



California Electronic Greenhouse Gas Reporting Tool

Reporting for Subpart Y

Petroleum Refineries

March 13, 2012

Presentation Slides Available Here:

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



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.

Training Resources

- Reporting Guidance: Applicability, Metering
<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)

Cal e-GGRT Help

<http://www.ccdsupport.com/confluence/display/calhelp/Home>

[Home](#)

Note: The Cal e-GGRT help system includes general instruction on using the California GHG reporting tool. However, the help system may not explain differences between California and U.S. EPA reporting requirements. Please refer to the ARB reporting website for California-specific reporting requirements and additional help.


Home

Welcome to Cal e-GGRT Help

This site contains news, tutorials, FAQs, help and other information about Cal e-GGRT.

 **Cal e-GGRT News**

News feeds and links coming soon!

 **Learn About Cal e-GGRT**

- [Registration Instructions](#)
- [GHG Reporting Instructions](#)
- [ARB Outreach and Training](#)

 **Help**

- [About ARB's Mandatory GHG Emission Reporting and AB32](#)
- [About EPA's GHG Reporting Program and Part 98](#)
- [Harmonization of CARB's Cal e-GGRT and EPA's e-GGRT](#)
- [Frequently Asked Questions \(FAQs\)](#)
- [Known Issues](#)
- [Contact Us](#)

Subpart Y - Outline

- Define your Subpart Y reporting requirements.
- Register your facility in Cal e-GGRT.
- Calculate emissions using the Cal e-GGRT functionality.
- Report emissions using Cal e-GGRT.

Subpart Y -Regulatory Basis for Reporting

Date	Action
10/30/2009	<p style="text-align: center;">US EPA Final Rule</p> <p>Finalizes the mandatory reporting of 30 source categories for Reporting Year 2010. These comprise subparts: A, C, D, E, F, G, H, N, O, P, Q, R, S, U, V, X, Y, Z, AA, BB, CC, EE, GG, HH, JJ, LL, MM, NN, OO, and PP.</p> <p>Preamble and Rule (PDF) (261 pp, 2.6MB)</p>
12/17/2010	<p style="text-align: center;">US EPA Final Rule</p> <p>Corrects technical and editorial errors, and clarifies rule provisions for subparts C, D, E, F, G, H, K, N, O, P, Q, R, S, V, X, Y, Z, AA, BB, CC, EE, GG, HH, JJ, NN, OO and PP.</p> <p>Preamble and Rule (PDF) (81 pp, 667K)</p> <p>More information</p>
1/1/2012	<p style="text-align: center;">California Air Resources Board MRR</p> <p>Regulation for the Mandatory Reporting of Greenhouse Gas Emissions, title 17, California Code of Regulations, Sections 95100-95157</p> <p>http://www.arb.ca.gov/cc/reporting/ghg-rep/regulation/2010_regulation.htm</p>

What is Cal e-GGRT Used For?

- Cal e-GGRT is the system used to report all data required by the GHG mandatory reporting regulation.
- The tool contains modules for each sector required to report.
 - Also includes modules for Fee Regulation and SF₆
- Multiple users can be associated with a single facility or entity.
- Verifiers can be associated with facilities and entities in the tool for data review purposes.

Overview of Cal e-GGRT Operation

- Registration – old and new reporters.
- Input required facility information.
- Adding subparts for reporting.
- Entering emissions data.
- Data reporting mechanisms.
 - Direct interface, XML spreadsheet uploads, spreadsheet attachments (varies by sector)
- Validation messages.

