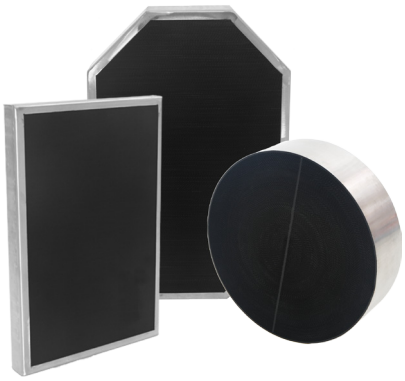
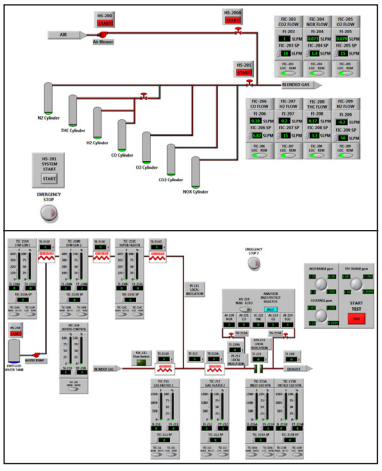
EmeraChem™
life beyond compliance®

1729 Louisville Dr.
Knoxville, TN 37921
**www.emerachem.com**
865.246.3000 Office
865.246.3001 Fax
888.777.4538 Toll Free






## Catalyst Performance Testing Services

A precious metal catalyst is a costly investment with long-term value. Like any piece of equipment, a catalytic system benefits from routine inspection and maintenance. As an OEM catalyst developer and manufacturer, EmeraChem offers complete catalyst lifecycle services to help you maximize the value of your investment. EmeraChem can help you set up a catalyst monitoring program that includes performance testing, laboratory evaluations, chemical washing and regeneration. At the end of its service life, EmeraChem will recover the precious metal and apply it to your replacement catalyst.

### Catalyst Performance Testing and Analysis:

- EmeraChem characterizes the performance of full-size commercial catalyst elements and test buttons using a large pilot-scale reactors.
- Actual field operating conditions are reproduced including temperature, flow rate, and inlet emission levels. Real-world test conditions show how your catalyst will perform in your system.
- CO, $SO_2$, NO, VOCs, and other gases are metered into the system and measured. EPA methods and protocols and a calibrated CEM system are used to measure catalyst performance over a range of operating conditions.
- Three-way (NSCR) catalysts are tested under rich air-to-fuel ratio conditions. The reactor system measures and records catalyst performance on NOx, CO and VOC over a range of air-to-fuel ratios, a range of operating temperatures, and a range of flow rates. Dithering conditions are accurately simulated.
- Oxidation catalysts are tested under lean air-to-fuel ratio conditions. Measurements are made and recorded for the oxidation of CO and VOCs, and the oxidation of NO to $NO_2$ and $SO_2$ to $SO_3$ over a range of temperatures and flow rates.
- EmeraChem interprets and reports the analytical results and recommends expected life and actions to reverse catalyst degradation and restore lost performance.

**Let us demonstrate** our solid products, operational excellence, experienced application engineering, responsive customer support before and after the sale, rapid manufacturing and delivery, low life-cycle cost, the best warranties in the industry, and long-term emission compliance.