



10 Commerce Drive Pelham, AL 35124
PHONE (205) 453-0236 FACSIMILE (205) 453-0239
www.innovativecombustion.com

Job Opportunity: Chemist

Location: Pelham, Alabama

About the Company:

ICT was founded in 1993 and has built a worldwide reputation as a results-oriented company serving the electric power industry, CHP and other industries utilizing natural gas, coal, oil, and biomass. ICT's services include:

- Expert know-how, technical and engineering services to electric generating units and other combustion systems.
- A full array of performance, diagnostic and environmental testing services per EPA methods, ASME, ASTM, AMCA and ISO standards as well as specialized testing methods developed by ICT.
- Performance, capacity and safety enhancements on power plants firing pulverized coal, other solid fuels, natural gas and oil.
- A SCR catalyst testing laboratory at pilot, bench and micro bench scale and an XRF laboratory to troubleshoot catalyst deactivation problems.
- Laboratory fuel testing to support our customers with quality control, fuel specification, trouble-shooting and R&D.
- Field services, analytical services and training to support our customers' needs and objectives associated with performance optimization, troubleshooting, emissions compliance and reliability of electric generating plants.
- Design and manufacturing of specialized testing equipment and performance optimization equipment used with combustion systems

Position Description:

The **Chemist** will produce accurate and timely analytical data following established methods, procedures and quality control protocols and will primarily work in the SCR catalyst testing facility and in the Fuel and Ash Laboratory. The chemist will perform various analyses which would include but not be limited to titrations, FTIR spectra, and X-Ray Fluorescence (XRF). Other duties will also include performing both Pilot Scale and Micro Scale catalyst testing. The chemist's responsibilities will include preparing test solutions and reagents, analyzing composition of catalyst samples using XRF, performing EPA Method 8A to measure oxidation of SO₂ to SO₃, assist with the preparation of samples, and conducting quality control tests. The Chemist will conduct research and explore how test procedures, methodologies and data interpretation can be improved. A successful chemist should be analytical, detail oriented, and logical. And always dedicated to furthering scientific knowledge, improving processes and willing to work with your hands.

Duties include:

- Perform tests, analyses and other tasks as directed by Catalyst Lab Chemical Engineer.
- Maintaining the cleanliness of the SCR laboratory as well as the Fuel and Ash laboratory.
- Operating the Pilot and Micro scale catalyst reactors which includes:
 - Establishing and sustaining stable test conditions.
 - Collecting real-time data and documenting appropriately.
 - Identifying and addressing problems with equipment functionality.
- Maintaining records and organization of the reagents and other chemicals used for testing.
- Calibration and maintenance of analytical instruments including O₂ analyzers, FTIR (Fourier Transformation Infrared), Scales, Titrators, etc. ICT will provide training on complex tasks such as aligning lasers and mirrors in the FTIRs; prior experience is a plus but not a prerequisite.
- Operating and maintaining instruments for chemical analyses, such as ion chromatography for sorbent trap analysis
- Maintain all other laboratory instruments, troubleshooting malfunctions and generating purchasing requests for laboratory supplies as required.
- Periodic functional testing of fume hoods in the SCR Lab and Fuel & Ash laboratory.
- Preparation of samples for XRF, which requires cutting, scrapping, and grinding with a mortar and pestle.
- Preparing test solutions, compounds, and reagents for conducting tests and advising and coordinating test procedures.
- Writing reports, white papers, and standard operating procedures.
- Conferring with scientists and engineers to analyze, interpret, and develop tests.



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- Preparing standards for and specifications for processes, tests, and analyses.
- Evaluating and ensuring compliance with laboratory safety procedures and standards.

Qualifications:

- Bachelor's degree in Chemistry or related field.
- Experience in scientific research and laboratory work may be advantageous.
- Proficient in use of basic lab equipment; balances, spectrophotometers, pH meters, micro-pipettes, desiccators, etc.
- Strong problem-solving, critical thinking, and analytical skills.
- Strong technical, communication, computer skills (Proficient with MS Office and Adobe Suite).
- Good presentation, documentation, and reporting skills.

Applicants must be legally authorized for employment in the United States and will not require employer sponsored work authorization now or in the future for employment in the United States.

Compensation and Benefits:

Competitive pay or salary commensurate with qualifications and experience and benefits that include 401K, dental insurance, medical insurance, paid company holidays, and 12 paid days off a year to be used as vacation, personal or sick days. Innovative Combustion Technologies, Inc. provides a unique environment that fosters individual growth and rewards performance of our productive team members.