E-REDOX® CASE STUDY: *IN SITU* GROUNDWATER BENZENE BIODEGRADATION ENHANCEMENT AT A FUEL STATION AND RESIDENTIAL AREA IN DENVER, CO

Location: Fuel station and residential area in Denver, CO

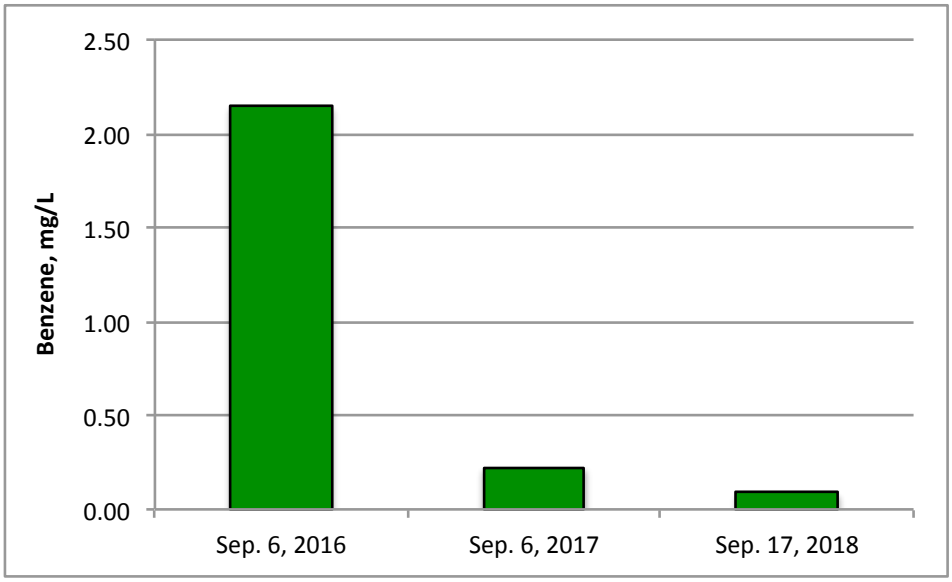
Contaminated Matrix: Groundwater

Primary Contaminants of Concern: Benzene

Project Objective: Enhancement of *in situ* contaminant degradation by full-scale implementation of E-Redox® technology

Case Study: E-Redox® units were installed in groundwater wells within the contaminant source area. The units were installed in an array with 20-ft spacing and operated with zero energy input. After 2 years of operation, total benzene concentrations in the source area dropped 90% from pre-installation levels (see figure below). Voltage was generated in all E-Redox® units, ranging from 20 to 150 mV, depending on contaminant and background organic carbon levels. The voltage profiles serve as a convenient tool for monitoring the E-Redox® units' performance and groundwater quality in general without groundwater sampling.

Overall, the full-scale implementation of E-Redox® technology at this site has resulted in a substantial reduction of overall benzene concentrations in the groundwater.



Overall benzene concentrations for the source area of a fuel station

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