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

March 1: Registration and System Overview

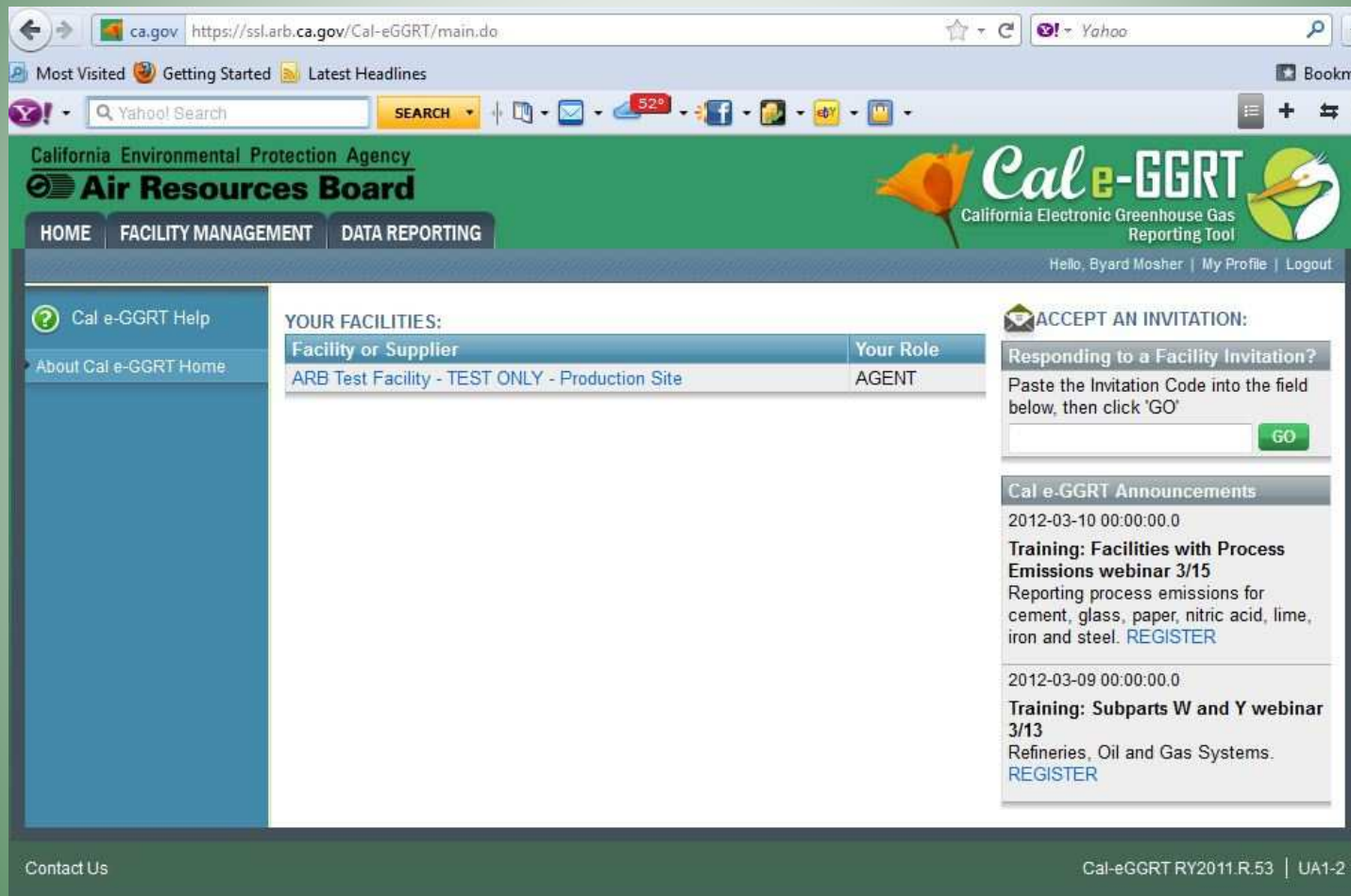
A brief overview of registering in the new Cal e-GGRT system and overall system operation.

Slides: [1-per-page \(color\)](#) [4-per-page \(B&W\)](#)

[Detailed Registration Instructions](#)

Cal e-GGRT Tabs

Home tab



California Environmental Protection Agency
Air Resources Board

Cal e-GGRT
California Electronic Greenhouse Gas Reporting Tool

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'

Cal e-GGRT Announcements

2012-03-10 00:00:00.0
Training: Facilities with Process Emissions webinar 3/15
Reporting process emissions for cement, glass, paper, nitric acid, lime, iron and steel. [REGISTER](#)

2012-03-09 00:00:00.0
Training: Subparts W and Y webinar 3/13
Refineries, Oil and Gas Systems. [REGISTER](#)

Contact Us

Cal-eGGRT RY2011.R.53 | UA1-2

Cal e-GGRT Tabs

Facility Management Tab

California Environmental Protection Agency
Air Resources Board

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.

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

Facility Representatives

Designated Representative	Patrick Gaffney
Alternate Designated Representative	Karen Lutter

Facility Profile

Physical Address	ARB Test Facility - TEST ONLY - Production Site 1001 I Street Sacramento CA 95814
Mailing Address	ARB Test Facility - TEST ONLY - Production Site 1001 I Street Sacramento CA 95814

Certificate of Representation

Agent (for this facility)	for
Byard W Mosher	DR
Anny Huang (Pending)	DR

[✕ Remove self as Agent](#)

Cal e-GGRT Tabs

Data Reporting Tab

California Environmental Protection Agency
Air Resources Board

HOME FACILITY MANAGEMENT **DATA REPORTING**

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[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	OPEN

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

Reporting - Overview

- Configure your Facility-Level Emission Summary – add units as required.
- Report emissions for each applicable source.
 - 1) download applicable excel spreadsheet
 - 2) enter data
 - 3) save as XML
 - 4) upload xml file to Cal e-GGRT

Reporting Emissions

California Environmental Protection Agency
Air Resources Board

HOME FACILITY MANAGEMENT DATA REPORTING

Hello, Byard Mosher | My Profile | Logout

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).

