

# Phosphoric Acid Production



## Final Rule: Mandatory Reporting of Greenhouse Gases

*Under the Mandatory Reporting of Greenhouse Gases (GHGs) rule, owners or operators of facilities that produce phosphoric acid using the wet-process (as defined below) must report emissions from phosphoric acid production processes and all other source categories located at the facility for which methods are defined in the rule. Owners or operators are required to collect emission data; calculate GHG emissions; and follow the specified procedures for quality assurance, missing data, recordkeeping, and reporting.*

### How Is This Source Category Defined?

The phosphoric acid production source category consists of facilities that produce phosphoric acid using a wet-process phosphoric acid process line in which phosphate rock is reacted with acid.

### What GHGs Must Be Reported?

Phosphoric acid production facilities must report carbon dioxide (CO<sub>2</sub>) emissions from each wet-process phosphoric acid process line.

In addition, each facility must report GHG emissions for other source categories for which calculation methods are provided in the rule. For example, facilities must report carbon dioxide (CO<sub>2</sub>), nitrous oxide (N<sub>2</sub>O), and methane (CH<sub>4</sub>) emissions from each stationary combustion unit on site by following the requirements of 40 CFR part 98, subpart C (General Stationary Fuel Combustion Sources). Please refer to the relevant information sheet for a summary of the rule requirements for calculating and reporting emissions from any other source categories located at the facility.

### How Must GHG Emissions Be Calculated?

Most owners or operators can elect to calculate and report process CO<sub>2</sub> emissions by using one of two methods:

- Installing and operating a continuous emission monitoring system (CEMS) that complies with the Tier 4 Calculation Methodology specified in 40 CFR 98, subpart C.
- Calculating the process CO<sub>2</sub> emissions using the following measurements:
  - Monthly mass of phosphate rock consumed by each process line.
  - Monthly inorganic carbon content of each grab sample of phosphate rock.

However, if process CO<sub>2</sub> emissions from phosphoric acid production are emitted through the same stack as a combustion unit or process equipment that uses a CEMS and follows Tier 4 methodology to report CO<sub>2</sub> emissions, then the CEMS must be used to measure and report combined CO<sub>2</sub> emissions from that stack. In such cases, the reporter cannot use the CO<sub>2</sub> calculation methodology outlined in approach (2) in the previous bullet.

A checklist for data that must be monitored is available at:

[www.epa.gov/climatechange/emissions/downloads/checklists/phosphoricacidproduction.pdf](http://www.epa.gov/climatechange/emissions/downloads/checklists/phosphoricacidproduction.pdf).

## When Must Reports be Submitted?

The submission date for the annual GHG report can vary in the first 3 years of the program.

- Reporting Year 2010. The report was required to be submitted by September 30, 2011.
- Reporting Year 2011. The due date depends on which source categories are included in the report. If the report includes one or more of the source categories listed below, then the report must be submitted by September 28, 2012. This reporting deadline applies to all subparts being reported by the facility. In addition, if the facility contains one or more of these source categories and the facility submitted a GHG annual report for reporting year 2010 under another subpart (e.g., subpart C for general stationary fuel combustion), then by April 2, 2012 you must notify EPA through e-GGRT that you are not required to submit the second annual report until September 28, 2012 (the notification deadline according to 4 CFR 98.3(b) is March 31, 2012, however, because this date falls on a Saturday in 2012, the notification is due on the next business day).
  - Electronics Manufacturing (subpart I)
  - Fluorinated Gas Production (subpart L)
  - Magnesium Production (subpart T)
  - Petroleum and Natural Gas Systems (subpart W)
  - Use of Electric Transmission and Distribution Equipment (subpart DD)
  - Underground Coal Mines (subpart FF)
  - Industrial Wastewater Treatment (subpart II)
  - Geologic Sequestration of Carbon Dioxide (subpart RR)
  - Manufacture of Electric Transmission and Distribution (subpart SS)
  - Industrial Waste Landfills (subpart TT)
  - Injection of Carbon Dioxide (subpart UU)
  - Imports and Exports of Equipment Pre-charged with Fluorinated GHGs or Containing Fluorinated GHGs in Closed-cell Foams (subpart QQ)

If the report contains none of the source categories listed above, then the report must be submitted by April 2, 2012 (the deadline is March 31, 2012, however, because this date falls on a Saturday, the annual report is due on the next business day).

- Reporting Year 2012. Starting in 2013 and each year thereafter, the report must be submitted by March 31 of each year, unless the 31st is a Saturday, Sunday, or federal holiday, in which case the reports are due on the next business day.

## What Information Must Be Reported?

In addition to the information required by the General Provisions at 40 CFR 98.3(c), each annual report must include the following information for each phosphoric acid production line:

- If a CEMS is used to measure emissions, under this subpart the relevant information required by 40 CFR subpart C for the Tier 4 Calculation Methodology and the following information must be reported:

- Identification number of each wet-process phosphoric acid process line.
- Annual phosphoric acid production by origin of the phosphate rock (tons).
- Annual phosphoric acid permitted production capacity (tons).
- Annual arithmetic average percent inorganic carbon in phosphate rock from monthly records.
- The annual CO<sub>2</sub> emissions from each wet-process phosphoric acid process line (metric tons).
- If a CEMS is not used to measure emissions, then the following information must be reported:
  - Identification number of each wet-process phosphoric acid process line.
  - Annual CO<sub>2</sub> emissions from each wet-process phosphoric acid process line (metric tons).
  - Annual phosphoric acid production by origin of the phosphate rock (tons).
  - Annual phosphoric acid permitted production capacity (tons).
  - Annual arithmetic average percent inorganic carbon in phosphate rock from monthly records.
  - Annual phosphate rock consumption from monthly measurement records by origin (tons).
  - Method used to estimate any missing values of inorganic carbon content of phosphate rock for each wet-process phosphoric acid process line.
  - Monthly inorganic carbon content of phosphate rock for each wet-process phosphoric acid process line (percent by weight, expressed as a decimal fraction).
  - Monthly mass of phosphate rock consumed by origin in production for each wet-process phosphoric acid process line (tons).
  - Number of wet-process phosphoric acid process lines.

EPA has temporarily deferred the requirement to report data elements in the above list that are used as inputs to emission equations (76 FR 53057, August 25, 2011). For the current status of reporting requirements, including the list of data elements that are considered to be inputs to emissions equations, consult the following link: <http://www.epa.gov/climatechange/emissions/CBI.html>

## For More Information

This document is provided solely for informational purposes. It does not provide legal advice, have legally binding effect, or expressly or implicitly create, expand, or limit any legal rights, obligations, responsibilities, expectations, or benefits in regard to any person. The series of information sheets is intended to assist reporting facilities/owners in understanding key provisions of the final rule.

Visit EPA's Web site ([www.epa.gov/climatechange/emissions/ghgrulemaking.html](http://www.epa.gov/climatechange/emissions/ghgrulemaking.html)) for more information, including the final preamble and rule, additional information sheets on specific industries, the schedule for training sessions, and other documents and tools. For questions that cannot be answered through the Web site, please contact us at: [GHGreporting@epa.gov](mailto:GHGreporting@epa.gov).