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Former St. Louis Chemical Plant Incorporates Geo-Seal® and Vapor-Vent® for Redevelopment Project

70,000 Square Feet of Geo-Seal and Vapor-Vent Applied to Prevent Harmful Vapor Intrusion

Project Highlights

- Geo-Seal applied to over 70,000 square feet of commercial space
- Redevelopment project is projected to create more than 1,000 new jobs in the St. Louis area

Project Summary

A former Solutia chemical plant, located in St. Louis, Missouri, in between the Mississippi River and St. Louis, required environmental remediation for safe redevelopment. The developers plan to turn the brownfield site into industrial and warehouse space. The redevelopment project is projected to significantly impact the area by providing more than 1,000 jobs.

The environmental remediation process included removing contaminated soil and treating contaminated water, as well as protecting buildings from possible vapor intrusion. In order to prevent vapor intrusion, the contractors installed over 70,000 square feet of Geo-Seal with a vapor ventilation system. Geo-Seal and Vapor-Vent were installed in between the soil pad and the foundation of the new buildings. Installing Geo-Seal, a composite and chemically resistant membrane system, effectively seals all entry pathways into the building preventing harmful vapor intrusion. In conjunction with Geo-Seal, Vapor-Vent, a ventilation system, allows for the natural buildup of underground vapors to be safely diverted and diffused above ground. The vapor barrier system ensures safety from vapor intrusion for this brownfield redevelopment.

Site Details

Site Type: Industrial

Contaminants of Concern:
Chlorinated Solvent and Petroleum Hydrocarbons

Remediation Approach:
Geo-Seal application with Vapor Vent

Geo-Seal®
Vapor Intrusion Barrier

Vapor-Vent™
Vapor Collection System

Technology

Geo-Seal is a vapor intrusion barrier which is placed between the foundation of the building and the soil pad. Geo-Seal is a three part system which combines two layers of chemically resistant high-density polyethylene (HDPE) with a spray applied core layer as well as a venting system.

Vapor-Vent is a low-profile vent system used in lieu of slotted PVC pipe. Through either passive or active ventilation, Vapor-Vent can safely regulate the diffusion underground vapors. This technology provides cost savings through its quick installation and its proximity of the vent to the barrier.

Results

The use of Geo-Seal with Vapor-Vent ensures that the buildings will be safe from harmful vapor intrusion. Following the installation of the Geo-Seal and Vapor Vent vapor barrier system, the new buildings met safety and environmental regulatory requirements ensuring a safe working environment for future tenants.