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SURFACTANT SELECTION FOR ENHANCED SOIL REMEDIATION

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ABSTRACT

Soil and aquifer remediation is frequently limited by contaminants strongly sorbed with and/or capillary-bound to the soil. Three surfactant mechanisms can be used to expedite soil and ground water remediation, including the soil rollup mechanism, micellar-enhanced solubilization and middle phase microemulsion-induced mobilization. Economic analyses demonstrate that maximizing contaminant extraction, minimizing surfactant losses and reusing the surfactant stream are critical to the viability of the solubilization and mobilization technologies. Results of six field studies will be summarized to demonstrate that this technology is ready for field deployment while also illustrating the importance of the factors discussed above.