

For evaluation of  
remedial technology  
performance variables



Contact SiREM for a quotation or more information on treatability services.

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## Laboratory Treatability Studies

Bench-scale laboratory treatability studies are a cost effective tool to assess, compare or optimize remedial technology performance variables (e.g., degradation rates, costs, etc.) prior to technology selection and subsequent field implementation. SiREM's state-of-the-art treatability laboratory is equipped with the instrumentation required to perform high quality, aerobic and anaerobic technology-specific, batch and column treatability studies.

SiREM's staff is experienced in the design, execution and interpretation of treatability studies for contaminants including petroleum hydrocarbons, chlorinated solvents and other recalcitrant compounds. Years of laboratory-to-field research by SiREM has repeatedly demonstrated the strong correlation between laboratory treatability and field success.

Specialty design elements, such as molecular genetic testing, column testing and stable carbon isotope analysis, can be accommodated by SiREM or through our associations and partnerships with leading research organizations. All studies are conducted on a fixed-fee basis per test or treatment, allowing flexibility in both study design and implementation.

Treatability study reports provide key information required by remediation project managers for design of effective pilot and full-scale remediation systems.

### SiREM provides laboratory treatability testing services for:

#### **Assessment of Enhanced In-Situ Bioremediation (EISB) including:**

- Evaluation of acclimation periods for natural microbial populations
- Assessment of the need for, and benefits of, bioaugmentation
- Optimization of electron donor or acceptor additions (type and concentration) for EISB remedies
- Estimation of site-specific enhanced degradation rates

#### **Assessment of Monitored Natural Attenuation (MNA) sustainability:**

- Evaluation of the nature, rate and extent of intrinsic biological and abiotic degradation activities

#### **Evaluation of Abiotic Treatment approaches including:**

- Testing zero valent iron products to measure chemical-specific reaction rates
- Assessment of natural oxidant demand of aquifer materials for in situ chemical oxidation
- Evaluation of rate and extent of chemical oxidation using commercial oxidants under a variety of activation methods
- Sediment amendments for active caps

#### **Evaluation of Electrokinetic (EK) Enhanced approaches including:**

- Testing EK for in-situ biological and chemical remediation in low permeability soils