



California Electronic Greenhouse Gas Reporting Tool

# **Reporting for Petroleum and Natural Gas Systems**

(Subpart W)

April 17, 2012

Presentation Slides Available Here:

<http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep.htm>



## **DISCLAIMER**

***This training is provided by ARB solely for informational purposes. It does not provide legal advice and does not have legally binding effect. This training does not supplant, replace or amend any of the legal requirements in the Regulation for the Mandatory Reporting of Greenhouse Gas Emissions, title 17, California Code of Regulations, sections 95100-95157. Conversely, any omission or truncation of regulatory requirements found within this training does not relieve any entity or person of their legal obligations to fully comply with all requirements of the regulation.***

# Webinar Overview

- Resources and Reporting Guidance
- Subpart W (reporting emissions)
  - Regulatory basis, BMMM
  - Industry segments
  - Reporting footprint
  - Emission sources and methodologies
- Subpart C (reporting stationary and portable combustion emissions)
- Offshore production

# Training Resources

- Subarticle 5 Reporting Guidance

[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)

- General Reporting Guidance

<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>

# Regulatory Basis for Petroleum and Natural Gas Systems

| Reg. Citation                                     | Action   |
|---|--|
| CARB<br>1/1/12                                    | California Air Resources Board MRR Regulation for the Mandatory Reporting of Greenhouse Gas Emissions, title 17, California Code of Regulations, Sections 95100-95157<br><a href="http://www.arb.ca.gov/cc/reporting/ghg-rep/regulation/mrr_2010_clean.pdf">http://www.arb.ca.gov/cc/reporting/ghg-rep/regulation/mrr_2010_clean.pdf</a> |
| US EPA<br>76 FR 22825<br>04/25/2011<br>Final Rule | Petroleum and Natural Gas Systems (Subpart W) : Extends deadline for submitting BAMM requests during the 2011 calendar year from April 30, 2011 to July 31, 2011; extends period during which specific sources could automatically use BAMM.<br><a href="#">Preamble and Rule (PDF)</a>  |
| US EPA<br>75 FR 74458<br>11/30/2010<br>Final Rule | Petroleum and Natural Gas Systems (Subpart W): Requires monitoring and reporting of greenhouse gas emissions from petroleum and natural gas systems.<br><a href="#">Preamble and Rule (PDF)</a>  |

# Subpart W and BAMMM

(Best Available Monitoring Methods)

- Current ARB MRR incorporates the USEPA April 25, 2011 Final Rule concerning the use of BAMMM. This rule allows the use of BAMMM for 1<sup>st</sup> nine months of 2011.
- Another USEPA Final Rule which extends the use of BAMMM for the full 12 months of 2011 was made final September 27, 2011. This rule is not incorporated in the present ARB MRR.
- ARB issued a Regulatory Advisory that extends the use of BAMMM for the full year 2011.
- BAMMM can only be applied to certain data elements. Check the US EPA Final Rules for specifics.

# Identifying your Subpart W Industry Segment(s)

- USEPA §98.230(a) defines 8 industry segments
  - Offshore petroleum and natural gas systems
  - Onshore petroleum and natural gas production
  - Onshore natural gas processing
  - Onshore natural gas transmission compression
  - Underground natural gas storage
  - Liquefied natural gas (LNG) storage
  - LNG import and export
  - Natural gas distribution

# Define your reporting footprint

- Subpart W uses three “facility reporting footprint” definitions.
  - Onshore Petroleum and Natural Gas Production.
  - Natural Gas Distribution.
  - General USEPA/MRR “facility” definition for remaining 6 Subpart W Industry segments.

[http://www.arb.ca.gov/cc/reporting/ghg-rep/guidance/ghg\\_oilgasfacility\\_definition.pdf](http://www.arb.ca.gov/cc/reporting/ghg-rep/guidance/ghg_oilgasfacility_definition.pdf)



# Subpart W Reporting Footprints (§98.238 Definitions)

- *Onshore Petroleum and Natural Gas Production* - Facility reporting footprint is defined as the basin
  - USEPA basin definition follows California county lines, however several counties may be in one basin.
- *Natural Gas Distribution* – Facility defined as all pipelines, metering and regulating stations.
- *Other Subpart W facilities* - use the standard ARB facility definition 95102(144) – “contiguous or adjacent property”

# Subpart W GHG Reporting Matrix

- Document that assists the reporter in identifying the appropriate calculation methodology to use for each subpart W industry segment.
- Document is posted on the subarticle 5 guidance page: [http://www.arb.ca.gov/cc/reporting/ghg-rep/guidance/ghg\\_subpart\\_w\\_matrix.pdf](http://www.arb.ca.gov/cc/reporting/ghg-rep/guidance/ghg_subpart_w_matrix.pdf)

# Subpart W Reporting Outline

- Register your facility in Cal e-GGRT.
- Enter Facility Information (Subpart A).
  - BMM and *de minimis* emissions
- Configure facility reporting profile.
  - Adding Subparts
- Report emissions, process/vented/flared emissions and production data (disaggregated by Thermal/Other than thermal operations and field) in Subpart W.
- Report Stationary and Portable Combustion Emissions (Subpart C).
  - Report non-pipeline quality natural gas combustion emissions.
  - Disaggregation of emissions and product data
    - by Thermal and Other than Thermal production.
    - and by Sub-basin (facility).

# Registration

- Need an ARB Registration Code to register in Cal e-GGRT
  - New reporters must request an ARB Registration Code prior to registration. Send an e-mail request to: [ghgreport@arb.ca.gov](mailto:ghgreport@arb.ca.gov)

## **March 1: Registration and System Overview**

A brief overview of registering in the new Cal e-GGRT system and overall system operation.

<http://www.arb.ca.gov/cc/reporting/ghg-rep/tool/ghg-tool.htm>

# Cal e-GGRT Tabs

## Home Tab

California Environmental Protection Agency  
**Air Resources Board**

HOME FACILITY MANAGEMENT DATA REPORTING

Hello, Byard Mosher | My Profile | Logout

Cal e-GGRT Help

About Cal e-GGRT Home

**YOUR FACILITIES:**

| Facility or Supplier                            | Your Role |
|---|-----------|
| ARB Test Facility - TEST ONLY - Production Site | AGENT     |

**ACCEPT AN INVITATION:**

Responding to a Facility Invitation?

Paste the Invitation Code into the field below, then click 'GO'

[GO](#)

---

**Cal e-GGRT Announcements**

2012-03-26 00:00:00.0


**Reporting Deadline April 10th**  
 Facilities emitting over 25,000 metric tons CO<sub>2</sub>e must submit reports no later than April 10th.

Contact Us Cal-eGGRT RY2011.R.58 | UA1-2

# Cal e-GGRT Tabs

## Facility Management Tab

California Environmental Protection Agency  
**Air Resources Board**



Cal e-GGRT  
California Electronic Greenhouse Gas Reporting Tool

HOME

FACILITY MANAGEMENT

DATA REPORTING

MY FACILITIES

▶ FACILITY SUMMARY

Hello, Byard Mosher | My Profile | Logout

Cal e-GGRT Help

About Facility Management

### ARB Test Facility - TEST ONLY - Production Site

Facility Summary

**Cal e-GGRT FACILITY SUMMARY**

From this summary page, depending upon your role, you can make changes to the "Facility Profile" information, the facility's representatives Designated Representative (DR) and Alternate Designated Representative (ADR), and to your Agents if you are a DR or ADR.

**Facility Representatives**

|  |                 |
|--|-----------------|
| <b>Designated Representative</b>           | Patrick Gaffney |
| <b>Alternate Designated Representative</b> | Karen Lutter    |

**Facility Profile**

|                         |   |
|-------------------------|---|
| <b>Physical Address</b> | ARB Test Facility - TEST ONLY - Production Site<br>1001 I Street<br>Sacramento CA 95814 |
| <b>Mailing Address</b>  | ARB Test Facility - TEST ONLY - Production Site<br>1001 I Street<br>Sacramento CA 95814 |

**Certificate of Representation Signed and Complete:** No further action is required by the facility representatives.


[Certificate of Representation](#)


| Agent (for this facility)                                    | for |
|--|-----|
| Byard W Mosher   | DR  |
| Anny Huang<br><span style="color: #c00000;">(Pending)</span> | DR  |

✘ Remove self as Agent

# Cal e-GGRT Tabs

## Data Reporting Tab

California Environmental Protection Agency  
 **Air Resources Board**



[HOME](#) | [FACILITY MANAGEMENT](#) | [DATA REPORTING](#)

Hello, Byard Mosher | [My Profile](#) | [Logout](#)

[? Cal e-GGRT Help](#)

[General Reporting Information](#)

### e-GGRT Greenhouse Gas Data Reporting

**Select Facility**

**ANNUAL GHG DATA REPORTING**

You must select a facility to begin using any Data Reporting features, which include: Specifying which subparts the facility will be reporting, entering or updating corporate parent information (subpart A), entering GHG data and viewing validation reports, and lastly, preparing and submitting the Annual Report to ARB.

