

# Frequently Asked Questions

## Mandatory Reporting of Greenhouse Gases



**Final Rule: Mandatory Reporting of Greenhouse Gases from Magnesium Production, Underground Coal Mines, Industrial Wastewater Treatment, and Industrial Waste Landfills**

### General Information About the Rule

#### What is the action being taken?

On June 28, 2010, the U.S. Environmental Protection Agency (EPA) issued a final rule (40 CFR part 98) that requires annual reporting of greenhouse gas (GHG) emissions from four source categories: magnesium production (subpart T), underground coal mines (subpart FF), industrial wastewater treatment (subpart II) and industrial waste landfills (subpart TT). Reporting requirements for these four source categories were proposed in April 2009 and have been finalized with this action. This action also stated EPA's final decision not to include ethanol production and food processing as distinct subparts in 40 CFR part 98, as well as the final decision not to require suppliers of coal to report under 40 CFR part 98 at this time.

#### What is the purpose of this rulemaking?

The 2008 Consolidated Appropriations Act directed EPA to develop a greenhouse gas reporting program that requires mandatory greenhouse gas emissions reporting from upstream production and downstream sources. This final rule has added four source categories that will be required to report their emissions to EPA. In general, this national greenhouse gas reporting program will provide EPA with accurate and timely emissions data from large emitters. This publicly available data will provide a better understanding of where greenhouse gases are coming from and will guide development of the best possible policies and programs to reduce emissions.

#### When will the rule go into effect?

Data collection at the facility level for the four source categories included in this final rule will begin on January 1, 2011 with the first annual report due to EPA on March 31, 2012, for emissions during 2011.

#### Why didn't EPA include ethanol production and food processing as distinct subparts in 40 CFR part 98?

EPA did not include ethanol production and food processing as distinct subparts in 40 CFR part 98 because the proposals for these subparts did not include any unique requirements for monitoring or reporting of process emissions. Instead, the proposed subparts simply referred to reporting that those facilities might need to do under other subparts. In general, any facility not specifically identified in a subpart must report its greenhouse gas emissions if that facility contains source categories covered by the greenhouse gas reporting rule and its aggregate emissions meet the reporting threshold. Therefore, ethanol production and food processing facilities will be required to report if they meet the annual emissions threshold of 25,000 metric tons of CO<sub>2</sub>e by aggregating emissions from all applicable source categories including stationary combustion, industrial wastewater treatment, industrial waste landfills, miscellaneous use of carbonates, and any others that might apply.

### **Why is EPA not including reporting requirements for coal suppliers at this time?**

EPA did not include coal suppliers as a subpart in 40 CFR part 98 because the Agency's near-term needs for information on greenhouse gas emissions from coal consumption can be met through existing reporting requirements under the rule, as well as other readily available and existing data sources. More than 99 percent of total carbon dioxide emissions from coal combustion will be obtained through reporting by downstream sources covered by 40 CFR part 98. Further, existing data sources such as the Inventory of U.S. Greenhouse Gas Emissions and Sinks, other data reported by coal-fired electricity generating units to EPA's Acid Rain Program, and the Energy Information Administration's (EIA) detailed coal production, consumption, imports and exports data, provide EPA with a comprehensive picture of the location and magnitude of emissions from coal consumption nationally.

### **How did EPA engage stakeholders in the development of this final rule?**

EPA met with stakeholders potentially affected by this rule during the development of the rule. The Agency communicated in the preamble of the proposed rule that it would consider the substantial number of public comments received on the proposal before making a final decision on the subparts addressed in this final rulemaking.

### **How many facilities will be required to report under this action?**

EPA estimates that approximately 680 facilities will report under this final rule. Many of these facilities may already be required to report under subparts that were finalized in October 2009.

### **What is the emissions coverage for these newly finalized source categories?**

EPA estimates that these four source categories will cover an additional 1 percent of the total greenhouse gas emissions from all industry sources covered by 40 CFR part 98, bringing the total emissions covered across the U.S. economy to 86 percent.