CO ₂ equivalent emissions (excluding biogenic) from subparts C - HH (metric tons)	290,131
Biogenic CO ₂ emissions from subparts C - HH (metric tons)	63,333
CO ₂ equivalent quantity from supplier categories (metric tons)	0

[VIEW GHG DETAILS](#)

REPORT DATA

Reporting Emissions

REPORT DATA

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

[+](#) ADD or REMOVE Subparts

SUBPART ATTACHMENTS

Uploaded File Name	Subpart	Uploaded By	Uploaded Date
Patrick Equation C-2b (HHV) Calculation Spreadsheet.xls	C	Patrick Gaffney	March 9, 2012

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

Reporting: 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 style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;"> <input checked="" type="checkbox"/> 95112 (Subpart D)—Acid Rain Program EGU Description (SHOW HIDE) <li style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;"> <input type="checkbox"/> 95110 (Subpart H)—Cement Production Description (SHOW HIDE) <li style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;"> <input type="checkbox"/> 95116 (Subpart N)—Glass Production Description (SHOW HIDE) <li style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;"> <input type="checkbox"/> 95114 (Subpart P)—Hydrogen Production Description (SHOW HIDE) <li style="border: 1px solid #ccc; padding: 5px;"> <input type="checkbox"/> 95120 (Subpart Q)—Iron and Steel Production Description (SHOW HIDE) 	<p>GENERAL STATIONARY FUEL COMBUSTION</p> <ul style="list-style-type: none"> <li style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;"> <input checked="" type="checkbox"/> 95115, 95112 (Subpart C)—Stationary Fuel Combustion Description (SHOW HIDE) <p>SUPPLIER CATEGORIES</p> <ul style="list-style-type: none"> <li style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;"> <input type="checkbox"/> 95121 (Subpart MM)—Suppliers of Petroleum Products Description (SHOW HIDE) <li style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;"> <input type="checkbox"/> 95122 (Subpart NN)—Suppliers of Natural Gas and Natural Gas Liquids Description (SHOW HIDE) <li style="border: 1px solid #ccc; padding: 5px;"> <input type="checkbox"/> 95123 (Subpart PP)—Suppliers of Carbon Dioxide Description (SHOW HIDE)
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[AB 32 COST OF IMPLEMENTATION FEE REGULATION](#)

Reporting: Adding Subparts

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

Data Reporting

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	OPEN

FACILITIES NOT REPORTING IN 2011:

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

Data Reporting

Open Subpart Y

REPORT DATA

2011 Reporting Source or Supplier Category	Validation Messages?	Subpart Reporting
Sections 95100-95108 (Subpart A)—General Information	View Messages	OPEN
Sections 95115, 95112 (Subpart C)—Stationary Fuel Combustion	View Messages	OPEN
Section 95112 (Subpart D)—Acid Rain Program EGU	View Messages	OPEN
Sections 95150-95157 (Subpart W)—Oil and Natural Gas Systems	View Messages	OPEN
Section 95113 (Subpart Y)—Petroleum Refineries	View Messages	OPEN

[+ ADD or REMOVE Subparts](#)

SUBPART ATTACHMENTS

Uploaded File Name	Subpart	Uploaded By	Uploaded Date
No subpart attachments			

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

VERIFICATION BODY

Reporting Emissions & Product Data

Air Resources Board
Cal e-GGRT
California Electronic Greenhouse Gas Reporting Tool

HOME FACILITY MANAGEMENT DATA REPORTING

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? Cal e-GGRT Help

Using Cal e-GGRT for Subpart Y reporting

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

Section 95113 (Subpart Y): Petroleum Refineries

Subpart Overview

OVERVIEW OF SUBPART Y REPORTING REQUIREMENTS

Subpart Y requires affected facilities to report greenhouse gas (GHG) emissions from flares, catalytic cracking units, traditional fluid coking units, fluid coking units with flexicoking design, delayed coking units, catalytic reforming units, sulfur recovery units, coke calcining units, asphalt blowing, equipment leaks, storage tanks, uncontrolled blowdown systems, loading operations, process vents, and non-merchant hydrogen plants. For additional information about Subpart Y reporting, please use the Cal e-GGRT Help link(s) provided.

