Subpart C Fuel-Level Emissions Information for RY2014 and Later

Once the fuel types and CO_2 calculation method are specified, e-GGRT will prompt the user for fuel specific emissions information. Although units using Tier 4 and alternative part 75 methods are not generally required to calculate fuel specific CO_2 mass emissions, such units are required to report fuel specific CH_4 and N_2O mass emissions. Fuel specific missing data information is also reported in this section.

The text below describes how to enter subpart C Stationary Fuel Combustion Sources fuel-level emissions information for each configuration type for RY2014 and later. The process to edit fuel information for an existing configuration type is essentially similar.





Starting on the Subpart C Overview page, find the configuration type for which you would like to enter emissions information in the CONFIGURATION SUMMARY table and click OPEN.

OME FACILITY REGISTR		MANAGEMENT	DATA REPOR	TING		Electronic Gree	enhouse Gas	Y
			BAIATE			Hello, Sokha	Chea My Prof	ile Log
	Sokha							
	Subpart C	: General S	tationary	Fuel Cor	nbustion (2013)			
ing e-GGRT for Subpart C orting	Subpart C Over	view » Single Unit	Using Tiers 1,	2, or 3 » Conf	iguration Summary			
	CONFIGURA	TION SUMMARY						
	For each stat requires both emissions inf	ionary combustion the reporting of fue ormation aggregate	configuration el-specific emi ed at the confi	that uses Tiers ssions informa guration-level.	s 1, 2, or 3, subpart C tion and the reporting of			
	While both Fi there is no or calculation sp Emissions Int Fuel-Specific	uel-Specific and Co der requirement on preadsheets, it is n formation first. Link Emissions page	onfiguration-Le I which must b ecommended Is to the sprea	vel emissions be entered first that the user e adsheets are p	are required in all cases, . If using the optional nter Fuel-Specific rovided on each			
	To be able to relevant fuel (methodology, type to enter	enter the Fuel-Spe one at a time), and Once a fuel is add the required fuel-sp	ecific Emission I then the corr ded the user m pecific emissio	ns pages, the u esponding CO nay open the p ons information	user must first select the 2 calculation age for a specific fuel 			
	For additional link(s) provide	l information about ed.	subpart C rep	orting, please	use the e-GGRT Help			
	CONFIGURATI	ON INFORMATION	I					
	Config	uration Type Si	ngle Unit Usin	g Tiers 1, 2, or	r 3			
	l	Jnit Name/ID Si	ngle Unit Test					
		Description						
		Unit Type P(CWD (Pulveriz	ed coal, wall-fi	red, dry bottom)			
	Maximun In	n Rated Heat 35 put Capacity	i00 (mmBtu/hr)				
	Edit this C	onfiguration Informa	ation					
	CONFIGURATI	ON-LEVEL EMISS	SIONS INFOR	MATION				
	Total Biogen (metric tons)	ic CO2 Emissions		Total CO ₂ Err (metric tons)	nissions from Sorbent Usag	je S	tatus ¹	
						In	complete	OPE
	FUEL- configu	SPECIFIC EMISS	IONS INFORI	ATION (for fu	els combusted at this reporti	ng		
		Fuel	Calcula	tion Period	Methodology	Status ¹		Dele
		Natural Gas (Weighted U.S. Average)	01/01/2 12/31/2	013 - 013	Tier 1 (Equation C-1)	Incomple	te OPEN	*
	🕂 ADI) a Fuel						
	★ Subpart C Ov	verview						
	¹ A status of "Inc validation mess	complete" means th ages in your Validat	at one or more tion Report by c	required data e licking the "View	elements are incomplete. For o w Validation" link on the overvie	details, refer to the D w page. (Note: if th)ata Completer ere are no valio	ness lation
	-							



Paperwork Reduction Act Burden Statement | Contact Us

e-GGRT RY2013.R20 | SPC-20

To enter emissions information by fuel type, find the fuel type for which you would like to enter fuel emissions data in the FUEL-SPECIFIC EMISSIONS INFORMATION table and click OPEN.

How you report fuel-level emissions information will depend on whether or not you intend to enter equation inputs using the IVT module or report them through e-GGRT. The section below describes how to enter inputs into the IVT module. If you are required or choose to report equation inputs to EPA, see Reporting Emissions and Equation Inputs to EPA for instructions on how to report fuel-specific emissions.

Reporting Emissions By Entering Equation Inputs Using the IVT

The data entry screen will vary depending on the calculation methodology (tier and equation). The screen shot below shows the Fuel-specific Emissions page for Tier 2 using Equation C-12a and C-9a to calculate CO_2 emissions and Equation C-8 to calculate CH_4 and N_2O emissions.

>> Click image	ge to expand		
\$EPA(\$₽	and the star		e-GGRT 🎉
		TRACTICE CONTRACTOR	-
Østation Mysiskersener Mysiskersener	10 Perspires 1957 Simpler Crown to SP State Constant Specific	monery FLE CONTRACTION (2014)	
	Contraction of the states for the state for the first state for the state for the state of the state of the state of the state state of the first state of the state state of the first state of the state.	en leve to an or strange i leve of United annotations and a second state of the state of the second state of the second state of the second state of the state of the second state	
	A CONTRACTOR OF A CONTRACT		And the spin of the second second
	Contractor and	Landress Marine Strategy and the Strategy	CONTRACTOR AND A
	terre Sing Keelfs	ter ter t	
	Congression of the	A de Art Castles (2 e 2	
	Basel - Valed	ALCONE EVENINE	
	and the second se	22. Available Available	
		her op a same half onder door is on	and the state of
		and a loss	
	SCHOOL STATISTICS	nun-	
		DEVELOPMENT OF A DEVELO	
	Annual II is an annual annual an	has been and the target of the second s	
	Control II: Constructions from Control Control of Control Line		
	the second s		
	Second ball on the late		
	1947		
Second Public Street	La en Secto		CONTROLST 2024

€PA	United States Environmental F Agency	Protection		e-GGRT 🎺
HOME FACILITY	REGISTRATION	FACILITY MANAGEMENT	DATA REPORTING	Electronic Greenhouse Gas Reporting Tool
				Hello, Richard Richards My Profile Logout
😢 e-GGRT Help	DR	Enterprises - TEST		
 Using e-GGRT for Su reporting 	Ibpart C Subp	part C: General St part C Overview » Single Unit U	ationary Fuel Combustion (2014) sing Tiers 1, 2, or 3 » Fuel-specific Emissions	
	FU Usa The info dat	EL-SPECIFIC EMISSIONS e this page to enter the annual e user is required to enter CO2, rmation (as applicable) for eac a collected on this page, pleas	greenhouse gas emissions information for this fuel. , CH4, N2O, sampling frequency and missing data h fuel type. For additional information about the se use the e-GGRT Help link(s) provided.	Annual CO2 (metric tons) Annual CH4 (metric tons) Annual N2O (metric tons)
	FAC	ILITY'S INPUTS VERIFIER FI	LE	What is the Inputs Verifier File?
	Ø	Inputs Data Loaded	Last Saved File: 511706-DR_Enterprises	TEST-2014.xml
		Save Inputs Data Locally	Saved By (Date): Richard Richards (Octo	ber 09, 2014 4:29 PM)
	CON	FIGURATION-FUEL-PERIOD		
		Unit or Group Name/ID	Test Unit 1	
		Configuration Type	Single Unit Using Tiers 1, 2, or 3	
		Fuel (Fuel Type)	Distillate Fuel Oil No. 2 (Petroleum Products)	
	-	Reporting Period	01/01/2014 - 12/31/2014	
	EQU	ATION C-1 SUMMARY AND R	RESULT	
			$CO_2 = 1 \times 10^{-3} \times Fuel \times HHV \times EF$ Hover over an element in the equation above to revea	al a definition of that element.
	fuel	Annual CO2 emissions from combustion of the specified (include both biogenic and non-biogenic emissions)	(metric tons) Use Inputs Verifier to calculate GO	
	EQU	ATION C-8 SUMMARY AND R	ESULTS	
			Hover over an element in the equation above to reveal	al a definition of that element.
		Annual CH4 emissions from combustion of the specified fuel	(metric tons) Use Inputs Verifier to calculate GO	
		Annual N2O emissions from combustion of the specified fuel	(metric tons) Use Inputs Verifier to calculate G0	
	CO ₂	EQUIVALENT EMISSIONS -		
	0.02	CO2 equivalent value for Annual CH4 emissions	(metric tons)	
		CO2 equivalent value for Annual N2O emissions	(metric tons)	
	CAI	NCEL		
Paperwork Reduction /	Act Burden Staten	nent Contact Us		e-GGRT RY2014.R18 SPC-22

Facilities access the IVT module from the Fuel-specific Emissions page. In the Equation Summary and Result Section for CO_2 , you will find a data entry cell for CO_2 emissions. Immediately below this data entry cell you will see a block labeled "Use Inputs Verifier to calculate" and a green "Go" box. Click "Go" to open the IVT module for the methodology you have selected for the fuel. You can also access the IVT module by clicking on the "Go" box associated with the data entry cells for CH_4 and N_2O . (For fuels for which you use the Tier 4 methodology (CEMS), you must access the IVT using the CH_4 and N_2O "Go" boxes since there is no CO_2 data entry cell on the Fuel-specific Emissions page for Tier 4. Also, if you are calculating emissions with the Tier 3 methodology for a gaseous fuel using Equation C-5, you must select the Molar Volume Constant (MVC) used at the bottom of the Fuel-specific Emissions page before you access the IVT module.)

Entering Data Using the IVT

If you have previously entered these inputs and saved your inputs file locally you should import your locally saved inputs file. (You will be prompted to load data from an existing inputs file when you open subpart C on the Facility Overview page.) If you are having trouble locating your inputs file or would like to "Reset" and recreate your inputs file, please review our help content reviewing these processes at Saving and Reloading a Inputs Verifier File or Resetting your Facility To Create a New Inputs Verifier file.



Once you enter the IVT module you will note that these screens are formatted with a grey background and an Inputs Verifier Tool header. Here you are asked to provide emissions inputs to allow the IVT to calculate emissions. These inputs will vary according to tier methodology used and whether the fuel is gaseous, liquid or solid. The screen shot below shows the IVT page for entering equation inputs for distillate fuel oil no. 2 using the Tier 1 method. The IVT data entry requirements for each tier are summarized below.

