

AIR SPARGING

Description/Application

During the passage of air through the ground volatile compounds of soil are mobilised and passed over into the gas phase. The exhausted ground air can be treated by thermic catalytic oxidation processes for example.

In many cases contaminated soil and groundwater can't be removed from the contaminated area for ex situ treatment or heaped up for treatment in accumulations. Among high costs existing housings at and usage of the contaminated area prohibit these treatment processes.

Solution

In those cases in situ processes have been approved. Especially for high volatile (BTEX) contaminations the pneumatic in-situ process of Air Sparging can be used effectively. During this process clean air is inserted into the soil and polluted air is exhausted through air gauges intended therefore.

Experience

Delta Umwelt-Technik GmbH has the expertise and experience for the optimal use of this process and thereby for the economic remediation of contaminated areas.

Advantages

The advantages of the Air Sparging process can be summarised as follows:

- safe remediation beneath fundaments and existing housing,

- also in explosive areas,
- space-saving and discrete remediation processes,
- no trench, digger etc.,
- the inserted air also contributes the activation of the natural biological cleaning process and thus allowing a shortened remediation time.



Examples/ References

Delta Umwelt-Technik GmbH operates a remediation plant on a former lacquer factory site with volatile contamination (BTEX) concentrations up to 75,000 µg/L at present. The origin of the contamination is located directly beneath a mall. The geologic profile and the localisation of the inserted gauges are shown in figure 1. The remediation plant at the former lacquer factory site is in operation for 2 years now and achieves excellent cleaning results. The catalytic treatment of discharged air is safe in operation and allows a high availability.

Some references of Delta Umwelt-Technik GmbH for the use of Air Sparging are the following remediation sites:

- Berlin Chemie AG
- VW Nutzfahrzeuge GmbH in Hannover
- Former coking plant in Zwickau
- Former lacquary factory in Weissensee
- Former lacquary factory in Teltow