**REPORTING FACILITIES**

| ARB ID | Facility or Supplier   | Annual Report Status | Facility Overview    |
|--------|--|----------------------|----------------------|
| 999999 | ARB Test Facility - TEST ONLY - Production Site (Sacramento, CA) | Not generated        | <a href="#">OPEN</a> |

**FACILITIES NOT REPORTING IN 2011:**

| ARB ID               | Facility or Supplier | Annual Report Status | Facility Overview |
|----------------------|----------------------|----------------------|-------------------|
| No facilities found. |                      |                      |                   |

Contact Us Cal-eGGRT RY2011.R.53 | DR-facility-select

# Your Facility Data Report

Cal e-GGRT Help

- How to add a subpart and report data
- General reporting information
- How to submit an annual report

ARB Test Facility - TEST ONLY - Production Site (2011)

## Cal e-GGRT Greenhouse Gas Data Reporting

Select Facility » [Facility or Supplier Overview](#)

### FACILITY OR SUPPLIER OVERVIEW

This page allows you to add the source and/or supplier categories for which your facility or supplier will be reporting, then to access those data reporting screens using the OPEN buttons.

After data reporting is complete, you can initiate the annual report review and submission process from this page by using the SUBMIT button (or RESUBMIT for subsequent submissions if needed).

 **290,131**

CO<sub>2</sub> equivalent emissions (excluding biogenic) from subparts C - HH (metric tons)

 **63,333**

Biogenic CO<sub>2</sub> emissions from subparts C - HH (metric tons)

 **0**

CO<sub>2</sub> equivalent quantity from supplier categories (metric tons)

[VIEW GHG DETAILS](#)

REPORT DATA



# Configure Your Facility Data Report

(add all relevant Subparts to your facility reporting configuration)

REPORT DATA

| 2011 Reporting Source or Supplier Category                   | Validation Messages?          | Subpart Reporting    |
|--|-------------------------------|----------------------|
| Sections 95100-95108 (Subpart A)—General Information         | <a href="#">View Messages</a> | <a href="#">OPEN</a> |
| Sections 95115, 95112 (Subpart C)—Stationary Fuel Combustion | <a href="#">View Messages</a> | <a href="#">OPEN</a> |
| Section 95114 (Subpart P)—Hydrogen Production                | <a href="#">View Messages</a> | <a href="#">OPEN</a> |
| Sections 95150-95157 (Subpart W)—Oil and Natural Gas Systems | <a href="#">View Messages</a> | <a href="#">OPEN</a> |
| Section 95113 (Subpart Y)—Petroleum Refineries               | <a href="#">View Messages</a> | <a href="#">OPEN</a> |
| Section 95123 (Subpart PP)—Suppliers of Carbon Dioxide (CO2) | <a href="#">View Messages</a> | <a href="#">OPEN</a> |

[+ ADD or REMOVE Subparts](#)

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SUBPART ATTACHMENTS

| Uploaded File Name  | Subpart | Uploaded By     | Uploaded Date |
|---|---------|-----------------|---------------|
| <a href="#">Patrick Equation C-2b (HHV) Calculation Spreadsheet.xls</a> | C       | Patrick Gaffney | March 9, 2012 |

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SUBMIT ANNUAL REPORT

If all subparts are completed and Validation Messages addressed to your satisfaction, you are ready to prepare and submit an Annual Report.

| Report | Uploaded File Name | Status | Submitted Date | Certification Date |
|--------|--------------------|--------|----------------|--------------------|
|        |                    |        |                |                    |

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VERIFICATION BODY

# Facility Configuration: Adding Subparts

ARB Test Facility - TEST ONLY - Production Site (2011)  
**e-GGRT Greenhouse Gas Data Reporting**  
 Select Facility » Facility Overview » Section (Subpart) Selection

**SECTION (SUBPART) SELECTION**  
 Please check all relevant ARB rule sections for this facility or supplier. Further information can be found in the e-GGRT Help links to the left.

|   |   |
|---|---|
| <p>EPA SUBPARTS D - AA</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> 95112 (Subpart D)—Acid Rain Program EGU<br/>Description ( <a href="#">SHOW</a>   <a href="#">HIDE</a> )</li> <hr/> <li><input type="checkbox"/> 95110 (Subpart H)—Cement Production<br/>Description ( <a href="#">SHOW</a>   <a href="#">HIDE</a> )</li> <hr/> <li><input type="checkbox"/> 95116 (Subpart N)—Glass Production<br/>Description ( <a href="#">SHOW</a>   <a href="#">HIDE</a> )</li> <hr/> <li><input type="checkbox"/> 95114 (Subpart P)—Hydrogen Production<br/>Description ( <a href="#">SHOW</a>   <a href="#">HIDE</a> )</li> <hr/> <li><input type="checkbox"/> 95120 (Subpart Q)—Iron and Steel Production<br/>Description ( <a href="#">SHOW</a>   <a href="#">HIDE</a> )</li> </ul> | <p>GENERAL STATIONARY FUEL COMBUSTION</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> 95115, 95112 (Subpart C)—Stationary Fuel Combustion<br/>Description ( <a href="#">SHOW</a>   <a href="#">HIDE</a> )</li> </ul> <hr/> <p>SUPPLIER CATEGORIES</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> 95121 (Subpart MM)—Suppliers of Petroleum Products<br/>Description ( <a href="#">SHOW</a>   <a href="#">HIDE</a> )</li> <hr/> <li><input type="checkbox"/> 95122 (Subpart NN)—Suppliers of Natural Gas and Natural Gas Liquids<br/>Description ( <a href="#">SHOW</a>   <a href="#">HIDE</a> )</li> <hr/> <li><input type="checkbox"/> 95123 (Subpart PP)—Suppliers of Carbon Dioxide<br/>Description ( <a href="#">SHOW</a>   <a href="#">HIDE</a> )</li> </ul> |
|---|---|

AR 32 COST OF IMPLEMENTATION FEE REGULATION

# Facility Configuration: Adding Subparts

|  |   |
|--|---|
| <input type="checkbox"/> 95114 (Subpart P)—Hydrogen Production<br>Description ( <a href="#">SHOW</a>   <a href="#">HIDE</a> )                          | <b>and Natural Gas Liquids</b><br>Description ( <a href="#">SHOW</a>   <a href="#">HIDE</a> )   |
| <input type="checkbox"/> 95120 (Subpart Q)—Iron and Steel Production<br>Description ( <a href="#">SHOW</a>   <a href="#">HIDE</a> )                    | <input type="checkbox"/> 95123 (Subpart PP)—Suppliers of Carbon Dioxide<br>Description ( <a href="#">SHOW</a>   <a href="#">HIDE</a> )          |
| <input type="checkbox"/> 95117 (Subpart S)—Lime Manufacturing<br>Description ( <a href="#">SHOW</a>   <a href="#">HIDE</a> )                           | AB 32 COST OF IMPLEMENTATION FEE REGULATION   |
| <input type="checkbox"/> 95118 (Subpart V)—Nitric Acid Production<br>Description ( <a href="#">SHOW</a>   <a href="#">HIDE</a> )                       | <input type="checkbox"/> 95201-95207—AB 32 Cost of Implementation Fee Regulation<br>Description ( <a href="#">SHOW</a>   <a href="#">HIDE</a> ) |
| <input checked="" type="checkbox"/> 95150-95157 (Subpart W)—Oil and Natural Gas Systems<br>Description ( <a href="#">SHOW</a>   <a href="#">HIDE</a> ) | SF6 GAS INSULATED SWITCHGEAR  |
| <input checked="" type="checkbox"/> 95113 (Subpart Y)—Petroleum Refineries<br>Description ( <a href="#">SHOW</a>   <a href="#">HIDE</a> )              | <input type="checkbox"/> 95350-95359—SF6 Gas Insulated Switchgear<br>Description ( <a href="#">SHOW</a>   <a href="#">HIDE</a> )                |
| <input type="checkbox"/> 95119 (Subpart AA)—Pulp and Paper Manufacturing<br>Description ( <a href="#">SHOW</a>   <a href="#">HIDE</a> )                | ELECTRIC POWER ENTITIES   |
| <input type="button" value="CANCEL"/> <input type="button" value="SAVE"/>  | 95111—Electric Power Entities<br>Not currently available for selection.<br><br>Description ( <a href="#">SHOW</a>   <a href="#">HIDE</a> )      |

# Reporting Emissions – Subpart W

ARB Test Facility - TEST ONLY - Production Site (2011)

## Sections 95150-95157 (Subpart W): Oil and Natural Gas Systems

### Subpart W Overview

#### OVERVIEW OF SUBPART W REPORTING REQUIREMENTS

Reporters are required to upload an XML file containing their facility's emissions data. To generate the XML file, download the **Petroleum and Natural Gas Systems Emissions Reporting Tool** spreadsheet below, complete the spreadsheet, export the completed spreadsheet to XML, and upload exported XML under section #2 below.

