

The Challenge:

- This service station had operated for many years and a former underground storage tank and transfer pipeline had leaked which contaminated both the soil and groundwater.
- The site could be not temporarily closed in order to remediate the site.

The OxyTek Solution:

- An in-situ remediation program using was developed. OxyTek-L™ was injected directly into the ground using direct push technology.
- Remediation of the site was completed in one day while the site continued to operate.



OxyTek-L™ being injected into wells as station continued to operate.

Background:

The subject property operated as a garage during the 1930s and in the 1980s retail petroleum facilities were added. The current investigations were undertaken by Oxy Teknologies Inc. to remediate the groundwater which was impacted by a leaking underground storage tank and transfer pipelines. Initial concentrations of the F1 and F2 fractions of TPH in the soils ranged up to a maximum of 9,190 ppm. The depth of impairment ranged in depth between 0.8 and 3.0 m below grade level.



Direct injection of OxyTek-L™

Process:

OxyTek-L™ was injected into the soils in the area of impairment using direct push technology. Groundwater samples were later obtained from the existing monitoring wells, which confirmed that PHC levels met Regulatory criteria with one injection event.

The site remediation was completed to meet Ontario Ministry of the Environment (MOE) Regulation 153, Table 3 criteria for commercial / industrial property use criteria. A Record of Site Condition was filed for the property with the MOE.



**OxyTek™ Case Study 100061:
Active Service Station Property, Mount Albert, Ontario**

Soil Concentrations Pre-Treatment and Post-Treatment using OxyTek-L™

	PARAMETERS:			
	Benzene	Toluene	Xylenes	F1 – F2 TPH
Regulations* :	25	150	210	2,160
Highest ppm levels obtained:				
Pre-treatment	36.4	677	1,468	9,190
Post-treatment	<25	<150	<210	<2160

All values in ug/g – ppm – parts per million MDL – method detection limit

< – below detection limit **Parameter exceedence**

*MOE O.Reg. 153/04 – Table 3 – Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition for Industrial / Commercial Property Use.