

**CASE HISTORY®**

**Work Summary (Site History)**

*CHS-0004 (BTEX)*

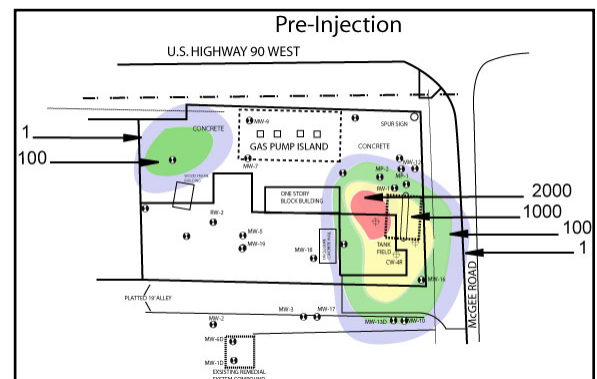
Acceptance into the Florida State cleanup program, was the driver for remedial action at this petroleum contaminated (gasoline) site in Northwest Florida. To mitigate gasoline released by leaking UST's, a remedial solution consisting of two systems was constructed. Air stripping and granular activated carbon absorption was employed to address groundwater contaminants. Attempts to mitigate soil contaminants employed a soil washing, water infiltration system with nutrient enhanced biodegradation. These were operated from 1993 through May, 1995, when it was concluded that they were ineffective because of the low permeability of the heavy soils and bio-fouling of equipment. In 2002, a RAP Addendum was approved incorporating a new hydrogen peroxide based ISCO remedial process. This proved to be very successful at reducing the contaminant mass due to it's ability to penetrate the heavy soil matrix.

**Project at a Glance**

*Site 0004 - Site Information*

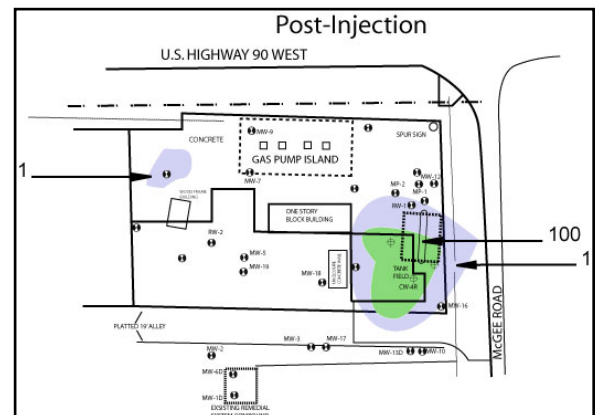
Type of site	Retail Gasoline Station
Contaminants	BTEX, MTBE
Work Scope	Inject ISCO solutions
Media Treated	Soil & Groundwater
Soil Type	Clayey sand to sandy clay
Groundwater Depth	3 fbg
Remedial Objective	Natural Attenuation default levels

*Site Map*



*Site 0004 - Application Information*

Technology Selected	Chemical Oxidation
Application Method	DPT Probe Rig
Area Treated	3,525 square Feet
Vertical Interval	3 to 12 feet bgs = 9 feet
Media Volume Treated	1,174 cubic yards
Injection Point (IP) Spacing	5 feet
Number of Injection Points	223
Oxidizer Volume	13,027 gal
Ave. Oxidizer per IP	58 gal



The blue area on the site map depicts the extent of the groundwater contaminant plume prior to the ISCO injection. The red area shows the higher concentrations where the release occurred. Note the reduction in the size of the plume and GW concentrations after the ISCO injections. Because of a potential real state transaction, an additional application is planned.

**Current Status**

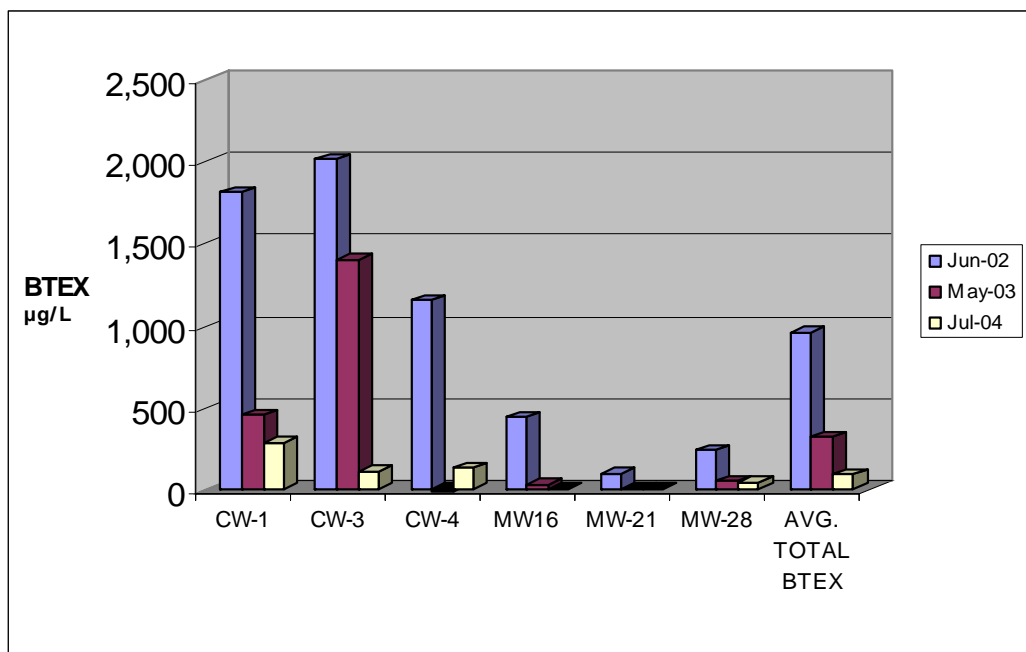
*Because of the significant reductions in contaminant concentrations, the site was placed in Post Remedial Action Monitoring Status pending determination of natural attenuation activity.*

**Results**

**Site 0004 - Contaminant Data**

DATE	CW-1	CW-3	CW-4	MW16	MW-21	MW-28	Avg. Total BTEX*
Jun-02	1,810	2016	1,155	445	105	247	963
May-03	462	1404	1	41	3	56	328
Jul-04	295	117	136	6	2	52	101

\* Above data is an average of six wells (CW-1, CW-3, CW-4, MW-16, MW-21 & MW-28)



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