Reporters are also required to upload an Excel (xls) file containing their activity data. Download the **Petroleum and Natural Gas Systems Activity Data** spreadsheet below and upload the completed spreadsheet under section #3 below. Be sure to upload the Excel (xls) file. You do not need to generate XML from this spreadsheet.

The **Supplemental Petroleum and Natural Gas Systems Calculation Tool** is also available to download below. This spreadsheet can be used to help reporters calculate emissions values. **YOU DO NOT NEED TO UPLOAD THIS SPREADSHEET.**



**Subpart W:** [View Validation](#)

1) DOWNLOAD APPLICABLE FORM(S)

# Reporting Emissions – Subpart W

(to download a form, click any of the three Subpart W forms)

1) DOWNLOAD APPLICABLE FORM(S)

- ▶ Petroleum and Natural Gas Systems Emissions Reporting Tools (XML upload required)
- ▶ Petroleum and Natural Gas Systems Activity Data (upload required)
- ▶ Supplemental Petroleum and Natural Gas Systems Calculation Tool (optional - do not upload)

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2) UPLOAD XML FROM THE PETROLEUM AND NATURAL GAS SYSTEMS EMISSIONS REPORTING TOOL

Upload the XML exported from your completed Petroleum and Natural Gas Systems Emissions Reporting Tool here.

NOTE: Upload XML files only. The spreadsheet includes directions for how to export XML from the spreadsheet.

| Uploaded File Name | Attached By | Date | Delete |
|--------------------|-------------|------|--------|
| No files found.    |             |      |        |

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3) UPLOAD PETROLEUM AND NATURAL GAS SYSTEMS ACTIVITY REPORTING TOOL

Upload the completed Petroleum and Natural Gas Systems Activity Data spreadsheet here.

NOTE: Upload the Excel (xls) file. Do not upload XML.

| Uploaded File Name | Attached By | Date | Delete |
|--------------------|-------------|------|--------|
| No files found.    |             |      |        |

# Reporting Emissions – Subpart W

## Step 1. Download a Reporting Form

To download the reporting form(s) for a subpart:

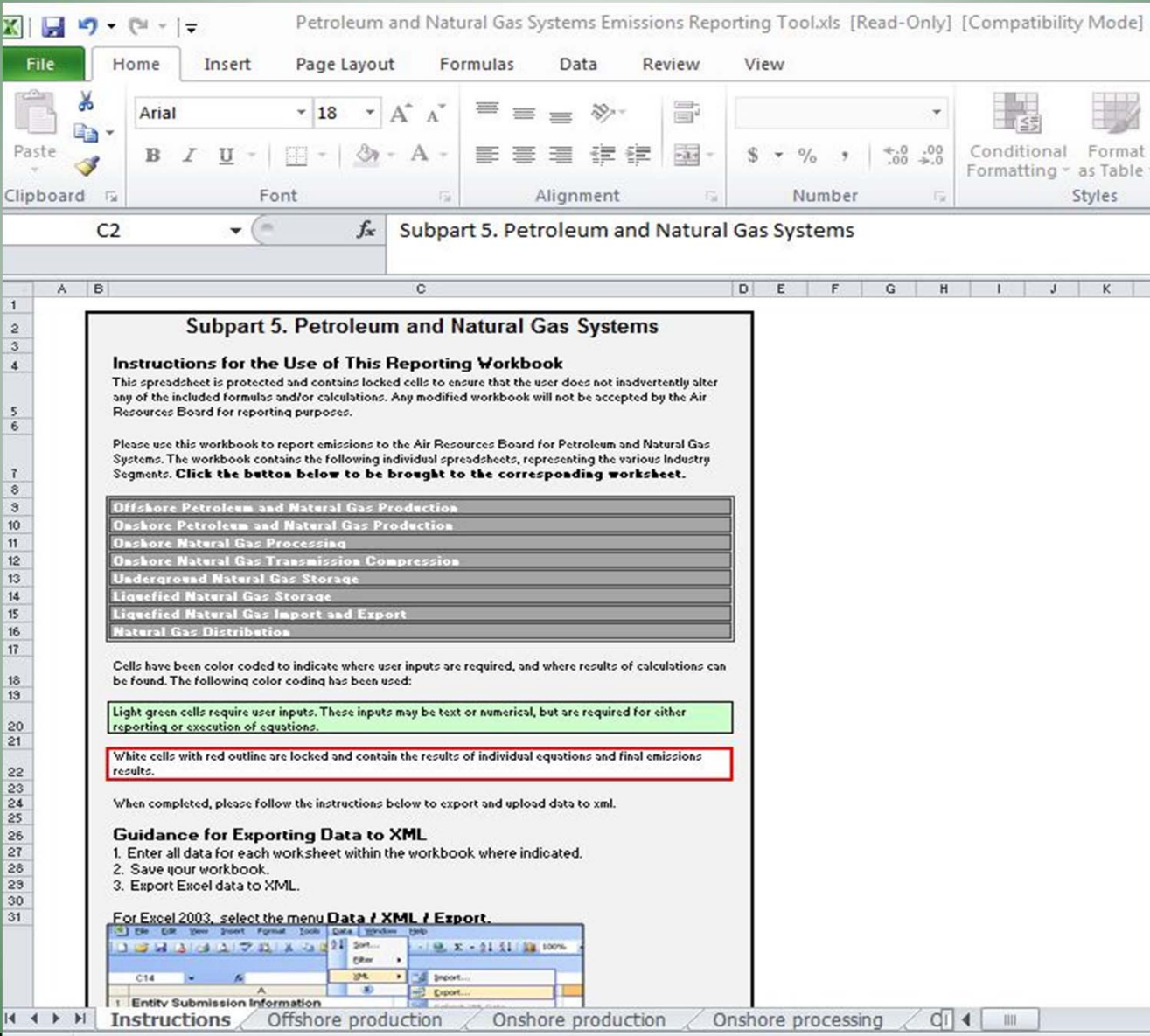
1. Find the subpart in the table below
2. Click the linked filename(s) in the second column
3. Save the file(s) to your computer in a location of your choosing
4. Repeat 1-3 for each applicable subpart

| Subpart<br>(Click to view subpart help)                             | Reporting Forms<br>(click to download)   | XML Schema<br>(Click to download)  | Required<br>Submission Format |
|---|--|------------------------------------|-------------------------------|
| <a href="#">A - De Minimis Emissions</a>                            | <a href="#">De Minimis Emissions.xls</a>                                       | n/a                                | XLS                           |
| <a href="#">A - Forest Product</a>                                  | <a href="#">Forest Product.xls</a>   | n/a                                | XLS                           |
| <a href="#">A - Sheet Steel - Soda Ash - Gypsum Production Data</a> | <a href="#">Sheet Steel - Soda Ash - Gypsum Production Data.xls</a>            | n/a                                | XLS                           |
| <a href="#">Q - Iron and Steel Production</a>                       | <a href="#">Subpart Q Production Data.xls</a>                                  | n/a                                | XLS                           |
| <a href="#">S - Lime Production (CEMS only)</a>                     | <a href="#">Subpart S Product Information for CEMS Reporting.xls</a>           | n/a                                | XLS                           |
| <a href="#">V - Nitric Acid Production</a>                          | <a href="#">Subpart V GHG Reporting Form - Required Data.xls</a>               | n/a                                | XLS                           |
| <a href="#">W - Petroleum and Natural Gas Systems</a>               | <a href="#">Petroleum and Natural Gas Systems Emissions Reporting Tool.xls</a> | <a href="#">carb_subpart_w.xsd</a> | XML                           |
| <a href="#">W - Petroleum and Natural Gas Systems</a>               | <a href="#">Petroleum and Natural Gas Systems Activity Data Workbook.xls</a>   | n/a                                | XLS                           |
| <a href="#">W - Petroleum and Natural Gas Systems</a>               | <a href="#">Petroleum and Natural Gas Systems Calculation Tool.xls</a>         | n/a                                | n/a                           |

# Subpart W – Reporting Forms

| Form   | Function  | Submission Format |
|--|---|-------------------|
| Petroleum and Natural Gas Systems Emissions Reporting Tool.xls | Report emissions and production data  | XML               |
| carb_subpart_w.xsd   | Schema used to design data dump from facility data system to Reporting Tool | NA                |
| Petroleum and Natural Gas Systems Activity Data Workbook.xls   | Report activity data  | XLS               |
| Petroleum and Natural Gas Systems calculation Tool.xls         | Calculate emissions off-line and enter emissions in Reporting Tool workbook | NA                |

# Petroleum and Natural Gas Reporting Tool.xls



Petroleum and Natural Gas Systems Emissions Reporting Tool.xls [Read-Only] [Compatibility Mode]

File Home Insert Page Layout Formulas Data Review View

Clipboard Font Alignment Number Styles

C2 Subpart 5. Petroleum and Natural Gas Systems

Subpart 5. Petroleum and Natural Gas Systems

**Instructions for the Use of This Reporting Workbook**  
 This spreadsheet is protected and contains locked cells to ensure that the user does not inadvertently alter any of the included formulas and/or calculations. Any modified workbook will not be accepted by the Air Resources Board for reporting purposes.

