C3 ENVIRONMENTAL LIMITED
Environmental Contractors & Engineers

WATERLOO BARRIER®
IN SITU CHEMICAL OXIDATION
EAST LONGMEADOW, MA

Case History, No. 57 **May 2018**

Problem

A former manufacturing plant in Massachusetts had a heavily contaminated area at the back of the property. This contamination was due to leaking underground storage tanks, and a history of improper equipment disposal. The contaminated groundwater was migrating off site.

Solution

It was concluded that installing a WEZ95 Waterloo Barrier® cell, in combination with an In Situ Chemical Oxidation (ISCO) system, would be an effective solution to prevent any further migration off site, and quickly remove the contaminants. Approximately 8,054 square feet of WEZ95 Waterloo Barrier® sheet piling was installed around the contaminated area (See Figure 1). Waterloo Barrier® sheets were selected due to the low hydraulic conductivity provided by the system (10^{-7} cm/sec or less).

A common problem faced when implementing an in-situ chemical oxidation system is to maintain the control and delivery of the chemical reagents injected into the groundwater. By installing a containment cell around the plume, the desired reactions could be controlled much easier, and the impacted groundwater would be confined within the cell. This resulted in higher reductions in contaminant concentrations. Additionally, treatment costs were lowered as a result of the more efficient remediation system.

Figure 1. Historic Dumping Area

Figure 2. Impact Hammer

SITE SUMMARY

Barrier: 8,054 square feet of Waterloo Barrier® WEZ95 **Depth:** 16 to 30 feet

A C³ Group Company

THE C3 GROUP

C3 Environmental Limited
350 Woolwich Street South
Breslau, Ontario
N0B 1M0

Telephone: 519-648-3611
Fax: 519-648-3505
Email: c3enviro@c3group.com
Web: www.c3group.com