Versuchseinrichtung zur Grundwasser- und Altlastensanierung · *VEGAS*
IWS - Universität Stuttgart - Pfaffenwaldring 61 - D-70569 Stuttgart

Problem description
MSc-Thesis
BAU, UMW, WASTE

Universität Stuttgart
Institut für Wasser- und Umweltsystemmodellierung

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Determination of mass transfer rates of Contaminants during Steam-Air Enhanced in-situ remediation processes, Part II

Description

The computer software “DLI-Tool” is used to design a steam-air driven in-situ soil and groundwater remediation. Thermodynamic and hydrodynamic processes are well predicted by the software. The contaminant mass removal depends on process specific parameters as well as the site specific parameters soil type, content of organic matter, and kind of contaminants distribution.
The investigation of the mass removal rate for chlorinated hydrocarbons is based on a literature study to develop an analytical/numerical solution. The novel approach will be verified during flume experiments in the VEGAS facility. The work may be split into three different theses. The main tasks will be the experimental implementation of 2-D remediation experiments and the data evaluation and the enhancement of an existing spreadsheet-based analytical method to predict the contaminant mass transfer rates.

Supervision
Dipl.-Ing.(FH) Oliver Trötschler

Start
1.3.2019 or later

Required knowledge:
Competent knowledge and experience in the Microsoft Office Suite, focus on VBA program-ming and MS Excel. Thermodynamic background knowledge concerning heat calculation using steam. Knowledge and experience in chemical analysis using a gaschromatograph. Knowledge and experience with experimental work.

contact
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