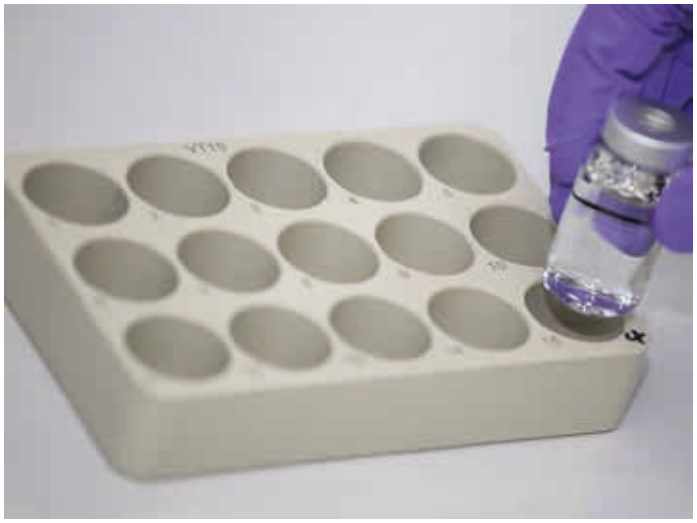
Dissolved Gas Analysis

Natural attenuation, or intrinsic remediation, is increasingly becoming the preferred remediation method.

This technique allows naturally occurring microbial activity to metabolize the contaminants of concern. The progress of remediation is evaluated partly on results of the analysis of groundwater samples for dissolved gases such as Methane (CH4), Ethane (C2H6) or Ethene (Ethylene) (C2H4). The reading of dissolved gases in groundwater is important in addressing whether intrinsic bioremediation is occurring in a fuel contaminated or solvent contaminated aquifer.



Analysis

A common practice observed in the UK and other countries worldwide is the disposal of landfill leachate. This is conducted by pumping into the local sewerage system for contaminants to receive treatment in combination with domestic sewage. Leachates can contain concentrations of dissolved Methane (CH4) that can cause explosive atmospheres within sewers. In order to avoid such incidents adequate treatment is required to be in place.

ALS Environmental offer analysis to measure the concentration of gases in water samples. We use state of the art technology to extract samples using a headspace technique that is then analysed by Gas Chromatography and detected using Flame Ionisation and Mass Spectrometric Detection.

Reporting limits:

- Methane 0.01mg/l
- Ethene (Ethylene) 0.01mg/
- Ethane 0.01mg/

The sample must be taken in a 40ml VOC vial and filled slowly down the side to avoid degassing. The vial must be fully filled to ensure no headspace gas remains. The samples are then returned to the lab where they are stored in refrigerators prior to analysis.

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