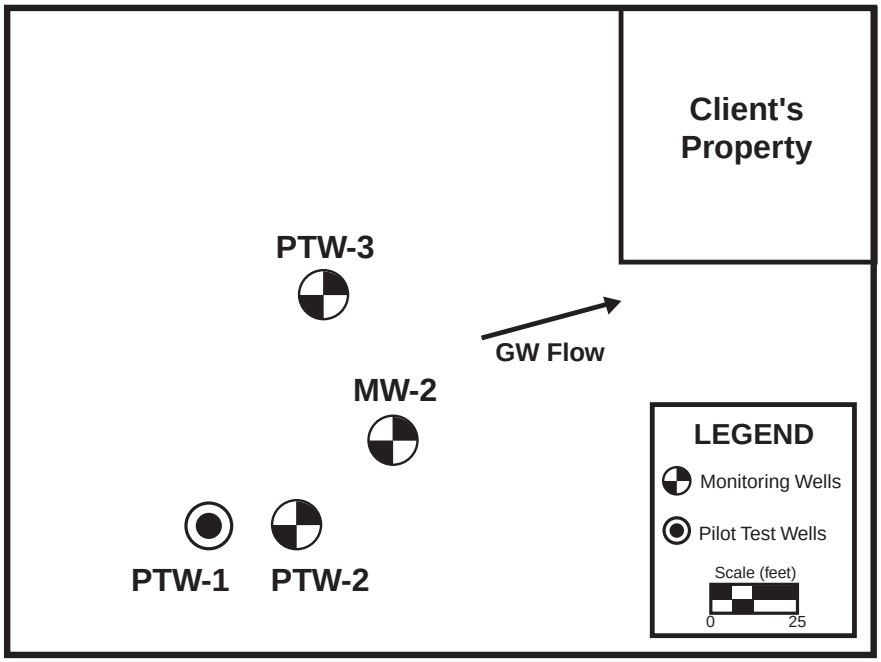
Risk Reduction BTEX Remediation Pilot Study in Fractured Bedrock in New Mexico

Contaminants	Application Method	Soil Type	Groundwater Velocity
BTEX	Risk Reduction	Fractured Bedrock	6-30 ft/day

An ORC pilot test in New Mexico was designed to help determine the efficacy of ORC in a fractured bedrock. ORC placed in a single well was able to influence a monitoring well 50 feet downgradient.

Site Description and Remedial Design



The affected aquifer beneath the site is composed of fractured bedrock with two distinct components - a highly transmissive fracture zone and less transmissive matrix blocks. Groundwater flow appears to take place primarily along major fractures or fracture systems. The average velocity in the high fracture zone is 30 feet per day and the average velocity in the less transmissive area is 6 feet per day. The 3 3/8" well socks were inserted into PTW - 1 and results were monitored at MW-2, 50 feet downgradient. A map detailing the insertion well and monitoring well locations is presented above. Samples of oxygen and BTEX was taken at 9 days and 34 days after socks were inserted.

Results

The results are presented in Figure 1 (D.O.), Figure 2 (benzene and total BTEX), and Figure 3 (toluene, ethylbenzene and xylene).

Figure 1

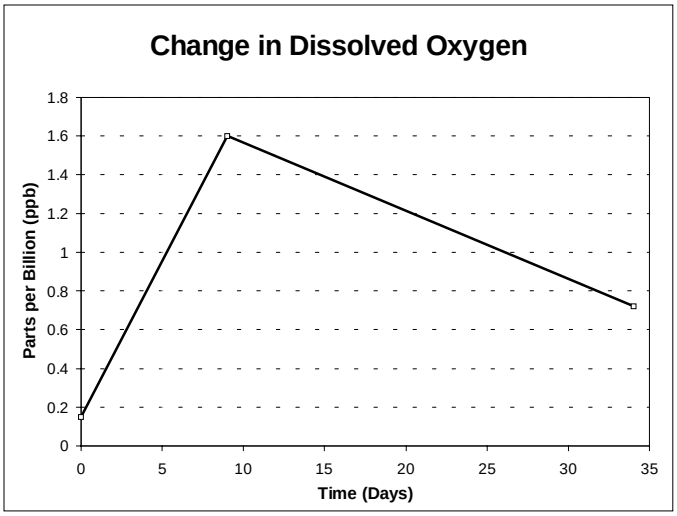


Figure 2

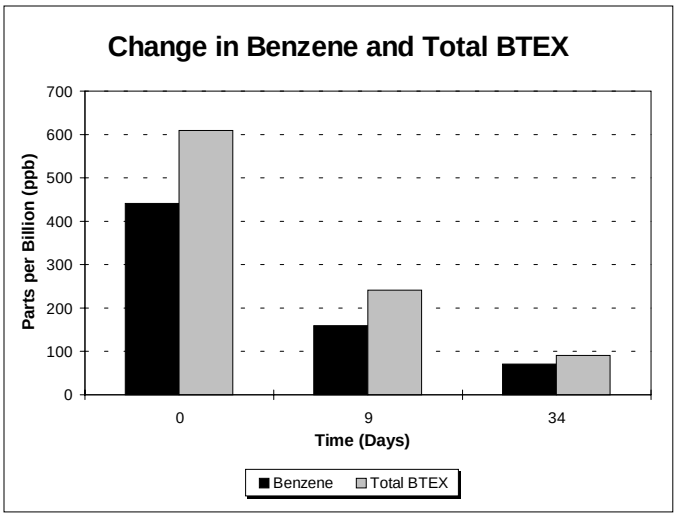
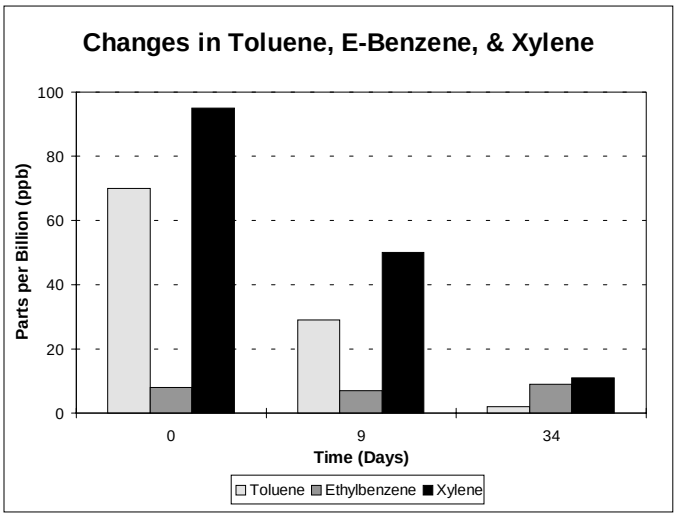


Figure 3



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