



# **Greenhouse Gas Reporting Program**

## **Subpart W - Petroleum and Natural Gas Systems - 2012 Update**

**September 6, 2012**

**EPA's Climate Change Division**

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# Overview of Top “Take Home” Items from this Presentation

# Overview of Top “Take Home” Items for subpart W reporters



- For 2012, what do I need to do?
- When?
- How?
- What are my resources?

# Top “Take Home” Items



- Data Reporting
  - E-GGRT Registration, Notification and Reporting Deadlines
- BMM
  - Automatic BMM--RY2011
  - Deadlines for BMM extension requests for RY2012 and beyond



# Presentation Agenda

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1. Brief Overview of subpart W
  - For more info – please see subpart W website [www.epa.gov/ghgreporting/reporters/subpart/w.html](http://www.epa.gov/ghgreporting/reporters/subpart/w.html)
  
2. Reporting subpart W data
  - How reports will be submitted
  
3. Use of Best Available Monitoring Methods (BAMM)

# Presentation Agenda



4. Additional Implementation Activities
5. How subpart W 12/23/11 Tech Revisions rule updated the November 30, 2010 Final Rule
6. Training Resources
7. Summary – top “take home” items - Key Dates



# **Submit all questions to the GHGRP Help Desk**

[www.epa.gov/ghgreporting/contactus.html](http://www.epa.gov/ghgreporting/contactus.html)





# 1. Subpart W - Brief Overview

# Brief Overview of Subpart W



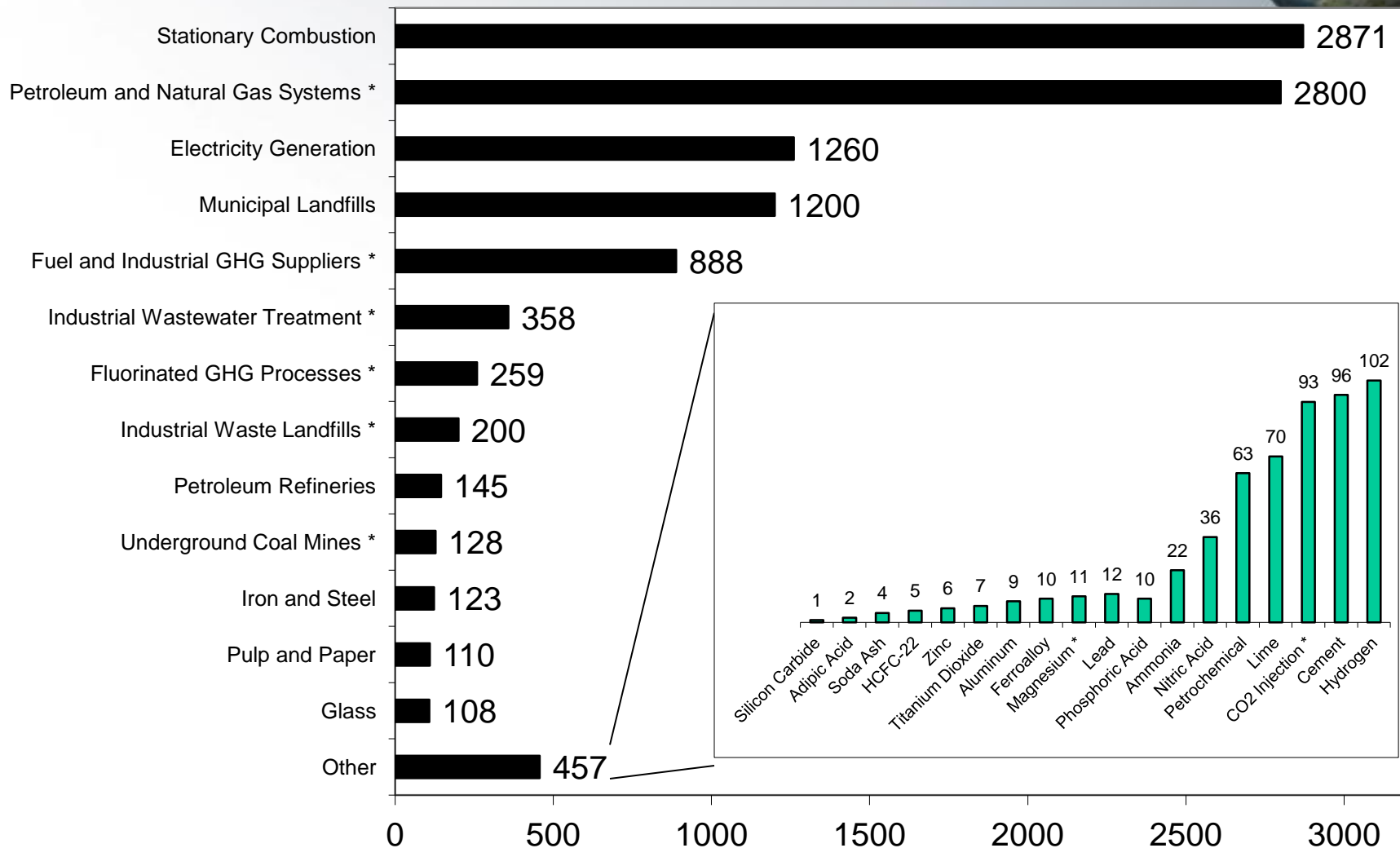
- Background and Subpart A- General Rule Requirements
- Subpart W- Petroleum and Natural Gas Systems