> Click	k image to exp	and			
€F	PA United Sta Environme	ates ental Protection			e-GGR1
	Agency				nnuts Verifier Too
				Hello	, Richard Richards My Profile Logout
DR Ent Subpart	terprises - TEST art C: Genera Overview » Test Unit	l Stationary Fuel Comb T1 » Distillate Fuel Oil No. 2 » Eq. (ustion (2015) C-1 and C-8 Inputs		
EQUA Use thi about t	TION C-1 AND C-8 IN is page to enter the in he data collected on t	IPUTS puts to Equations C-1 and C-8. For a his page, please use the e-GGRT He	dditional information lp link(s) provided.	Inj	out will not be stored by EPA
CONFIG	URATION-FUEL-PEF	RIOD			
Unit	t or Group Name/ID	Test Unit T1			
	Configuration Type	Single Unit Using Tiers 1, 2, or 3			
	Fuel (Fuel Type)	Distillate Fuel Oil No. 2 (Petroleum	Products)		
	Reporting Period	01/01/2015 - 12/31/2015			
EQUATI	ONS C-1 AND C-8	CO ₂ =1×10 ⁻³ × Fuel × F	IHV × FF		
	Equation C-8	$CH_4 \text{ or } N_2O = 1 \times 10^{-3} \times Fuel \times H_4$	HV × EF		
Fuel		Volume of liquid fuel combusted (Input to Equations C-1 and C-8)		(gallons/year)	
Note: T	he following values ar	e the defaults for the fuel you selecte	ed. The fuel and default va	lues are found on Table C-1 and C-2	of Part 98.
HHV		Default high heat value of the fuel (Input to Equations C-1 and C-8)	0.138 (mmBtu/gallon)		
EF	Fuel-specif	ic default emission factor for CO2 (Input to Equation C-1)	73.96 (kg CO2/mmBtu)		
EF	Fuel-specif	ic default emission factor for CH4 (Input to Equation C-8)	0.003 (kg CH4/mmBtu)		
EF	Fuel-specif	ic default emission factor for N2O (Input to Equation C-8)	0.0006 (kg N2O/mmBtu)		
SAVE	CANCEL				
Paperwork	Reduction Act Burden S	tatement Contact Us			e-GGRT RY2015.R40 SPC-2



e-Li **Inputs Verifier Tool**

DR Ent Subp Subpart	terprises - TEST art C: Genera Overview » Test Unit	l Stationary Fuel Combu T1 » Distillate Fuel Oil No. 2 » Eq. C-	Istion (2015) 1 and C-8 Inputs	
EQUA	TION C-1 AND C-8 IN	IPUTS		
Use thi about t	is page to enter the in the data collected on t	puts to Equations C-1 and C-8. For ad his page, please use the e-GGRT Hel	ditional information o link(s) provided.	
CONFIG				
Uni	t or Group Name/ID	Test Unit T1		
	Configuration Type	Single Unit Using Tiers 1, 2, or 3		
	Fuel (Fuel Type)	Distillate Fuel Oil No. 2 (Petroleum P	roducts)	
	Reporting Period	01/01/2015 - 12/31/2015		
EQUATI	ONS C-1 AND C-8			
	Equation C-1	CO2 = 1x10 ⁻³ × Fuel × H	HV × EF	
	Equation C-8	CH_4 or $N_2O = 1 \times 10^{-3} \times Fuel \times He$	HV × EF	
Fuel		Volume of liquid fuel combusted (Input to Equations C-1 and C-8)		(gallons/year)
Note: T	he following values a	e the defaults for the fuel you selected	I. The fuel and default	values are found on Table C-1 and C-2 of Part 98.
HHV		Default high heat value of the fuel ((Input to Equations C-1 and C-8)	0.138 (mmBtu/gallon)	
EF	Fuel-specif	ic default emission factor for CO2 (Input to Equation C-1)	73.96 (kg CO2/mmBtu)
EF	Fuel-speci	ic default emission factor for CH4 ((Input to Equation C-8)	0.003 (kg CH4/mmBtu)
EF	Fuel-specif	ic default emission factor for N2O ((Input to Equation C-8)	0.0006 (kg N2O/mmBi	u)
SAVE	CANCEL			
				e-GGRT RY2015.R40 SPC-22

Tier 1 (Equation C-1, C-1a, or C-1b)

For each fuel type (including biomass fuel(s))* for which you have elected to use a Tier 1 (Equation C-1, C-1a, or C-1b) methodology, the IVT requires you to enter the quantity of the fuel combusted:

- For gaseous fuels, enter the volume of fuel combusted in scf per year (Equation C-1) or, for natural gas, enter annual natural gas usage in therms per year (Equation C-1a) or mmBtu per year (Equation C-1b)
- · For liquid fuels, enter the volume of fuel combusted in gallons per year
- · For solid fuels, enter the mass of fuel combusted in tons per year

*When using Wood and Wood Residuals in non-IVT configuration, additional data is necessary. In place of the radio buttons for "High heat value of the fuel used" e-GGRT instead collects "moisture content used to calculate the wet-basis HHV" as a percent. Unit's measure of "percent" and the value collected would be a value greater than or equal to zero and less than or equal to 100. This value will automatically be used to calculate a wet-basis HHV in mmBtu /short ton based on the default dry-based HHV for Wood and Wood Residuals.

When finished, click SAVE.

Tier 2 (Equations C-2a and C-2b)

For each fuel type (including biomass fuel(s)) for which you have elected to use a **Tier 2 (Equations C-2a and C-2b)** methodology, the IVT requires you to enter the following:

- · For gaseous fuels:
 - The volume of gaseous fuel combusted (scf/year)
 - High heat value of the fuel used (mmBtu/scf)*
- For liquid fuels:
 - The volume of liquid fuel combusted (gallons/year)
 - High heat value of the fuel used (mmBtu/gallon)*
- For solid fuels:
 - Mass of solid fuel combusted (tons/year)
 - High heat value of the fuel used (mmBtu/ton)*

*Depending on the unit(s)' size and fuel sampling frequency requirements, you may be required to use Equation C-2b to calculate the fuel volume and high heat value of the fuel used. Specifically, if the unit (or largest unit in the configuration) is at least 100 mmBtu/hr, and, the fuel sample results are obtained at least monthly, you must use Equation C-2b. If these requirements are not met, you have the option of either using Equation C-2b to calculate an average HHV, or, calculating an arithmetic average HHV. In either optional case, you will calculate the annual average HHV offline and enter the value directly into the IVT. Access the Equation C-2b IVT by selecting the radio button labeled "Use Equation C-2b to calculate a weighted annual average high heat value of the fuel" and clicking on the "Go" button associated with the data entry cell that appears. The equation C-2b IVT requires entry of the following for each month of the reporting year:

- Measured high heat value of the fuel, for month (which may be the arithmetic average of multiple determinations), or, if applicable, an appropriate substitute data value (mmBtu per scf, gallon or ton)
- Quantity (mass or volume) of the fuel combusted during month, from company records (scf, gallons, or tons)

Tier 2 (Equation C-2c)

For municipal solid waste (MSW) for which you have elected to use the Tier 2, Equation C-2c methodology, the IVT requires you to enter the following:

- Total mass of steam generated by MSW or solid fuel combustion during reporting year (pounds steam)
- Ratio of the boiler's maximum rated heat input capacity to its design rate steam output capacity (mmBtu/pounds steam)

Tier 3 (Equation C-3, C-4, or C-5)

For each fuel type (including biomass fuel(s)) for which you have elected to use a **Tier 3 (Equations C-3, C-4 and C-5)** methodology, the IVT requires you to enter the following:

- For gaseous fuels (Equation C-5/C-8):
 - Annual volume of gaseous fuel combusted (scf/year)
 - Annual average carbon content of the gaseous fuel (kg C/kg)
 - Annual average molecular weight of the gaseous fuel (kg/kg-mole)
 - High heat value of the fuel used (mmBtu/scf)
 - Default from Table C-1, or
 - Calculated by the IVT for Equation C-2b*
- For liquid fuels (Equation C-4/C-8):
 - Annual volume of liquid fuel combusted (gal/year)
 - Annual average carbon content of the liquid fuel (kg C/gallon)
 - High heat value of the fuel used (mmBtu/gallon)
 - Default from Table C-1, or
 - Calculated by the IVT for Equation C-2b*
- For solid fuels (Equation C-3/C-8):
 - Annual volume of solid fuel combusted (short tons/year)
 - Annual average carbon content of the solid fuel (percent by weight, expressed as a decimal fraction)
 - High heat value of the fuel used (mmBtu/short ton)
 - Default from Table C-1, or
 - Calculated by the IVT for Equation C-2b*

*Access the Equation C-2b IVT by selecting the radio button labeled "Use Equation C-2b to calculate a weighted annual average high heat value of the fuel" and clicking on the "Go" button associated with the data entry cell that appears. The equation C-2b IVT requires entry of the following for each month of the reporting year:

- Measured high heat value of the fuel, for month (which may be the arithmetic average of multiple determinations), or, if applicable, an appropriate substitute data value (mmBtu per scf, gallon or ton)
- Quantity (mass or volume) of the fuel combusted during month, from company records (scf, gallons, or tons)

Tier 4 (CEMS)

For each fuel type (including biomass fuel(s)) for which you use the **Tier 4** methodology, subpart C requires you to enter the **Cumulative annual** heat input from combustion of the fuel (mmBtu) to allow the IVT to calculate CH₄ and N₂O emissions using Equation C-10.

Once you have completed entering all of your inputs for the fuel in the IVT, click "Save" at the bottom of the page and e-GGRT will calculate your emissions and return you to the Fuel-specific Emissions page where the emissions of CO_2 , CH_4 , and N_2O calculated for the fuel is displayed in the respective data entry cell for each gas. The CO_2e for CH_4 and N_2O emissions will also be displayed on this page. Check the "Enter/Report Alternate Result" box if you wish to report a result that differs from the one calculated by the IVT (note that this will generate a validation message).

For Tier 2 and Tier 3 methodology, you are required to report monitoring information in sections below the equation summary and results sections (see Rep orting Fuel-specific Monitoring Information below).

When you have finished entering data on the Fuel-specific Emissions page, click "Save," which will return you to the Configuration Summary page.

Saving and Reloading Your Inputs Verifier File

As you enter data into the Inputs Verifier Tool (IVT), the system creates and "inputs file" that contains all the data that you entered into IVT. You must save your inputs file to your computer or other location that you designate. On each subsequent log in, you will be prompted to temporarily upload the latest version of the inputs file to e-GGRT. e-GGRT will not save data entered into the IVT. Users are responsible for saving their facility's inputs file. This page shows how the IVT assists users with this task.

The following example demonstrates how the inputs to equations are 1) entered, 2) saved locally, 3) temporarily loaded at a later session, 4) the screen errors you may receive, and 5) error messages you may receive if you attempt to open an inputs file that is not the most recent one saved for your facility.

If you are having trouble locating your inputs file or would like to "Reset" and recreate your inputs file, please review our help content reviewing these processes at Reloading Your Inputs Verifier File or Resetting your Facility To Create a New Inputs Verifier file.

To access the inputs verifier tool, users would log in to e-GGRT with their username and password, select their facility, and navigate to the "Data Reporting" section of e-GGRT.



