

Chlorinated Solvent Case History

ART In-well Air Stripping Technology

Accelerated Remediation Technologies, LLC (ART) was secured by a major uniform services company to provide remediation technology at a PCE site in Minneapolis. Contaminant concentrations had reached asymptotic levels and were significantly higher than defined action levels. ART worked with the client's consultant to install the *ART Technology* in the most contaminated source area location. Within a short period of time, the *ART Technology* achieved a 93% reduction of contamination into background concentration levels. Client has petitioned the state for site closure.

Site Description: Former uniform processing facility – currently a brownfield-type site in a light to medium industrial setting. Client needed to jump-start remediation, clean up site and prepare for sale. Soil types consist of silty sand with depth to groundwater approximately 30 feet below grade with a saturated thickness of about 25 feet. Significant PCE contamination moving onsite from offsite location yielding background PCE levels of up to 85 µg/l.

Contaminant(s) of concern: tetrachloroethene (PCE, PERC)

Site Remediation History: A typical SVE and Air Sparging system was installed by major, international consulting firm in 1995 to remediate soils and groundwater. However, the existing remediation system had not achieved reduction of contamination levels required for closure. The *ART Technology* was installed in a single, 4-inch, source area well utilizing existing compressor, SVE and vapor treatment equipment to control costs. Within 14 days, the *ART Technology* had achieved a 90% reduction in indicator well. Within a total of 70 days, the *ART Technology* had reduced site contamination 93% - which was in the range of historical background PCE levels (moving onsite from offsite source).

Contaminant (µg/l)	MW-2 (20' downgradient)			
	Pre-ART	+ 13 days	8/27/01	11/12/01
Tetrachloroethene (PCE)	2700	240	79	170
Trichloroethene	3	ND	ND	ND
Cis-1,2 Dichloroethene	0.57	ND	ND	ND
Chloroform	3.2	ND	ND	ND
	Field Parameters			
Dissolved Oxygen (mg/l)	1.23	9.57	7.9	9.69

Summary: Within a period of about thirteen days of operation, the *ART Technology* achieved significant contaminant reduction of all contaminant compounds on a site where remediation had stalled. Client has petitioned for closure and the *ART Technology* continues to maintain the lowest contamination levels possible, given the upgradient PCE feeder source(s).

The *ART Technology* combines in-situ air stripping, air sparging, soil vapor extraction, Dynamic Subsurface Circulation™ and enhanced bioremediation/oxidation in an innovative wellhead system. The system is designed to accommodate a 4-inch well and be very cost effective when compared with other, stand-alone technologies.