### **What greenhouse gases are covered under this rule?**

This rule includes methods for estimating emissions of methane (CH<sub>4</sub>) from underground coal mines, industrial wastewater treatment and industrial landfills. It also includes methods for estimating emissions of greenhouse gases used as protective cover gases in magnesium operations, such as, sulfur hexafluoride (SF<sub>6</sub>), hydrofluorocarbon 134a (HFC -134a), dodecafluoro-2-methylpentan-3-one (FK 5-1-12), and carbon dioxide (CO<sub>2</sub>).

### **What is the estimated cost to implement this rule?**

EPA estimates the total cost of reporting by the private sector under this rule would be \$7.0 million for the first year of reporting and \$5.5 million in subsequent years.

### **What impact does this rule have on small businesses?**

EPA expects that very few small businesses would be affected as most fall below the 25,000 metric ton threshold and would not be required to report.

## Subpart-specific FAQs

### SUBPART T. MAGNESIUM PRODUCTION

#### **What types of facilities would be required to report under this subpart?**

Magnesium production and processing facilities where magnesium metal is produced through smelting (including electrolyte smelting), refining, or remelting operations, or any site where molten magnesium is used in alloying, casting, drawing, extruding, forming, or rolling operations would be required to report.

#### **What types of emissions would be reported?**

Emissions of greenhouse gases used as protective cover gases, namely, sulfur hexafluoride (SF<sub>6</sub>), hydrofluorocarbon 134a (HFC -134a), dodecafluoro-2-methylpentan-3-one (FK 5-1-12), and carbon dioxide (CO<sub>2</sub>) would be reported.

#### **What is the threshold for reporting?**

Facilities that emit 25,000 tons or more of carbon dioxide equivalent per year are required to report.

#### **How many facilities would be required to report under this subpart?**

Approximately 11 facilities are expected to report under this subpart.

#### **What are the primary differences between this final rulemaking and the proposal for magnesium production in April 2009?**

There are no major differences between the final rule and the proposal for this subpart.

### SUBPART FF. UNDERGROUND COAL MINES

#### **What types of facilities would be required to report under this subpart?**

This source category consists of underground coal mines that are active or under development, including all underground coal mines that have operational pre-mining degasification systems. It includes both mines under development and mines categorized by the Mine Safety and Health Administration (MSHA) as active (where coal is currently being produced or has been produced within the previous 90 days).

#### **What types of emissions would be reported?**

Methane (CH<sub>4</sub>) liberation (from both ventilation and degasification systems), any CH<sub>4</sub> destruction, carbon dioxide (CO<sub>2</sub>) from coal mine combustion where gas is not a fuel input for energy generation or use, and CO<sub>2</sub>, CH<sub>4</sub>, and nitrous oxide (N<sub>2</sub>O) from stationary fuel combustion devices.

#### **What is the threshold for reporting?**

There is no emissions threshold for reporting for this source category. Instead, EPA has determined that all underground coal mines that are subject to quarterly or more frequent sampling of mine ventilation systems by the MSHA are required to report.

### **How many facilities would be required to report under this subpart?**

EPA's analysis indicates that approximately 115 underground coal mines would be required to report at the MSHA quarterly reporting threshold.

### **What are the primary differences between this final rulemaking and the proposal for underground coal mines in April 2009?**

The rule increases the flexibility for monitoring methane emissions from mine ventilation and degasification activities. Continuous Emissions Monitors (CEMs) are now allowed as a monitoring option for liberation from ventilation and degasification, although they are no longer required for liberation from degasification. In addition, emissions from degasification may now be monitored through weekly sampling. Further, methane liberation may now be monitored at centralized monitoring points rather than at each individual well, shaft, borehole, etc., provided that liberation from all sources is monitored.

## **SUBPART II. INDUSTRIAL WASTEWATER TREATMENT**

### **What types of facilities would be required to report under this subpart?**

Facilities that are required to report under this subpart are those that meet the emissions threshold of 25,000 metric tons of CO<sub>2</sub>e per year, use anaerobic processes to treat industrial wastewater and wastewater treatment sludge, and perform the following operations:

- Pulp and paper manufacturing
- Food processing (fruits, vegetables, meat and poultry processing only)
- Ethanol production
- Petroleum refining

### **What types of emissions would be reported?**

Facilities must report:

- Annual mass of methane (CH<sub>4</sub>) *generated* by each anaerobic wastewater treatment process (but not anaerobic sludge digesters);
- Annual mass of CH<sub>4</sub> *recovered* from each anaerobic wastewater treatment process and anaerobic sludge digester; and
- Annual mass of CH<sub>4</sub> *emitted* from each anaerobic wastewater treatment process and anaerobic sludge digester.