Subpart Y: View Validation

FACILITY-LEVEL EMISSIONS SUMMARY

	CO ₂ (metric tons)	CH ₄ (metric tons)	Status ¹	
Uncontrolled Blowdown Systems	N/A		Incomplete	OPEN
Equipment Leaks	N/A		Incomplete	OPEN
Loading Operations	N/A		Incomplete	OPEN
Storage Tanks	N/A		Incomplete	OPEN
Sour Gas Sent Off-Site		N/A	Incomplete	OPEN
Delayed Coking	N/A		Incomplete	OPEN

Reporting Emissions & Product Data

(adding units)

DELAYED COKING UNITS

Unit Name/Identifier	Status ¹		Delete
 Coking Unit	Complete	OPEN	

[+ ADD a Delayed Coking Unit](#)

ASPHALT BLOWING UNITS EMISSIONS SUMMARY

Unit Name/Identifier	CO ₂ (metric tons)	CH ₄ (metric tons)	Status ¹	Delete
None entered				

[+ ADD an Asphalt Blowing Unit](#)

COKE CALCINING UNITS EMISSIONS SUMMARY

Unit Name/Identifier	CO ₂ (metric tons)	CH ₄ (metric tons)	N ₂ O (metric tons)	Status ¹	Delete
None entered					

[+ ADD a Coke Calcining Unit](#)

CATALYTIC CRACKING UNITS, TRADITIONAL FLUID COKING UNITS, FLUID COKING UNITS WITH FLEXICOKING DESIGN, AND CATALYTIC REFORMING UNITS EMISSIONS SUMMARY

Unit Name/Identifier	CO ₂ (metric tons)	CH ₄ (metric tons)	N ₂ O (metric tons)	Status ¹	Delete
None entered					

[+ ADD a Catalytic Cracking or Coking Unit](#)

FLARES UNITS EMISSIONS SUMMARY

Unit Name/Identifier	CO ₂ (metric tons)	CH ₄ (metric tons)	N ₂ O (metric tons)	Status ¹	Delete
None entered					

Reporting Additional Data

(product and Solomon index data)

FLARES UNITS EMISSIONS SUMMARY

Unit Name/Identifier	CO ₂ (metric tons)	CH ₄ (metric tons)	N ₂ O (metric tons)	Status ¹	Delete
None entered					
+ ADD a Flare					

PROCESS VENTS UNITS EMISSIONS SUMMARY

Unit Name/Identifier	CO ₂ (metric tons)	CH ₄ (metric tons)	N ₂ O (metric tons)	Status ¹	Delete
None entered					
+ ADD a Process Vent					

SULFUR RECOVERY UNITS EMISSIONS SUMMARY

Unit Name/Identifier	CO ₂ (metric tons)	Status ¹	Delete
None entered			
+ ADD a Sulfur Recovery Plant			

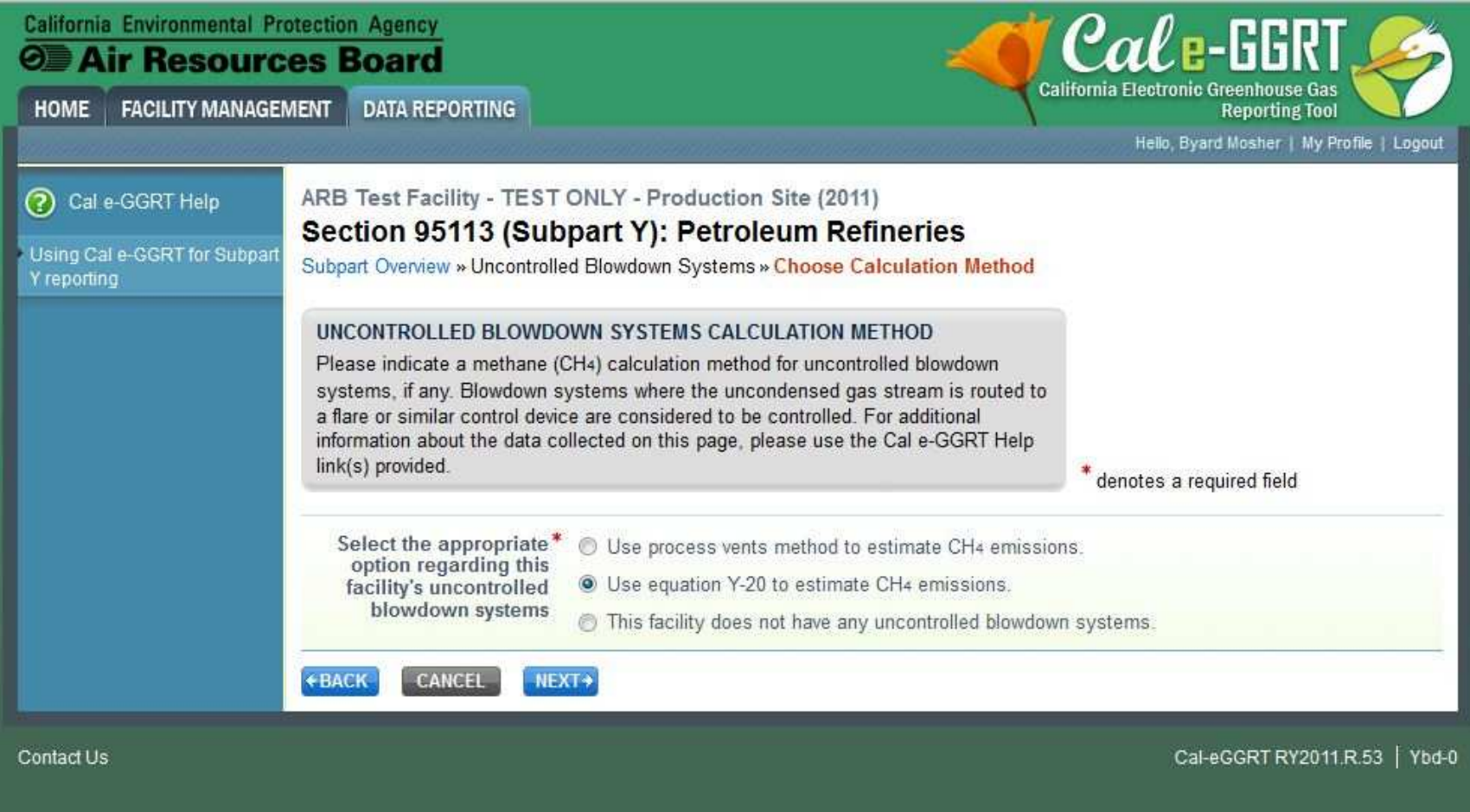
ADDITIONAL PRODUCT DATA AND ENERGY EFFICIENCY INDEX (EEI)