SEPA United St Environm Agency	ates iental Protection		e-GGRT 🎺
HOME FACILITY REGISTR/	ATION FACILITY MANAGEMEN	T DATA REPORTING EPA REPORTS HELP DESK	Reporting Tool
			Hello, Sokha Chea My Profile Logout
e-GGRT Help	Siem Reap		
Using e-GGRT for Subpart S	Subpart S: Lime Ma	anufacturing <mark>(2014)</mark>	
reporting	Subpart Overview » Subpart S	Summary Information	
	EQ. S.4: FACILITY-LEVEL (CO2 PROCESS EMISSIONS AND ADDITIONAL	
	EMISSIONS INFORMATION	l i i i i i i i i i i i i i i i i i i i	86,161.6
	Subpart S requires a facility below. For additional informa	to report the facility and emissions information described tion about the facility information required by Subpart S	(Eq. S-4) Annual CO ₂ process emissions
	please use the e-GGRT Help	b link(s) provided.	(metric tons/year).
	FACILITY'S INPUTS VERIFIE	:R FILE	What is the Inputs Verifier File?
	📀 Inputs Data Loaded	Last Exported File: 515869-Siem Reap-201	I4.xml
	🔚 Save Inputs Data Locally	Exported By (Date): Sokha Chea (July 28, 2	014 3:42:28 PM)
	EQUATION S-4 SUMMARY A	ND RESULT	
	$E_{CO_2} = \sum_{i=1}^{t} \sum_{n=1}^{12}$	$(EF_{lime,i,n} \times M_{lime,i,n}) + \sum_{i=1}^{b} \sum_{n=1}^{12} (EF_{lkd,i,n} \times M_{lkd,i,n})$	$(1) + \sum_{i=1}^{z} E_{waste,i}$
		Hover over an element in the equation above to reveal a de	finition of that element.
	Annual CO2 process	86161.6327 (metric tons)	
	emissions from lime production from all kilne	Use Inputs Verifier to calculate GO	
	Enter/Report Alternate Re	esult	
	ADDITIONAL EMISSIONS DA	ΤΑ	
	Annual lime production capacity for the entire facility	12 (short tons)	
	Was CO2 used on site?	⊚ Yes	
		No	
	CANCEL		
Paperwork Reduction Act Burder	n Statement Contact Us		e-GGRT RY2014.R11 s-facility

On the Data Reporting tab for the selected subpart, immediately below a reported emissions value, the user will find a button labeled **"Use Inputs Verifier to calculate| GO"**. Clicking **GO** will open the inputs verifier tool for that reported emissions value. Please note that screens in the inputs verifier tool are clearly marked with a unique header indicating that you are using the IVT (shown below with red outline).



SEPA United States Environmental Protection Agency		e-GGRT
		Inputs Verifier Tool
		Hello, Sokha Chea My Profile Logout
Siem Reap		
Subpart S: Lime Manufacturing (2 Subpart Overview » Subpart S Summary Information	O14) » Equation S-1 Inputs	
	· ·	
EQUATION S-1 PRODUCT INPUTS Use this page to enter the inputs to equation S-1. The	ne inputs to equations will be	
used for verification purposes only, and will not be s verification checks (the verification summary, viewal	tored by EPA. The results of the ole from the "Subpart Overview"	
page) will be stored by EPA.		J
FACILITY'S INPUTS VERIFIER FILE		What is the Inputs Verifier File?
Inputs Data Not Saved	A file has not yet been save copy of your equation inputs data!	d for this facility. Be sure to use the "Save Inputs Data Locally" link to save a s data before you log off as e-GGRT will not save or store equation inputs
Save Inputs Data Locally		
EQUATION INPUTS (1 OF 2)		
Product or By-Product Name	e (type) 🛛 III (product 1 (product	t) 🧭 all inputs entered
	By Product A (by-proc	duct sold) 🥑 all inputs entered
Equation S-4 Summary		
Equation S-1: EFLIME,	$i_{i,n} = [(SR_{CaO} \times CaO_{i,n}) + (SR_{I})]$	MgO × MgO _{i,n})] * 2000 2205
Hover over an elemen	it in the equation above to reveal a	definition of that element.
JANUARY		
Calcium oxide content, determined according to §98.194(c)	0.66; (me	etric ton CaO/metric ton lime) Make all months same
Magnesium oxide content, determined according to §98.194(c)	0.4 (me	etric ton MgO/metric ton lime) Make all months same
Emission factor for lime type	0.8659 (me	etric tons CO2/ton lime)
Weight or mass of lime type produced	520 (tor	is) Make all months same
(input to Equation 5-4)	will not be stored by EPA	
· <i>····</i>		~ <i>~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~</i>
<u> </u>		· · · · · · · · · · · · · · · · · · ·
DECEMBER		
Calcium oxide content, determined according to §98.194(c)	0.66 (me will not be stored by EPA	etric ton CaO/metric ton lime)
Magnesium oxide content, determined according to §98.194(c)	0.4 (me	etric ton MgO/metric ton lime)
Emission factor for lime type (calculated input to Equation S-4)	0.8659 (me	etric tons CO2/ton lime)
Weight or mass of lime type produced (input to Equation S-4)	520; (ton will not be stored by EPA	15)
CANCEL		
Paperwork Reduction Act Burden Statement Contact Us		e-GGRT RY2014.R15 S-eq1-inputs

Entering Data Using the IVT

Once in the IVT, the user will be able to enter inputs to equations data. An example of an inputs to equations field is outlined with red in the screen shot below. Please note that every field for inputs to equations states that the data "will not be stored by EPA". Unless you save you input files, you will need to manually re-enter this data during future data entry sessions.

A The screenshot below is from Subpart S and is displayed as an example. The screen for other subparts may differ slightly.

>> Click this link to exp	and		
SEPA States			B-GGRT
			Inputs Verifice Tool
***************	********	*******	CONTRACTOR OF AND
f can be a X -dependent of the transmission of the $\{X\}$ -dependence of the transmission of transmission of the transmission of transmiss	tana na aka		
DATE: 1000000 (1001) Selected and the boots of the collary behavior of a character of selected at 1000	45539		
VALUE AND ADDRESS			Z states of balls
and the state and			
filment and the			
CONTRACTOR OF THE			
Real at a significant discussion	4 10 10 10 10 10 10		
TRANSPORT IN AND			
opened with the second	Dispersional Tree		
The second se		Alex Collection Internal	dealers failers
L THINK .	and a second s	Alex Collection and the off	destructions of
provide a second second second	store field	Class CONtra lane	
The second se			
	*****		******
· · ·	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	5	
lau.a	endered.		
HEIN			
Received areas from the spe- transfer of areas of Locality 1 to Received areas of and spectrum.			
	end and		
NUMBER OF A DESCRIPTION OF A DESCRIPTION OF A DESCRIPTION			ALL COMPANIES AND ADDR



en Statement | Contact Us ______e

CANCEL SAVE

e-GGRT RY2014.R15 S-eq1-inputs

Saving Data Entered in the IVT

Data entered into the inputs verifier module are NOT saved in e-GGRT. Only the output values from the inputs verifier module are saved in e-GGRT. Ther efore, each user/facility will have to save their inputs verifier file to their local hard drive and keep track of the file for future use. On the top of each IVT screen, immediately below the grey box, IVT will present the save status of your FACILITY'S INPUTS VERIFIER FILE (File History), which contains the data entered into the inputs verifier module. To use e-GGRT in the future for your facility, you must save this file in a place where you can access it. This status box is also available on the Facility Overview page. Prior to saving your inputs verifier file, this section of the screen will state "Inputs Data Not Saved" in red letters and will provide the "Last Saved File" field. Click "Save Inputs Data" to save the inputs verifier file to your computer. This status box appears on many pages throughout e-GGRT and IVT so that it is easy for you to save inputs. However, you only need to save inputs at the completion of each data entry session.

After clicking "Save Inputs Data", you will be able to save the inputs verifier file to your computer. Please note that different browsers may allow the user to set file-saving preferences and default locations. The example shown below uses the Firefox browser. Each user's save dialog box and defaults may appear differently, depending on the browser used. For information on browser-specific behaviors please refer to Browser-specific issues and behaviors.



Once you have saved the file, the inputs verifier file status box will display "Inputs Data Saved" in green text and the "Saved By (Date):" field that shows the name of the user who most recently saved an inputs verifier file and the date and time." Each time you click "Save Inputs Data Locally", the IVT will record that you have saved your inputs verifier file. The IVT does not record where you save your inputs verifier file or whether you elect to cancel this action.

Reloading an Inputs Verifier File

When you come back to e-GGRT in a later session, you will return to the FACILITY or SUPPLIER OVERVIEW web form. Here you will see the box for the FACILITY'S INPUTS VERIFIER FILE (File History), with the message that "Inputs Data Not Loaded" in red text. To load an inputs verifier file that has been previously saved, click the link labeled "Temporarily Load Inputs Data". Then browse to and select the inputs verifier file saved locally (to your local computer or local network drive). The IVT will accept the ZIP file or XML file previously downloaded by the user or a copy of that file (note: this file may be renamed but its contents must be identical). Finally, click the IMPORT button to load the file to the inputs verifier tool.

>> Click this link to expand

Temporarily load Inputs Verifier data	
Laan Seeved File: 515489-560part_C-2015v4.8.5 Seeved By (Dete): Vincent Vega (*ebxary 17, 2016 10.52 AM)	
To proceed, locate the Last Saved File above with the Bronse (or Cheose File) field below and click LOAD.	
Chaose File No file chosen	
LOAD CANCEL	
If yee are weatle to locate the Last Samed File above, or know it to be test: 1. You may load an other version of your inputs file. Doing so nill require the system to re-calculate and re-validate all equations based on the inputs contained in that inputs file version. 2. You may "word" your facility. The version process will enable you to enter this subpart. Est, Encand, access will sense ALL productly adjusted inputs. Verifie: Tool results and will require you to enter this subpart. Est, Encand, access will enable you to enter this subpart. Est, Encand, access will sense ALL productly adjusted inputs. Verifie: Tool results and will require you to enter this subpart. Est, Encand, access and an inclusive you to enter this subpart. Enclosed on inputs data for ALL of this badity's adjustant.	
2 - 이가 11 원건 전 전 전 11 11 11 11 11 11 11 11 11 11 11	
Temporarily load Inputs Verifier data	
Lest Saved Files 545400.0 Lest 0.0045 4.0.5	
Last Saved File: 515408-Subpart_C-2015-v4.0.5	
Saved By (Date): Vincent Vega (February 17, 2016	5 10:52 AM)
To proceed, locate the Last Saved File above with the Brows	(or Chaosa File) field below and dick LOAD
To proceed, locate the Last Saved File above with the browse	(or choose File) field below and click LOAD.
Chasse File No file chosen	
Choose the No the chosen	
CARCEL	
If you are unable to locate the Last Saved File above, or 1. You may load an older version of your inputs file. Doing so the inputs contained in that inputs file version. 2. You may "reset" your facility. The reset process will enable calculated inputs Verifier Tool results and will require you to r	know it to be lost: will require the system to re-calculate and re-validate all equations based on you to enter this subpart; but, the reset process will remove ALL previously eventer ALL inputs Verifier Tool equation inputs data for ALL of this facility's
subparts.	s once the inputs verifier roor equation inputs data for the of this facility's
RESET FACILITY	

If the user attempts to reload an inputs verifier file that is not the one most recently saved for the facility, the user will receive the following warning message. The system prevents the user from accidentally loading an outdated file and thus losing the most recent data. Note that you may elect to choose "I Would Like to Upload this File" and the system will attempt to reconcile all validation messages and IVT calculations (which are based on the most recently-saved file) based on the inputs contained in the old file that you are electing to load. If you elect to proceed to upload an old file, it is highly recommended that you review all equation inputs and calculations to ensure your annual report is complete and accurate.

>> Click this link to expand

The inputs Vetifier File you are attempting to load in not the last saved file. It is strongly recommended that you locate the last saved file in order to ensure that you do not loas any previously completed work. You may refer to the following help content # you are baning totable locating your most source file. Product Last Input File. If you would like to try again with a different file plasma dick. CAVKEL, it you would like is load this file, the system will re-calculate and m-validate at equation based on the legals contained in this file and you will be prompted to re-save a locat copy of this legals file. If you proceed with this option, you about review all equation legals and calculations to emany your annual report to complete and accurate.

