

Blacks Dry Cleaner Tetrachloroethene Remediation Project

Background

- PCE source area in soil and groundwater at an active dry cleaner.
- Performed demonstration of Bioavailability Enhancement Technology (B.E.T.[™] patent pending).
- B.E.T.[™] is a source area bioremediation technology that enhances the dissolution of the chlorinated solvent contaminant and provides an electron donor for anaerobic reductive dechlorination (ARD).
- WILCLEAR[™] Sodium Lactate electron donor injected in an existing monitoring well using a simple metering device and garden hose.



Project Status

Accomplishments

- A single injection of WILCLEAR[™] provided the system with greater than 1,000 mg/L of total organic carbon in a downgradient monitoring well.
- A single injection resulted in the onset of methanogenic conditions, the conditions under which ARD of chloroethenes is energetically favorable.
- The bioavailability and biodegradation of primary solvents was enhanced after a single injection – PCE and TCE decreased immediately and cis-1,2-DCE increased to concentrations significantly greater than the original PCE/TCE levels.
- It is expected that complete ARD to ethene will commence following continued injection and biomass growth.