Use the Additional Product Data and Solomon EEI spreadsheet to record the production amounts for each product produced by this facility. Upload the completed XML exported from the spreadsheet.

[▶ Additional Product Data and Solomon EEI Spreadsheet](#)

Reporting Emission Data

(facility level emissions)



California Environmental Protection Agency
Air Resources Board

HOME FACILITY MANAGEMENT DATA REPORTING

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Cal e-GGRT Help
Using Cal e-GGRT for Subpart Y reporting

ARB Test Facility - TEST ONLY - Production Site (2011)
Section 95113 (Subpart Y): Petroleum Refineries
Subpart Overview » Uncontrolled Blowdown Systems » **Choose Calculation Method**

UNCONTROLLED BLOWDOWN SYSTEMS CALCULATION METHOD
Please indicate a methane (CH₄) calculation method for uncontrolled blowdown systems, if any. Blowdown systems where the uncondensed gas stream is routed to a flare or similar control device are considered to be controlled. For additional information about the data collected on this page, please use the Cal e-GGRT Help link(s) provided.

* denotes a required field

Select the appropriate option regarding this facility's uncontrolled blowdown systems *

- Use process vents method to estimate CH₄ emissions.
- Use equation Y-20 to estimate CH₄ emissions.
- This facility does not have any uncontrolled blowdown systems.

← BACK CANCEL NEXT →

Contact Us Cal-eGGRT RY2011.R.53 | Ybd-0

Reporting Emission Data

(blowdown systems)

Cal e-GGRT Help

Using Cal e-GGRT for Subpart Y reporting

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

Section 95113 (Subpart Y): Petroleum Refineries

[Subpart Overview](#) » [Uncontrolled Blowdown Systems](#) » [Eq. Y-20](#)

GHG DATA AND ASSOCIATED INFORMATION

Use this page to enter the GHG data required by Subpart Y. For additional information about the data collected on this page, please use the Cal e-GGRT Help link(s) provided.

(Eq. Y-20) CH₄ emissions (metric tons)

EQUATION Y-20 SUMMARY AND RESULT

$$CH_4 = (Q_{Ref} \times EF_{BD} \times \frac{16}{MVC} \times 0.001)$$

Hover over an element in the equation above to reveal a definition of that element.

Use the equation Y-20 Calculation Spreadsheet to calculate the result. Upload the completed XML exported from the spreadsheet.

[Equation Y-20 Calculation Spreadsheet](#)

Browse... **UPLOAD**

Uploaded File Name	Attached By	Date	Delete
No files found.			

