



AECOM

Laboratory and Analytical Services

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The objectives behind the laboratory and analytical services that AECOM provides are to assist our clients in the identification, evaluation, optimization, and troubleshooting of processes they need and rely on.



AECOM maintains a suite of process and analytical laboratories in a 10,000+ sq ft state-of-the-art research complex located in Austin, TX. Individual labs are configured based on current activities, but are designed to be easily modified or re-outfitted with equipment and/or instrumentation to meet changing project needs. The facility is staffed primarily by chemists and chemical and mechanical engineers, and is capable of continuous 24/7 operation.

Analytical Laboratories

The current analytical laboratory space supports characterization services involving the development, demonstration, or performance of industrial processes. Current routine analytes include metals (e.g., mercury, magnesium, etc.), halogens (e.g., chloride, fluoride, iodide), and polyatomic ions (e.g., nitrate, carbonate, sulfate). The analysis of hydrocarbons from liquid and solid samples is also performed. AECOM research chemists are able to develop new methodologies for other species of interest.

As an example of our laboratories reconfigurability, one is currently dedicated to the analysis for mercury in samples from a variety of industrial air, solid, and wastewater process streams. AECOM uses this particular laboratory to help our industrial clients meet new regulatory requirements. In addition to supporting projects focused on developing and evaluating



10,000^{ft²}
of laboratory space



Volumetric Flasks with Preserved and Unpreserved Aqueous Samples Destined for Mercury Analysis

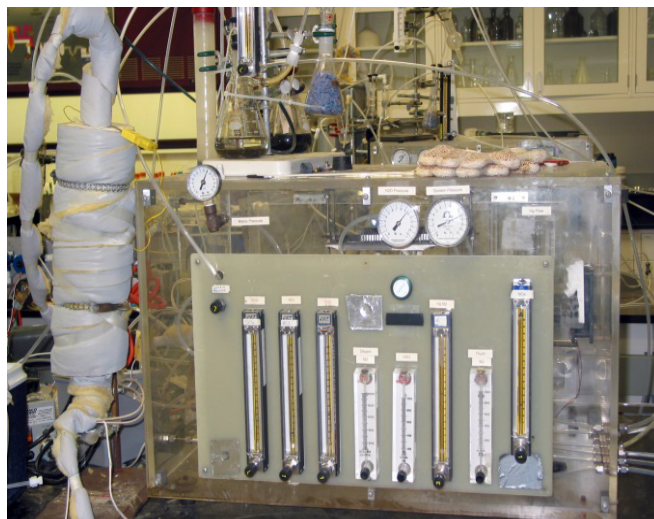
mercury control technologies and studying the fate of mercury across various industrial processes, researchers also develop and validate mercury measurement methods.

Other analytical laboratories include sample preparation labs and an electrochemistry lab. The electrochemistry lab supports a variety of technology development and consulting projects that evaluate corrosion phenomena, electro-catalysis, chemical sensing, and other reduction-oxidation processes.

Process Engineering Laboratories

Engineering laboratories currently support small- to mid-scale R&D investigations of air-, water-, and hydrocarbon-based technologies. The labs contain multiple bench-scale systems, each of which is designed to simulate a different industrial process. Each system is composed of a process stream generation system, an experimental reaction chamber, and multiple sample ports; some systems are capable of continuous 24/7 operation.

Some of these systems support the development and evaluation of pollution control technologies, whether they are absorbers, adsorbents, or catalytic reactors. Results help researchers identify reagents, reactor designs, and operating conditions for subsequent tests conducted at pilot- or full-scale.



Gas Distribution System for a Bench-Scale System

One of the process engineering laboratories supports bench-scale R&D activities focused on the removal of various contaminants, such as hydrogen sulfide, from natural gas, gasification syngas, and a variety of industrial gas streams. This lab also houses a bench-scale test system designed to develop and evaluate catalytic reactors operating at high temperature and pressure conditions.

Results generated from both bench-scale and full-scale experiments enable researchers to assess the chemistry of the various processes, solve client problems, and proactively develop solutions to upcoming needs in the power industry.

About AECOM

AECOM is built to deliver a better world. We design, build, finance and operate infrastructure assets for governments, businesses and organizations in more than 150 countries. As a fully integrated firm, we connect knowledge and experience across our global network of experts to help clients solve their most complex challenges. From high-performance buildings and infrastructure, to resilient communities and environments, to stable and secure nations, our work is transformative, differentiated and vital. A Fortune 500 firm, AECOM companies have annual revenue of approximately US\$19 billion.

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