# Purpose of 40 CFR Part 98



- Part 98 requires reporting of greenhouse gas (GHG) emissions and other relevant information from certain source categories in the United States
  - Better understand relative emissions of specific industries, and of individual facilities within those industries
  - Better understand factors that influence GHG emission rates and actions facilities could take to reduce emissions
- Does not require control of GHG emissions

# Approximately 10,000 U.S. Facilities Covered



\* Approximate (first reports due Sep 2012)

# Key Elements of Part 98



- Annual reporting of GHG by:
  - Direct emitting source categories
  - Suppliers of certain products that would result in GHG emissions if released, combusted or oxidized.
- 25,000 metric tons CO<sub>2</sub>e or more per year reporting threshold for many sources; capacity-based thresholds where feasible.

# Key Elements of Part 98



- Requires reporting by 41 industrial categories. For calendar year 2010, facilities in 29 categories were required to report. An additional 12 categories begin reporting for calendar year 2011 emissions.
- Direct reporting to EPA electronically
- EPA verification of emissions data

# Which petroleum and natural gas industry segments must report under Subpart W?



- Industry segments covered:
  - Offshore petroleum and natural gas production
  - Onshore petroleum and natural gas production\*
  - Onshore Natural gas processing facilities
  - Onshore Natural gas transmission compression
  - Underground natural gas storage
  - Liquefied natural gas (LNG) storage
  - LNG import and export equipment
  - Natural gas distribution\*

\* Due to their unique characteristics, the facility definition for onshore petroleum and natural gas production and natural gas distribution differs from the definition of facility in subpart A.

# Which petroleum and natural gas industry segments must report under Subpart W?



- Reporting is required by facilities that emit GHGs  $\geq$  25,000 metric tons carbon dioxide equivalent ( $\text{CO}_2\text{e}$ ) per year.

For reference, a threshold of 25,000  $\text{mtCO}_2\text{e}/\text{year}$  is approximately equal to 170,000  $\text{scf}/\text{day}$  vented methane, 65 100-HP engines operating at full load, or one 900  $\text{scfm}$  flare.





## 2. Reporting subpart W data

# Electronic Reporting System



- For the GHGRP, all data is submitted to EPA electronically in e-GGRT
  - Except the one-time Electronic Signature Agreement (ESA) which is submitted on paper
- Web-based system for facility/supplier reporting to EPA. reporting. Reporters must report all source categories at their facility through e-GGRT.

