



THF – Remediation using a new method

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Tetrahydrofuran (THF), is a colourless organic liquid often used in industry as a solvent. THF belongs to the group of ethers. It features a high degree of polarity and is fully miscible with water.

General information:

Name: Tetrahydrofuran (THF)
Chemical formula: C₄H₈O
CAS-Number: 109-99-9

THF and remediation

Tetrahydrofuran is fully miscible with water. Its high polarity makes THF difficult to remove from the dissolved phase. On the basis of the physico-chemical properties of THF, In-Situ Technieken has developed a new process for in situ chemical oxidation (ISCO).



THF contamination in Dordrecht – From pilot to full-scale remediation

Challenge

The site of an industrial client in Dordrecht was found to be contaminated with THF. The contamination was located in the groundwater at the site, which was still in use.

Approach

Currently there is no fully effective remediation technology available for cleaning up contamination with THF. Through a combination of literature study, information provided by the client and laboratory testing, In-Situ Technieken developed a new reagent formula for ISCO to be used in a pilot remediation project.

Result

The new ISCO approach resulted in a decrease in THF concentrations of over 98%. After the successful pilot project the new ISCO approach was used in the full-scale remediation of the site.

In-Situ Technieken

In-Situ Technieken has extensive knowledge of numerous remediation techniques for the treatment of contaminated soils and groundwater. Many of these techniques have been developed in-house and patented. To facilitate continuous updating of our innovative techniques, we make use of our own laboratory and a large library, and cooperate closely with the scientific community. We have a successful track record in remediating difficult contaminants and excel in developing innovative techniques. Whatever the contamination, we can practically always offer you a suitable solution.

In-Situ Technieken has successfully completed a large number of remediation projects. Various remediation techniques have been applied during these projects, such as in situ chemical oxidation (ISCO), soil vapour extraction (SVE), multiphase extraction (MPE), air sparging, immobilisation, enhanced biological degradation, and pump and treat (P&T).

ISTR[®]

We have the knowledge and experience in house to offer a remediation solution for a wide range of chemicals that are inherently difficult to treat. The proven method used for this purpose by In-Situ Technieken is In Situ Targeted Remediation (ISTR[®]). We use ISTR[®] to remediate various contaminants in differing geological and hydrogeological profiles quickly, safely and in a controlled manner. Every project receives its own specific approach, with safety and flexibility as key features. In-Situ Technieken – a trade name of ARCADIS – is fully certified for carrying out (soil) remediation projects and operates world-wide.

For more information:

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