The Mandatory Greenhouse Gas Reporting Rule: Are You Ready?

By Larry W. Nettles and Margaret E. Peloso

On December 30, 2010, the Subpart W of the EPA's Mandatory Greenhouse Gas Reporting Rule (MRR or Mandatory Reporting Rule) went into effect. Subpart W will require entities in the oil and gas industry exceeding certain emissions thresholds to monitor and report their greenhouse gas (GHG) emissions to the EPA. This bulletin addresses the key aspects of Subpart W of the MRR and suggests initial steps that covered entities should be taking to ensure that they are prepared to comply with their reporting obligations.

What is the Mandatory Reporting Rule?

The Mandatory Reporting Rule requires owners and operators of facilities in 45 covered industries to report their greenhouse gas emissions to the EPA.[1] The MRR provides rules for all industries subject to reporting and uses industry-specific subparts to detail the precise requirements for measuring, monitoring, and reporting GHG emissions. Monitoring under the MRR began in 2010 for some sectors, while others including the oil and gas sector, are obligated to monitor and report their emissions beginning on January 1, 2011.

Greenhouse gases under the Mandatory Reporting Rule are defined to include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and the fluorinated hydrocarbons. Reporting requirements under the MRR are triggered when a facility emits more than a specified level of GHGs calculated in metric tons of CO_2 equivalent per year ($mtCO_2e/y$).[2] In general, the MRR's requirements apply to facilities whose GHG emissions exceed 25,000 $mtCO_2e/y$ and certain other facilities expressly specified in the regulations.[3]

Who must report under Subpart W?

Subpart W covers oil and gas production and distribution. Beginning on January 1, 2011, the following sectors are required to monitor and report their GHG emissions to the EPA:[4]

[1] For a list of the sectors currently covered by the MRR see http://www.epa.gov/climatechange/emissions/subpart.html.
[2] CO_2e is calculated for the other greenhouse gases by taking the amount of gas emitted and multiplying it by the GHG's global warming potential, a measure of the radiative forcing (the amount of atmospheric heating produced by the gas) caused by the gas in the atmosphere. For example, methane causes much more radiative forcing per molecule than CO_2, and is assigned a global warming potential of 25 over a period of 100 years, meaning that one metric ton of methane emissions is equal to 25 $mtCO_2e$.
[3] *See* 40 C.F.R. § 98.2(a) and tables A-3 and A-5 in the regulation for sources that must report regardless of their emission level.
[4] 40 C.F.R. § 98.230.

- **Offshore Petroleum and Natural Gas Production**: includes any platform, structure, or associated structure (including tanks and walkways) affixed to offshore submerged lands for the purposes of extracting, processing, and transferring hydrocarbons.
- **Onshore Petroleum and Natural Gas Production**: includes all equipment on or associated with a well pad used in the production of petroleum or natural gas as well as equipment for enhanced oil recovery.
- **Onshore Natural Gas Processing**: includes all processing facilities as well as the capture of CO_2 separated from natural gas streams and GHG emissions from gathering lines and boosting stations. All processing facilities that fractionate or have a throughput of at least 25 million cubic standard feet (MMscf) per day are covered.
- **Onshore Natural Gas Transmission Compression**: includes all stationary compressors that move natural gas at elevated pressure in transmission lines from fields or production facilities to distribution pipelines or storage.
- **Underground Natural Gas Storage**: includes any subsurface storage where gas has been transferred from its original location. This category also includes all wellheads connected to compression units located at the storage facility.
- **Liquid Natural Gas (LNG) Storage**: includes all onshore above ground LNG storage vessels as well as equipment associated with liquefying and regassifying LNG.
- **LNG Import and Export Facilities**: includes all equipment that receives LNG by ocean transport and delivers natural gas to the transmission and distribution system as well as equipment that receives natural gas and liquefies it for ocean transport.
- **Natural Gas Distribution Facilities**: covers all distribution pipelines and metering and regulating equipment that physically deliver natural gas to end users (does not include individual meters on end users properties).

Facilities in these covered sectors will be subject to the MRR if their GHG emissions exceed 25,000 $mtCO_2e/y$. The term facility is defined for the following sectors:

- Onshore Petroleum and Natural Gas Production: a facility includes all production equipment associated with a well pad under common ownership in a single production basin. If a producer owns or operates more than one well, the facility is defined as *all production equipment within the geologic basin*.[5] Geologic basin is defined by reference to the American Association of Petroleum Geologists' geologic provinces.

[5] *Id.* § 98.238.

- Natural Gas Distribution: a facility includes all pipelines, metering stations, and regulating stations operated by a single local distribution company.[6]
- All other sectors: use the MRR general facility definition, which is all structures or equipment located on contiguous property.

What GHGs must be reported under Subpart W?

Subpart W requires that the following types of GHG emissions be reported:[7]

- CO_2 and methane emissions from equipment leaks and vents;
- CO_2, methane, and, for some sectors, N_2O emissions from specified source types (see table at the end of this bulletin);
- CO_2, methane, and N_2O from each stationary fuel combustion unit; and
- CO_2, methane, and N_2O emissions from combustion at flares.

What emission sources are covered under Subpart W?

As with all parts of the MRR, Subpart W gives a detailed list of the particular types of equipment from which emissions are to be reported in each sector. For a summary of the equipment covered by Subpart W, please refer to the table at the end of this bulletin.

