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Remediation strategy and electrochemistry flushing & reduction technology for real Cr(VI)-contaminated soils

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Abstract

Exposure pathways to contaminated soils determine that the impact assessment of contaminated soils should be health risk-based, which use soil concentration, $mg \cdot kg^{-1}$, rather than leaching concentration, $mg \cdot L^{-1}$, to evaluate the threat of contaminated soils to human health. In this study, desorption kinetics experiments with a real heavily Cr(VI)-contaminated soils of 600±28 mg Cr(VI)$\cdot kg^{-1}$were conducted at pH 6.8, 12.0 and 55, 90℃, respectively. The final removals with pH 6.8 were 46.7% at 55℃ and 59.5% at 90℃, respectively. It means that the insoluble Cr(VI) is the challenge to meeting the regulatory remediation limits and the remediation strategy for