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## **General Summary of the EPA's Rule for Mandatory Reporting of Greenhouse Gases**

On October 30, 2009, the U.S. Environmental Protection Agency released the Final Rule for the Mandatory Reporting of Greenhouse Gases (GHG) (40 CFR 98). The rule becomes effective on December 29, 2009. Facilities subject to the rule need to begin data collection on January 1, 2010; the initial reports are due on March 31, 2011.

### Who Must Report?

The applicability requirements of the rule are broken into four (4) parts. Any facility that is located in the United States and meets requirements of one of these four parts (see details below) must report.

#### Group 1 (see 40 CFR 98.2(a)(1))

Any facility that contains sources in any of the following categories as of calendar year 2010 must report.

- Electricity Generation (units that report CO<sub>2</sub> emissions under 40 CFR Part 75)
- Adipic Acid Production
- Aluminum Production
- Ammonia Manufacturing
- Cement Production
- HCFC-22 Production
- HFC-23 Destruction processes that are not collocated with a HCFC-22 production facility and that destroy more than 2.14 metric tonnes of HFC-23 per year.
- Lime Manufacturing
- Nitric Acid Production
- Petrochemical Production
- Petroleum Refineries
- Phosphoric Acid Production
- Silicon Carbide Production
- Soda Ash Production
- Titanium Dioxide Production

- Municipal Solid Waste Landfills that generate CH<sub>4</sub> in amounts equivalent to 25,000 metric tonnes of CO<sub>2</sub> equivalent (CO<sub>2</sub>e) or more per year, determined according to 40 CFR 98 Subpart HH
- Manure management systems with combined CH<sub>4</sub> and N<sub>2</sub>O emissions in amounts equivalent to 25,000 metric tonnes of CO<sub>2</sub>e or more per year, determined according to 40 CFR 98 Subpart JJ

Group 2 (see 40 CFR 98.2(a)(2))

Facilities that contain sources that are listed in this section and that emit 25,000 metric tonnes CO<sub>2</sub>e or more per year combined from stationary fuel combustion units, miscellaneous uses of carbonate, and all the categories listed below must report.

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

Group 3 (see 40 CFR 98.2(a)(3))

Any facility that meets all three of the following conditions must report:

- The facility does not meet the requirements of Group 1 or Group 2 above;
- The aggregated maximum rated heat input of all stationary combustion units is 30 MMBtu/hr or greater; and
- The facility has combined emissions from all stationary combustion sources of 25,000 metric tonnes or more of CO<sub>2</sub>e.

Group 4 (see 40 CFR 98.2(a)(4))

Suppliers<sup>1</sup> that as of 2010 provide any of the products listed below must report.

- Coal-to-liquid products
- Petroleum products
- Natural gas and natural gas liquids
- Industrial greenhouse gases
- Carbon dioxide

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<sup>1</sup> Suppliers include producers, importers, and exporters of fuels and industrial gases. The level of reporting for suppliers is specified in the rule. Most are required to report at the facility level; however, imports and exports, however, are reported at the corporate level.

## What Must be Reported and How Do I Report?

The rule requires the reporting of annual emissions of CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, SF<sub>6</sub>, HFCs, PFCs, and other fluorinated gases. Emissions are based on the previous calendar year's data and are reported in metric tonnes per year and as metric tonnes per year of CO<sub>2</sub>e. Not all pollutants are required to be reported for all source categories. Reports are to be submitted using EPA's electronic reporting tool, which is expected to be available in the near future.

## How are Emissions Calculated?

Emissions are calculated using one of the four methodology tiers detailed in the rule. The use of some of the methodologies is restricted based on unit size, type of fuels burned, and other factors. Annual CO<sub>2</sub> emissions are calculated as follows according to the four tiers.

- *Tier 1* – use annual fuel consumption (from company records), fuel specific default higher heating values (HHV), and default CO<sub>2</sub> emission factors
- *Tier 2* – use annual fuel consumption (from company records), measured fuel specific HHV, and default CO<sub>2</sub> emission factors
- *Tier 3* – use annual fuel consumption from company records (for solid fuels) or directly measured fuel consumption values (for liquid and gaseous fuels) and periodic fuel carbon content measurements
- *Tier 4* – use CEMS data. There are a variety of restrictions on the use of the Tier 4 methodology. The rule should be consulted prior to using this method.

Facilities that report year-round heat input values to EPA under 40 CFR Part 75 can calculate CO<sub>2</sub> emissions using the methods contained in Part 75, in lieu of the Tier 1 through 4 methods discussed above. Also, the rule contains special provisions for facilities that burn biomass or co-fire biomass with fossil fuels or municipal solid waste (MSW).

## What are the Recordkeeping Requirements?

Each facility subject to the reporting requirements must collect and maintain records including, but not limited to, the following: the detailed methods used to calculate GHG emissions; analytical data used to calculate site-specific emission factors; analytical data from site-specific calculation of fuel higher heating value (HHV) and/or carbon content; operating data used in GHG emission calculations; and records relating to missing data.

In addition, each facility must develop a written GHG Monitoring Plan detailing the processes used to collect data, QA/QC procedures, and calibration and maintenance procedures for meters or devices used to collect data.

Alternate data collection procedures may be used at certain facilities until April 1, 2010. Beginning on April 1, 2010, all facilities must either follow the data collection procedures contained in the rule or obtain an extension from EPA to continue the use of the alternate procedure. The request for an extension must be submitted to EPA no later than January 29, 2010.

### Where Can I Get More Information?

Additional information can be found on EPA's website at <http://www.epa.gov/climatechange/emissions/ghgrulemaking.html> and by contacting Sierra Research staff.