

CEMS NEWSLETTER

Monitoring Solutions

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GREENHOUSE GAS REPORTING RULE

This special issue contains summary information on the newly enacted GHG Reporting Rule.

GHG Monitoring starts January 1, 2010. Your GHG Monitoring Plan, describing the monitoring protocols and equipment used to perform the monitoring, is also required to be in place by January 1, 2010.

There are three important things to know:

1. There is a lot more to the rule than merely calculating your emissions.
2. You don't need to report until March 31, 2010, BUT there are other things you need to do soon.
3. There are fuel consumption thresholds to determine applicability.

THE RULE:

The Mandatory Greenhouse Gas Reporting Rule, 40 CFR Parts 98, et al. was published as a final rule on October 30, 2009. This rule does not require reductions of greenhouse gases, but does require a very specific reporting structure for those facilities required to report their greenhouse gas emissions.

APPLICABILITY:

Applicability may be by an **"all-in source category"** that requires all facilities within this category to be

subject to the rule regardless of emissions. There are 17 categories:

- Electric Generation that report CO₂ under ARP
- Adipic Acid Production
- Aluminum Production
- Ammonia Manufacturing
- HCFC -22 Production
- HFC-23 Destruction Processes (not co-located with HCFC-22 Production & that destroys more than 2.14 metric tons HCF-23
- Cement Production
- Lime Manufacturing
- Nitric Acid Production
- Petrochemical Production
- Petroleum Refineries
- Phosphoric Acid Production
- Silicon Carbide Production
- Soda Ash Production
- Titanium Production
- Municipal Waste Landfills that generate 1,190 metric tons of methane or more per year
- Manure Management Systems with combine CH₄ and N₂O emissions equivalent to 25,000 metric tons of CO₂e or more per year

Applicability may be by **"threshold categories"** meaning that the aggregate of emissions from all categories meets the **25,000 metric tons of CO₂e** threshold set by the rule. (All greenhouse gases are referenced to metric tons of carbon dioxide equivalent - CO₂e.). There are 7 categories:

- Ferroalloy Production
- Glass Production
- Hydrogen Production
- Iron & Steel Production
- Lead Production
- Pulp & Paper Production
- Zinc Production

Reporting is also required of 6 types of suppliers of fuel and industrial greenhouse gases and motor vehicle and engine suppliers (except the light duty sector).

- Engines (except Light Duty Vehicles)
- Coal-to-Liquids Suppliers
- Petroleum Product Suppliers
- Natural Gas and Natural Gas Liquids Suppliers
- Fluorinated GHG and N₂O Suppliers
- CO₂ Suppliers

Stationary Combustion sources are also required to comply if they meet the following:

- Stationary Fuel Combustion with total heat capacity >30 MMBtu/hr
- 25,000 metric tons of CO₂e or more per year

There are several "deferred" categories where rulings are not yet finalized, but the EPA promises to regulate next:

- Electronics Manufacturing
- Ethanol Production
- Fluorinated GHG Production
- Food Processing
- Magnesium Production
- Oil and Natural Gas Systems
- SF₆ from Electrical equipment
- Underground Coal Mines
- Industrial Landfills
- Wastewater Treatment
- Suppliers of Coal

Stationary Fuel Combustion Sources are subject to the rule if they meet the following annual thresholds:

- Natural Gas: 460 Million Cubic Ft.
- Fuel Oil: 2.3 Million Gallons
- Coal: 10,800 Tons

MAJOR REQUIREMENTS:

Prepare a Monitoring Plan by January 1, 2010

- Identifies those with data collection responsibilities
- Explains the processes and methods used for data collection
 - Default emission factors from the rule, stack testing, or CEMs
 - Uses equations provided in the rule for certain sectors and emission units
- Describes QA/QC procedures for monitors (if used)
- References to existing corporate documents and SOPs
- May be revised when changes are made to monitoring equipment or procedures.
- May reflect “best available” monitoring methods until required monitoring equipment is purchased and installed.
- Must be available on-site for EPA review

(The Monitoring Plan timing was not clearly defined in the rule but was confirmed by Katherine Sibold, Program Integration Branch, USEPA Office of Air and Radiation. “The monitoring plan should be in place when the monitoring starts (e.g., Jan 1, 2010) but can be revised over time. For example, you might use best available monitoring methods for the first 3 months and the initial plan would reflect that and might be able to reference existing SOPs. By April 1, 2010, the plan should describe the procedures and the QA/QC you will use to comply with the full monitoring methods in the rule. Look for additional information in the Oct. 30, 2009 Federal Register General Provisions, page 56273 (Best Available Monitoring Methods), and 56281 (Monitoring Plan).”)

