

U.S. EPA Mandatory Greenhouse Gas Reporting Rule

The following information is provided by KERAMIDA - a Global EHS & Sustainability Services Company. 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.

Reporting

On October 30, 2009, the U.S. EPA published the final Mandatory Reporting of Greenhouses Rule. At that time, The U.S. EPA deferred finalizing reporting requirements for 8 categories that had been included in the proposed rules. On April 12, 2010, the U.S. EPA published proposed reporting requirements for 7 additional categories:

- * Electronics Manufacturing,
- * Fluorinated Gas Production,
- * Petroleum and Natural Gas Systems,
- * Importers and Exporters of Fluorinated Greenhouse Gases Contained in Pre-charged
- * Equipment or Closed Cell Foam,
- * Injection and Geologic Sequestration of Carbon Dioxide, and Electrical Equipment
- * Manufacture and Refurbishment and Manufacturing of Electrical Components.

Electronics, Fluorinated Gas Production, and Oil and Natural Gas Systems were categories that were deferred from the 2009 final rule. The preamble for the various fluorinated gas categories solicits comment on the definition of facility as used in the deferred April 2009 rule for Electric Transmission and Distribution Equipment Use, in particular with respect to electric power systems.

The U.S. EPA also published the following additional requirements for all reporters on April 12: Provide the name, address, and ownership status of their U.S. parent company, The primary and all other applicable North American Industry Classification (NAICS) code(s), and An indication of whether or not any of their reported emissions are from a cogeneration unit.

Technical corrections

On May 27, 2010, the U.S. EPA released numerous proposed "technical corrections" to the December reporting rule. EPA does not believe that any of these corrections should affect facilities ability to report 2010 emissions in 2011, The following types of changes are in the proposal and affect most of the rule's subparts:

- * Corrections to cross references
- * Additional information to better understand compliance obligations
- * Amendments to equations to better reflect actual operatin conditions
- * Corrections to terms and definitions in certain equations,
- * Corrections to better match data reporting to emissions calculations
- * Other amendments related issues identified by facilities during rule implementation.

Permitting

On May 13, 2010 the U.S. EPA issued the final greenhouse gas "tailoring" rule to define when Title V and Prevention of Significant Deterioration Permits (PSD) will be required for new and existing greenhouse gas emitting sources. Greenhouse gases will become regulated pollutants under the Clean Air Act permitting programs in January 2011 when light duty motor vehicles must meet new greenhouse gas-related fuel economy standards.

For pollutants that are not listed as hazardous under §112, the threshold is generally 100 tons per year (250 for some PSD Sources). Because the EPA estimates that 6 million sources would need Title 5 operating permits and 82,000 permitting actions would need to address PSD, the U.S. EPA cites "absurd results", "administrative necessity", and "one-step-at-a-time" for establishing higher thresholds than stated in the Clean Air Act.

The rule is structured in 3 steps.

Step 1 (January 2, 2011-June 30, 2011)

Only sources subject to PSD requirements for other pollutants would need to address Best Available Control Technology for GHG emissions at 75,000 tons per year of CO₂ equivalent. Sources that have, or will receive Title V operating permits will be subject to Title V requirements for greenhouse gases, although there are no applicable requirements for greenhouse gases (the mandatory reporting rule does not meet the definition of applicable requirement).

Step 2 (July 1, 2011 to June 30, 2013)

PSD permitting requirements will apply to new sources that emit 100,000 tons of greenhouse gases per year and to modifications that increase emissions by 75,000 tons per year. Facilities that emit at least 100,000 tons per year will need to obtain title V operating permits. The EPA estimates that 550 sources will need to obtain Title V permits for the first time.

Step 3 (2011 to July 1, 2012)

The U.S. EPA commits to undertake an additional rulemaking to address the permitting of greenhouse gas emission, but will not require permitting for sources that emit less than 50,000 tons per year until at least April 30, 2016.

Past information on the GHG Rules:

April 1, 2010 was an important date for facilities required to report their greenhouse gas emissions to the U.S. EPA under 40 CFR 98, et al.

