

CASE HISTORY®

Work Summary (Site History)

CHS-0010 Ethylene Dibromide (EDB & BTEX)

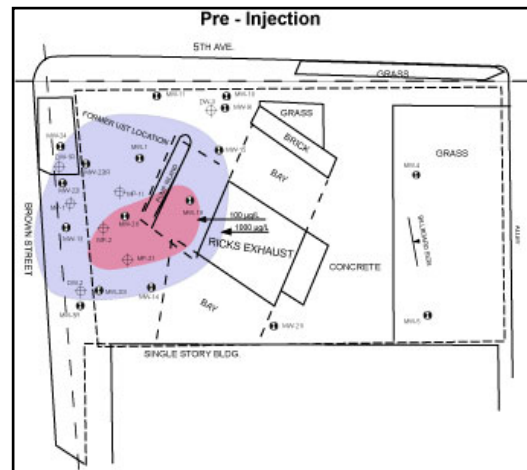
Discovery of gasoline contaminated soil and a UST provided the criteria for acceptance for funding by the Florida Abandoned Tank Restoration Program. Initial remediation included removal of the 600 gallon UST and excavation of 45 tons of contaminated soil. Pilot testing ruled out DP extraction or SVE. Instead, the *Cool-Ox™* Process, a Technology based upon the controlled production of hydrogen peroxide in-situ, was selected. This Technology had demonstrated its ability to eradicate mixed contaminants (hydrocarbons with halogens) and seemed ideal at this site where ethylenedibromide (EDB) was also present. Post remedial monitoring revealed 97% reduction in total BTEX with EDB reduced to non-detect.

Project at a Glance

Site 0010 - Site Information

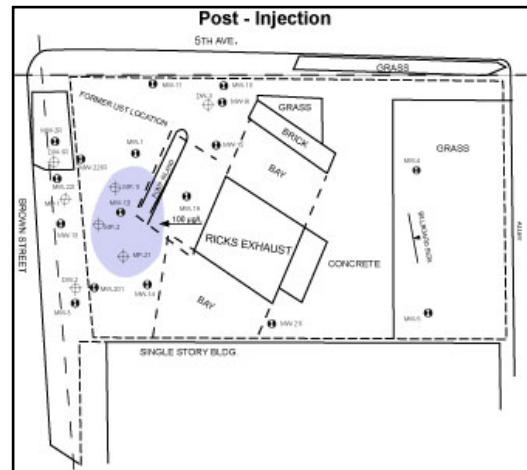
Site Map

Type of site	Former Retail Gasoline Station
Location	Jackson County, Florida
Contaminants	EDB & BTEX
Work Scope	Inject <i>Cool-Ox™</i> Reagent
Media Treated	Soil & Groundwater
Soil Type	Sandy Clay to Hard Clay, Limestone @ 40'
Groundwater Depth	11 fbgs
Remedial Objectives	1. Eliminate Soil Sources 2. Initiate GW Remediation



Site 0010 – Application Information

Technology Selected	<i>Cool-Ox™</i> Process
Application Method	DPT Probe Rig
Area Treated	2,048 square Feet
Vertical Interval	10 to 40 feet bgs
Injection Point (IP) Spacing	7 feet
Media Volume Treated	2,276 cubic yards
Number of Injection Points	42
<i>Cool-Ox™</i> Volume	11,400 gal
<i>Cool-Ox™</i> per IP	271 gal



The blue area on the site map depicts the extent of the groundwater contaminant plume prior to the first *Cool-Ox™* injection. Samples from replacement wells collected after the initial injection revealed that the contaminant plume had shrunk to a small area (see blue area on Post Injection Site Map).

Current Status

As expected, EDB concentrations were reduced to non-detect. Because of the significant reductions in contaminant concentrations, the site was placed in Post Remedial Action Monitoring Status. Petroleum contaminant concentrations continue to decline as a function of the long-term sustained chemical oxidation and biologic mechanisms indicative of the Cool-Ox™ remedial Technology.

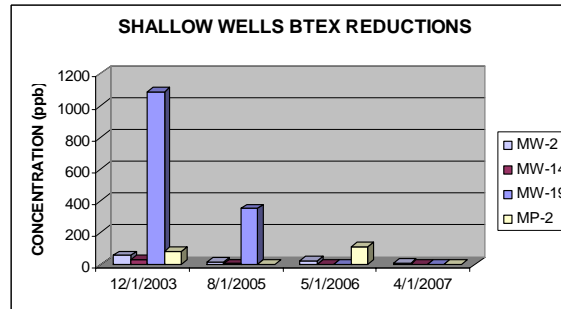
CASE HISTORY

CHS-0010 Ethylene Dibromide (EDB & BTEX) (Cont.)

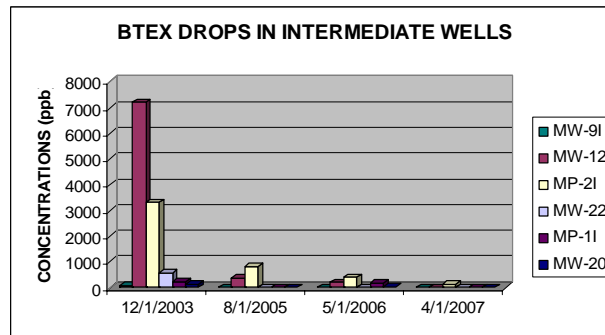
Results

Site 0010- Contaminant Data

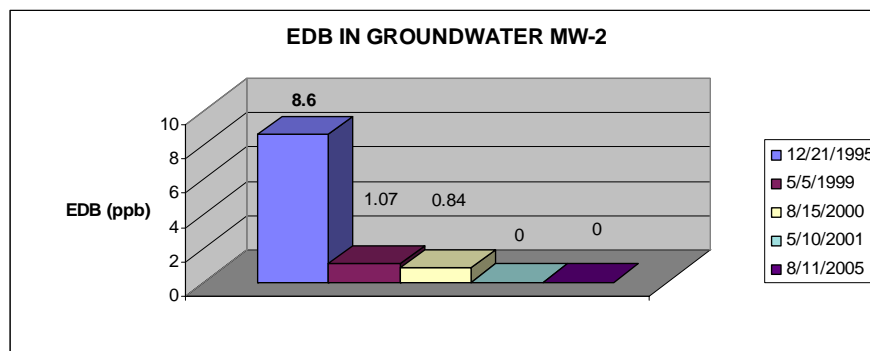
Date	MW-2	MW-14	MW-19	MP-2	AVG. Total BTEX
Dec-03	58	29	1086	84	314
Aug-05	15	5	352	4	94
May-06	25	1	<1	112	35
Apr-07	9	<1	<1	4	6.5



Date	MW-9I	MW-12I	MW-20I	MW-22I	MP-1I	MP-20I	AVG. Total BTEX
Dec-03	81	7207	140	560	220	3304	1919
Aug-05	3	383	2	2	2	813	201
May-06	10	202	15	2	192	401	137
Apr-07	0	14	0	<1	1	141	59



Date	12/21/95	5/5/1999	8/15/2000	5/10/2001	8/11/2005
EDB (ppb)	8.6	1.07	0.84	ND	ND



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