

Groundwater monitoring on Philippine fuel spill site: Seasonal plume variations and persistence of VOC contaminants

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2 million liters of petroleum products were released to soil and groundwater last 2010 in the financial district of the Philippines. The leak was traced to a defective weld on a pipeline. Remediation measures using multi-phase extraction were initiated and monitoring of the contaminant plume was done through 50 sampling wells. GCMS analyses within a 2-year time frame done monthly show benzene levels are persistently high (>>5ppb) in monitoring wells which are adjacent to the spill point and are located in a relatively flat groundwater elevation. Upon inspection of the VOC profiles from the GCMS derived chromatograms, it was also found that volatile hydrocarbons such as BTEX and various benzene derivatives such as naphthalene and indane are still present even four years after the start of petroleum spill remediation activities. The plume also varies in size depending on the extent of rainfall and groundwater infiltration.