The ability to use "Best Available Monitoring Methods" ends, and you must use the methods specified by the rule;

You must have all flow meters and other devices that measure data used to calculate greenhouse gas emissions calibrated in accordance with the requirements of the rule. Under certain circumstances you can delay calibration, but there are specific criteria and procedures to do so; and

Although the rule is not clear on the deadline for having a written greenhouse gas monitoring plan, the official U.S. EPA interpretation is that April 1 is the deadline for having one in place.

The U.S. EPA will very soon be finalizing greenhouse gas standards for light duty motor vehicles. That will make greenhouse gases a regulated air pollutant under the Clean Air Act, triggering air permit requirements for relatively small sources (100 and 250 tons per year). The U.S. EPA has proposed a "tailoring rule" intended to provide relief to facilities that would be affected by the new air permit requirements. That rule is evolving as indicated by Administrator Jackson's February 22 letter to Senator Rockefeller and other public statements.

Stay tuned for the final developments, or call Paul Dubenetzky and Pat Brady of KERAMIDA Inc. at (800) 508-8034.

The rule became effective on DECEMBER 28, 2009. It requires much more than merely calculating your emissions and reporting them to the USA EPA.

04/01/10: The GHG Monitoring Plan must be finalized.

04/01/10: All devices used to measure parameters associated with calculating emissions must be calibrated by + or - 5%.

04/01/10: All required monitoring devices must be installed unless the US EPA granted an extension. You were able to rely on the "best available monitoring data" during the first quarter.

01/27/11: Submit to the US EPA the Certificate of Representation for the person (Certified Representative) who will be certifying the accuracy of your report.

03/31/11: Submit the 2010 annual report to the US EPA using a yet-to-be developed web-based electronic tool.

Got questions???

Call Paul Dubenetzky at Keramida: 317-685-6600 or email pd@keramida.com

Summary:

THIS RULE IS ESTIMATED TO AFFECT 10,000 PLANTS NATIONWIDE!

Plants affected the most initially : There are special sections for Lime, Glass and Cement plants. These plants will need to comply initially by having a CO₂ analyzer and flow monitor. If the plant emits more than 25 Ktons/year of CO₂ and does not have a CEMS currently, one may be required - the State regulatory agency will help determine this.

At this time, the EPA is NOT going final with the following subparts as they further investigate public comments, HOWEVER, most all plants will be required as a minimum to have a GHG Monitoring Plan, collect data, and add recordkeeping to their current operations:

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

The EPA plans to review further public comments and other information before finalizing these subparts. Additional discussion of their reasons for not finalizing these particular source categories at this time can be found in the individual subsections in Section III of the preamble.

Part 60 CEMS users: if a plant emits over 25 tons/year of CO₂ a plan must be submitted. This can be as simple as a calculation or a CO₂ analyzer and/or Flow monitor may be required.

Part 75 CEMS users: If you have a CO₂ or O₂ analyzer currently, there are calculations allowed to report mass emissions of CO₂. Some old plants that pump CO₂ into their process will be required to have a CO₂ analyzer.

The ruling is very vague on whether all plants will require a flow monitor. This will be mainly determined by your State regulatory agency.

The "Table for CO₂ Requirements" gives a good overview and also makes mention that O₂ measurement might be allowed (applies to non-Part 75, non EGU (industrial) units where O₂ analyzers will not suffice, e.g. sources with process emissions (cement, lime, glass).

HOW CAN MONITORING SOLUTIONS HELP?

For companies with existing CEMS:

Monitoring Solutions offers CO2 analyzers for retrofit to existing CEMS. We are proud to partner with California Analytical (CAI) to offer their complete line of CO2 analyzers. CAI manufactures the most reliable and easy to maintain CO2 analyzers in the CEMS industry today. Their unique NDIR optical bench has been an industry standard for over 30 years.

Besides supplying the analyzers, Monitoring Solutions offers the sales and application engineering expertise to assist with integration into an existing CEMS. We can also assist with installation, installation support, start-up, and certification support.

For companies without existing CEMS:

Monitoring Solutions can provide a complete CEMS solution for not only CO2 but other gases that might be required for monitoring (i.e. NOx, CO, SO2, etc.). We manufacture both dilution and extraction CEMS for flexibility to meet a specific application.

Please contact us for more information and assistance.

sales@monsol.com or 317-856-9400