Basis for the methane emission factor value Select

←BACK
CANCEL
SAVE

Reporting Emissions Data

[Home](#) » [GHG Reporting Instructions](#) » [Reporting Form Instructions](#)

Note: The Cal e-GGRT help system includes general instruction on using the California GHG reporting tool. However, the help system may not explain differences between California and U.S. EPA reporting requirements. Please refer to the ARB reporting website for California-specific reporting requirements and additional help.

Reporting Form Instructions

This help page provides guidance for using Reporting Forms and Cal e-GGRT to report GHG emissions and other required information for a subpart.

For each applicable subpart from the list below, users must report their facility's total emissions of each applicable GHG directly into Cal e-GGRT and submit required supplemental data and information using Excel-based Reporting Forms which may be downloaded as described below. The Reporting Forms are meant to provide reporters with a simple and straightforward means for reporting required data and information for the subparts listed below and **DO NOT ASSIST REPORTERS IN CALCULATING EMISSIONS:**

- Subpart A - General Information
- Subpart Q - Iron and Steel Production
- Subpart S - Lime Manufacturing (CEMS users only)
- Subpart V - Nitric Acid Production
- Subpart W - Oil and Natural Gas Systems
- Subpart Y - Petroleum Refineries
- Subpart MM - Suppliers of Petroleum Products
- Subpart NN - Suppliers of Natural Gas and Natural Gas Liquids
- SF6 Gas Insulated Switchgear
- Electric Power Entities

Reporting Emissions Data

Subpart (Click to view subpart help)	Reporting Forms (click to download)	XML Schema (Click to download)	Required Submission Format
A - De Minimis Emissions	De Minimis Emissions.xls	n/a	XLS
A - Forest Product	Forest Product.xls	n/a	XLS
A - Sheet Steel - Soda Ash - Gypsum Production Data	Sheet Steel - Soda Ash - Gypsum Production Data.xls	n/a	XLS
Q - Iron and Steel Production	Subpart Q Production Data.xls	n/a	XLS
S - Lime Production (CEMS only)	Subpart S Product Information for CEMS Reporting.xls	n/a	XLS
V - Nitric Acid Production	Subpart V GHG Reporting Form - Required Data.xls	n/a	XLS
W - Petroleum and Natural Gas Systems	Petroleum and Natural Gas Systems Emissions Reporting Tool.xls	carb_subpart_w.xsd	XML
W - Petroleum and Natural Gas Systems	Petroleum and Natural Gas Systems Activity Data Workbook.xls	n/a	XLS
W - Petroleum and Natural Gas Systems	Petroleum and Natural Gas Systems Calculation Tool.xls	n/a	n/a
Y - Petroleum Refineries	Subpart Y Additional Production Data and Solomon Energy Efficiency Index.xls	n/a	XLS
MM - Suppliers of Transportation Fuels Calculation and Reporting Tool	Suppliers of Transportation Fuels Calculation and Reporting Tool.xls	carb_subpart_mm.xsd	XML
NN - Suppliers of Natural Gas and NGLs	Subpart NN - Interstate NG Pipeline.xls	n/a	XLS
SF6 Gas Insulated Switchgears	SF6 Gas Insulated Switchgear (GIS) Reporting.xls	n/a	XLS

Downloading Calculation Spreadsheets

Equation Y-8 Calculation Spreadsheet.xls	Catalytic Cracking Units or Fluid Coking Units	CO ₂	Y-8 Help
Equation Y-9, Y-10 Calculation Spreadsheet.xls	Catalytic Cracking Units, Fluid Coking Units, Coke Calcining Units, Catalytic Reforming Units	CH ₄ , N ₂ O	Y-9, Y-10 Help
Equation Y-11 Calculation Spreadsheet.xls	Catalytic Reforming Units	CO ₂	Y-11 Help
Equation Y-12 Calculation Spreadsheet.xls	On-Site Sulfur Recovery Plants, Sour Gas Sent Off-Site for Sulfur Recovery	CO ₂	Y-12 Help
Equation Y-13 Calculation Spreadsheet.xls	Coke Calcining Units	CO ₂	Y-13 Help
Equation Y-14, Y-15 Calculation Spreadsheet.xls	Uncontrolled Asphalt Blowing Operations, Asphalt Blowing Operations Controlled by vapor Scrubbing	CO ₂ , CH ₄	Y-14, Y-15 Help
Equation Y-16a, Y-16b, Y-17 Calculation Spreadsheet.xls	Asphalt Blowing Operations Controlled by Thermal Oxidizer or Flare	CO ₂ , CH ₄	Y-16a, Y-16b, Y-17 Help
Equation Y-18 Calculation Spreadsheet.xls	Delayed Coking Units	CH ₄	Y-18 Help
Equation Y-19 Calculation Spreadsheet.xls	Process Vents Not Covered in Paragraphs (a) through (i) of Section 98.253	CO ₂ , CH ₄ , or N ₂ O	Y-19 Help
Equation Y-20 Calculation Spreadsheet.xls	Blowdown Systems	CH ₄	Y-20 Help
Equation Y-21 Calculation Spreadsheet.xls	Equipment Leaks	CH ₄	Y-21 Help
Equation Y-22 Calculation Spreadsheet.xls	Storage Tanks Other Than Those Processing Unstabilized Crude Oil	CH ₄	Y-22 Help
Equation Y-23 Calculation Spreadsheet.xls	Storage Tanks That Process Unstabilized Crude Oil	CH ₄	Y-23 Help
Equation Y-SSM Calculation Spreadsheet.xls	Flares	CO ₂	Y-SSM Help

