DISSOLVED PHASE REMEDIATION USING ISOC TECHNOLOGY IN CONJUNCTION WITH BIO-SPARGING

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Ground water was contaminated by a pipeline failure at a remote southwest US site. Contaminants migrated vertically through the shallow silty/clayey fine sand layer to a similar low permeability but caliche-cemented zone. Once the condensate reached the groundwater, dissolved phase petroleum migrated offsite.

The *in-situ* Submerged Oxygen Curtain (iSOCTM) technology was selected because of its remote capability. Two iSOC curtains have been installed near the boundaries of the plume. After favorable results were indicated, a bio-sparge system was installed in the heart of the plume, followed by additional boundary iSOC units.

After installation, monthly sampling was conducted for BTEX, DO, ORP and Total Inorganic Carbon (TIC). Data indicate that DO, ORP, and TIC concentrations are increased and benzene and MtBE concentrations are significantly decreased in all wells.

The most significant results were found in the well located 80 feet cross gradient of the iSOC curtain. Initial TIC concentrations in this well were 111 mg/L and have increased to 170 mg/L. Benzene concentrations in this well started at 36 mg/L and have fallen to 0.66 mg/L.

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