AECOM Treatability Studies Laboratory

Areas of Expertise

- Bioremediation (aerobic and anaerobic)
- In situ chemical oxidation
- Chemical reduction
- Solidification/stabilization
- Surfactants treatment
- Metals fixation
- Batch and column tests
- Flocculation and settling tests
- Cell culture of beneficial microbial strains

Overview

The AECOM Treatability Study Laboratory provides a cost-competitive option for performing batch and column treatability studies to evaluate chemical, biological, and physical treatment approaches for a wide range of chemicals in various environmental media, at projects across the US. Bench-scale treatability studies can be used to compare treatment alternatives, evaluate reagent types, dosages and application methods, shed light on site biogeochemical conditions, and provide proof-of-concept evidence that a selected remedial technology will attain performance objectives. The treatability study results can be used to support all aspects of remedy selection, design, and implementation.

Analytical Capabilities

On-site analytical capability is critical to measure the real-time contaminant degradation kinetic data and determine the time points for off-site quantitative analyses, if needed. Our facility offers the following analytical capabilities:

- Ion chromatography: Nitrate, sulfate, chloride, organic acids
- Gas chromatography (FID and TCD detection): VOCs and gases
- Atomic absorption (metals)
- Mercury analysis
- UV-VIS spectrophotometry: reduced iron, reduced anthraquinone disulfonic acid (AQDS), protein, hexavalent chromium
- Soil oxidant demand test
- Total organic carbon (TOC)
- pH, ORP, DO, specific conductivity, temperature, and turbidity

The contaminants of concern that can be evaluated with these tests include:

- Chlorinated ethanes/ethenes: PCE, TCE, 1,1,1-TCA, cis-DCE, etc.
- Benzene, toluene, ethylbenzene, and xylene (BTEX)
- Chloroform
- Nitrosodimethylamine (NDMA)
- 1,4-Dioxane
- Toxic metals: mercury, arsenic, hexavalent chromium
- PFAS

More Information

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