# Reporting through e-GGRT



- e-GGRT supports Part 98 reporting requirements
  - but NOT Part 98 recordkeeping requirements
  - supports reporting of both CBI and non-CBI data; does not currently collect deferred inputs to emission equations.
- Subpart W NOI and BAMM requests have already been submitted using e-GGRT

# Registration in e-GGRT



- Reporters *MUST* have registered in e-GGRT 60 days before reporting deadline (for RY2011 this was July 30, 2012)
  - If reporters already reported to EPA in 2011 and will now be reporting for W, they would already be registered in the system; but need to have notified EPA by April 2 that they were deferring reporting to 9/28/12.
- Registration in e-GGRT- currently open

# e-GGRT



- e-GGRT registration webinar was held – May 10, 2012
- e-GGRT Subpart W Training webinars were held – June 19 and Sept. 4, 2012
- e-GGRT opened for reporting RY2011 data –  
– August 20, 2012
- Reporting Deadline– Sept 28, 2012

# Reporting Process



**For reporting of subpart W data, reporters have 2 options:**

1. Download MS Excel file (“reporting form”) from EPA and enter data
  - Data calculated in-house, **or**
  - Data calculated off-line using EPA’s optional Calculation tool – “Subpart W Calculation Spreadsheets”

Upload the reporting form into e-GGRT

**OR**

2. Download e-GGRT XML schema (the entire schema for all subparts)

Use schema to design data export from in-house data system

Upload completed XML file into e-GGRT

**Please note: If using the XML bulk upload option, all applicable subparts must be included in the same XML bulk file. For example, a facility, if subject to multiple subparts, would submit a single XML bulk upload file including all applicable subparts (such as subparts A, W, Y, C, etc) in one file submission.**

# Reporting Process



- Optional EPA-supplied “Subpart W Calculation Spreadsheets” provided to help reporters calculate emissions to input into either the reporting form or the XML file
- Sandbox Period: June 4-15, reporters had an opportunity to preview e-GGRT for RY2011
  - There were 2 instructional webinars on how to participate in preview.



# 3. Best Available Monitoring Methods (BAMM)



# Use of BAMM in 2011



- Facilities may use BAMM for unique or unusual circumstances for calculation of emissions in 2011.
  - For RY 2011 – BAMM is allowed automatically

# Use of BAMM in 2012



- Facilities may use BAMM, if approved, for unique or unusual circumstances for calculation of emissions in 2012.
  - If reporter filed notice of intent by Dec 31, 2011 and BAMM request by March 30, 2012 ,BAMM granted from January 1-June 30, 2012.
  - EPA reviewed requests to use BAMM from July 1, 2012 through December 31, 2012. Facilities may use BAMM during that time period if approved by EPA.

# Use of BAMM in 2013 and beyond



- Facilities may use BAMM, if approved, for unique or unusual circumstances for calculation of emissions in 2013 and beyond, if
  - BAMM request submitted by Sept 30 of the preceding year, **and if BAMM request approved by EPA**
    - Ex of BAMM submission deadline: For RY 2013, if applying for BAMM, BAMM request must be submitted by September 30, 2012 (*In 2012, since September 30 falls on a Sunday, reporters will actually have until the following Monday – October 1, 2012.*)

# BAMM



## **If allowed to use BAMM, what methods must I follow?**

- Please refer to 40 CFR 98.234 (f) for further details. Please note that reporters are still required to use the calculation equations in the rule but may use alternative means to determine the inputs to those equations.

*“EPA will allow owners or operators to use BAMM for parameters in 98.333 Calculating GHG Emissions as specified in paragraphs (f)(2), (f)(3), and (f)(4) of this section.”*

- BAMM Fact Sheet is on the W website  
<http://www.epa.gov/ghgreporting/documents/pdf/2011/documents/subpart-w-bamm-factsheet.pdf>

# Example of BMM Usage



- Example - for equation W-18:

$$E_{a,n} = \sum_{q=1}^y \sum_{p=1}^x GOR_{p,q} * V_{p,q} \quad (\text{Eq. W-18})$$

- $E_{a,n}$  = Annual volumetric natural gas emissions, at the facility level, from associated gas venting under actual conditions, in cubic feet.
- $GOR_{p,q}$  = Gas to oil ratio, for well p in sub-basin q, in cubic feet of gas per barrel of oil; oil here refers to hydrocarbon liquids produced of all API gravities.
- $V_{p,q}$  = Volume of oil produced, for well p in sub-basin q, in barrels in the calendar year during which associated gas was vented or flared.
- x = Total number of wells in sub-basin that vent or flare associated gas.
- y = Total number of sub-basins in a basin that contain wells that vent or flare associated gas

# Example of BAMM Usage



- BAMM estimates could be used for the inputs:  $GOR_{p,q}$ ,  $V_{p,q}$ ,  $x$ , or  $y$ ; but not for  $E_{a,n}$ .
  - For example, if in the 1<sup>st</sup> year of reporting the reporter did not have a count for  $x$  = Total number of wells in sub-basin that vent or flare associated gas; the reporter could use an estimate based on one of the 4 allowable BAMM:
    - (i) Monitoring methods currently used by the facility that do not meet the specifications of this subpart.
    - (ii) Supplier data.
    - (iii) Engineering calculations.
    - (iv) Other company records.



