



## RESEARCH & DEVELOPMENT

#### LEADING THROUGH INNOVATION

At CETCO, our research and development capabilities are fundamental to creating technical innovations that solve our customers' unique challenges. In our well-equipped Houston laboratory, CETCO scientists develop new technologies and provide valuable insight into services that enable us to maximize efficiency, minimize costs and enhance sustainability. Using state-of-the-art analytical equipment, we perform a wide range of Applied Analytical and Testing Services while providing unsurpassed support to customers across the globe at our ancillary labs.

### **APPLICATIONS**

- Analytical Studies focused on fluid characterization and solid phase identification
- Treatability Studies to measure the effectiveness of a specific treatment method
- Test Loop and life-scale studies complimenting Bench Top, Treatability and Analytical studies
- Offsite Services for Trouble Shooting and Sampling
- Technology Development to transform new ideas into practical and sustainable solutions

## FEATURES & BENEFITS

- Maximize production
- · Avoid costly shutdowns
- Highly qualified scientists
- Advanced technology laboratory
- · Reliable and Sustainable Solutions









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#### **ANALYTICAL STUDIES**

We perform analytical studies that are mainly focused on fluid characterization and solid phase identification. This includes, hydrocarbons in water phase measurement by Gravimetric EPA 1664, Solvent-Free Fluorescence Spectroscopy, Infra Red Absorbance, Spectrophotometry UV-near IR and Colorimetry. Anions, Cations by Colorimetry. Solids by Millipore, NACE TM0173, Microscopy and PSD by Visual Imaging. Bacteria by ATP, pH, COD etc.



#### **OFFSITE SERVICES**

Are regularly conducted by highly specialized and offshore certified technicians. Customized to a customer's need, these services can be for troubleshooting, sampling, onsite analysis, or comprehensive ORCA® studies. CETCO's analytical and testing capabilities for offsite projects usually include an initial evaluation with the customer, defining plan and objectives, drafting sampling program and sampling protocols, selecting applicable field-rated instrumentation and tools.



#### TREATABILITY STUDIES

We conduct verification tests to evaluate the success rate of a proposed treatment method or to provide a solution for treatment of a specific fluid. Through our Analytical and Testing service, we evaluate a treatability request by conducting series of tests against its proprietary separation technologies and/or chemical treatment.



#### **TECHNOLOGY DEVELOPMENT**

Technology development is an integral part of our NPPD Stage Gate process. Leveraging our Analytical and Testing capabilities, we transform new ideas to practical and sustainable solutions by application of state-of-the-art methodology, design of experiment, qualified tests and verifications.



#### **CETCO TEST LOOP**

Test Loop and life-scale studies compliment Bench Top, Treatability, and Analytical studies. CETCO Analytical and Testing capabilities include a dedicated test loop to study experimental solutions at a real-life scale. Equipped with Instrumentation and control capability, CETCO Test Loop can simulate field process conditions throughout the test and provide comprehensive measurement capability and Data Acquisition of the key performance and process indicators.

