

## In-situ remediation of heating oil plume in marl structure

Pressurized oil phase extraction | Biostimulation | Environment sensors | Plant construction

### Project description

The soil in front of a family's house had become contaminated with 1000-2000 liters of heating oil; leaked from tank installations. Excavation work demonstrated significant heating oil residues, extending into deep regions of the soil. After the installation of multi-level injection lances, the oil remaining in the soil was automatically extracted using vacuum assisted technology.

Phase-free oil deposits remaining at the edges of the plume were first exposed to chemical oxidation followed by biological treatment. The project was considered a difficult one, due to the silty nature of the soil type. Nonetheless, remediation was completed successfully and closure of the site was approved by the local environmental protection authorities.

### Customer

Regional insurance company

### Estimated cost

110,000 EUR

### Project timing

June 2007 – July 2009

### Project areas

Chemical and biological treatment, remediation system installation and environmental sensor technology



### Project data

- Contaminants: hydrocarbons, mineral heating oil
- Plume size: front yard of a house 400 m<sup>2</sup>, extending to 7 m deep

### Services rendered

- Participation in the generation of the remediation concept
- Design and installation of remediation equipment
- Executing intra-soil injections
- Project documentation

### Customer's expectations

- Avoiding further excavations
- Land value increases
- Limiting the disposal costs
- Cost reduction in comparison to traditional methods

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