Please use this workbook to report emissions to the Air Resources Board for Petroleum and Natural Gas Systems. The workbook contains the following individual spreadsheets, representing the various Industry Segments. **Click the button below to be brought to the corresponding worksheet.**

|   |
|---|
| Offshore Petroleum and Natural Gas Production |
| Onshore Petroleum and Natural Gas Production  |
| Onshore Natural Gas Processing                |
| Onshore Natural Gas Transmission Compression  |
| Underground Natural Gas Storage               |
| Liquefied Natural Gas Storage                 |
| Liquefied Natural Gas Import and Export       |
| Natural Gas Distribution                      |

Cells have been color coded to indicate where user inputs are required, and where results of calculations can be found. The following color coding has been used:

Light green cells require user inputs. These inputs may be text or numerical, but are required for either reporting or execution of equations.


White cells with red outline are locked and contain the results of individual equations and final emissions results.

When completed, please follow the instructions below to export and upload data to xml.

**Guidance for Exporting Data to XML**

1. Enter all data for each worksheet within the workbook where indicated.
2. Save your workbook.
3. Export Excel data to XML.

For Excel 2003, select the menu **Data / XML / Export**.



Instructions Offshore production Onshore production Onshore processing



# Onshore Production - Emissions

(Petroleum and Natural Gas Systems Reporting Tool.xls)

The screenshot shows an Excel spreadsheet with the following table structure:

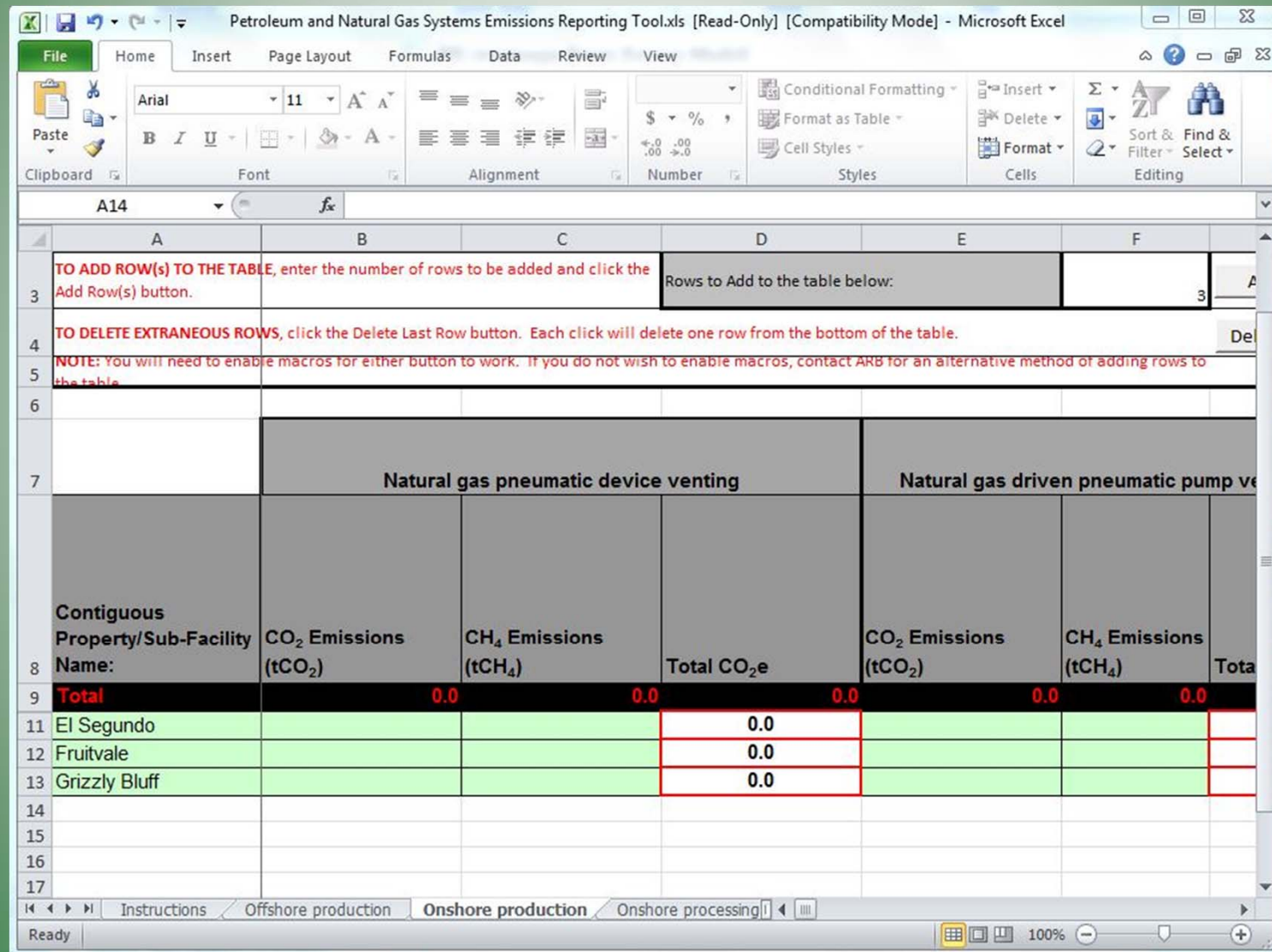
| Onshore Petroleum and Natural Gas Production |   |   |                         |   |   |                         |   |   |       |
|--|---|---|-------------------------|---|---|-------------------------|---|---|-------|
| Contiguous Property/Sub-Facility Name:       | Natural gas pneumatic device venting          |   |                         | Natural gas driven pneumatic pump venting     |   |                         | Well venting for liquids unlo                 |   |       |
|  | CO <sub>2</sub> Emissions (tCO <sub>2</sub> ) | CH <sub>4</sub> Emissions (tCH <sub>4</sub> ) | Total CO <sub>2</sub> e | CO <sub>2</sub> Emissions (tCO <sub>2</sub> ) | CH <sub>4</sub> Emissions (tCH <sub>4</sub> ) | Total CO <sub>2</sub> e | CO <sub>2</sub> Emissions (tCO <sub>2</sub> ) | CH <sub>4</sub> Emissions (tCH <sub>4</sub> ) | Total |
| <b>Total</b>                                 | 0.0   | 0.0   | 0.0                     | 0.0   | 0.0   | 0.0                     | 0.0   | 0.0   | 0.0   |
|  |   |   | 0.0                     |   |   | 0.0                     |   |   |       |

Instructions for table manipulation:

- TO ADD ROW(S) TO THE TABLE**, enter the number of rows to be added and click the Add Row(s) button.
- TO DELETE EXTRANEOUS ROWS**, click the Delete Last Row button. Each click will delete one row from the bottom of the table.
- NOTE:** You will need to enable macros for either button to work. If you do not wish to enable macros, contact ARB for an alternative method of deleting rows from the table.

# Onshore Production – Reporting

(disaggregation of data by production field and EOR status)



TO ADD ROW(S) TO THE TABLE, enter the number of rows to be added and click the Add Row(s) button.

TO DELETE EXTRANEOUS ROWS, click the Delete Last Row button. Each click will delete one row from the bottom of the table.