Equation Y-20 Calculation Spreadsheet

G26 fx

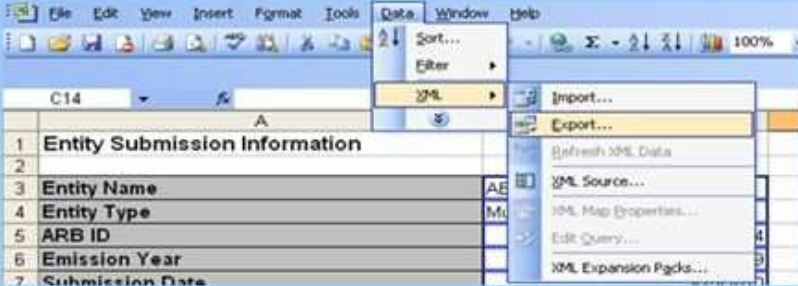
	A	B	C	D	E	F	G
1	Subpart Y - Petroleum Refineries - Calculating Methane Emissions from Blowdown Systems Using Equation Y-20						
2	FOLLOW THE INSTRUCTIONS ON THE NEXT TAB (DATA EXPORT GUIDANCE) FOR INSTRUCTIONS ON HOW TO EXPORT YOUR DATA						
3	Version	Cal e-GGRT RY2011.R.01					
4	Today's date	3/11/2012					
5	This spreadsheet is protected and contains locked cells to ensure that you do not inadvertently alter any of the included formulas and/or						
6	calculations. To remove this protection and alter this spreadsheet, right-click the "worksheet" tab near the bottom of the screen and select						
7	"Unprotect Sheet." When prompted for the password, type "GHG" and click "OK." Please note that making changes to an unprotected sheet						
8	could result in incorrect calculations and that you are responsible for the accuracy of the data you report. For additional help, visit the						
9	Microsoft Excel Support website (http://office.microsoft.com/en-us/excel-help).						
10							
11							
12	Equation Y-20:	$CH_4 = \left(Q_{Ref} \times EF_{BD} \times \frac{16}{MVC} \times 0.001 \right)$					
13							
14							
15							
16							
17	Facility Name:						
18	Reporter Name:						
19	Unit Name or Identifier:						
20	Unit Description:						
21	Comments:						
22	Unit Type:	Blowdown System					
23							
24	Input Data						
25		[Q _{ref}] = Quantity of crude oil plus the quantity of intermediate products received from off site that are processed at the facility (MMbbl/year)					
		[EF _{BD}] = Methane emission factor for uncontrolled blown systems (scf	137,000.	The default value for EF _{BD} is 137,000			

Equation Y-20 Data Export Guidance

Exporting Equation Calculation Spreadsheets

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



6. For Excel 2007 and Excel 2010, right-click within a linked cell. Select **XML / Export**.

Equation Y-20:

$$CH_4 = \left(Q_{Ref} \times EF_{BD} \times \frac{16}{M} \right)$$

Facility Name: _____
 Reporter Name: _____
 Unit Name or Identifier: _____
 Unit Description: _____
 Comments: _____
 Unit Type: Blowdown System

Input Data

Equation Y-20 | Data Export Guidance

Reporting Emissions and Production Data

- Report emissions for all Facility Level emissions sources
- Report Emissions for all additional facility units
- Report Production Data

Reporting Production and EEI Data

(additional Production and Solomon EEI data)

Clipboard Font Alignment Number Styles Cells Editing

Security Warning Macros have been disabled.

A1

Subpart Y - Additional Production and Solomon Energy Efficiency Index Data

FOLLOW THE INSTRUCTIONS ON THE NEXT TAB (DATA EXPORT GUIDANCE) FOR INSTRUCTIONS ON HOW TO EXPORT YOUR DATA

Version Cal e-GGRT RY2011.R.01
Today's date 3/11/2012

Facility Information
Instructions: Complete the following facility information.

