CLEANOX PILOT-SCALE STUDY
CHLORINATED HYDROCARBON CONTAMINATION AT A MANUFACTURING FACILITY IN CAMDEN, ARKANSAS

An *in-situ* chemical oxidation project was conducted at a former manufacturing facility in Arkansas to demonstrate that the process could rapidly degrade hydrocarbon contamination in groundwater underlying the plant site. The perched water table had been contaminated with chlorinated hydrocarbons from previous material handling practices associated with chlorinated solvents including trichloroethylene (TCE) and 1,2-dichloroethylene (1,2-DCE).

After a successful bench-scale application, the CleanOX Process was applied on a pilot-scale basis using two on-site groundwater monitoring wells. These application wells were selected where the highest concentration of chlorinated solvents had been detected on-site. During the application of the CleanOx reagents, elevated photoioization detector (PID) readings were not observed during monitoring of the on-site wells. Post-application head space monitoring determined that the vapor concentrations in the on-site monitoring wells had been reduced.

Analysis of groundwater samples following application of the CleanOX process indicated a 93% to 97% reduction of the chlorinated solvent constituents in the two demonstration wells. Based on this dramatic reduction in contaminant concentration and the absence of environmental or human receptors, the site owner petitioned for closure pending the results of the on-going groundwater monitoring program.

VOLATILE ORGANIC COMPOUNDS (UG/L)	PRE-PILOT STUDY		POST-PILOT (7 DAYS)		POST-PILOT (56 DAYS)	
	MW-15	MW-108	MW-15	MW-108	MW-15	MW-108
Trichloroethene	20,000	1,100	2,900	9,500	1,700	<10
1,2-Dichloroethene	11,000	340	1,600	35	540	<10
Vinyl Chloride	730	180	120	20	22	<10
1,1-Dichloroethene	41	<10	<10	<10	<10	<10
Toluene	13	<10	<10	<10	<10	<10
Tetrachloroethene	<10	<10	<10	33	<10	55
Acetone	<10	<10	150	120	<10	<10
Chloromethane	<10	<10	83	92	<10	<10
Bromomethane	<10	<10	36	35	<10	<10
2-Butanone	<10	<10	14	<10	<10	<10
Carbon Disulfied	<10	<10	<10	24	<10	<10
Total VOCs	31,784	1,620	4,903	454	2,262	55