NOTE: You will need to enable macros for either button to work. If you do not wish to enable macros, contact ARB for an alternative method of adding rows to the table.

| Contiguous Property/Sub-Facility Name: | Natural gas pneumatic device venting          |   |                         | Natural gas driven pneumatic pump ve          |   |       |
|--|---|---|-------------------------|---|---|-------|
|  | CO <sub>2</sub> Emissions (tCO <sub>2</sub> ) | CH <sub>4</sub> Emissions (tCH <sub>4</sub> ) | Total CO <sub>2</sub> e | CO <sub>2</sub> Emissions (tCO <sub>2</sub> ) | CH <sub>4</sub> Emissions (tCH <sub>4</sub> ) | Total |
| <b>Total</b>                           | 0.0   | 0.0   | 0.0                     | 0.0   | 0.0   | 0.0   |
| El Segundo                             |   |   | 0.0                     |   |   |       |
| Fruitvale                              |   |   | 0.0                     |   |   |       |
| Grizzly Bluff                          |   |   | 0.0                     |   |   |       |

# Onshore Production – Reporting (disaggregation of data by production field and EOR status)

Petroleum and Natural Gas Systems Emissions Reporting Tool.xls [Read-Only] [Compatibility Mode] - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View

Clipboard Font Alignment Number Styles Cells Editing

A14 fx

|    | CO  | CP   | CQ  | CR  | CS   | CT  | CU  | C  |                            |
|----|---|--|---|---|--|---|---|--|----------------------------|
| 3  | TO ADD ROW(S) TO THE TABLE: Add Row(s) button.  |  |   |   |  |   |   |  |                            |
| 4  | TO DELETE EXTRANEOUS ROW(S): Add Row(s) button.   |  |   |   |  |   |   |  |                            |
| 5  | NOTE: You will need to enable the table.  |  |   |   |  |   |   |  |                            |
| 7  | <b>Production Data</b> - Pursuant to §95156(a), all operators of onshore petroleum and natural gas production facilities must report the following data by sub-facility |  |   |   |  |   |   |  |                            |
| 8  | Contiguous Property/Sub-Facility Name:  | CO <sub>2</sub> e emissions associated with thermal EOR (tCO <sub>2</sub> e) [Include all applicable subparts] | Crude oil produced using methods other than thermal EOR (barrels) | CO <sub>2</sub> e emissions associated with methods other than thermal EOR (tCO <sub>2</sub> e) [Include all applicable subparts] | Associated gas produced using thermal EOR (MMBtu) (optional) | Associated gas produced using methods other than thermal EOR (MMBtu) (optional) | Barrels of oil equivalent produced using thermal EOR (barrels) (optional) | Barrels of oil equivalent produced using methods other than thermal EOR (barrels) (optional) | Dry Gas (MMBtu) (optional) |
| 9  | <b>Total</b>  | 0.0  | 0.0   | 0.0   | 0.0  | 0.0   | 0.0   | 0.0  |                            |
| 11 | El Segundo  |  |   |   |  |   | 0.0   | 0.0  |                            |
| 12 | Fruitvale   |  |   |   |  |   | 0.0   | 0.0  |                            |
| 13 | Grizzly Bluff   |  |   |   |  |   | 0.0   | 0.0  |                            |
| 14 |   |  |   |   |  |   |   |  |                            |
| 15 |   |  |   |   |  |   |   |  |                            |
| 16 |   |  |   |   |  |   |   |  |                            |
| 17 |   |  |   |   |  |   |   |  |                            |
| 18 |   |  |   |   |  |   |   |  |                            |
| 19 |   |  |   |   |  |   |   |  |                            |
| 20 |   |  |   |   |  |   |   |  |                            |
| 21 |   |  |   |   |  |   |   |  |                            |
| 22 |   |  |   |   |  |   |   |  |                            |

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Ready 100%

## Subpart C - Reporting Stationary Combustion Emissions

- Refer to Subpart C webinar slides.
- Combustion Emissions should be reported separately for thermal and other than thermal operations (in Subpart C use separate configurations for thermal and other than thermal combustion emissions).
- Report portable equipment emissions under Subpart C.
- Separately report NG processing combustion emissions from other stationary combustion emissions in Subpart C.

# Stationary Combustion – Subpart C

ca.gov https://ssl.arb.ca.gov/Cal-eGGRT/datareporting/subpartc/c\_overview.do

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Using Cal e-GGRT for Subpart C reporting



















ARB Test Facility - TEST ONLY - Production Site (2011)  
**95115, 95112 (Subpart C) - Stationary Fuel Combustion**  
 Subpart C Overview

**OVERVIEW OF SUBPART C REPORTING REQUIREMENTS**  
 Subpart C requires affected facilities to report annual carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O) emissions from each stationary combustion unit. First, use this page to identify each stationary combustion reporting *configuration* (reporting options listed in §98.36) and then enter emissions information required by subpart C for each configuration.

For additional information about subpart C reporting, please use the Cal e-GGRT Help link(s) provided.

