

CASE STUDY: Geo-Seal® and Vapor-Vent® Applied at 275,000-Square-Foot Medical Supply Warehouse Distribution Center

Medical Supply Warehouse Distribution Center – Detroit, Michigan

A 17.5 acre Brownfield site in Detroit that 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 Technologies 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.

About the Geo-Seal® Gas Vapor Barrier

Geo-Seal is the ideal blend of chemically resistant HDPE sheet and spray applied membrane technologies, resulting, in the most appropriate gas vapor barrier technology used to eliminate vapor intrusion on Brownfields or environmentally impaired sites. Geo-Seal is a chemically resistant material placed between the subgrade and building foundation to seal off exposure pathways and stop vapor intrusion into buildings. By selecting Geo-Seal, developers can ensure a healthy indoor environment while reducing the cost of site remediation and expediting site construction.



Geo-Seal and Vapor-Vent were applied to 275,000-square-feet of new construction.



Project Highlights

- Brownfield Site historically operated as manufacturing facilities, fuel storage operations, auto services, a rail yard, and a paint shop along with multiple commercial and residential structures.
- Geo-Seal and Vapor-Vent applied to 275,000 square feet.
- Distribution center will bring 140 jobs to the area.