

The Challenge:

- Two USTs (toluene and waste solvents) and a 1,1,1-trichloroethane AST were previously installed on-site.
- Previous site remediations and bioremediation were completed by other consultants. Impairment of acetone, 1,1 Dichloroethene and 1,1,1 Trichloroethane remained in the groundwater.

The OxyTek Solution:

- The existing wells and thirty additional injection wells were installed in the area of impairment. OxyTek-L™ was injected into the wells to reduce VOC concentrations to meet Regulatory criteria.
- OxyTek-L™ reduced VOC levels to meet Regulatory criteria in three injection events. Closure of the project was achieved to meet the stakeholders' real estate closing.



Injecting OxyTek-L™ into injection wells around building

Background:

Chemicals used in the printing process included toluene, 1,1,1-trichloroethane, acetic acid, isopropyl alcohol, methyl ethyl ketone, acetone and polybutene and waste solvents were stored on-site. All previous USTs, ASTs and chemical storage facilities were removed in 1998. Previous site remediations and bioremediations efforts were completed between 1998 and 2005 by other consulting firms and elevated VOC concentrations persisted in the groundwater. In 2006, Oxy Teknologies Inc. was retained by the stakeholders to remediate the site so that a real estate transaction could occur. Soils in the area of impairment were silty clay, with a low permeability. Due to these soil conditions, three injections of OxyTek-L™ were required.



Injection well with OxyTek-L™ being loaded

Process:

Thirty injection wells were installed in the area of impairment. OxyTek-L™ was injected into the wells over three treatment intervals. The treatment was allowed to stabilize for 10 days prior to sampling.

The site remediation was completed to meet Ontario Ministry of the Environment (MOE) Regulation 153, Table 3 criteria for industrial / commercial property use criteria. The Ministry of the Environment authorized a Record of Site Condition for this site in July 2007.



**OxyTek™ Case Study 100039:
Former Blueprinting Facility, Scarborough, Ontario**

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

	PARAMETERS:				
	Chloroethane	Acetone	1,1 Dichloroethene	1,1 Dichloroethane	1,1,1 Trichloroethane
Regulations* :	NV	3,300	4.1	50,000	200
Highest ppb levels obtained:					
Pre-treatment	170	8,900	100	40,000	5,900
Post-treatment	<0.2	<0.5	<0.2	5.7	9.5

All values in ug/L – ppb – parts per billion 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 Commercial/Industrial Property Use.