CANCEL INCLUDENCE TO UPLOND THIS FLE

The Inputs Verifier File you are attempting to load is not the last saved file. It is strongly recommended that you locate the last saved file in order to ensure that you do not lose any previously completed work. You may refer to the following help content if you are having trouble locating your most recent file: Finding Lost Input Files. If you would like to try again with a different file, please click CANCEL. If you would like to load this file, the system will re-calculate and re-validate all equations based on the inputs contained in this file and you will be prompted to re-save a local copy of this inputs file. If you proceed with this option, you should review all equation inputs and calculations to ensure your annual report is complete and accurate.

CANCEL I WOULD LIKE TO UPLOAD THIS FILE

Screen Errors You May Receive

When attempting to save inputs data during the IVT data entry process, the user may receive screen errors that indicate the user has not completely entered required data to the Inputs Verifier Tool. Screen errors must be corrected before you will be permitted to complete a save action. Once you have corrected these errors, IVT will be able to calculate the equation result and you will be able to save your inputs verifier file locally.

SEPA Linded States Evolopimental Protection		e-GGRT Inputs Verifier Tool
		riano, Sostra Draza MyProfila Logical
Angkor Subpart S: Lime Manufecturing (2 Detectionates - Select 5 Detection Internation	(D14) = Equation 5-1 leputs	
EQUATION 5.1 PRODUCT INPUTS		
Use this page to enter the inputs to equation 5-1. To used for verification parproves only, and will not be a verification checks (the verification summary, viewall page) will be shored by CPA.	re inputs to equations will be fored by DPA. The results of the sie from the "Subpart Greenlew"	
FACILITY'S INPUTS VERIFICE FILE		What is the inputs Veriller Field
C Inputs Data Not Saved	Allie has not yet been saved copy d'your equation inputs dataf	Nor This lability. Be sure to use the "Same Inputs Data1, scally" but to save a data before you tog all as a CORT will not save ar store equation inputs.
Save Inputs Data Locally		
EQUATION INPUTS (1 OF E) Product of By Product Isame	Paper Product 1 (product) is its Product 3 (product)	breite capita 🖉
Spotor 54 Summary 47857 85314		
SCREEK ENRORS Calcum under under 1 for July, determined according to	o (18.196)»). This data element is requ	ired. Finanz entre the empired data or stati 510 CDL
Equation 5-1: EFLINEL	ur=[{88cuc = CaOur}+(88a	sc = MgDur)]* 2008
Hover over an element	d in the equation above to reveal a	definition of that element.
DALARY		
Calciam oxide contast, determined according to get.784pp	which is a proving the	Hoter GaGimaticten Ime). Nate al mentre same
Magnesium oxide content, determined according to §00.1540;2	without in a security IP's	tic ten MgGimatric ton lime) . Noise all months same
Emission lactor for lime type (calculated input to Equation 3-4)	1.7021 (mat	In tana Coottai Inne)

CEPA United States Environmental Protection		e-GGRT
		Inputs Verifier Tool
		Hello, Sokha Chea My Profile Logout
Angkor Subpart S: Lime Manufacturing (2014 Subpart Overview » Subpart S Summary Information » Equ	4) uation S-1 Inputs	
EQUATION S-1 PRODUCT INPUTS Use this page to enter the inputs to equation S-1. The inpused for verification purposes only, and will not be stored verification checks (the verification summary, viewable from page) will be stored by EPA.	puts to equations will be d by EPA. The results of the om the "Subpart Overview"	
FACILITY'S INPUTS VERIFIER FILE		What is the Inputs Verifier File?
Inputs Data Not Saved	A file has not yet been saved copy of your equation inputs data!	for this facility. Be sure to use the "Save Inputs Data Locally" link to save a data before you log off as e-GGRT will not save or store equation inputs
Carl Save Inputs Data Locally		
EQUATION INPUTS (1 OF 2) Product or By-Product Name (type	e) Product 1 (product) Py Product (by-product)	Image: Solution of the second sec
Equation S-4 Summary + PREV NEXT+		
SCREEN ERRORS Calcium oxide content for July, determined according to §98.	.194(c). This data element is requi	red. Please enter the required data or click CANCEL.
Equation S-1: EF _{LIME,i,n} =[$(SR_{CaO} \times CaO_{i,n}) + (SR_{Mg})$	_{g0 ×} MgO _{i,n})]* ²⁰⁰⁰ /2205
Hover over an element in th	ne equation above to reveal a c	definition of that element.
JANUARY		
Calcium oxide content, determined according to §98.194(c)	1 (metri will not be stored by EPA	ric ton CaO/metric ton lime) Make all months same
Magnesium oxide content, determined according to §98.194(c)	1 (metri will not be stored by EPA	ric ton MgO/metric ton lime) Make all months same
Emission factor for lime type (calculated input to Equation S-4)	1.7021 (metr	ic tons CO2/ton lime)

If the user inputs and saves data in IVT, then adds, deletes, or updates one or more inputs to an equation in IVT without saving the inputs file locally and subsequently attempts to log out of e-GGRT, the following warning message will be displayed.

>> Click this link to expand

WARRENGY You have not served data entered into the Inputs Verifier Tool.
If you wish to save this data before logging out, dick SAVE INPUTS to return to e-CORT. If you proceed to logout this data will be discarded as it is not served by e-CORT.
SAVE NPUTS AND LOGOUT. LOGOUT. INCOMPLETATION INFORMATION INFORMATIONI INFORMAT

WARNING! You have not saved data entered into the Inputs Verifier Tool. If you wish to save this data before logging out, click SAVE INPUTS to return to e-GGRT. If you proceed to logout this data will be discarded as it is not saved by e-GGRT. SAVE INPUTS AND LOGOUT CANCEL

The user	has	three	0	ptions:
----------	-----	-------	---	---------

- SAVE INPUTS AND LOGOUT after clicking this button, the user is prompted to save the inputs file locally. Once the file has been saved, the user is logged out of e-GGRT.
- LOGOUT DISCARD EQUATION INPUTS DATA the most recent changes to the inputs data are discarded and the user is automatically logged out of e-GGRT. The inputs file is NOT saved.
- CANCEL the user is returned to e-GGRT. The inputs file is NOT saved. Note that if the user clicks CANCEL and does not save the inputs file locally and later attempts to logout, the warning message will be displayed again).

If the user clicked the LOGOUT - DISCARD EQUATION INPUTS DATA button in a previous session, the following message will be displayed the next time the user logs in.

>> Click this link to expand



In a previous session you added, deleted, or updated one or more inputs to an equation within the Inputs Verifier Tool (IVT) resulting in changes to your e-GGRT annual report data and/or validation messages, but you did not save those changes to a local Inputs Verifier file. When uploading your last saved Inputs Verifier File for this facility, the system will re-calculate and re-validate all equations based on the inputs contained in this file.

IVT data not saved to a local file can be lost if:

- · your e-GGRT session ends after 30 minutes of inactivity (you will receive a warning after 25 minutes of inactivity)
- · you close your browser without first saving your inputs file (or your system/browser crashes), or
- · you log off of e-GGRT and voluntarily elect to 'discard' inputs.

The e-GGRT system is capable of detecting when IVT data has been discarded and will re-calculate and revalidate all IVT equations based on the last-saved file in this scenario. To prevent this from happening in the future, be sure to save IVT data updates to a local file regularly.

CLOSE

To load an inputs verifier file that has been previously saved (as would occur if you logged off and came back to e-GGRT in a later session), the user would click the link labeled "Temporarily Load Inputs Data". The user would browse to and select the inputs verifier file saved locally (to their local computer or local network drive). The IVT will accept the ZIP file or XML file previously downloaded by the user or a copy of that file (note: this file may be renamed but its contents must be identical). The user would then click the **IMPORT** button to load the file to the inputs verifier tool.

FACILITY'S INPUTS VERIFIER FILE		What is the Inputs Verifier File?	
Inputs Data Not Loaded	Last Saved File:	516069-MLHResources-2014.xml	
Temporarily Load Inputs Data	Saved By (Date):	M Huppert (October 20, 2014 11:28 AM)	

If you attempt to reload an inputs verifier file that is not the one most recently saved for the facility, the user will receive the following warning message. The system prevents the user from accidentally loading an outdated file and thus losing the most recent data. Note that you may elect to choose "I Would Like to Upload this File" and the system will attempt to reconcile all validation messages and IVT calculations (which are based on the most recently-saved file) based on the inputs contained in the old file that you are electing to load. If you elect to proceed to upload an old file, it is highly recommended that you review all equation inputs and calculations to ensure your annual report is complete and accurate.



Reporting Fuel-specific Monitoring Information

For fuels for which you have elected to use Tier 2 or Tier 3 methodologies, you are also required to report monitoring information in sections below the equation summary and results sections.

For Tier 2, you are required to report the following HHV Substitute Data Information for all fuels:

- Identify each month for which the monthly HHV value is calculated using one or more substitute data values by selecting the checkbox for that month
- Select the frequency of HHV determinations from the following options in the dropdown box:
 - Hourly
 - Daily
 - ° Weekly
 - Monthly
 - Semiannually
 - Quarterly
 - Once per fuel lot
 - Upon addition of oil to fuel tank
 - Other (specify)

>> Click image to expand



	tates nental Protection		
HOME FACILITY REGISTR	ATION FACILITY MANAGEMENT	DATA REPORTING	Reporting Tool
			Hello, Richard Richards My Profile Logo
e-GGRT Help	DR Enterprises - TEST Subpart C: Ceneral St	ationany Eucl Combustion (2014)	
Using e-GGRT for Subpart C reporting	Subpart C Overview » Single Unit Us	sing Tiers 1, 2, or 3 » Fuel-specific Emissions	
	FUEL-SPECIFIC EMISSIONS Use this page to enter the annual The user is required to enter CO ₂ , information (as applicable) for eac data collected on this page, pleas	greenhouse gas emissions information for this fuel. CH4, N2O, sampling frequency and missing data h fuel type. For additional information about the se use the e-GGRT Help link(s) provided.	Annual CO ₂ (metric tons) Annual CH ₄ (metric tons)
			Annual N2O (metric tons)
	FACILITY'S INPUTS VERIFIER FI	LE	What is the Inputs Verifier File
	Inputs Data Loaded	Last Saved File: 511706-DR_Enterpris	esTEST-2014.xml
	Rave Inputs Data Locally	Saved By (Date): Richard Richards (Oc	tober 09, 2014 4:58 PM)
	CONFIGURATION-FUEL-PERIOD		
	Unit or Group Name/ID	Test Unit 1	
	Configuration Type	Single Unit Using Tiers 1, 2, or 3	
	Fuel (Fuel Type)	Distillate Fuel Oil No. 2 (Petroleum Products)	
	EQUATION C-2a SUMMARY AND	RESULT CO ₂ =1x10 ⁻³ × Fuel × HHV × EF Hover over an element in the equation above to rev	veal a definition of that element.
	Annual CO ₂ emissions from combustion of the specified fuel (include both biogenic and non-biogenic emissions)	(metric tons) Use Inputs Verifier to calculate GO	
	EQUATION C-9a SUMMARY AND	RESULTS	
		CH_4 or $N_2O = 1 \times 10^{-3} \times HHV \times EF \times Fuel$	
		Hover over an element in the equation above to rev	veal a definition of that element.
	Annual CH4 emissions from combustion of the specified fuel	(metric tons) Use Inputs Verifier to calculate GO	
	Annual N2O emissions from combustion of the specified fuel	(metric tons) Use Inputs Verifier to calculate GO	
	CO2 EQUIVALENT EMISSIONS		
	CO2 equivalent value for Annual CH4 emissions	(metric tons)	
	CO2 equivalent value for Annual N2O emissions	(metric tons)	
	HHV SUBSTITUTE DATA INFORM	ATION	
	Identify each month for which the monthly HHV value is calculated using one or more	January February April Mav	MarchJune
	substitute data values	July August	September