# 4. Additional Implementation Activities

# Additional Implementation Activities



- Subpart W CBI Determinations
- Subpart W Technical Corrections
- Litigation



# Additional Implementation Activities (cont'd)



## Subpart W CBI Determinations

- All elements included in e-GGRT are required reporting elements, as applicable
- E-GGRT reflects the final rules deferring the reporting deadline for inputs to emission equations for direct emitters (76 FR 53057, published Aug. 25, 2011 and 77 FR 48072, published Aug. 13, 2012)
- Data elements that have been determined to be CBI must be reported
- Reporting elements that have been determined to be CBI will be protected under the Clean Air Act (Sec. 114(c)) and EPA regulations (40 CFR Part 2)

# Additional Implementation Activities (cont'd)



## Subpart W Technical Corrections

- E-GGRT reflects the final rule for Technical Corrections to Subpart W Proposal (77 FR 51477, published 8/24/12).
  - Types of changes - corrections to equations, introducing more flexibility, clarifying existing requirements
- Subpart W Litigation Discussions are on-going



5. How December 23, 2011  
Technical Revisions updated the  
11/30/10 Final Rule

# How 12/23/11 Tech Revisions updated the 11/30/10 Final Rule



- December 23, 2011, EPA issued a final rule that amended specific provisions in subparts A and W to correct technical and editorial errors and address issues identified as a result of questions/concerns received from stakeholders.
- Amendments don't change overall requirements, but improve clarity and consistency across calculation, monitoring and data reporting requirements.
- Amendments will assist facilities with meeting reporting requirements, and provide greater specificity on applicability and reporting thresholds. They maintain accuracy of data while, in some cases, reduce burden for those entities that report under these subparts.
- Presentation won't go over all changes to the November 30, 2010 rule made by the December 23, 2011 rule, but major changes are summarized.

# How 12/23/11 Tech Revisions updated the 11/30/10 Final Rule



- Rule revisions published: Dec 23, 2011 (Technical Revisions)
- Rule notices found on Subpart W website:
  - [www.epa.gov/ghgreporting/reporters/subpart/w.html](http://www.epa.gov/ghgreporting/reporters/subpart/w.html)
  - *Reporters should refer to the e-CFR for the final rule ([http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=9415fad5f1c7ea4d940d308e1ea74e11&tpl=/ecfrbrowse/Title40/40cfr98\\_main\\_02.tpl](http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=9415fad5f1c7ea4d940d308e1ea74e11&tpl=/ecfrbrowse/Title40/40cfr98_main_02.tpl)).*

# How 12/23/11 Tech Revisions updated the 11/30/10 Final Rule



- Clarified definitions for the following industry segments: 1) onshore petroleum and natural gas production, 2) onshore natural gas processing, 3) onshore natural gas transmission compression; and 4) natural gas distribution
- For the onshore petroleum and natural gas segment measurement requirements, replaced the “field” designation with “sub-basin category” consisting of counties and major formation types.

# How 12/23/11 Tech Revisions updated the 11/30/10 Final Rule



Revisions included:

- In the onshore production and natural gas distribution industry segment, established a 1 mmBtu threshold for internal combustion engines (not compressor drivers). Units that fall below this threshold only need to report activity data.
- For the natural gas distribution industry segment, provided the option for facilities to conduct monitoring at their transmission-distribution transfer stations over a multi-year period (not to exceed 5 years).

