

SERVICE, SUPPORT & TESTING CAPABILITIES

Environmental Monitoring System Support and Source Emissions Testing



Monitoring Solutions offers full support of Compliance Stack Monitoring Systems, and Source and Stack Testing on all emissions sources to help customers achieve their maximum equipment uptime and meet their regulatory air requirements.

Monitoring Solutions employs a large US service force dedicated to assisting customers with their CEMS, Opacity, Flow, and Source Emissions Testing. We offer a wide range of services and support to our customers including:

- Preventive Maintenance and Overhauls
- Start-up and Installation Support
- Training
- Certification Testing and Support
- CGA and Linearity Support
- Opacity Filter Audits
- Opacity Clear Stack Audits
- Parts & Repairs (on-site and factory)
- Source Testing

MonSol Advantages:

- Decades of combined technical experience and expertise
- Competitive rates and flexible contract services
- Maximization of system uptime and availability
- 100's of contracts nationwide means lower T&E with shared costs
- 24/7 Phone Support with unlimited access
- Multiple dispatch locations around the country for quick emergency response

Our Offices:

- Hampton, NJ
- Indianapolis, IN
- Casper, WY
- Tucson, AZ



MONITORING SOLUTIONS

Complete source for all your
 Continuous Emissions Monitoring
 (CEMS) needs:

- > Both Dilution-Extractive and Full Extractive CEMS systems
- > Data Acquisition Systems (DAS)
- > Flow Monitoring Systems
- > Opacity Monitoring Systems
- > Oxygen Monitoring Systems
- > Particulate (PM) Monitoring
- > Process Monitoring Systems

SERVICE CAPABILITIES

Environmental & Process Monitoring

Monitoring Solutions can tailor a hardware support contract to your plants' specific needs. Some of the standard support contract features include:

| | |
|---|--|
| Operation & Maintenance & 24/7 Emergency Support | Unlimited telephone support for any emergencies outside of normal business hours. |
| Quarterly Preventive Maintenance | Includes quarterly visits to perform comprehensive preventive maintenance on your CEM System Equipment, including analyzers, opacity, flow and probes. This includes pump/analyzer overhauls, flow check, filter replacements, media replacements, and cleaning. |
| Annual Relative Accuracy Test Audit Support | A Monitoring Solutions Service Engineer will supervise the annual RATA performed by a customer-provided stack test crew or MonSol stack test crew. |
| Cylinder Gas Audits (CGA's) | Monitoring Solutions' Service Engineer will perform the required Cylinder Gas Audits (3 per year). A written report will be submitted within 30 business days. |
| Quarterly Linearity's | Monitoring Solutions' Service Engineer will perform the required Linearity Gas Audits (4 per year). An electronic report will be emailed within 30 business days. |
| Opacity Monitor Audits | Monitoring Solutions will perform the quarterly Performance Audits in accordance with State and Federal Regulations. An electronic report will be emailed within 30 business days. |
| Opacity Clear Stack Audit | A Monitoring Solutions' Service Engineer will perform the required Annual Clear Stack Test or Annual "Zero Alignment. An electronic report will be emailed within 30 business days. |
| Additional On-site Labor | In conjunction with the quarterly visits, Monitoring Solutions' Service Engineer will perform services (repairs, etc.) outside the scope of the preventive maintenance contract as necessary. |
| Emergency Visits with Guaranteed On-Site Response Time | A Monitoring Solution's Service Engineer will be on site within 24 hours of the determination that on-site support is required. |
| Priority Support | Service Contract clients receive priority emergency support for both site visits and in-house repairs. |
| Emergency Parts Shipment | Monitoring Solutions will provide expedited shipment and delivery (including commercial airline freight services) of in-stock parts for any emergencies which occur during or outside of Monitoring Solutions' normal business hours. |
| Discount on Travel Rates | Service Contract clients receive a substantial discount on the rate charged for travel time. |

EMISSIONS/SOURCE TESTING CAPABILITIES

Monitoring Solutions offers complete Source Testing with mobile labs fully equipped with CEMS and isokinetic sample trains. With full engineering, technical and compliance expertise we offer:

- **Compliance Testing**
- **Stack Performance Testing**
- **CEMS Certification & RATA**
- **RICE Testing**
- **Process Testing**
- **Engineering Testing and more.**

Monitoring Solutions can supply a full range of emissions testing services using wet method testing techniques, Continuous Emission Monitoring Systems (CEMS) and Fourier Transform Infrared Spectroscopy (FTIR). Our procedures follow EPA test methods listed in 40 CFR Parts 51, 60, 63 and 75 and methods published by the American Society of Mechanical Engineers (ASME), National Council for Air and Stream Improvement (NCASI), and the California Air Resource Board (CARB).

Performance Engineering Testing – Engineering test data and results are used to improve the performance of a process or operating equipment or emissions control device.

Compliance Testing - Driven by operating permits or regulatory requirements.

Common Sampling Methodologies Performed:

| Method | Constituent | Method | Constituent | Method | Constituent | Method | Constituent |
|--------|--------------------|--------|--------------------------------------|--------|---------------------|--------|--------------------------------------|
| 1 & 2 | Velocity | 8 | SO ₂ /SO ₃ | 16B | TRS | 101A | Mercury |
| 3 | Molecular Weight | 9 | Vis. Emiss. | 17 | Total Particulate | 201A | PM _{2.5} & PM ₁₀ |
| 3A | O ₂ /CO | 10 | CO | 23 | PCDDs/PCDF's | 202 | Condensable PM |
| 4 | Moisture | 11 | H ₂ S | 25A | THC | 320 | Organic/Inorganics |
| 5 | Total PM | 12 | Lead | 26 | HCl/Cl ₂ | 321 | Hydrogen Chloride |
| 6 | SO ₂ | 13B | Fluorides | 26A | HCl/Cl ₂ | 0011 | Aldehydes |
| 6C | SO ₂ | 15 | H ₂ S/COS/CS ₂ | 29 | Multi-Metals | 0030 | VOC's |
| 7E | NOx | 16 | TRS | 30B | Vapor Mercury | 417E | Ammonia |

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