



Styrene – Combined remediation

ISTR®

Styrene, also called vinyl benzene, is an aromatic monomer. Styrene is used in the petrochemical industry as a raw material for plastics such as polystyrene and styrene butadiene rubber.

General information:

Name: Styrene
 Chemical formula: C_8H_8
 CAS-Number: 100-42-5

Styrene and remediation

Styrene is volatile, easily soluble but also strippable. In-Situ Technieken has experience with remediation of styrene contaminations. Using in situ chemical oxidation (ISCO) a high level of remediation was achieved in a very short time.



Styrene contamination in Arnhem – Combined remediation as the best solution

Challenge

On the former site of a chemicals manufacturer in Arnhem, concentrations of styrene were detected in the unsaturated zone to a depth of five metres below ground level. Concentrations up to approximately 2,000 mg/kg d.s. were measured in the soil. There was only a limited amount of time available for the remediation project. Challenges arose during remediation implementation as the site was still active and the above ground structures remained in place.

Approach

In-Situ Technieken used a remediation approach consisting of in situ chemical oxidation (ISCO) combined with soil vapour extraction (SVE) and biostimulation.

Result

The remediation work was completed within a short period of only a few weeks, without any disruption to site activities. The remediation was terminated after an agreement was reached with the regulatory authorities.

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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