

Desorption of mineral oils



Context

Within the framework of a soil remediation project of a automotive garage contaminated with hydrocarbons in the soil and the underground water, Injectis was called to find a fast and effective solution to treat the site.

Indeed, the pollution is in a silt with a low permeability, the heaviest fractions of TPH are not very mobile in water because they are strongly bound to the soil particles, considering the high concentrations of organic matter. Moreover, it is not possible to excavate the area, nor to stop the activity.

Reaction

To be able to liberate the contaminants strongly bound to the soil particles and organic matter, it was proposed to carry out 3 injections in the area to release the contaminants by **desorption** and make them available in a second time for an above ground treatment by Pump&Treat or an In Situ Chemical Oxidation (ISCO). In this case, it has been decided to treat by an ISCO.

Reagents

To ensure the mobilization of mineral oils combined with the degradation of pollution by chemical oxidation, a mixture of the Petrocleanze solution (A+B) and Regenox was chosen. The Petrocleanze act like a surfactant to liberate the hydrocarbons and Regenox is the oxidant used for the ISCO.

Particularity

The geology of the site presenting gravelly layers, our specific **Gravel Spin** machine had to be used to allow the injection in these layers more difficult to access for our traditional SPIN® Injection machines.

Location:	Brussels, BE
Geology:	Silt with gravel layers
Pollutant(s):	GW with TPH up to 125 mg/L
Reaction:	Desorption + ISCO
Reagent(s):	Petrocleanze (as surfactante) + RegenOX (as oxidant)
Application type:	Grid application
Surface/length:	40 m ²
Number of points:	3
Depth interval:	3,0 – 6,0 m-bgl
Dosage:	average 450 l/m

Injectis, your specialist partner for in situ soil remediation

Innovative techniques for cleaning and restoring contaminated soil in its original location.