		October	November	December
	Frequency of HHV determinations	Select		
	CANCEL			
Paperwork Reduction Act Burder	Statement Contact Us			e-GGRT RY2014.R18 SPC-22

For Tier 3, you are required to report the following Carbon Content Substitute Data Information for all fuels:

- Total number of valid carbon content determinations
- · Total number of carbon content substitute data values
- Frequency of carbon content determinations, selecting from the following options in the dropdown box:
 - Hourly
 - ° Daily
 - Weekly
 - Monthly
 - Semiannually
 - ° Quarterly

 - Once per fuel lot
 Upon addition of oil to fuel tank
 - Other (specify)
- · Total number of operating hours in the reporting year for which missing data substitution was used for fuel usage

For gaseous fuels that use the Tier 3 methodology, you are also required to report the following:

- Molecular Weight Information
 - Total number of valid molecular weight determinations
 - ° Total number of molecular weight substitute data values
 - Frequency of molecular weight determinations
- Molar Volume Constant, selecting one of the following values using the radio buttons provided:
 - ° 836.6 scf per kg mole
 - ° 849.5 scf per kg mole



	nmental Protection		
HOME FACILITY REGIS	RATION FACILITY MANAGEMENT	DATA REPORTING	Reporting Tool
	DD Entermines TEST		Hello, Richard Richards My Pr
C e-GGRT Help	Subpart C: General St	ationary Fuel Combustion (2014)	
Using e-GGRT for Subpart C reporting	Subpart C Overview » Single Unit U	sing Tiers 1, 2, or 3 » Fuel-specific Emissions	
	FUEL-SPECIFIC EMISSIONS		
	Use this page to enter the annual The user is required to enter CO ₂ ,	greenhouse gas emissions information for this fuel. CH4, N2O, sampling frequency and missing data	Annual CO ₂ (metric tons)
	information (as applicable) for eac data collected on this page, pleas	h fuel type. For additional information about the e use the e-GGRT Help link(s) provided.	
	1.5.1		Annual CH4 (metric tons)
			Annual N2O (metric tons)
	EACILITY'S INPLITS VERIFIER FI	IF	What is the Inputs Ve
	Inputs Data Loaded	Last Saved File: 511706-DR_Enterprises	sTEST-2014.xml
		Saved by (Date): Richard Richards (Octo	ober 09, 2014 4:58 PM)
	CONFIGURATION-FUEL-PERIOD		
	Unit or Group Name/ID	Test Unit 1	
	Configuration Type	Single Unit Using Tiers 1, 2, or 3	
	Fuel (Fuel Type)	Natural Gas (Weighted U.S. Average) (Natural Gas)
		01/01/2014 - 12/31/2014	
	EQUATION C-5 SUMMARY AND R	ESULT	
		$CO_2 = \frac{44}{12} \times Fuel \times CC \times \frac{MW}{MVC} \times 0.001$	
		Hover over an element in the equation above to reve	al a definition of that element.
	Annual CO ₂ emissions from	(metric tons)	
	fuel (include both biogenic and non-biogenic emissions)	Use Inputs Verifier to calculate GO	
	EQUATION C-8 SUMMARY AND R	CH4 or NoO=1x10 ⁻³ × Fuel × HHV × FF	
		Hover over an element in the equation above to reve	al a definition of that element.
	Annual CH4 emissions from	(metric tons)	
	compussion of the specified fuel	Use Inputs Verifier to calculate GO	
	Annual N2O emissions from compustion of the specified	(metric tons)	
	fuel	Use Inputs Verifier to calculate GO	
	CO2 EQUIVALENT EMISSIONS -		
	CO2 equivalent value for Annual CH4 emissions	(metric tons)	
	CO ₂ equivalent value for Annual N ₂ O emissions	(metric tons)	
	CARBON CONTENT SUBSTITUTE	DATA INFORMATION	
	Total number of valid carbon content determinations		
	Total number of carbon content		

Frequency of carbon content determinations	Select
Total number of operating hours in the reporting year for	
which missing data substitution was used for fuel usage	
MOLECULAR WEIGHT INFORMATIO	DN
Total number of valid molecular weight determinations	
Total number of molecular weight substitute data values	
Frequency of molecular weight determinations	Select
MOLAR VOLUME CONSTANT	
Molar Volume Constant (MVC) used 84	16.6 (scf per kg mole) 19.5 (scf per kg mole)
CANCEL	
Paperwork Reduction Act Burden Statement Contact Us	e-GGRT RY2014.R18 SPC-22

Reporting Emissions and Equation Inputs to EPA

The data entry screen will vary depending on the calculation methodology (tier and equation). The screen shot below shows the Fuel-specific Emissions page for Tier 1 using Equation C-1 to calculate CO_2 emissions and Equation C-8 to calculate CH_4 and N_2O emissions.

	ates iental Protection		e-GGRT 🔑
HOME FACILITY REGISTR	ATION FACILITY MANAGEMENT	DATA REPORTING	Electronic Greenhouse Gas Reporting Tool
			Hello, Sokha Chea My Profile Logout
📀 e-GGRT Help	Sokha	(i	
Using e-GGRT for Subpart C reporting	Subpart C: General Sta Subpart C Overview » Single Unit Us	sing Tiers 1, 2, or 3 » Fuel-specific Emissions	
	FUEL-SPECIFIC EMISSIONS		5000.0
	Use this page to enter the annual The user is required to enter CO ₂ ,	greenhouse gas emissions information for this fuel. CH4, N2O, sampling frequency and missing data	Annual CO ₂ (metric tons)
	information (as applicable) for each data collected on this page, pleas	n fuel type. For additional information about the e use the e-GGRT Help link(s) provided.	1.00
	1011		Annual CH4 (metric tons)
			Annual N2O (metric tons)
	CONFIGURATION-FUEL-PERIOD -		
	Unit or Group Name/ID	Single Unit Using Tiers 1	
	Configuration Type	Single Unit Using Tiers 1, 2, or 3	
	Fuel (Fuel Type)	Natural Gas (Weighted U.S. Average) (Natural Gas	;)
	Reporting Period	01/01/2013 - 12/31/2013	
	EQUATION C-2a SUMMARY AND F	RESULT	
		CO ₂ =1x10 ⁻³ × Fuel × HHV × EF	
		Hover over an element in the equation above to reve	eal a definition of that element.
	Annual CO2 emissions from combustion of the specified fuel (include both biogenic and non-biogenic emissions)	5000 (metric tons)	ulate
	FOLIATION C-92 SUMMARY AND F	25511175	
		CH_{1} or $N_{2}O = 1 \times 10^{-3} \times HHV \times EF \times Fuel$	
		Hover over an element in the equation above to reve	eal a definition of that element.
	Annual CH4 emissions from	1 (metric tons)	
	combustion of the specified fuel	Use Equation C-2a/C-9a spreadsheet to calc	ulate
	Annual N2O emissions from combustion of the specified fuel	1 (metric tons) Use Equation C-2a/C-9a spreadsheet to calc	culate
	CO2 EQUIVALENT EMISSIONS		
	CO2 equivalent value for Annual CH4 emissions	25.0 (metric tons)	
	CO2 equivalent value for Annual N2O emissions	298.0 (metric tons)	
	HHV SUBSTITUTE DATA INFORMA		
	Identify each month for which the monthly HHV value is	January Ebruary	March
	calculated using one or more substitute data values	April May	June Sentember
		October November	December
	Frequency of HHV determinations	Weekly ▼	
	CANCEL		
Paperwork Reduction Act Burder	Statement Contact Us		e-GGRT RY2013.R18 SPC-22

	ates eental Protection		e-GGRT 🔑
HOME FACILITY REGISTR	ATION FACILITY MANAGEMENT	DATA REPORTING	Electronic Greenhouse Gas Reporting Tool
			Hello, Sokha Chea My Profile Logout
? e-GGRT Help	Sokha		
Using e-GGRT for Subpart C reporting	Subpart C: General Sta Subpart C Overview » Single Unit Us	tionary Fuel Combustion (2013) sing Tiers 1, 2, or 3 » Fuel-specific Emissions	
	Use this page to enter the annual	greenhouse gas emissions information for this fuel.	5000.0
	The user is required to enter CO ₂ , information (as applicable) for eacl	CH4, N2O, sampling frequency and missing data h fuel type. For additional information about the	Annual CO2 (metric tons)
	data collected on this page, pleas	e use the e-GGRT Help link(s) provided.	1.00
			Annual CH4 (metric tons)
			1.000
			Annual N2O (metric tons)
	CONFIGURATION-FUEL-PERIOD		
	Unit or Group Name/ID	Single Unit Using Tiers 1	
	Configuration Type	Single Unit Using Tiers 1, 2, or 3	
	Fuel (Fuel Type)	Natural Gas (Weighted U.S. Average) (Natural Gas)	
	Reporting Period	01/01/2013 - 12/31/2013	
	EQUATION C-2a SUMMARY AND F	RESULT	
		$CO_2 = 1 \times 10^{-3} \times Fuel \times HHV \times EF$	
		Hover over an element in the equation above to revea	I a definition of that element.
	Annual CO ₂ emissions from combustion of the specified fuel (include both biogenic and	5000 (metric tons)	late
	non-biogenic emissions)		
	EQUATION C-9a SUMMARY AND F	RESULTS	
		$CH_4 \text{ or } N_2O = 1 \times 10^{-3} \times HHV \times EF \times Fuel$	
		Hover over an element in the equation above to revea	l a definition of that element.
	Annual CH4 emissions from	1 (metric tons)	
	combustion of the specified fuel	Use Equation C-2a/C-9a spreadsheet to calcul	ate
	Annual N2O emissions from combustion of the specified	1 (metric tons)	
	fuel	➡ Use Equation C-2a/C-9a spreadsheet to calcul	late
	CO2 EQUIVALENT EMISSIONS		
	CO2 equivalent value for Annual CH4 emissions	25.0 (metric tons)	
	CO2 equivalent value for Annual N2O emissions	298.0 (metric tons)	
	HHV SUBSTITUTE DATA INFORMA		
	Identify each month for which	January Eebruary	March
	the monthly HHV value is calculated using one or more	April May	June
	substitute data values	July August	September
		October November	December
	Frequency of HHV determinations	Weekly	
	CANCEL		

Paperwork Reduction Act Burden Statement | Contact Us

For each fuel type (including biomass fuel(s))* for which you have elected to use the **Tier 2 (Equation C-2a)**) methodology, subpart C requires you to report the following information by fuel type:

- The total annual CO₂ mass emissions derived from Equation C-2a in metric tons CO₂ (this includes both non-biogenic and biogenic CO₂ as applicable) [98.36(b)(8)(i), 98.36(c)(1)(vi), 98.36(c)(3)(vii)]
- The total annual CH₄ mass emissions derived from Equation C-9a in metric tons CH₄ and in metric tons CO₂e (for Table C-2 fuels only). Note that e-GGRT will automatically calculate the CO₂e data value [98.36(b)(8)(i), 98.36(c)(1)(vi), 98.36(c)(3)(vii)]
- The total annual N₂O mass emissions derived from Equation C-9a in metric tons N₂O and in metric tons CO₂e (for Table C-2 fuels only). Note that e-GGRT will automatically calculate the CO₂e data value [98.36(b)(8)(i), 98.36(c)(1)(vi), 98.36(c)(3)(vii)]
- Identification of each month for which the HHV was calculated using one or more substitute data values [98.36(e)(2)(ii)(C)]
- The frequency of the HHV determinations [98.36(e)(2)(ii)(B)]
 - Hourly
 - Daily
 - Weekly
 - Monthly
 - Semiannually
 - Quarterly
 - Once per fuel lot
 - Upon addition of oil to the storage tank
 - Other (specify)

Use the red-bordered text boxes to enter the required emissions information.