Monitoring Requirements allow for “best available” monitoring methods, and related Monitoring Plan, until April 1, 2010 when the required

monitoring equipment must be installed and operating. **Extensions may be granted to December 2010.**

The deadline for requesting an extension is January 27, 2010.

Calibration (+/- 5%) of all devices measuring parameters used to calculate emissions by April 1, 2010.

Detailed Recordkeeping Requirements for all emissions units, data, and procedures used to calculate emissions.

Reporting of greenhouse gases is required by March 31, 2011 for the 2010 calendar year.

- Report electronically to EPA with self certification by designated representative
- EPA will verify emissions data both electronically and through on-site audits
- For facilities that contain only Stationary Combustion Sources; Abbreviated Emissions Report available for 2010

The Mandatory Greenhouse Gas Reporting Rule covers 25 source categories (30 including suppliers) and each category has specific data requirements and methods of calculating greenhouse gases specific to the category.

To view a copy of the Final Mandatory Reporting of Greenhouse Gases Rule, please visit the EPA's website at

<http://www.epa.gov/climatechange/emissions/ghgrulemaking.html>.

MONITORING SOLUTIONS CAN HELP YOU MEET YOUR MONITORING NEEDS:

From a complete CO₂ CEMS to adding just a flow monitor, Monitoring Solutions can help engineer the best solution for your plant to meet the Greenhouse Gas Reporting Rule.

For GHG Monitoring we offer:

- Analyzers – Monitoring Solutions carries a complete line of CO₂ analyzers to add to existing CEMS or as stand-alone units to measure and record emissions.



- CEMS – Monitoring Solutions manufactures both Dilution and Extraction CEMS. Coupled with our CEMDAS Data Acquisition System, our CEMS offer a complete solution to emissions monitoring.



- Flow Monitoring – Our CEMFlow pitot type flow monitor offers simple reliable stack flow monitoring for use in calculating mass emissions of pollutants.



Besides supplying monitoring equipment, Monitoring Solutions offers complete sales and application engineering expertise to insure your project goes smoothly from start to finish. We offer complete assistance with installation support, start-up, and certification support.

Do you have questions about applying the GHG Rules to Your Plant?

Keramida Can Help...



We're GHG Experts offering the following services:

- ❖ Non-Applicability Documentation
- ❖ GHG Monitoring Plan and Procedures Preparation
- ❖ GHG Emissions Calculation for Annual Reporting
- ❖ Audit of GHG Monitoring Plan and Procedures
- ❖ Serve as Designated Representative's Delegated Agent for Submission for Annual Reports to U.S. EPA

KERAMIDA's GHG Experts Team brings over 100 years of experience to you. KERAMIDA was asked to provide 10 major GHG Rule training seminars and webinars over the last half of 2009 by multi-facility industrial clients, national industrial associations, law firms, and state organizations.

KERAMIDA has provided GHG Rule services to many clients in various sectors, including power plants, gas distribution companies, steel producers, metal fabrication, plastics, foundries, heavy-duty engine manufacturing, hospitals, glass manufacturers, water utilities, and furniture manufacturers.

KERAMIDA is a high-tech, full-service Sustainability, Environmental, Health & Safety, and Remediation Consulting and Engineering firm, providing services to industries, cities, and governments worldwide. The firm has been in operation since 1988 and has offices throughout the USA and abroad. KERAMIDA's principals are nationally known lecturers, authors of technical papers and textbooks, expert witness and patent holders and have played major roles in the development of national and state programs and standards. The firm's technical staff possesses certifications and registrations in over 30 different areas of expertise and holds over 25 M.S. and Ph.D. degrees.

For assistance, please don't hesitate to call on us:

Patrick Brady
Tel: 317-685-6600 • 1-800-508-8034
Cell: 317-679-3971 • e-mail: pbrady@keramida.com

www.keramida.com

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please contact Jim Nowak at:

888-386-5226

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THE COMPLETE SOURCE FOR ALL YOUR CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) NEEDS:

- Both Dilution and Extractive Type Systems
- Data Acquisition Systems (DAS)
- Opacity & Flow Monitoring
- Oxygen Monitoring Systems
- Ambient & Meteorological Monitoring
- Process Monitoring Systems
- Complete Service and Support of all CEMS including:
 - ◆ RATA's ◆ Quarterly Preventative Maintenance ◆ Quarterly Audits ◆
 - ◆ Opacity Performance Audits ◆ Training ◆ Spare Parts ◆ Repairs ◆ Contracts