In addition, each facility must report greenhouse gas emissions for any other source categories for which calculation methods are provided in other subparts of the rule.

### **What is the threshold for reporting?**

Facilities that perform pulp and paper manufacturing, food processing (fruits, vegetables, meat and poultry processing only), ethanol production and petroleum refining, use anaerobic processes to treat industrial wastewater and wastewater treatment sludge *and* have aggregate emissions from all source categories covered by the rule in the amount of 25,000 tons carbon dioxide equivalent or more, must report their industrial wastewater treatment emissions along with any other emissions from covered source categories.

### **How many facilities would be required to report under this subpart?**

Approximately 350 facilities would be required to report under this subpart. However, many of these facilities, such as pulp and paper mills and petroleum refineries, are already required to report under subparts finalized in October 2009.

### **What are the primary differences between this final rulemaking and the proposal for industrial wastewater treatment in April 2009?**

In general, the final rule is very similar to the proposal for this subpart. However, the final rule does more clearly define the types of operations covered by subpart II ( i.e., pulp and paper, petroleum refining, ethanol production, and food processing). The final rule also more clearly defines which processes used to treat wastewater and wastewater treatment sludge at industrial facilities are covered by this subpart (i.e., anaerobic reactors, anaerobic lagoons, and anaerobic sludge digesters).

This final rule also provides more options for monitoring frequency and emissions calculations. Specifically, the estimate of annual mass of methane generated from an anaerobic reactor or anaerobic lagoon can be calculated using either chemical oxygen demand (COD) or five-day biochemical oxygen demand (BOD<sub>5</sub>). At proposal only COD could be used. In addition, for anaerobic treatment processes from which some biogas is recovered, facilities can monitor the CH<sub>4</sub> concentration of the biogas either continuous or weekly, whereas the proposal required continuous monitoring.

## **SUBPART TT. INDUSTRIAL WASTE LANDFILLS**

### **What types of facilities would be required to report under this subpart?**

Owners or operators of industrial waste landfills are required to report under this subpart if the landfill accepted waste on or after January 1, 1980 and is located at a facility whose total landfill design capacity is greater than or equal to 300,000 metric tons of waste. Industries that have industrial waste landfills that are expected to have organic wastes include: organic chemical manufacturers, plastics and resins manufacturers, pulp and paper facilities, food and kindred product facilities, water treatment facilities, petroleum refineries, rubber and miscellaneous products manufacturers, selected chemicals and allied product manufacturers, textile manufacturers, and leather and leather product facilities. However, about 75 percent of facilities that are expected to report are either pulp and paper facilities or food and kindred products facilities.

### **What types of emissions would be reported?**

Industrial waste landfill owners and operators must report:

- Annual methane generation and emissions from the landfill
- Annual methane destruction (for landfills with gas collection and control systems).

### **What is the threshold for reporting?**

An industrial waste landfill is required to report if the landfill accepted waste on or after January 1, 1980, accepts organic waste, is located at a facility whose total landfill design capacity is greater than or equal to 300,000 metric tons, and is located at a facility whose aggregate emissions from all source categories covered by the rule are greater than or equal to 25,000 metric tons of carbon dioxide equivalent.

**How many facilities are required to report under this subpart?**

EPA estimates that about 200 facilities will be required to report under this subpart. However, many of these facilities are already required to report under other subparts finalized in October 2009. For example, pulp and paper mills and petroleum refineries are already required to report their emissions from other source categories. With this final action, these facilities will be required to include emissions from industrial landfills in their reports to EPA.

**What are the primary differences between this final rulemaking and the proposal for industrial waste landfills in April 2009?**

This final rule limits reporting to those facilities with landfills that are expected to have significant methane emissions, namely those which accept only organic wastes and those with a design capacity of greater than or equal to 300,000 metric tons of waste. The final rule also provides more options for determining both current and historical waste quantities. Lastly, the final rule provides emissions factors that are more appropriate for industrial landfills and provides a methodology by which landfill owners and operators may calculate their own emissions factors if appropriate.