To calculate the emissions you have the option of using your own resources or alternatively you may use the following tool and set of instructions:

- Download the spreadsheet tool by clicking the link below one of the red-bordered text boxes labeled "Use Equation C-2a/C-9a spreadsheet to calculate"
- Fill in the spreadsheet completely using the instructions provided in the tool
- After completing the spreadsheet, copy the values calculated by the spreadsheet to the red-bordered text boxes on this page

There are no associated reporting requirements for Equation C-2b, which is used to calculate the average HHV when multiple values are available.

Use the check boxes, plain text box, and drop-down menu to enter the remaining required emissions information.

*When using Wood and Wood Residuals in non-IVT configuration, additional data is necessary. In place of the radio buttons for "High heat value of the fuel used" e-GGRT instead collects "moisture content used to calculate the wet-basis HHV." Unit's measure of "percent" and the value collected would be a value greater than or equal to zero and less than or equal to 100. This value will automatically be used to calculate a wet-basis HHV in mmBtu/short ton based on the default dry-based HHV for Wood and Wood Residuals.

When finished, click SAVE.

Tier 2 (Equation C-2c)

	ates nental Protection		e-GGRT 🎉
HOME FACILITY REGISTR	ATION FACILITY MANAGEMENT	DATA REPORTING	Electronic Greenhouse Gas Reporting Tool
			Hello, Sokha Chea My Profile Logout
e-GGRT Help Using e-GGRT for Subpart C reporting	Sokha Subpart C: General St Subpart C Overview » Aggregation	tationary Fuel Combustion (2013) of Units » Fuel-specific Emissions	
	FUEL-SPECIFIC EMISSIONS Use this page to enter the annua The user is required to enter CO2 information (as applicable) for ea data collected on this page, plea	I greenhouse gas emissions information for this fuel. 2, CH4, N2O, sampling frequency and missing data ch fuel type. For additional information about the se use the e-GGRT Help link(s) provided.	Annual CO2 (metric tons)
			Annual CH4 (metric tons)
	CONFIGURATION-FUEL-PERIOD		
	Configuration Type	Aggregation	
	Fuel (Euel Type	Authracite (Coal and Coke)	
	Reporting Period	01/01/2013 - 12/31/2013	
	EQUATION C-2c SUMMARY AND	RESULT CO ₂ = 1x10 ⁻³ Steam × B × EF Hover over an element in the equation above to reve.	al a definition of that element.
	Annual CO2 emissions from combustion of the specified fuel (include both biogenic and non-biogenic emissions	(metric tons)	
	EQUATION C-9b SUMMARY AND	RESULTS $CH_4 \text{ or } N_2O = 1 \times 10^{-3}$ Steam × B × EF Hover over an element in the equation above to reve.	al a definition of that element.
	Annual CH4 emissions from combustion of the specified fue	(metric tons)	
	Annual N2O emissions from combustion of the specified fue	(metric tons)	
	CO2 EQUIVALENT EMISSIONS -		
	CO2 equivalent value for Annual CH4 emissions	(metric tons)	
	CO2 equivalent value for Annual N2O emissions	(metric tons)	
	CANCEL		
Paperwork Reduction Act Burder	n Statement Contact Us		e-GGRT RY2013.R19 SPC-22

SEPA United St Environm Agency	ates nental Protection			
HOME FACILITY REGISTR	ATION FACILITY MANAGEMENT	T I	DATA REPORTING	Reporting Tool
e-GGRT Help Using e-GGRT for Subpart C reporting	Sokha Subpart C: General Subpart C Overview » Aggregati FUEL-SPECIFIC EMISSIONS Use this page to enter the ann The user is required to enter (information (as annirable) for	Sta sion o S nual CO2,	ationary Fuel Combustion (2013) of Units » Fuel-specific Emissions greenhouse gas emissions information for this fuel. , CH4, N2O, sampling frequency and missing data b fuel type. For additional information about the	Annual CO2 (metric tons)
	data collected on this page, p	pleas	e use the e-GGRT Help link(s) provided.	Annual CH4 (metric tons) Annual N2O (metric tons)
	CONFIGURATION-FUEL-PERIC	OD -		
	Configuration T	ivno	GP-Aggregation	
	Fuel (Fuel Ty	ype	Aggregation of Onits	
	Reporting Per	riod	01/01/2013 - 12/31/2013	
	EQUATION C-2c SUMMARY A	and f	RESULT CO ₂ =1x10 ⁻³ Steam × B × EF Hover over an element in the equation above to reve	al a definition of that element.
	Annual CO2 emissions fr combustion of the specif fuel (include both biogenic a non-biogenic emission	rom fied and ons)	(metric tons) Use C-2c/C-9b spreadsheet to calculate	
	EQUATION C-9b SUMMARY A	AND F	RESULTS	
			$CH_4 \text{ or } N_2O = 1 \times 10^{-3} \text{ Steam × B × EF}$	
			Hover over an element in the equation above to reve	al a definition of that element.
	Annual CH4 emissions fr combustion of the specif f	rom fied fuel	(metric tons) Use C-2c/C-9b spreadsheet to calculate	
	Annual N2O emissions fr combustion of the specif f	rom fied fuel	(metric tons)	
	CO2 EQUIVALENT EMISSIONS	s—		
	CO2 equivalent value Annual CH4 emissi	e for ions	(metric tons)	
	CO2 equivalent value Annual N2O emissio	e for ions	(metric tons)	
	CANCEL			
Paperwork Reduction Act Burder	n Statement Contact Us			e-GGRT RY2013.R19 SPC-22

For each fuel type (including biomass fuel(s)) for which you have elected to use the **Tier 2 (Equation C-2c)** methodology, subpart C requires you to report the following information by fuel type:

• The total annual CO₂ mass emissions derived from Equation C-2c in metric tons CO₂ (this includes both non-biogenic and biogenic CO₂ as applicable) [98.36(b)(8)(i), 98.36(c)(1)(vi), 98.36(c)(3)(vii)]

- The total annual CH₄ mass emissions derived from Equation C-9b in metric tons CH₄ and in metric tons CO₂e (for Table C-2 fuels only). Note that e-GGRT will automatically calculate the CO₂e data value [98.36(b)(8)(i), 98.36(c)(1)(vi), 98.36(c)(3)(vii)]
- The total annual N₂O mass emissions derived from Equation C-9b in metric tons N₂O and in metric tons CO₂e (for Table C-2 fuels only). Note that e-GGRT will automatically calculate the CO₂e data value [98.36(b)(8)(i), 98.36(c)(1)(vi), 98.36(c)(3)(vii)]

Use the red-bordered text boxes to enter the required emissions information.

To calculate the emissions you have the option of using your own resources or alternatively you may use the following tool and set of instructions:

- Download the spreadsheet tool by clicking the link below one of the red-bordered text boxes labeled "Use Equation C-2c/C-9b spreadsheet to calculate"
- · Fill in the spreadsheet completely using the instructions provided in the tool
- After completing the spreadsheet, copy the values calculated by the spreadsheet to the red-bordered text boxes on this page

When finished, click SAVE.

Tier 3 (Equation C-3, C-4, or C-5)

Note: Equation C-5 pictured, Equations C-3 and C-4 will not include the MOLECULAR WEIGHT INFORMATION and MOLECULAR VOLUME CONSTANT sections

SEPA United States Environmental Protection Agency			e-GGRT 🔑
HOME FACILITY REGISTRA	ATION FACILITY MANAGEMENT	DATA REPORTING	Electronic Greenhouse Gas Reporting Tool
e-GGRT Help Using e-GGRT for Subpart C reporting	DR Enterprises - TEST Subpart C: General Sta Subpart C Overview » Unit 101 » Nar	ntionary Fuel Combustio tural Gas (Weighted U.S. Average)	n (2015)
	FUEL-SPECIFIC EMISSIONS Use this page to enter the annual g The user is required to enter CO ₂ , information (as applicable) for each collected on this page, please use	reenhouse gas emissions information CH4, N2O, sampling frequency and mi fuel type. For additional information a fuel e-GGRT Help link(s) provided.	for this fuel. ssing data bout the data Annual CO2 (metric tons) Annual CH4 (metric tons) Annual NzO (metric tons)
	CONFIGURATION-FUEL-PERIOD - Unit or Group Name/ID	Unit 101	
	Configuration Type	Single Unit Using Tiers 1, 2, or 3	
	Fuel (Fuel Type)	Natural Gas (Weighted U.S. Average) (Natural Gas)
	Reporting Period	01/01/2015 - 12/31/2015	
	EQUATION C-5/C-8 INPUTS Annual volume of the gaseous fuel combusted (Input to		(scf/year)
	Equations C-5 AND C-8) Annual average carbon content of the gaseous fuel (Input to Equation C-5)	 Enter annual average carbon cor than monthly in accordance with Use Equation C-2b to calculate a option is required if the results of accordance with 98.33(a)(2)(ii)(A 	tent, if the results of sampling are received less frequently $98.33(a)(2)(ii)(B)$ weighted annual average carbon content of the fuel. This sampling are received monthly or more frequently, in
	Annual average molecular weight of the gaseous fuel (Input to Equation C-5)	 Enter annual average molecular frequently than monthly in accord Use Equation C-2b to calculate a option is required if the results of accordance with 98.33(a)(2)(ii)(A 	weight, if the results of sampling are received less ance with 98.33(a)(2)(ii)(B) weighted annual average molecular weight of the fuel. This sampling are received monthly or more frequently, in
	Molar volume constant (MVC) used (Input to Equation C-5)	 836.6 (scf/kg-mole) 849.5 (scf/kg-mole) 	
	High heat value of the fuel used (Input to Equation C-8)	 Default high heat value of the fue Enter annual average high heat value 	l (0.001026 mmBtu/scf) alue
	EQUATION C-5 SUMMARY AND RE	ESULT $CO_2 = \frac{44}{12} \times Fuel \times CC \times \frac{MW}{MVC} \times I$ Hover over an element in the equation	0.001 In above to reveal a definition of that element. (metric tons)
	(include both biogenic and non- biogenic emissions)		
	EQUATION C-8 SUMMARY AND RE	ESULTS $CH_4 \text{ or } N_2O = 1 \times 10^{-3} \times Fuel \times HI$ Hover over an element in the equation	₩ × EF In above to reveal a definition of that element.
	Fuel-specific default emission factor for CH4 (Input to Equation C-8)	0.001	lkg CH₄/mmBtu)
	Annual CH4 emissions from combustion of the specified fuel		(metric tons)
	Fuel-specific default emission factor for N2O (Input to Equation C-8)	0.0001	(kg N2O/mmBtu)
	Annual N2O emissions from combustion of the specified fuel		(metric tons)
	CO ₂ EQUIVALENT EMISSIONS		(metric tons)
	CH4 emissions CO2 equivalent value for Annual N2O emissions		(metric tons)
	N2O emissions		
	CARBON CONTENT SUBSTITUTE Total number of valid carbon	DATA INFORMATION	
	Content determinations		
	Frequency of carbon content determinations	Select	✓
	dotorninationa		

