California Regulation for the Mandatory Reporting of Greenhouse Gas Emissions

2012 GHG Reporting
Subarticle 5: Petroleum and Natural Gas Systems

February 20, 2013
Presentation Slides Available Here:
http://www.arb.ca.gov/cc/reporting/ghg-rep/guidance/guidance-training.htm
Outline

• Key Reporting Dates
• Rule Applicability: Effective Dates

• Subarticle 5 (Subpart W) Petroleum and Natural Gas Systems
  – Implementation of 2012 revisions
  – Emissions
  – Product data
  – Additional data to support cap-and-trade

• Resources
  – Reporting guidance
  – Cal e-GGRT- training, registration, help

• Q&A
## Key Reporting Dates

<table>
<thead>
<tr>
<th>Date</th>
<th>Activity</th>
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<tbody>
<tr>
<td>February 1</td>
<td>Regulatory deadline: Due date for electric power entities to register specified facilities outside California</td>
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<td>February 13</td>
<td>Public release of Cal e-GGRT</td>
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<td><strong>April 10</strong></td>
<td>Regulatory deadline: Reporting deadline for facilities and suppliers of fuels and carbon dioxide, except when subject to abbreviated reporting</td>
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<td><strong>June 3</strong></td>
<td>Regulatory deadline: Reporting deadline for electric power entities and those subject to abbreviated reporting</td>
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<td>July 15</td>
<td>Regulatory deadline: Deadline for corrections to RPS Adjustment data required for electric power entity data reports</td>
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<tr>
<td>September 3</td>
<td>Regulatory deadline: Final verification statements due (emissions data and product data)</td>
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Implementation of 2012 Revisions to Subarticle 5

- Revisions applying to reporting of 2012 data in 2013
  - ARB incorporations of existing USEPA requirements
  - Clarifications to existing methods
  - Voluntary reporting requirements

- Revisions applying to reporting of 2013 data in 2014
  - Fugitive emissions added to > 25,000 MTCO2e applicability threshold
  - New reporting methodologies
  - New reporting requirements

- Note that new methods/requirements may be used for 2012 data reported in 2013, if data is available

For additional guidance:
http://www.arb.ca.gov/cc/reporting/ghg-rep/guidance/guidance-docs.htm
Subpart W – Reporting for New Methods

• Flexible implementation (2013/2014)
  – Intermittent bleed devices
  – New acid gas removal method
  – New blowdown reporting requirements
  – Produced water, crude oil, and condensate

• Effective for 2012 data reported in 2013
  – Best Available Monitoring Methods (BAMM)
  – Voluntary reporting of product data
    • Dry Gas
    • Natural Gas Liquids
    • Associated Gas
Determining Facility Basin

- The basin boundaries for California are outlined in a copyrighted USGS map.
- ARB staff has added a table to guidance that lists the California counties in each basin boundary.
- The table is located here: [http://www.arb.ca.gov/cc/reporting/ghg-rep/guidance/guidance_subpart_w.htm](http://www.arb.ca.gov/cc/reporting/ghg-rep/guidance/guidance_subpart_w.htm)
Onshore Production Storage Tanks

- Onshore petroleum and natural gas production facilities are required to report emissions from “onshore production and storage tanks”. (95152(c)(8))
  - With the addition of the Crude Oil, Condensate, and Produced Water Dissolved CO$_2$ and CH$_4$ (95153(v)), emissions from onshore production tanks are reported based on the results of a flash liberation test, thus fulfilling the requirement in 95152(c)(8).
Equipment and Pipeline Blowdowns

• Acceptable methods for determining input variables for section 95153(g), required for all reporters:
  – N = number of blowdowns – maintain a list
  – \( T_a \) = temp at actual conditions – System Control and Data Acquisition (SCADA), thermometer
  – \( P_a \) = pressure at actual conditions – SCADA, engineering estimate
  – Use the most accurate data available
Compressor Leak Measurement: Safety Concerns

• Monitoring and QA/QC requirements are in section 95154(a)(4)

• Reporting facilities are directed to use an optical gas imaging device “for all sources that are inaccessible and cannot be monitored…”
  – This includes safety concerns when sampling compressor emissions exhibiting high H₂S levels.
  – Use this provision to quantify emissions without exposing personnel to hazardous conditions.
Leak Survey Timing

- Timing of leak surveys is consistent with US EPA guidance and applies to natural gas distribution (section 95153(o)(8)(A).
- Over a five-year period, an equal proportion of sampling is not necessary, just complete sampling over the five-year period.
Crude Oil, Condensate and Produced Water Dissolved CO$_2$ and CH$_4$

- Must sample prior to the point where liquids exit the separator and flash to atmospheric pressure.
- A temporary, portable separator may be used in cases where produced liquids do not routinely pass through a separator.
- Where total number of tanks makes sampling each stream prohibitively expensive, reporters may design a sampling plan that insures a representative number of samples are gathered to accurately quantify these emissions.
Use of Common Pipe Measurement

• Section 95153(y)(2)(A) indicates that ‘company records’ may be used to determine combustion emissions for non-pipeline quality natural gas.