 **Subpart C: View Validation**

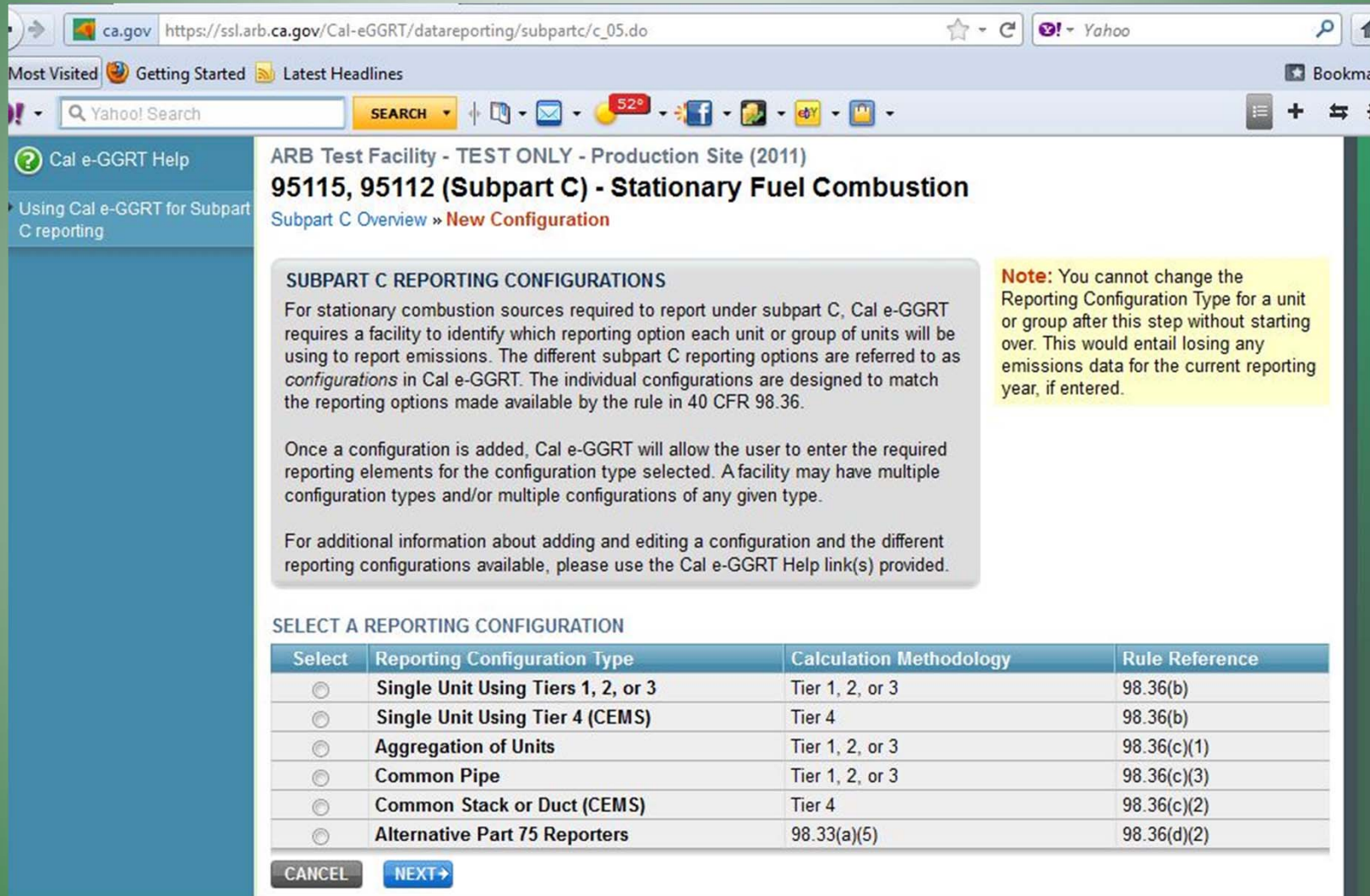
**CONFIGURATION SUMMARY**

| Configuration Name or ID  | Configuration Type                 | Status <sup>1</sup> |                      | Delete  |
|---|------------------------------------|---------------------|----------------------|---|
|  Unit Test                | Single Unit Using Tiers 1, 2, or 3 | Complete            | <a href="#">OPEN</a> |   |
|  SU1/3-Thermal-FieldName | Single Unit Using Tiers 1, 2, or 3 | Incomplete          | <a href="#">OPEN</a> |  |
|  PG Boiler #3            | Single Unit Using Tiers 1, 2, or 3 | Complete            | <a href="#">OPEN</a> |  |
|  CP-Thermal-Gaviota      | Common Pipe                        | Incomplete          | <a href="#">OPEN</a> |  |
|  GP-NonThermal-Rio Viejo | Aggregation of Units               | Incomplete          | <a href="#">OPEN</a> |  |
|  GP-Thermal-Rio Viejo    | Aggregation of Units               | Incomplete          | <a href="#">OPEN</a> |  |
|  GP-12                   | Aggregation of Units               | Complete            | <a href="#">OPEN</a> |  |
|  GP-RFG                  | Aggregation of Units               | Incomplete          | <a href="#">OPEN</a> |  |
|  Biomass power plant     | Single Unit Using Tiers 1, 2, or 3 | Incomplete          | <a href="#">OPEN</a> |  |

[+ Add a Configuration](#)

[↑ Facility Overview](#)

# Stationary Combustion – Subpart C



ca.gov https://ssl.arb.ca.gov/Cal-eGGRT/datareporting/subpartc/c\_05.do

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ARB Test Facility - TEST ONLY - Production Site (2011)  
**95115, 95112 (Subpart C) - Stationary Fuel Combustion**  
[Subpart C Overview](#) » [New Configuration](#)

**SUBPART C REPORTING CONFIGURATIONS**

For stationary combustion sources required to report under subpart C, Cal e-GGRT requires a facility to identify which reporting option each unit or group of units will be using to report emissions. The different subpart C reporting options are referred to as *configurations* in Cal e-GGRT. The individual configurations are designed to match the reporting options made available by the rule in 40 CFR 98.36.

Once a configuration is added, Cal e-GGRT will allow the user to enter the required reporting elements for the configuration type selected. A facility may have multiple configuration types and/or multiple configurations of any given type.

For additional information about adding and editing a configuration and the different reporting configurations available, please use the Cal e-GGRT Help link(s) provided.

**Note:** You cannot change the Reporting Configuration Type for a unit or group after this step without starting over. This would entail losing any emissions data for the current reporting year, if entered.

**SELECT A REPORTING CONFIGURATION**

| Select                | Reporting Configuration Type       | Calculation Methodology | Rule Reference |
|-----------------------|------------------------------------|-------------------------|----------------|
| <input type="radio"/> | Single Unit Using Tiers 1, 2, or 3 | Tier 1, 2, or 3         | 98.36(b)       |
| <input type="radio"/> | Single Unit Using Tier 4 (CEMS)    | Tier 4                  | 98.36(b)       |
| <input type="radio"/> | Aggregation of Units               | Tier 1, 2, or 3         | 98.36(c)(1)    |
| <input type="radio"/> | Common Pipe                        | Tier 1, 2, or 3         | 98.36(c)(3)    |
| <input type="radio"/> | Common Stack or Duct (CEMS)        | Tier 4                  | 98.36(c)(2)    |
| <input type="radio"/> | Alternative Part 75 Reporters      | 98.33(a)(5)             | 98.36(d)(2)    |

CANCEL NEXT

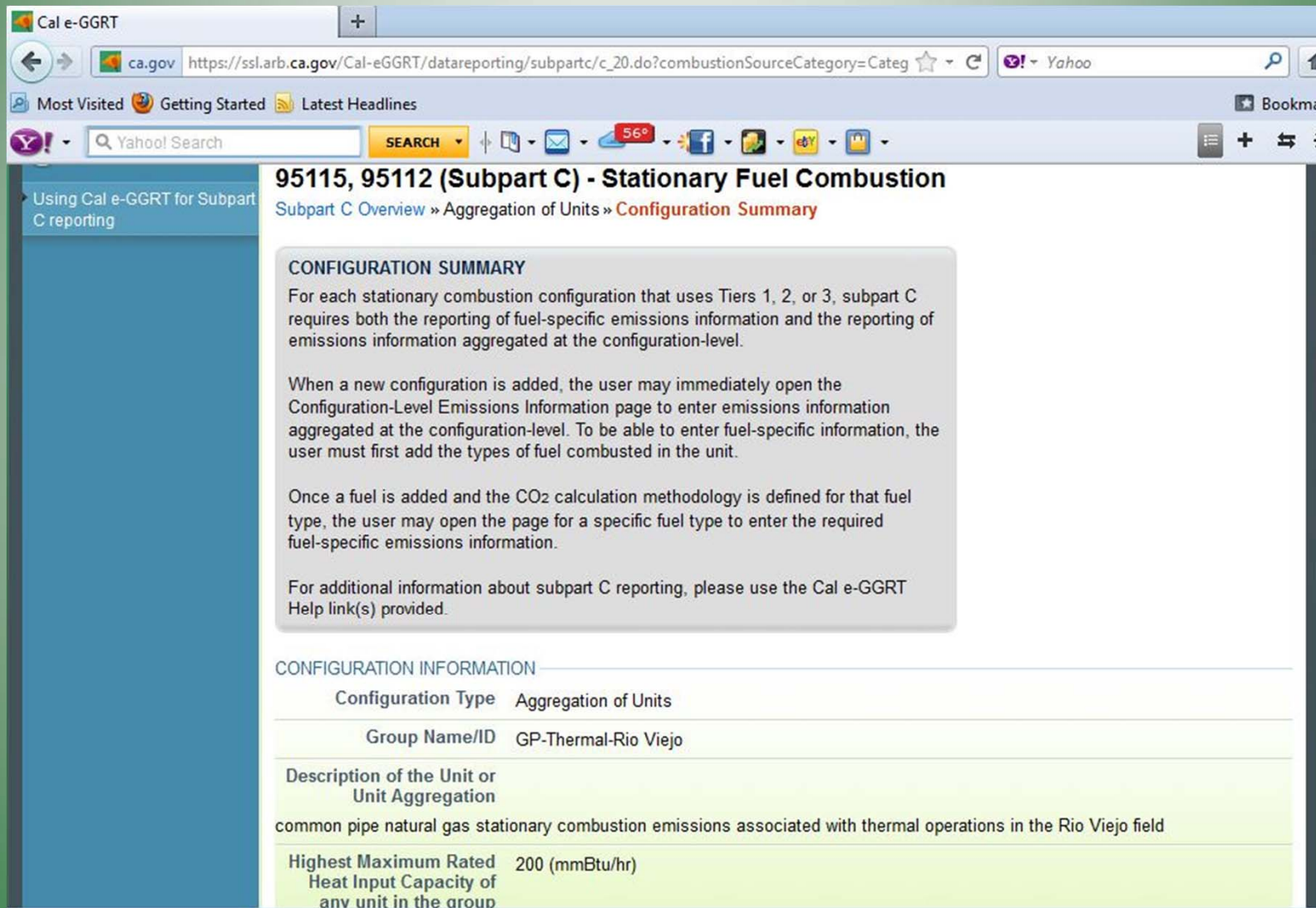
# Stationary Combustion – Subpart C

## Configuration naming convention

| Configuration Type          |        | Suffix - Field Type - Field Name    |            |
|-----------------------------|--------|-------------------------------------|------------|
|                             | Suffix | Field Type                          | Field name |
| Single Unit Tier 1, 2, or 3 | SU1/3  |                                     |            |
| Single Unit Tier 4 (CEMS)   | SUCEMS |                                     |            |
| Aggregation of Units        | GP     | Thermal<br>or<br>Other than Thermal | Field Name |
| Common Pipe                 | CP     |                                     |            |
| Common Stack or Duct (CEMS) | CS     |                                     |            |
| Alternative Part 75         | Alt75  |                                     |            |

# Stationary Combustion – Subpart C

## Aggregation of Units – Add a Fuel



Cal e-GGRT

ca.gov https://ssl.arb.ca.gov/Cal-eGGRT/datareporting/subpartc/c\_20.do?combustionSourceCategory=Categ

Using Cal e-GGRT for Subpart C reporting

### 95115, 95112 (Subpart C) - Stationary Fuel Combustion

Subpart C Overview » Aggregation of Units » **Configuration Summary**

**CONFIGURATION SUMMARY**

For each stationary combustion configuration that uses Tiers 1, 2, or 3, subpart C requires both the reporting of fuel-specific emissions information and the reporting of emissions information aggregated at the configuration-level.