l otal number of in the reporti missing data us	t operating hours ng year for which substitution was ed for fuel usage			
MOLECULAR W Total number or Veigt	EIGHT INFORMATION			
weight subst	titute data values			
Frequency of	molecular weight determinations	Select	~	
SAVE	NCEL			
Paperwork Reduction Act Burden Statement Contact	tUs			e-GGRT RY2015.R39 SPC-22

	ates iental Protection		e-GGRT 🎺
HOME FACILITY REGISTR	ATION FACILITY MANAGEMENT	DATA REPORTING	Electronic Greenhouse Gas Reporting Tool
			Hello, Richard Richards My Profile Logout
e-GGRT Help Using e-GGRT for Subpart C reporting	DR Enterprises - TEST Subpart C: General Sta Subpart C Overview » Unit 101 » Nat	ntionary Fuel Combustion (2015) tural Gas (Weighted U.S. Average)	
	FUEL-SPECIFIC EMISSIONS Use this page to enter the annual g The user is required to enter CO ₂ , information (as applicable) for each collected on this page, please use	greenhouse gas emissions information for this fuel. CH4, N2O, sampling frequency and missing data h fuel type. For additional information about the data the e-GGRT Help link(s) provided.	Annual CO2 (metric tons) Annual CH4 (metric tons) Annual CH4 (metric tons) Annual N2O (metric tons)
	CONFIGURATION-FUEL-PERIOD		
		Unit 101	
		Single Unit Using Tiers 1, 2, or 3	
	Fuel (Fuel Type)	Natural Gas (Weighted U.S. Average) (Natural Gas)	
	Reporting Period	01/01/2015 - 12/31/2015	
	EQUATION C-5/C-8 INPUTS		
	Annual volume of the gaseous fuel combusted (Input to Equations C-5 AND C-8)	(scf/year)	
	Annual average carbon content of the gaseous fuel (Input to Equation C-5)	 Enter annual average carbon content, if the result than monthly in accordance with 98.33(a)(2)(ii)(B) Use Equation C-2b to calculate a weighted annua option is required if the results of sampling are rec accordance with 98.33(a)(2)(ii)(A) 	s of sampling are received less frequently I average carbon content of the fuel. This seived monthly or more frequently, in
	Annual average molecular weight of the gaseous fuel (Input to Equation C-5)	 Enter annual average molecular weight, if the resuffrequently than monthly in accordance with 98.33(Use Equation C-2b to calculate a weighted annual option is required if the results of sampling are recaccordance with 98.33(a)(2)(ii)(A) 	ults of sampling are received less (a)(2)(ii)(B) I average molecular weight of the fuel. This seived monthly or more frequently, in
	Molar volume constant (MVC) used (Input to Equation C-5)	○ 836.6 (scf/kg-mole) ○ 849.5 (scf/kg-mole)	
	High heat value of the fuel used (Input to Equation C-8)	 Default high heat value of the fuel (0.001026 mmE Enter annual average high heat value 	3tu/scf)
	EQUATION C-5 SUMMARY AND RI	ESULT	
		$CO_2 = \frac{44}{12} \times Fuel \times CC \times \frac{101VV}{MVC} \times 0.001$ Hover over an element in the equation above to revea	al a definition of that element.
	Annual CO ₂ emissions from combustion of the specified fuel (include both biogenic and non- biogenic emissions)	(metric tons)	
	EQUATION C-8 SUMMARY AND R	ESULTS CH₄ or N₂O = 1x10 ⁻³ × Fuel × HHV × EF	
		Hover over an element in the equation above to revea	al a definition of that element.
	Fuel-specific default emission factor for CH4 (Input to Equation C-8)	0.001 (kg CH4/mmBtu)	

Annual CH4 emissions from combustion of the specified fuel		(metric tons)
Fuel-specific default emission factor for N2O (Input to Equation C-8)	0.0001	(kg N2O/mmBtu)
Annual N2O emissions from combustion of the specified fuel		(metric tons)
CO2 EQUIVALENT EMISSIONS		
CO2 equivalent value for Annual CH4 emissions		(metric tons)
CO2 equivalent value for Annual N2O emissions		(metric tons)
CARBON CONTENT SUBSTITUTE I Total number of valid carbon content determinations		
Total number of carbon content substitute data values		
Frequency of carbon content determinations	Select	✓
Total number of operating hours in the reporting year for which missing data substitution was used for fuel usage		
MOLECULAR WEIGHT INFORMATIO	ON	
Total number of valid molecular weight determinations		
Total number of molecular weight substitute data values		
Frequency of molecular weight determinations	Select ~	
SAVE		
Statement Contact Us		E-GGRT RY2015 B30 SPC

For each fuel type (including biomass fuel(s)) for which you have elected to use a **Tier 3 (Equation C-3, C-4, or C-5)** methodology, subpart C requires you to report the following information by fuel type:

- The total annual CO₂ mass emissions derived from Equation C-3 for solid fuels, Equation C-4 for liquid fuels, or Equation C-5 for gaseous fuels in metric tons CO₂ (this includes both non-biogenic and biogenic CO₂ as applicable) [98.36(b)(8)(i), 98.36(c)(1)(vi), 98.36(c)(3)(vii)]
- The total annual CH₄ mass emissions derived from Equation C-8 in metric tons CH₄ and in metric tons CO₂e (for Table C-2 fuels only). Note that e-GGRT will automatically calculate the CO₂e data value [98.36(b)(8)(i), 98.36(c)(1)(vi), 98.36(c)(3)(vii)]
- The total annual N₂O mass emissions derived from Equation C-8 in metric tons N₂O and in metric tons CO₂e (for Table C-2 fuels only). Note that e-GGRT will automatically calculate the CO₂e data value [98.36(b)(8)(i), 98.36(c)(1)(vi), 98.36(c)(3)(vii)]
- The total number of valid carbon content determinations [98.36(e)(2)(iv)(D)]
- The total number of carbon content substitute data values [98.36(e)(2)(iv)(D)]
- The frequency of carbon content determinations [98.36(e)(2)(iv)(B)]
 - Hourly
 - Daily
 - Weekly
 - Monthly
 - Semiannually
 - Quarterly
 - Once per fuel lot
 - $^{\circ}~$ Upon addition of oil to the storage tank
 - Other (specify)
- The total number of operating hours in the reporting year for which missing data substitution was used for fuel usage [98.3(c)(8)]

For each gaseous fuel at each configuration for which you have elected to use the **Tier 3 (Equation C-5)** methodology, subpart C requires you to report the following additional information:

- Total number of valid molecular weight determinations [98.36(e)(2)(iv)(D)]
- Total number of molecular weight substitute data values [98.36(e)(2)(iv)(E)]
- Frequency of molecular weight determinations [98.36(e)(2)(iv)(B)]
 O Hourly

- Daily
- Weekly
- Monthly
- Semiannually
- Quarterly
- Other (specify)
- The molar volume constant (MVC) used in Equation C-5 by selecting the radio button for either 836.6 scf per kg mol or 849.5 scf per kg mol.

Use the red-bordered text boxes to enter the required emissions information.

To calculate the emissions you have the option of using your own resources or alternatively you may use the following tool and set of instructions:

- Download the spreadsheet tool by clicking the link below one of the red-bordered text boxes labeled "Use Tier 3 spreadsheet to calculate"
- Fill in the spreadsheet completely using the instructions provided in the tool
 After completing the spreadsheet, copy the values calculated by the spreadsheet to the red-bordered text boxes on this page

When finished, click SAVE.

Tier 4 (CEMS)

	ates iental Protection		e-GGRT <i>S</i>
HOME FACILITY REGISTR	ATION FACILITY MANAGEMENT	DATA REPORTING	Electronic Greenhouse Gas Reporting Tool
			Hello, Sokha Chea My Profile Logout
🕜 e-GGRT Help	Sokha		
Using e-CCPT for Subpart C	Subpart C: General Sta	ationary Fuel Combustion (2013)	
reporting	Subpart C Overview » Alternative Pa	art 75 Reporters » Fuel-specific Emissions	
	FUEL-SPECIFIC CH4 AND N2O E	MISSIONS	
	Use this page to enter the annual	CH4 and N2O emissions information for this fuel	
	type. For additional information at e-GGRT Help link(s) provided.	bout the data collected on this page, please use the	Annual CO2e for CH4 (metric tons)
			Annual CO2e for N2O (metric tons)
	CONFIGURATION		
	Unit or Group Name/ID	Alternative	
	Configuration Type	Alternative Part 75 Reporters	
	Part 75 Methodology	CEMS calculation method § 98.33(a)(5)(iii)	
	Part 75 Heat Input Method	CEMS	
	Fuel (Fuel Type)	Natural Gas (Weighted U.S. Average) (Natural Gas)	
		,	
	FOLIATION C.10 SUMMARY AND	DESINTS	
	EQUATION C-10 SUMMART AND	CH or N O = 0.001 x (HI), x EE	
		Hover over an element in the equation above to reves	a definition of that element
	Annual band innut		a demittor of that element.
	Emission factor for CH	(mmbtu)	
	Emission factor for N O	0.0001 (kg N2O/mmBtu)	
		0.0001 (kg N20/minibid)	
	ANNUAL CH ₄ EMISSIONS		
	Note: This value is not a reporting require	ment, but is used to calculate CO _{2e} which is a reporting requiren	nent under 98.36(d)(1)(iii), 98.36(d)(2)(ii)(H), or
	98.36(d)(2)(iii)(H).		
	Annual CH4 emissions from	(metric tons)	
	combustion of the specified fuel		
	Use which CH ₄ result?	\bigcirc Use the calculated result rounded	
		Enter my own result (value will be rounded)	
	ANNUAL N ₂ O EMISSIONS		
	Note: This value is not a reporting require	ment, but is used to calculate CO _{2e} which is a reporting requiren	nent under 98.36(d)(1)(iii), 98.36(d)(2)(ii)(H), or
	98.36(d)(2)(iii)(H).	_	
	Annual N2O emissions from	(metric tons)	
	combustion of the specified fuel		
	Use which N ₂ O result?	\bigcirc Use the calculated result rounded	
		 Enter my own result (value will be rounded) 	
	CO2 EQUIVALENT EMISSIONS	(metric tons)	
	Annual CH4 emissions	(none one)	
	CO2 equivalent value for	(metric tons)	
	Annual N2O emissions		
	CANCEL		
Paperwork Reduction Act Burder	Statement Contact Us		e-CCRT RV2013 R18 SPC-1



When a **Tier 4 (CEMS)** configuration is selected, you are required to report the following information for each fuel type listed in Table C-2 (including biomass fuel(s)):

- The total annual CH₄ mass emissions derived from Equation C-10 in metric tons CH₄ and in metric tons CO₂e. Note that e-GGRT will automatically calculate the CO₂e data value [98.36(b)(9)(iii), 98.36(c)(2)(ix)]
- The total annual N₂O mass emissions derived from Equation C-10 in metric tons N₂O and in metric tons CO₂e. Note that e-GGRT will automatically calculate the CO₂e data value [98.36(b)(9)(iii), 98.36(c)(2)(ix)]

Use the red-bordered text boxes to enter the required emissions information.