# How 12/23/11 Tech Revisions updated the 11/30/10 Final Rule



- Finalized a default natural gas composition of 95% methane and 1% carbon dioxide for specific industry segments that is consistent with other parts of subpart W.
- Clarified key terms such as blowdown vent stacks, well venting and flaring, well completion and well workover event boundaries, and sonic and subsonic flow rates in pipelines.
- Allowed company records to be used for flow meter calibration.



# How 12/23/11 Tech Revisions updated the 11/30/10 Final Rule



- Refined some equations and variables to correct inaccuracies, errors or inconsistencies.

## **SUBPART A (General Provisions)**

- Added a new paragraph that states that for the purposes of applying the terms owner and operator used throughout the general provisions, facilities reporting under the onshore production industry segment and the natural gas distribution industry segment of subpart W will use their uniquely defined facility definitions as outlined in subpart W.

# How 12/23/11 Tech Revisions updated the 11/30/10 Final Rule



- Clarified definitions for continuous bleed and intermittent bleed pneumatic devices.

A Technical Revisions Fact Sheet is located on the W website

[http://www.epa.gov/ghgreporting/documents/pdf/2011/documents/2011-revisions\\_subpart-w-factsheet.pdf](http://www.epa.gov/ghgreporting/documents/pdf/2011/documents/2011-revisions_subpart-w-factsheet.pdf)



# 6. Training Resources

# For More Information



[www.epa.gov/ghgreporting/reporters/index.html](http://www.epa.gov/ghgreporting/reporters/index.html)

- Information sheets and fact sheets for each subpart
- Preamble and rule
- Technical background documents on source categories
- Comment response documents
- Training and Webinar schedule - [For webinars, register at  
http://www.epa.gov/ghgreporting/reporters/training/index.html](http://www.epa.gov/ghgreporting/reporters/training/index.html)
- Other technical assistance materials (e.g. applicability tool)

# For More Information



[www.epa.gov/ghgreporting/reporters/notices/index.html](http://www.epa.gov/ghgreporting/reporters/notices/index.html)

- FAQs (by topic areas)

<http://www.ccdsupport.com/confluence/display/faq/FAQs>

- Subpart W FAQs

<http://www.ccdsupport.com/confluence/display/faq/Subpart+W.+Petroleum+and+Natural+Gas+Systems>

- GHGRP 's Rule Help Center

<http://www.epa.gov/ghgreporting/help/index.html>

- e-GGRT help website - [www.ccdsupport.com](http://www.ccdsupport.com)

- Help Desk

<http://www.epa.gov/ghgreporting/contactus.html>



# 7. In Summary – Key Dates

# Key Dates



- Data Reporting
  - Deadline for facilities that reported in 2011 (RY2010 data) to notify EPA that they have a new 2011 source category (e.g., subpart W) & will delay reporting until 9/28 – **April 2, 2012 (Past)**
  - Deadline for Facility registration - **July 30, 2012 (Past)**
  - e-GGRT began accepting W 2011 data – **Aug. 20, 2012 (Past)**
  - Deadline for reporting 2011 data- **Sept 28, 2012**
- BMM
  - Automatic BMM--**Jan 1 to Dec 31, 2011 (Past)**
  - Deadline for BMM extension for 2012- NOI by **Dec 31, 2011** with BMM application by **Mar 30, 2012 (Past)**
  - Deadline for BMM request for 2013 - **Oct 1, 2012**

# Key Dates



- Training and e-GGRT Reporting Sandbox Preview
  - e-GGRT Registration Webinar - **May 10 (Past)**
  - e-GGRT Overview Training Webinar – **May 29 (Past)**
  - e-GGRT Subpart W Specific Training Webinars - **May 30, June 5 and September 4 (Past)**
  - e-GGRT Reporting Sandbox Preview - **June 4-15, 2012 (Past)**
  - Overview of Subpart W – **June 19, 2012 (Past)**
  - Subpart W 2012 Update Webinar – **June 19 and Sept 6, 2012**

Webinars Slides are located at:

<http://www.epa.gov/ghgreporting/reporters/training/index.html>



# Key Dates beyond 2012



- Data Reporting
  - e-GGRT begins accepting W 2012 data – **February 2013**
  - Deadline for reporting 2012 data- **April 1, 2013**
  - RY2013 and beyond, annual report due **Mar 31 of the year following data collection**
    - Ex: RY 2013 data is due March 31, 2014