California Regulation for the Mandatory Reporting of Greenhouse Gas Emissions

Cement Plants
2012 GHG Reporting

March 13, 2013
Presentation Slides Available
http://www.arb.ca.gov/cc/reporting/ghg-rep/guidance/guidance-training.htm
Outline

• Emissions Data
  – De Minimis
  – CEMS
  – Reporting Biogenic Emissions
  – GHG Monitoring Plan

• Product Data
  – Correctable Errors
  – Revisions to Material Misstatement Calculation
  – Guidance Document for Reporting Options
De Minimis Emissions

- Used to report small quantities of emissions
  - Upload to NEW Cal e-GGRT spreadsheet in Tool
- Verifier confirms estimate is reasonable and is <20,000 MT CO$_2$e and <3% of total emissions
- Sometimes for CH$_4$ and N$_2$O if CEMS is used
- May **not** be used for product data reporting
CEMS – Reporting CH\textsubscript{4} and N\textsubscript{2}O

- All fuel amounts consumed must be reported, even if CEMS is used to report CO\textsubscript{2} emissions

1. Add a monitoring location
2. Add a fuel to report CH\textsubscript{4} and N\textsubscript{2}O and fuel consumed
CEMS - Biogenic Sampling

• (1) If combusting biomass fuels, CEMS must be used with 
  accurate and representative quarterly biogenic stack 
  sampling (ASTM methods) to determine biogenic fraction 
  — Relieves requirement for fuel measurement accuracy 

• (2) Alternatively, quantities of biomass fuels combusted 
  must be measured directly and accurately 
  — Needed to subtract exempt fuels from total emissions when 
    determining what emissions are “covered” 

• If quarterly biogenic sampling is not representative and 
  amount of exempt fuel is not accurately known, all 
  emissions are covered (with a compliance obligation) 
  — i.e. use (1) or (2); if you can’t use either, all emissions are 
    assumed to be fossil (covered emissions)
Correctable Errors Must be Fixed

- All correctable errors must be fixed
- For “covered emissions” or “covered product data” not fixing correctable errors triggers an adverse verification statement (§95131(b)(9))
- For all other data, not correcting triggers a non-conformance and may trigger an adverse verification statement
- Any disagreement regarding what is “correctable” contact ARB immediately
GHG Monitoring Plan

• Required by 95105(c) and includes written procedures, explanations, and equations specific to facility

• Provide plan to verification body early
  – Used to document that facility data systems and methods are complete and accurate

• Verifiers confirm that reporters have a clear understanding of the reported emission sources
  – Knowledge of data quality procedures is important
  – Use and update your plan (as needed) when explaining procedures to verifier
  – Simple drawings and schema are useful
Cement Product Data Reporting
Guidance for Product Data

- Covered product data includes clinker produced, clinker consumed, limestone and gypsum consumed for blending

- Measurement point A: Clinker produced
- Measurement point B: Clinker consumed
Accuracy of Covered Product Data

• Covered product data is sum of:
  Clinker Produced + Clinker Consumed + Limestone
  + Gypsum Consumed for Blending
  – Because of smaller quantities used, limestone and gypsum
    likely do not have to be accurate for the total product data
    sum to still be ±5% accurate
  – However, any single product that is not accurate is a
    non-conformance
    • If total covered products are accurate, but a single product is
      not, this results in a qualified positive verification statement
  – Material misstatement is only triggered if overall sum is not
    within ± 5% accuracy
    • Results in adverse product verification statement
Product Data Reporting Examples

• Following are two examples for reporting covered product data (next 2 slides)

• Annual data must be accurate
  – Monthly data can provide additional support on accuracy, but only annual data must be accurate
  – Verifiers will scrutinize entire process to determine conformance with regulation

• During verification meetings, be prepared with all staff necessary to explain process
Example 1

- **Directly** measure products using accurate and calibrated truck scales, weigh feeders, and belt scales or other meters
  - Other inventory measurements using tank drop and pile surveys must still be accurate (±5%)
- Good option for cement plants if measurement equipment is robust and appropriate
Example 2

- Use cement sales and analysis data to back-calculate “covered products”
- Adjust for beginning and ending inventory to ensure only products that are produced are reported
  - Regulation intent was to report only amount produced during reporting year
  - If inventory adjustment is small, does not need to be highly accurate (most of the annual data is from truck scales, which are assumed to be accurate)
- Tie-in to financial data
Tips for Successful Verification

• Correctable Errors must be fixed
• “Covered Emissions” and “Covered Product Data” (totals) must meet accuracy requirements
• If verifier and reporter disagree on requirements, always contact ARB for assistance
• Maintain all ARB clarifications in GHG Monitoring Plan
Resources
Verification Guidance Materials

- Includes check-lists and other resources used by verifiers during verification
- Identifies key data needed for successful verification and compliance with the regulation
- To be posted here (in March):
  http://www.arb.ca.gov/cc/reporting/ghg-ver/ghg-ver.htm
<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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<tr>
<td>February 13</td>
<td>Public release of Cal e-GGRT</td>
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<tr>
<td>April 10</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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<tr>
<td>June 3</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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## GHG Reporting Contacts

<table>
<thead>
<tr>
<th>Subject Matter</th>
<th>Contact</th>
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<tbody>
<tr>
<td>GHG Mandatory Reporting (General)</td>
<td>Dave Edwards, Manager</td>
</tr>
<tr>
<td>Reporting Requirements, Stationary Combustion, Other Sectors (cement, glass,</td>
<td>Patrick Gaffney</td>
</tr>
<tr>
<td>pulp and paper, etc.)</td>
<td>916.322.7303</td>
</tr>
<tr>
<td>Reporting Tool Registration and General Questions</td>
<td>Karen Lutter</td>
</tr>
<tr>
<td>916.322.8620</td>
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<tr>
<td>Verification of Cement Plants</td>
<td>Chris Halm</td>
</tr>
<tr>
<td>916.323.4865</td>
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<tr>
<td>Greenhouse Gas Report Verification</td>
<td>Renee Lawver, Manager</td>
</tr>
<tr>
<td>916.322.7062</td>
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</tr>
<tr>
<td>Chief – Greenhouse Gas Emission Inventory Branch</td>
<td>Richard Bode, Chief</td>
</tr>
<tr>
<td>916.323-8413</td>
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