To calculate the emissions you have the option of using your own resources or alternatively you may use the following tool and set of instructions:

- Download the spreadsheet tool by clicking the link below one of the red-bordered text boxes labeled "Use Tier 4 spreadsheet to calculate"
- Fill in the spreadsheet completely using the instructions provided in the tool
- After completing the spreadsheet, copy the values calculated by the spreadsheet to the red-bordered text boxes on this page

When finished, click SAVE.

Year-Round Part 75 Heat Input Reporters

	ental Protection		2-66KT
FACILITY REGISTR	ATION FACILITY MANAGEMENT	DATA REPORTING	Electronic Greenhouse Gas Reporting Tool
	Califa		Hello, Sokna Chea My Profile
RT Help	Subpart C: General St	ationary Fuel Combustion (2013)	
GRT for Subpart C	Subpart C Overview » Alternative Pa	art 75 Reporters » Fuel-specific Emissions	
	FUEL-SPECIFIC CH4 AND N20 (EMISSIONS	
	Use this page to enter the annual	CH4 and N2O emissions information for this fuel	1
	type. For additional information al e-GGRT Help link(s) provided.	bout the data collected on this page, please use the	Annual CO2e for CH4 (metric tons)
			1
			Annual CO2e for N2O (metric tons)
	CONFIGURATION		
	Unit or Group Name/ID	Alternative	
	Configuration Type	Alternative Part 75 Reporters	
	Part 75 Methodology	Appendix D and G calculation method § 98.33(a)(5)(i)
	Part 75 Heat Input Method	Appendix D	
	Fuel (Fuel Type)	Natural Gas (Weighted U.S. Average) (Natural Gas)	
	EQUATION C-10 SUMMARY AND	RESULTS	
		$CH_4 \text{ or } N_2O = 0.001 \times (HI)_A \times EF$	
		Hover over an element in the equation above to revea	al a definition of that element.
	Annual heat input	450000 (mmBtu)	
	Emission factor for CH ₄	0.001 (kg CH4/mmBtu)	
	Emission factor for N ₂ O	0.0001 (kg N2O/mmBtu)	
	ANNUAL CH ₄ EMISSIONS		
	Note: This value is not a reporting require	ement, but is used to calculate CO_{2e} which is a reporting requirem	nent under 98.36(d)(1)(iii), 98.36(d)(2)(ii)(h
	98.36(d)(2)(lll)(H).		
	Annual CH4 emissions from combustion of the specified	0.45 (metric tons)	
	fuel	Iter the calculated arouth rounded	
	Use which ch ₄ result?	 Ose the calculated result rounded Enter my own result (value will be rounded) 	
	ANNUAL N ₂ O EMISSIONS		
	Note: This value is not a reporting require 98.36(d)(2)(iii)(H).	ement, but is used to calculate CO _{2e} which is a reporting requirem	nent under 98.36(d)(1)(iii), 98.36(d)(2)(ii)(H
	Annual N2O emissions from	0.045 (metric tons)	
	combustion of the specified fuel		
	Use which N O result?	Output the calculated result rounded	
		Enter my own result (value will be rounded)	
	CO2 EQUIVALENT EMISSIONS	\odot Enter my own result (value will be rounded)	
	CO2 EQUIVALENT EMISSIONS CO2 equivalent value for	Enter my own result (value will be rounded) 11.3 (metric tons)	
	CO2 EQUIVALENT EMISSIONS CO2 equivalent value for Annual CH4 emissions	Enter my own result (value will be rounded) 11.3 (metric tons)	
	CO2 EQUIVALENT EMISSIONS CO2 EQUIVALENT EMISSIONS CO2 equivalent value for Annual CH4 emissions CO2 equivalent value for Annual N2O emissions	 Enter my own result (value will be rounded) 11.3 (metric tons) 13.4 (metric tons) 	



HOME FACILITY REGISTRATION FACILITY MANAGEMENT DATA REPORTING

Sokha



🕜 e-GGRT Help

Subpart C: General Stationary Fuel Combustion (2013)

Using e-GGRT for Subpart C reporting Subpart C Overview » Alternative Part 75 Reporters » Fuel-specific Emissions

FUEL-SPECIFIC CH4 AND N2O EMISSIONS

Use this page to enter the annual CH4 and N2O emissions information for this fuel type. For additional information about the data collected on this page, please use the e-GGRT Help link(s) provided.



nnual CO2e for N2O (metric tor

CONFIGURATION -

Unit or Group Name/ID	Alternative
Configuration Type	Alternative Part 75 Reporters
Part 75 Methodology	Appendix D and G calculation method § 98.33(a)(5)(i)
Part 75 Heat Input Method	Appendix D
Fuel (Fuel Type)	Natural Gas (Weighted U.S. Average) (Natural Gas)

EQUATION C-10 SUMMARY AND RESULTS

$CH_4 \text{ or } N_2O = 0.001 \times (HI)_A \times EF$

Hover over an element in the equation above to reveal a definition of that eleme		
Annual heat input	450000	(mmBtu)
Emission factor for CH	0.001 (kg CH4/mmBtu)	

ANNUAL CH₄ EMISSIONS

Note: This value is not a reporting requirement, but is used to calculate CO_{2e} which is a reporting requirement under 98.36(d)(1)(iii), 98.36(d)(2)(ii)(H), or 98.36(d)(2)(iii)(H).

Annual CH4 emissions from	0.45 (metric tons)
fuel	
Use which CH ₄ result?	Ose the calculated result rounded
	 Enter my own result (value will be rounded)

Emission factor for N2O 0.0001 (kg N2O/mmBtu)

ANNUAL N₂O EMISSIONS

Note: This value is not a reporting requirement, but is used to calculate CO_{2e} which is a reporting requirement under 98.36(d)(1)(iii), 98.36(d)(2)(ii)(H), or 98.36(d)(2)(iii)(H).

Annual N2O emissions from combustion of the specified fuel	0.045 (metric tons)
Use which N ₂ O result?	Our set the calculated result rounded
	○ Enter my own result (value will be rounded)

CO2 EQUIVALENT EMISSIONS -

CO2 equivalent value for Annual N2O emissions	13.4 (metric tons)
CO2 equivalent value for Annual CH4 emissions	11.3 (metric tons)

CANCEL

For configurations using the alternative CO_2 mass emissions calculation methods provided in **98.33(a)(5)** (Year-round Part **75 heat input reporters)**, subpart C requires the entry of the total heat input for each fuel type listed in Table C-2 combusted in each unit (except as otherwise provided in 98.33(c)(4) (ii)(B)) in units of mmBtu. Enter this value in the text box provided under Equation C-10 Summary and Results. [98.36(d)(2)(ii)(G) and 98.36(d)(2)(iii)(G)]

e-GGRT will calculate CH_4 and N_2O emissions from the total heat input entered using Equation C-10 and display the results under Annual CH_4 Emissions and Annual N_2O Emissions, respectively. [98.36(d)(2)(ii)(H) and 98.36(d)(2)(iii)(H)]

If you calculated CH_4 and N_2O emissions for a blended fuel according to 98.33(c)(6)(ii), you can override the automatically calculated emissions values by selecting the "Enter my own result (value will be rounded)" radio buttons under Annual CH4 Emissions and Annual N2O Emissions. Enter the CH_4 and N_2O values you calculated in the "Report this value" fields.

	ANNUAL CH4 EMISSIONS	
	Note: This value is not a reporting requirement, but is used to calculate CO _{2e} which is a reporting requirement under 98.36(d)(1)(iii), 98.36(d)(2)(ii)(H), or 98.36(d)(2)(iii)(H).	
	Annual CH4 emissions from combustion of the specified	0.45 (metric tons)
	Use which CH ₄ result?	O Use the calculated result rounded
		Enter my own result (value will be rounded)
	Report this value	(metric tons)
	ANNUAL N ₂ O EMISSIONS	
	Note: This value is not a reporting requirem 98.36(d)(2)(iii)(H).	tent, but is used to calculate CO_{2e} which is a reporting requirement under 98.36(d)(1)(iii), 98.36(d)(2)(ii)(H), or
	Annual N2O emissions from combustion of the specified fuel	0.045 (metric tons)
	Use which N ₂ O result?	O Use the calculated result rounded
		e Enter my own result (value will be rounded)
	Report this value	(metric tons)
	CO2 EQUIVALENT EMISSIONS	
	CO2 equivalent value for Annual CH4 emissions	11.3 (metric tons)
	CO2 equivalent value for Annual N2O emissions	0.0 (metric tons)
	CANCEL	
Paperwork Reduction Act Burden	Statement Contact Us	e-GGRT RY2013 R18 SPC-12

	ANNUAL CH ₄ EMISSIONS	
	Annual CH4 emissions from combustion of the specified	0.45 (metric tons)
	Use which CH ₄ result?	 O Use the calculated result rounded The end of the end of the
	Report this value	(metric tons)
	ANNUAL N20 EMISSIONS	
	Note: This value is not a reporting requiren 98.36(d)(2)(iii)(H).	nent, but is used to calculate CO _{2e} which is a reporting requirement under 98.36(d)(1)(iii), 98.36(d)(2)(ii)(H), or
	Annual N2O emissions from combustion of the specified fuel	0.045 (metric tons)
	Use which N ₂ O result?	 O Use the calculated result rounded Inter my own result (value will be rounded)
	Report this value	(metric tons)
	CO2 EQUIVALENT EMISSIONS	
	CO ₂ equivalent value for Annual CH ₄ emissions	11.3 (metric tons)
	CO2 equivalent value for Annual N2O emissions	0.0 (metric tons)
	CANCEL	
Paperwork Reduction Act Burden (Statement Contact Us	e-GGRT RY2013.R18 SPC-12

When finished, click SAVE.

Back to Top

See Also

Screen Errors Using e-GGRT to Prepare Your Subpart C Report for RY2014 and Later Subpart C Configurations for RY2014 and Later Subpart C Configuration-Level Emissions Information for RY2014 and Later Subpart C Fuel Identification Information for All Reporting Years Subpart C Fuel-Level Emissions Information for RY2014 and Later Configuration types, emission details and their presentation in the summary report Using Subpart C Calculation Spreadsheets Subpart Validation Report