

Utah's First Pay For Performance Remediation Project Closure

In December 1998 Wasatch Environmental entered into a three party agreement with the Utah Solid and Hazardous Waste Control Board and Standard Transportation for a Pay for Performance cleanup for a fixed price of \$239,931. Wasatch was to be reimbursed for 50% of the fixed price upon completing satisfactory installation and startup of the remediation system. An additional 10% (30% total) of the fixed price would be reimbursed when 25, 50, and 75 percent reduction of contaminated



concentrations where attained. Another 10% was reimbursed when the specified cleanup level had been attained in each key well. The final 10% was reimbursed after three key monitor wells had maintained the cleanup levels after a six-month period and three soil

samples had been collected to verify that specific cleanup

- 3 ½ year remediation program meets MTBE & BTEXN targets**

levels for soil had been attained. The site conditions consisted of silty clay soils requiring treatment to depths of 15 to 18 feet with groundwater seasonally varying between eight and nine feet deep. The treatment area was 180 feet long and 140 feet wide. Hydraulic conductivity was 10E-6 cm/s.

Four key monitor wells were selected and cleanup targets of 0.54 mg/l for benzene, 0.51 mg/l for MtBE, and 10 mg/l for TPH were established. The baseline average in the key monitor wells was 2.51 mg/l benzene, 0.77 mg/l MtBE, and 6.12 mg/l TPH. Benzene concentrations as high as 18 mg/l, MtBE concentrations as high as 9.9 mg/l, and TPH concentrations as high as 110 mg/l had been detected

in key monitor wells prior to startup.

The remediation system was started on February 25, 1999 and consisted of 23 Density

Driven Convection (DDC) wells and a soil vapor extraction system. Angled DDC wells were installed beneath the shop which was the primary release source area.

The first 25% and 50% reductions were attained in December 1999 and the 75% reduction was attained in November 2000. The specified cleanup levels for each monitor well were met in June 2002, and the remediation system was turned off for the six month period. On December 23, 2002 the key wells were sampled and were in compliance. Three soil samples were collected on February 5, 2003. Chemical

analysis of the soil samples indicated non detectable concentrations of BTEXN.