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Technologies
Superintendent,
Environmental
Remediation
Services, GIP

275,000 Square Feet of Geo-Seal 100 Protects Commercial Site

A former industrial brownfield site in Ontario was recently redeveloped for commercial use. Solvents and resins were brought onto the site by railcar until 1989 and some chemicals remained on site, stored in tank cars on railway spurs until 1994. The site went idle in 1990.

Phase Two Environmental investigations revealed a broad spectrum of soil contamination. Ethylbenzene, PHC F1 (C6 C10), PHC F2 (C10 C16), toluene, and xylenes (total) were identified in some of the soil samples collected at the site at concentrations above the Site Condition Standards.

With a new owner aiming to efficiently develop the land, and mitigate risks, a Site Specific Risk Assessment provided by the owner’s consultant specified a high performance vapor intrusion mitigation system to be installed as part of the new building construction - after site cleanup efforts took place.

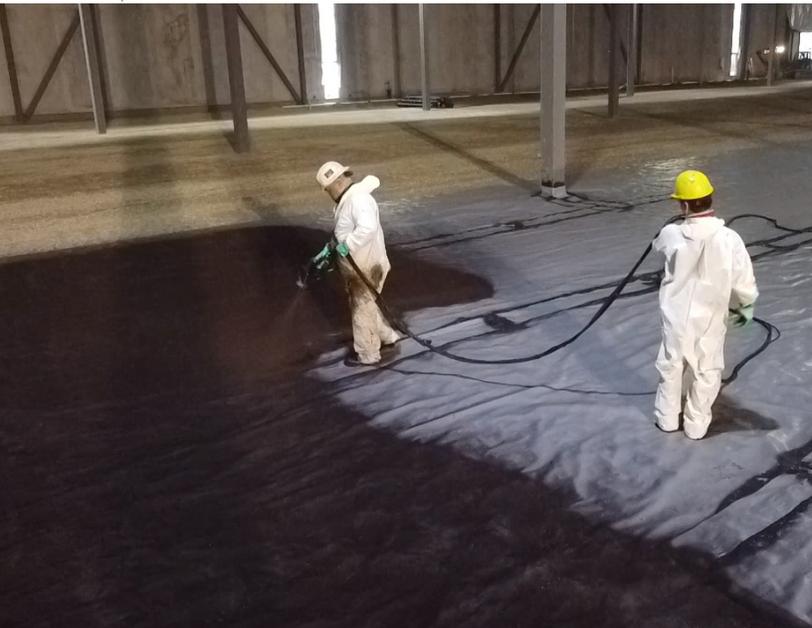
The design for this large site required a robust, top-tier, air-tight solution that could be easily installed with minimum impact to other construction activities. Geo-Seal 100 was deemed to be the best fit for these conditions. Approximately 275,000 square feet of product was applied to mitigate remaining soil vapor intrusion concerns and to protect the new building envelope.

“It’s a great product and it has one of the highest levels of protection, which was what we needed for this site,” explains Brian McNaughton, Technologies Superintendent,



Project Size: 275,000 SF
Application: Vapor Intrusion Mitigation System
Environmental Consultant: GIP
System: Geo-Seal 100

Spray-applying the vapor barrier



Early stages of installation.



Environmental Remediation Services, GIP.

Geo-Seal 100 is an industry leading and patented sub-slab vapor intrusion barrier system that mitigates vapor intrusion risks for brownfields and other environmentally impacted sites. Due to its composite design, it can withstand the rigors of modern-day construction by providing a seamless, low diffusion, high tensile strength, puncture resistant robust air-tight barrier that seals all penetrations and terminations without the need for additional 3rd party tapes or sealants.

Thoroughly tested for diffusion, and field tested using high volume smoke testing, Geo-Seal 100 has proven highly effective against common soil vapors such as radon and methane (providing non-detects) as well as being highly impermeable to volatile organic vapors like benzene, toluene, other petroleum-based compounds (BTEX), and highly volatile vapors of chlorinated solvents and coal tar naphthas.

Geo-Seal 100 can fully isolate the building envelope and often allows engineers and designers the assurance and freedom to design highly efficient, low carbon and environmentally friendly passively vented systems. When active ventilation is prescribed, studies have shown that composite membranes like Geo-Seal 100 can significantly reduce the need for costly and often complex mechanical, sub-slab depressurization systems. Maintenance free, Geo-Seal systems have repeatedly earned full approval and also are a cost-effective barrier solution. Multiple federal and provincial/state regulatory agencies including the Ministry of the Environment and Climate Change (MOECC, [Province of Ontario]) have approved Geo-Seal as part of the prescribed mitigative action in many Site Specific Risk Assessments including this one.

Top-notch product offerings are only one part of a manufacturer's continued success: Reliable support and guidance set companies apart. For instance, EPRO goes "above and beyond," with each and every project, and the company's team of product representatives are extremely knowledgeable about all products, systems and equipment. "We felt confident in what we had learned about Geo-Seal to communicate what was needed for an ideal installation and this kept everything running smoothly and to schedule," says McNaughton. "We have a great working relationship with EPRO and I appreciate all the experience I have with EPRO products now."