

CASE STUDY

MITIGATING RISKS USING A PLUMESTOP BASED PERMEABLE REACTIVE BARRIER



BACKGROUND

CLIENT: LANDOWNER

DURATION: 1 WEEK

LOCATION: CAMBRIDGE, ONTARIO

In Cambridge, Ontario a retail office had PHC-impacted groundwater flowing onto the site coming from a nearby active gas bar. In order to mitigate potential risks to down gradient receptors, a PRB was installed in the highly heterogenetic aquifer. IRSL then outlined a design verification program that was completed prior to the remedial program.

APPROACH

The groundwater impacts were addressed using a combination of adsorption and enhanced aerobic bioremediation. IRSL used colloidal activated carbon (CAC), supplemented with oxygen-releasing compounds (ORC). The CAC and ORC solutions were injected into the impacted zones using direct push technology (DPT).



GEOLOGY: Sand, Gravel Fill, Cobbles, and Silty Sand

PLUME SIZE: Approximately 30 metres wide

Construction:

IRSL designed and implemented the install of a Permeable Reactive Barrier in one week. During this one-week period 890 kg of PlumeStop S™, 215 kg of ORC-A™ and 230 kg of ORC-P™ were injected using DPT.

Reagents Used:

- Plumestop™
- Oxygen-Releasing Material™

Challenges

- Working in a small parking lot which had a high volume of traffic coming in and out.
- Sub-zero temperatures
- Variation in contaminant flux

Results



InSitu Remediation Services Ltd. (IRSL) is one of Canada's most experienced remediation companies. Our team has designed, implemented, and optimized, soil and groundwater remediation programs in diverse geological environments in North, Central, and South America, Asia, Europe, and the Middle East.

We confidently implement innovative solutions, based on sound knowledge, using seasoned field staff. Our pragmatic, flexible approach reduces effort, cost to our clients, and environmental risk.

*For more information,
contact:*

InSitu Remediation Services Limited
St. George, Ontario, Canada

T: 289.208.8832
E: info@irsl.ca

IRSL.CA