When a new configuration is added, the user may immediately open the Configuration-Level Emissions Information page to enter emissions information aggregated at the configuration-level. To be able to enter fuel-specific information, the user must first add the types of fuel combusted in the unit.

Once a fuel is added and the CO<sub>2</sub> calculation methodology is defined for that fuel type, the user may open the page for a specific fuel type to enter the required fuel-specific emissions information.

For additional information about subpart C reporting, please use the Cal e-GGRT Help link(s) provided.

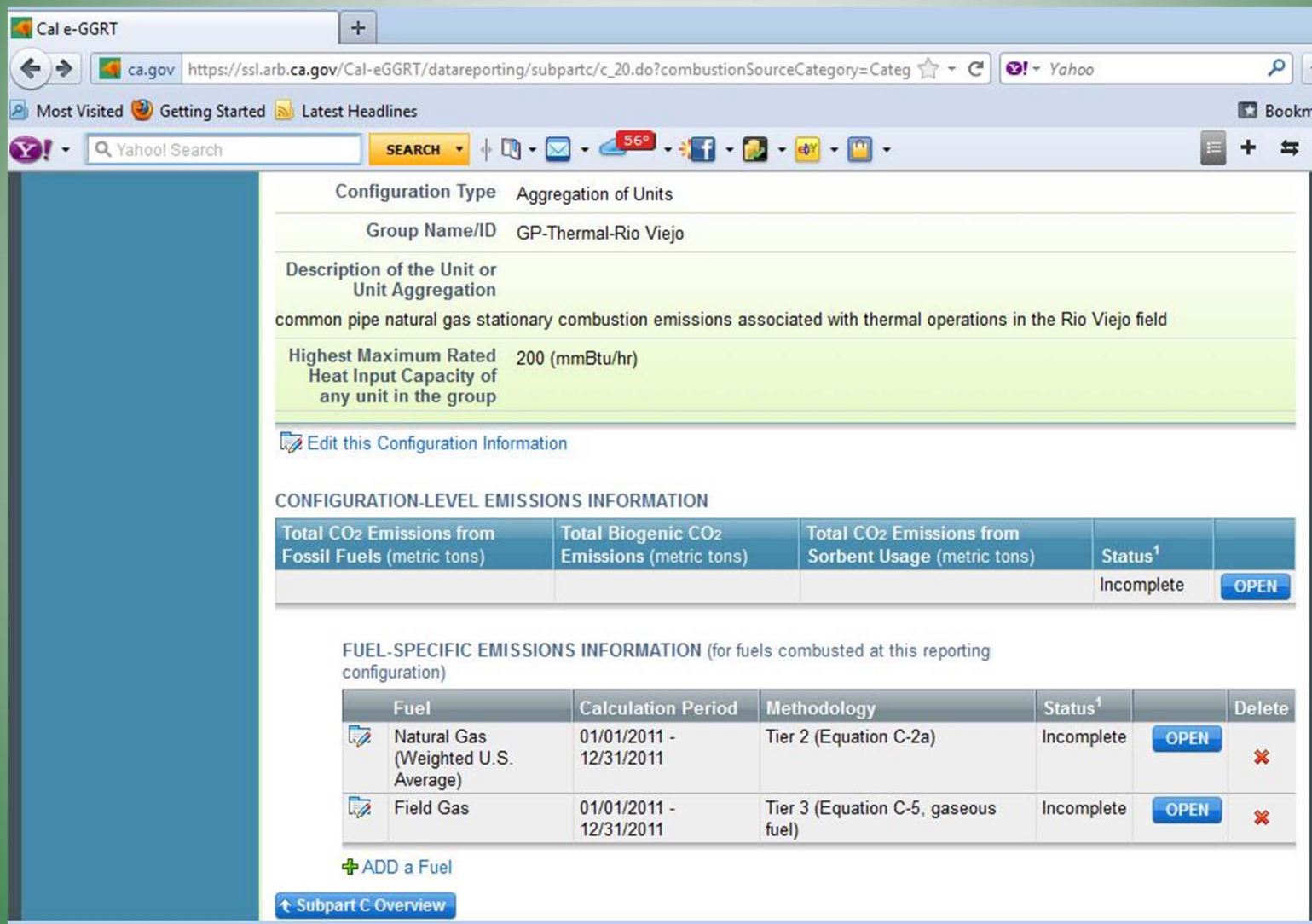
**CONFIGURATION INFORMATION**

|  |   |
|--|---|
| Configuration Type   | Aggregation of Units  |
| Group Name/ID  | GP-Thermal-Rio Viejo  |
| Description of the Unit or Unit Aggregation                        | common pipe natural gas stationary combustion emissions associated with thermal operations in the Rio Viejo field |
| Highest Maximum Rated Heat Input Capacity of any unit in the group | 200 (mmBtu/hr)  |



# Stationary Combustion - Subpart C

## Add a Fuel



Configuration Type: Aggregation of Units

Group Name/ID: GP-Thermal-Rio Viejo

Description of the Unit or Unit Aggregation: common pipe natural gas stationary combustion emissions associated with thermal operations in the Rio Viejo field

Highest Maximum Rated Heat Input Capacity of any unit in the group: 200 (mmBtu/hr)

[Edit this Configuration Information](#)

**CONFIGURATION-LEVEL EMISSIONS INFORMATION**

| Total CO <sub>2</sub> Emissions from Fossil Fuels (metric tons) | Total Biogenic CO <sub>2</sub> Emissions (metric tons) | Total CO <sub>2</sub> Emissions from Sorbent Usage (metric tons) | Status <sup>1</sup> |                      |
|---|--|--|---------------------|----------------------|
|   |  |  | Incomplete          | <a href="#">OPEN</a> |

**FUEL-SPECIFIC EMISSIONS INFORMATION** (for fuels combusted at this reporting configuration)

| Fuel  | Calculation Period      | Methodology                         | Status <sup>1</sup> |                      | Delete |
|---|-------------------------|-------------------------------------|---------------------|----------------------|--------|
| <a href="#">Natural Gas (Weighted U.S. Average)</a> | 01/01/2011 - 12/31/2011 | Tier 2 (Equation C-2a)              | Incomplete          | <a href="#">OPEN</a> | ✗      |
| <a href="#">Field Gas</a>                           | 01/01/2011 - 12/31/2011 | Tier 3 (Equation C-5, gaseous fuel) | Incomplete          | <a href="#">OPEN</a> | ✗      |

[+ ADD a Fuel](#)

[↑ Subpart C Overview](#)

# Stationary Combustion - Subpart C

## Add a Fuel

Cal e-GGRT

ca.gov https://ssl.arb.ca.gov/Cal-eGGRT/datareporting/subpartc/c\_15.do?combustionSourceCategory=Categ

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For additional information about reporting fuel information, please use the Cal e-GGRT Help link(s) provided.

| COAL AND COKE   | HIDE                     | PETROLEUM PRODUCTS | SHOW |
|---|--------------------------|--------------------|------|
| <input type="radio"/> Anthracite  |                          |                    |      |
| <input type="radio"/> Bituminous  |                          |                    |      |
| <input type="radio"/> Subbituminous   |                          |                    |      |
| <input type="radio"/> Lignite   |                          |                    |      |
| <input type="radio"/> Coke  |                          |                    |      |
| <input type="radio"/> Mixed (Coal and Coke Commercial sector)   |                          |                    |      |
| <input type="radio"/> Mixed (Coal and Coke Industrial coking)   |                          |                    |      |
| <input type="radio"/> Mixed (Coal and Coke Industrial sector)   |                          |                    |      |
| <input type="radio"/> Mixed (Coal and Coke Electric Power sector)   |                          |                    |      |
| NATURAL GAS   | HIDE                     |                    |      |
| <input type="radio"/> Natural Gas (Weighted U.S. Average)   |                          |                    |      |
| <p><b>i</b> If a fuel is not found among those listed, you can add it to the other fuels and blends list below.</p> |                          |                    |      |
| OTHER FUELS AND BLENDS  | HIDE                     |                    |      |
| <input type="radio"/> Field Gas - Other (gas)   | <input type="checkbox"/> |                    |      |
| <input type="radio"/> PSA off-gas (low Btu) - Other (gas)   | <input type="checkbox"/> |                    |      |
| <input type="radio"/> Refinery Fuel Gas - Other (gas)   | <input type="checkbox"/> |                    |      |
| <p><b>+</b> ADD an Other Fuel or Blend</p>  |                          |                    |      |
| <p>CANCEL SAVE</p>  |                          |                    |      |

