

## Emissions Testing

### Experience in Testing

As the number of regulated air pollutants increases, accurate air emissions testing and reliable monitoring become more important. GE Energy's team of technicians, project managers, engineers and scientists apply decades of experience and the rigors of GE's Six Sigma quality process to the full range of air emissions testing required by federal, state/provincial and local regulations. This includes extensive testing experience covering a broad range of stationary sources (including combustion turbines) for emissions such as:

- Single-Digit Nitrogen Oxides (NO<sub>x</sub>)
- Sulfur Oxides (SO<sub>2</sub>)
- Particulate Matter (PM)
- Fine Particulates
- Ammonia (NH<sub>3</sub>)
- Carbon Monoxide (CO)
- Mercury (Hg)
- Formaldehyde
- Hazardous Air Pollutants (HAPS) using Fourier Transform Infrared (FTIR)

### Innovation

GE is defining the cutting edge of technology for characterizing PM10/PM2.5 emission factors, size distribution (including ultrafines) and chemical speciation profiles from combustion sources. Our recent innovative fine particulate work has captured the interest of industry, academia, and public agencies – and is leading to more accurate measurement of emissions from gas turbines, boilers, process heaters, cement plants, and reciprocating engines. GE is applying these techniques to help our customers develop:

- Particulate Control Baseline/Guarantee Data
- Opacity Solutions
- Emission Inventories

- Rulemaking Advocacy
- Site Permitting/Applications
- Health Risk Analyses
- Source Apportionment Studies

### Technology

Accurate determinations of NO<sub>x</sub> and CO often require measurements to the single digit ppm levels. GE has invested in the development of testing methodologies and has utilized our combustion research facilities to evaluate the performance of emission reduction technologies. We have developed a unique understanding of test methods such as CARB-430 for reliable measurement of aldehydes at low concentrations. We now offer extractive Fourier Transform Infrared (FTIR) technology that offers the capability to measure formaldehyde and other trace gases at parts per billion (ppb) levels in real-time. This capability enhances your ability to rapidly evaluate emissions, make process improvements and benchmark control technologies in real-time.

### Industry Leading Capabilities

The GE Energy testing portfolio has industry-leading capabilities from our experienced test engineers to a growing fleet of mobile-testing labs, remote monitoring and diagnostic capabilities, and even contractual plant operation and maintenance. We work with our customers to determine the services that will best meet the unique needs of their operations, lending our expertise where they need it most.



## Extensive Experience Measuring:

- NO<sub>x</sub>, NO<sub>2</sub>, NH<sub>3</sub>, SO<sub>2</sub>, SO<sub>3</sub>, Sulfates, O<sub>2</sub>, CO, CO<sub>2</sub>, HCl, Total Hydrocarbons (THC), H<sub>2</sub>S
- Particle Size & Distribution, Mass Emissions & Condensibles, PM10, PM2.5 & Aerosols
- Trace Metals (incl. Speciated Mercury)
- Volatile and Semi-Volatile Organics including Dioxins, Furans, Formaldehyde, Polycyclic Aromatic Hydrocarbons (PAH) and Polychlorinated Biphenyls (PCBs)
- INSITU Resisitivity
- SCR & Control Equipment Performance
- Total Reduced Sulfur (Total and Speciated)

## State-of-the-Art Equipment

- Mobile Dilution CEM Systems
- On-Site Gas Chromatography
- More than 40 Mobile Laboratories
- Continuous Emissions Monitoring (CEM) Systems
- Fourier Transform Infrared Spectroscopy (FTIR)

## Industry Experience

- Gas Turbines, Stationary Diesel, Spark Ignition Engines
- Industrial and Utility Boilers
- Refinery Process Heaters, FCCUs and CO Boilers
- Incinerators Burning Municipal, Hazardous, Medical or Mixed Wastes
- RCRA/TSCA Incinerator Testing and Trial Burns
- Recovery and Power Boilers, Thermal Oxidizers, Lime Kilns, Dissolving Tanks and Other Pulp and Paper-Related Sources
- Cement Kilns
- Aerospace Manufacturing Facilities
- Wastewater Treatment Plants
- Petrochemical Manufacturing Facilities
- Steel Plants, Foundries and Smelters
- Printing and Coating Plants
- High-Temperature, High-Pressure Environments
- Other Commercial, Industrial and Utility Plants



ISO 9001 Accredited  
Quality System

For more information, contact your GE Energy representative today at 800-821-2222 or visit us at [gepower.com/airquality](http://gepower.com/airquality).

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GEA-13206D (09/05)

