

## One-dimensional emulsion flushing with real soils for removal of TCE

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For the feasibility of emulsion flushing to remove trichloroethylene (TCE), one-dimensional column experiments were conducted with real soils. Emulsion was prepared by mechanical homogenization of aqueous silicone oil solutions (2 % (v/v) silicone oil) during 15 min. And three types of soils, which have the different properties, were collected from the field. As the reference, the jumunjin filtered sand with very low organic contents was selected. Results of one-dimensional column studies indicated that hydraulic conductivity and sorption of TCE by organic content were important in flushing performance. In flushing with soil of high organic, silt and clay content, the solubilization of TCE progressed slowly because of low hydraulic conductivity and strong sorption of TCE by high organic content. However, the inhibition on TCE solubilization was not observed with soils below 3.5 % organic content and 45 % of silt and clay.