields US EPA Phoenix Award

Geo-Seal® and Vapor-Vent™ Applied at Medical Supply Warehouse Distribution Center

Project Highlights

- Awarded the US EPA Brownfields Phoenix Award
- Geo-Seal® and Vapor-Vent™ applied to 275,000 square feet
- Distribution center will bring 140 jobs to the Detroit area

Project Summary

A 17.5 acre Brownfield site in Detroit once housed multiple factories, fuel storage operations, a rail yard, paint shops and commercial structures has recently been developed into a medical distribution center for a major medical supply company. Subsurface investigations within the area identified that the historical operations released volatile organic compounds (VOCs), including chlorinated solvents, which posed a potential risk to the indoor air quality of the proposed medical supply warehouse facility. The environmental consultant (AKT Peerless) was able to secure Brownfield funding through the Michigan Department of Environmental Quality (MDEQ) and prepared and submitted a Vapor Mitigation System Work Plan to the MDEQ which detailed the installation of the system design for the proposed new building.

Land Science® assisted with providing details to AKT Peerless to aid in their design of the vapor mitigation system, which included a redundant ventilation and barrier system. The system included both Geo-Seal and Vapor-Vent which was applied to the entire footprint of the medical supply warehouse (275,000-square-feet) to mitigate the vapor intrusion risk. Post-installation smoke and pressure testing were completed to ensure optimum sub-surface ventilation and barrier performance. With a vapor mitigation system in place, construction continued on the \$28 million building. The facility is expected to bring 140 jobs to the area.

Technology Description

Geo-Seal is a gas vapor management technology designed to eliminate vapor intrusion on Brownfields or any type of environmentally-impaired site. Geo-Seal is a chemically-resistant material placed between the foundation of the building and the soil pad to eliminate vapor intrusion pathways and stop contaminant vapors from permeating through the slab. By deploying Geo-Seal, developers can ensure a healthy indoor environment while reducing the cost of site remediation and expediting site construction.

Vapor-Vent is a low profile vent system that can be used in lieu of slotted PVC pipe. The speed of installation and the proximity of the vent to the barrier provide cost savings and performance benefits compared to other technologies. Vapor-Vent can be installed to passively or actively vent vapors from under the building. The movement for energy efficient buildings and the cost to maintain active venting systems make passive systems an attractive alternative. In addition, a passive system can be designed to become active if needed.

AKT PEERLESS



Site Details

Site Type: Brownfield site

Contaminant of Concern: VOCs, including chlorinated solvents

Vapor Intrusion Solution: Vapor intrusion barrier and vapor collection system

Treatment Area: 275,000 ft²

Technology Used:



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1011 Calle Sombra San Clemente, CA 92673
T: 949.481.8118 | www.landsciencetech.com