# Stationary Combustion - Subpart C

## Add a Fuel

For additional information about reporting fuel information, please use the Cal e-GGRT Help link(s) provided.

| COAL AND COKE   | HIDE | PETROLEUM PRODUCTS                                    | HIDE |
|---|------|---|------|
| <input type="radio"/> Anthracite                                  |      | <input type="radio"/> Kerosene                        |      |
| <input type="radio"/> Bituminous                                  |      | <input type="radio"/> Used Oil                        |      |
| <input type="radio"/> Subbituminous                               |      | <input type="radio"/> Liquefied petroleum gases (LPG) |      |
| <input type="radio"/> Lignite                                     |      | <input type="radio"/> Propylene                       |      |
| <input type="radio"/> Coke  |      | <input type="radio"/> Ethane                          |      |
| <input type="radio"/> Mixed (Coal and Coke Commercial sector)     |      | <input type="radio"/> Ethylene                        |      |
| <input type="radio"/> Mixed (Coal and Coke Industrial coking)     |      | <input type="radio"/> Isobutane                       |      |
| <input type="radio"/> Mixed (Coal and Coke Industrial sector)     |      | <input type="radio"/> Isobutylene                     |      |
| <input type="radio"/> Mixed (Coal and Coke Electric Power sector) |      | <input type="radio"/> Butane                          |      |
|   |      | <input type="radio"/> Butylene                        |      |
|   |      | <input type="radio"/> Naphtha (<401 deg F)            |      |
|   |      | <input type="radio"/> Natural Gasoline                |      |
|   |      | <input type="radio"/> Other Oil (>401 deg F)          |      |
|   |      | <input type="radio"/> Petrochemical Feedstocks        |      |
|   |      | <input type="radio"/> Petroleum Coke                  |      |
|   |      | <input type="radio"/> Special Naphtha                 |      |
|   |      | <input type="radio"/> Unfinished Oils                 |      |
|   |      | <input type="radio"/> Heavy Gas Oils                  |      |
|   |      | <input type="radio"/> Lubricants                      |      |
|   |      | <input type="radio"/> Motor Gasoline                  |      |
|   |      | <input type="radio"/> Aviation Gasoline               |      |
|   |      | <input type="radio"/> Kerosene-Type Jet Fuel          |      |
|   |      | <input type="radio"/> Asphalt and Road Oil            |      |
|   |      | <input type="radio"/> Crude Oil                       |      |
|   |      | <input type="radio"/> Residual Fuel Oil               |      |

**NATURAL GAS** HIDE

Natural Gas (Weighted U.S. Average)

**OTHER FUELS AND BLENDS** HIDE

Field Gas - Other (gas) ✗

PSA off-gas (low Btu) - Other (gas) ✗

Refinery Fuel Gas - Other (gas) ✗

[+ ADD an Other Fuel or Blend](#)

# Offshore Petroleum and Natural Gas Production

(Petroleum and Natural Gas Systems Reporting Tool.xls )

- Download GOADS reporting software.
- Enter required data.
- Submit completed form to BOEMRE (Bureau of Ocean Energy, Management, Regulation, and Enforcement).
  - BOEMRE calculates emissions using in-house software
  - BOEMRE provides emissions report to your Offshore facility
- Report BOEMRE calculated emissions in Reporting Tool.xls
- At this point the Format and Output of the BOEMRE generated report are uncertain. If current reporting fields in the tool are not adequate, you may attach the BOEMRE report to your GHG report.

# Reporting Offshore Subpart W Emissions

- Report to BOEMRE (Bureau of Ocean Energy Management, Regulation and Enforcement)
- Report using the *Gulfwide Offshore Activity Data System - 2011 (GOADS-2011)*  
<http://www.gomr.boemre.gov/homepg/regulate/enviro/airquality/goads-2011.html>
- [Emissions Reporting Software](#)
- [GOADS-2011 User's Guide](#)
- [Frequently Asked Questions About GOADS-2011](#) (*Word Document*)
- [Technical Support](#)
- [How to Submit Emissions Reports](#)
- Report activity to BOEMRE, BOEMRE calculates facility emissions, you report emissions to USEPA and ARB.

# Offshore Petroleum and Natural Gas Production (Petroleum and Natural Gas Systems Reporting Tool.xls)

Petroleum and Natural Gas Systems Emissions Reporting Tool.xls [Read-Only] [Compatibility Mode] - Microsoft Excel

File Home Insert Page Layout Formulas Data Review View

Clipboard Font Alignment Number Styles Cells Editing

B6 =SUM(B7:B17)

| Offshore Petroleum and Natural Gas Production Reporting |   |   |  |                         |
|---|---|---|--|-------------------------|
| Facility Name   |   |   |  |                         |
| Source Category   | CO <sub>2</sub> Emissions (tCO <sub>2</sub> ) | CH <sub>4</sub> Emissions (tCH <sub>4</sub> ) | N <sub>2</sub> O Emissions (tN <sub>2</sub> O) | Total CO <sub>2</sub> e |
| <b>Total</b>  | 0.0   | 0.0   | 0.0  | 0.0                     |
| Combustion Flares                                       |   |   |  | 0.0                     |
| Fugitives (Equipment Leaks)                             |   |   |  | 0.0                     |
| Glycol Dehydrators                                      |   |   |  | 0.0                     |
| Losses from Flashing                                    |   |   |  | 0.0                     |
| Mud Degassing   |   |   |  | 0.0                     |
| Pneumatic Pumps   |   |   |  | 0.0                     |
| Pressure/Level Controllers                              |   |   |  | 0.0                     |
| Storage Tanks   |   |   |  | 0.0                     |
| Cold Vents  |   |   |  | 0.0                     |
| Minor Sources   |   |   |  | 0.0                     |
| Other   |   |   |  | 0.0                     |

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# Key Reporting Dates

| Date               | Activity   |
|--------------------|--|
| February 1         | Regulatory deadline: Due date for electric power entities to <a href="#">register specified facilities</a> outside California                  |
| February 23        | Public release of Cal e-GGRT   |
| March 2012         | Training for re-accreditation of current ARB verifiers on new regulation requirements  |
| <b>April 10</b>    | Regulatory deadline: Reporting deadline for facilities and suppliers of fuels and carbon dioxide, except when subject to abbreviated reporting |
| <b>May 10</b>      | Extended reporting deadline for Subpart W reporters.   |
| April - June       | Verifier training for new verifiers to receive ARB accreditation   |
| <b>June 1</b>      | Regulatory deadline: Reporting deadline for electric power entities and those subject to abbreviated reporting                                 |
| July 15            | Regulatory deadline: Deadline for corrections to RPS Adjustment data required for electric power entity data reports                           |
| <b>September 1</b> | Regulatory deadline: Final verification statements due (emissions data and product data)   |

# For More Information

- GHG Reporting Website
  - <http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep.htm>
- See website for:
  - Regulation reporting guidance and fact sheets
    - Petroleum and Natural Gas Systems guidance
  - Reporting tool information
  - “Clean” copy of the regulation (no underline/strikeout)
  - Sector specialist contacts
- Email reporting tool questions to:  
[ghgreport@arb.ca.gov](mailto:ghgreport@arb.ca.gov)



# GHG Reporting Contacts

| Subject Matter   | Contact  |
|--|--|
| GHG Mandatory Reporting (General)  | <a href="#">Dave Edwards</a> , Manager<br>916.323.4887 |
| Reporting Requirements, Stationary Combustion, Other Sectors (cement, glass, pulp and paper, etc.) | <a href="#">Patrick Gaffney</a><br>916.322.7303        |
| Reporting Tool Registration and General Questions  | <a href="#">Karen Lutter</a><br>916.322.8620           |
| Electricity Generation and Cogeneration Facilities   | <a href="#">Anny Huang</a><br>916.323.8475             |
| Electricity Retail Providers and Electricity Marketers   | <a href="#">Wade McCartney</a><br>916.327.0822         |
| Fuel and CO2 Suppliers - Transportation Fuels, Natural Gas, LPG, CO2                               | <a href="#">Byard Mosher</a><br>916.323.1185           |
| Petroleum Refineries, Hydrogen Plants, Oil & Gas Production  | <a href="#">Byard Mosher</a><br>916.323.1185           |
| Greenhouse Gas Report Verification   | <a href="#">Renee Lawver</a> , Manager<br>916.322.7062 |
| Chief – Greenhouse Gas Emission Inventory Branch   | <a href="#">Richard Bode</a> , Chief<br>916.323-8413   |