• For purposes of this regulation, ‘company records’ includes common pipe measurements.

• For disaggregating unit level emissions, please follow the unit aggregation guidance:
  
  http://www.arb.ca.gov/cc/reporting/ghg-rep/guidance/unit_aggregation.pdf
Use of Best Available Monitoring Methods (BAMM)

• 2012 emissions data reported in 2013 for Subpart W only:
  – Reporting entities may use BAMM for data inputs listed in Sections 95154(f)(1) through (f)(4).
• 2013 emissions data reported in 2014 may no longer use BAMM for emissions data listed in 95154(f)(1) – (f)(4).
Verification of Reported Activity Data

- All Subpart W reporters are required to report Activity Data as detailed in section 95157.
- The Activity Data reported under Section 95157 must be verified for conformance by the third-party verification body.
- Reporters should use best available data (e.g. company records, engineering calculations) to apportion combustion emissions to the process and unit level where required in section 95157.
Questions?
Reporting Product Data

• Reporting requirements – section 95156
• Covered product data is defined in MRR, with categories listed in Table 9.1 in the Cap-and-Trade Regulation and applies to:
  – Crude oil (thermal and other than thermal)
  – Associated gas (thermal and other than thermal)
  – Natural gas liquids
• Dry gas is not a covered product data and should only be checked during verification for conformance
Reporting Covered Product Data for 2012

- Crude oil is required for 2012 data reported in 2013
- Associated gas and natural gas liquids are voluntary for 2012 data
Petroleum and Natural Gas Systems
Product Data XML Workbook Updates

• Onshore Production tab contains new columns
  – Refer to the product data reporting guidance for specifics
  – Evaluation for conformance on new fields
  – Evaluation for conformance and material misstatement if voluntary information is reported

• New tab: Natural Gas Liquid Processing or Natural Gas Liquid Fractionating facility (NGL)
2011 Product Data

• The reporting guidance gives step-by-step instructions to fill out the 2011 Product Data workbook.

• 2011 data voluntarily reported in 2013 will not be used for determining an entity’s allowance allocation
Product Data Upload Workbooks

• Updated workbooks are in the reporting tool
  – 2011 Product Data spreadsheet is separate from the 2012 xml upload file.

• Upload Workbooks and Guidance are available here:
  – http://www.ccdsupport.com/confluence/display/calhelp/Reporting+Form+Instructions
Questions?
Associated Gas Reporting

• Associated gas includes gases that are produced in association with crude oil production.
• Associated gas is considered a covered product data and must meet the metering and accuracy requirements of section 95103(k).
• ARB staff is working to ensure associated gas is reported consistently
• ARB staff will release guidance on the reporting and subsequent verification requirements for associated gas
Associated Gas Discussion

• What do reporters consider ‘associated gas’?
• Are there metering and accuracy issues with reporting associated gas?
• What are the perceived verification impediments?
Additional Training

• ARB sector-specific training (see link for times)
  http://www.arb.ca.gov/cc/reporting/ghg-rep/tool/ghg-tool.htm
  – February 21 – Fuel Suppliers: Transportation, NG, etc.
  – February 28 – Refinery Product Data
  – Mid-April – Electric Power Entities

• Contact ARB staff as needed for questions:
  ghgreport@arb.ca.gov
# GHG Reporting Contacts

<table>
<thead>
<tr>
<th>Subject Matter</th>
<th>Contact</th>
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<tbody>
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<td>Chief – Greenhouse Gas Emission Inventory Branch</td>
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Resources

• Reporting Guidance: Applicability, Metering, Product Data
  http://www.arb.ca.gov/cc/reporting/ghg-rep/guidance/guidance.htm

• Tool Training: Registration, Subparts
  http://www.arb.ca.gov/cc/reporting/ghg-rep/tool/ghg-tool.htm

• Cal e-GGRT Main Help Page
  http://www.ccdsupport.com/confluence/display/calhelp/Home

• U.S. EPA Detailed Sector Training Slides
  http://www.epa.gov/climatechange/emissions/training.html
  (use as a supplement to ARB summary slides)