Calculating emissions to report

Subpart W specifies a combination of direct measurements be taken and equations be used in calculating emissions from the various covered components in each sector. Recognizing that not all covered facilities would have the required monitoring equipment at their disposal on January 1, 2011, the EPA has permitted the use of best available monitoring measures (BAMMs) in certain areas. A facility employing BAMMs must use the equations specified in the regulations to calculate emissions but may draw estimated emissions data from current facility monitoring, supplier data, engineering calculations, or other company records.[8] BAMMs may be used for the following time periods:

- January 1, 2011 to June 30, 2011 for well-related emissions and certain types of activity data (e.g., cumulative hours of venting, number of blowdowns, completions, or workovers). No request to EPA to use BAMMs is required.

[6] *Id.*
[7] *Id.* § 98.232.
[8] *Id.* § 98.234(f).

- January 1, 2011 to December 31, 2011 for leak detection and measurement upon request to the administrator.

If an operator wishes to use BAMMs for leak detection, extend the time for BAMMs for well-related or activity data, or apply for the use of BAMMs for covered sources not specified as eligible in the regulations, it must submit a request to EPA by April 30, 2011. This request must show that the company has made good faith efforts to comply with monitoring requirements, why compliance is not possible, and when and how compliance will be achieved.[9]

All covered facilities must also create a monitoring plan that specifies who is responsible for data collection and explains the procedures used to collect data and ensure its quality.[10]

Important deadlines under Subpart W

- January 1, 2011: Begin data collection.
- April 1, 2011: Deadline to complete monitoring plan.[11]
- April 30, 2011: Deadline to submit requests to use best available monitoring methods in 2011 for leaks and beyond June 30, 2011 for field activity and wells.
- July 1, 2011: Use of BAMMs for field activity and wells only permissible with approval from Administrator.
- January 31, 2012: Deadline for entity responsible for reporting to file certificate of representation with EPA.
- March 31, 2012: First annual report, covering 2011 emission, due to EPA.

Key steps toward compliance with Subpart W

- Determine whether Subpart W applies to your facility:
    - Determine the boundaries of your facility; and
    - Estimate the emissions of your facility.
- Begin the monitoring process:
    - Conduct an inventory of covered facilities to determine what existing equipment must be included in monitoring and reporting;
    - Determine what monitoring equipment is available and what additional equipment will be required to comply with the MRR; and

[9] *Id.*
[10] *Id.* § 98.3(g).
[11] *See* 75 Fed. Reg. 74458, 74511 (Nov. 30, 2010).

- Determine whether BAMMs will be necessary for an ongoing period.

- Determine who will be responsible for reporting:
  - Each facility may have only one reporter. If your facility has multiple owners and operators, the person responsible for reporting should be designated by binding agreement between all parties subject to regulation for the particular facility;[12] and
  - Notify EPA who the designated reporter will be by filing a certificate of representation.[13]

- Develop a system to ensure ongoing compliance with monitoring and reporting requirements:
  - Draft and file a monitoring plan.

For more information, please contact Vinson & Elkins lawyers Larry W. Nettles at +1.713.758.4586 or at lnettles@velaw.com or Margaret E. Peloso at +1.202.639.6774 or at mpeloso@velaw.com. Visit our website to learn more about V&E's Climate Change practice.

[12] 40 C.F.R. § 98.4(a)-(b).
[13] *Id.* § 98.4(i).

Table of Emission Sources Covered by Subpart W[14]

Source Type	Sector							
	Offshore Production	Onshore Production	Natural Gas Processing	Natural Gas Transmission Compression	Underground Storage	LNG Storage	LNG Import and Export Equipment	Distribution
Natural gas pneumatic device venting		●		●	●			
Natural gas driven pneumatic pump venting		●						
Acid gas removal vent stack		●	●					
Dehydrator vent stack		●	●					
Well venting for liquids unloading		●						
Gas well venting during well completions and workovers with hydraulic fracturing		●						
Gas well venting during well completions and workovers without hydraulic fracturing		●						
Blowdown vent stacks		●	●	●			●	
Onshore production storage tanks		●						
Transmission storage tanks				●				
Well testing, venting, and flaring		●						
Associated gas venting and flaring		●						

[14] Reproduced from Mandatory Reporting of Greenhouse Gases: Petroleum and Natural Gas Systems; Final Rule, 75 Fed. Reg. 74458, 74463 (Nov. 30, 2010).

Source Type	Sector							
	Offshore Production	Onshore Production	Natural Gas Processing	Natural Gas Transmission Compression	Underground Storage	LNG Storage	LNG Import and Export Equipment	Distribution
Flare stacks		●	●					
Centrifugal compressor venting		●	●	●	●	●	●	
Reciprocating compressor rod packing venting		●	●	●	●	●	●	
Other emissions from equipment leaks		●	●	●	●	●	●	●
Population count and emissions factor		●			●	●	●	●
Vented, equipment leaks, and flare emissions identified in BOEMRE GOADS Study	●							
Enhanced oil recovery hydrocarbon liquids dissolved CO_2		●						
Enhanced oil recovery injection pump blowdown		●						
Onshore petroleum and natural gas production and natural gas distribution combustion emissions		●						●