Facility Name:	
Reporter Name:	

Solomon Energy Efficiency Index
Instructions: Complete the following table.

	2008	2009	2010	2011
Solomon Energy Efficiency Index (EEI)				

Additional Production Data
Instructions: For each row in the table, select a product from the Product dropdown and enter the corresponding Production Amount.
If you need to add rows to the table, enter the number of rows to be added and click the Add Row(s) button.
NOTE: You will need to enable macros for the button to work. If you do not wish to enable macros, contact ARB for an alternative method of adding rows to the table.

Number of Rows to Add to the Table Below:	1	<input type="button" value="Add Row(s)"/>
---	---	---

Product	EIA Number	Production Amount
	#N/A	
	#N/A	

Subpart Y Production and EEI | Data Export Instructions | Products

Reporting Production Data

Security Warning Macros have been disabled. [Enable Content](#)

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	A	B	C	D	E	F	G	H
1	Product	EIA						
2	Renewable Fuels, TOTAL	202						
3	Ethanol	141						
4	Biomass-based diesel	203						
5	Other renewable diesel	205						
6	Other renewable fuels	207						
7	Oxygenates (Excluding Fuel Ethanol), TOTAL	446						
8	ETBE	142						
9	MTBE	144						
10	Other Oxygenates	445						
11	LPG/LRG Ethane	641						
12	LPG/LRG Ethylene	631						
13	LPG/LRG Propane	642						
14	LPG/LRG Propylene	632						
15	LPG/LRG Butane	643						
16	LPG/LRG Butylene	633						
17	LPG/LRG Isobutane	644						
18	LPG/LRG Isobutylene	634						
19	LPG/LRG Pentanes Plus	220						
20	Unfinished Oils, TOTAL	812						
21	Naphtha and Lighter	820						

Subpart Y Production and EEI | Data Export Instructions | Products

Additional Information for Refiners who also report as Suppliers of Carbon Dioxide

- Does your facility produce Hydrogen?
- Does your facility capture and sell CO₂?
- If you report under Subpart PP (Suppliers of CO₂)- there is a potential for double-counting “transferred CO₂” emissions.
- Use the provision in 95114(g) to subtract emissions that are reported using other calculation methods from your facility total.
- ARB will issue guidance on this topic.



Data Validation


Reporting: Validation Messages

- Tool provides data validation
- Most messages must be cleared before report submittal
- Clicking on message brings you to where the issue occurred

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

SUBPART C VALIDATION REPORT

This report contains a complete set of validation messages for all data required by this Subpart. For additional information about Validation Reports, please use the Cal e-GGRT Help link(s) provided.

[Print-friendly version](#) 

FACILITY-LEVEL VALIDATION MESSAGES

Validation Type ¹	ID ²	Message ³
No facility level validation messages.		

CONFIGURATION-LEVEL VALIDATION MESSAGES

Validation Type ¹	ID ²	Unit Name	Message ³
Data Completeness	C125	PG Single Unit	Annual carbon dioxide emissions from combustion of all biomass fuels combined (if any of the units burn fossil AND biomass). This data element is required.
Data Completeness	C128	PG Single Unit	Annual carbon dioxide emissions from sorbent. This data element is required.

FUEL-LEVEL VALIDATION MESSAGES

Validation Type ¹	ID ²	Unit Name	Fuel Name	Message ³
Data Completeness	C146	PG Single Unit	Natural Gas (Weighted U.S. Average)	Annual carbon dioxide emissions from combustion of the specified fuel. This data element is required.

[← Subpart Overview](#)

¹ Validation Types: Cal e-GGRT generates a variety of validation types, defined below:

- Data Completeness: data required for reporting is missing or incomplete.
- Data Quality: data is outside of the range of expected values. The value you have provided is outside the ARB estimated range for this data element. Please double check this value and revise, if necessary. If you believe it to be correct, please submit the value as is.
- Screen Error: a data value or combination of data values prevents Cal e-GGRT from continuing to the next page. Typically, this will not appear on the Validation Report, but instead will be displayed on the data entry page at the time the error was created.

Key Reporting Dates

- See **Key Dates** web page for specific dates applicable to reporting year
- <http://www.arb.ca.gov/cc/reporting/ghg-rep/ghg-rep-dates.htm>
- Actual Reporting Dates may differ from dates specified in the regulation if the specified dates fall on a Saturday, Sunday, or Holiday
- **Key Dates** page is updated annually with required submission dates

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
 - Reporting tool information
 - “Clean” copy of the regulation (no underline/strikeout)
 - Sector specialist contacts
- Email reporting tool questions to:
ghgreport@arb.ca.gov

GHG Reporting Contacts

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