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For today's webinar please only submit questions regarding e-GGRT functionality. Question on other topics (rule requirements, legal issues, etc.) should be submitted to <u>GHGReporting@epa.gov</u>.

Overview



 Inputs to equations whose reporting was deferred until 2013 must be reported to EPA by April 1, 2013, for reporting years 2011 and 2012

- Listed in Table A-6 of the rule by subpart

- Incorporated into e-GGRT
- Walk through changes made to e-GGRT
 - For reporting of inputs to equations
 - System now performs many of the calculations

There are some substantial changes to the e-GGRT system for this reporting cycle.

The inputs to equations whose reporting was deferred until 2013 must be reported to EPA by April 1, 2013 for reporting years 2011, and 2012. The inputs have been incorporated into e-GGRT.

For the list of inputs that were deferred until 2013, refer to Table A-6 of the rule. The inputs are listed by subpart.

Please note, while most of the inputs to equations will be collected starting in 2013, there are a few inputs in subparts II and TT that were deferred until 2015. These will not be collected at this time. For a list of inputs that were deferred until 2015, please see Table A-7 of the rule.

The purpose of this webinar is to walk through e-GGRT to highlight the changes as a result of adding the inputs. Because these inputs are reported, the system can now do many of the calculations for reporters.



As was said, this webinar is going to focus on the changes to e-GGRT as a result of the equation inputs deferral having expired.

Therefore, there are a number of items this webinar will not cover that were covered in previous webinars. You can refer back to the previous webinar by going to the link on the last bullet of this slide.

What is not covered are the basic navigation of the system. However, it should be noted, that reporters should click SAVE a the bottom of all pages, where there is a SAVE button. This is even is you did not change anything on the page.

Also not covered is how to get into the different subpart modules or how to add or remove subparts, the validation messages, calculation spreadsheets that are still accessible from the Help link, how to sign, certify, and submit a report. Also not covered is anything that has not changed in the module.

For more information about updated to e-GGRT in modules other than II and TT, please go to the Training and Testing Opportunities section on our web site and download other webinars.



The webinar will first cover subpart TT which as before used web forms to enter required data in e-GGRT.

This is a detailed list of items whose deferral has expired for Subpart TT. Many of these are inputs to Equation TT-1, the first order decay model as you see waste quantities, DOC, and k-values among other data elements.

Subpa	art TT: Subpart OVERVIEW	And the state of t
e-GGRT Help	HH-C Landfill 2 Subpart TT: Industrial Waste Landfills (2012) Subpart Overview VERVIEW OF SUBPART REPORTING REQUIREMENT Subpart TT requires industrial waste landfills to report methane (CH4) generation and ergissions quantities. First, provide the information requested in the Landfill Details pased on the information you provide about your landfill. Next, identify each waste store placed into the landfill and provide the associated information requested by e- GGRT. For additional information about Subpart TT reporting, please use the e-GGRT Help link(s) provided.	EPA has finalized a rule that defers the deadline for reporting certain data elements used as inputs to emission equations for direct emitters until March 31, 2015. See 76 FR 53057 (unlished August 25, 2011) and 77 FR 40072 (concerning additional inputs in this subpart, published August 31, 2012). In accordance with the rule, e-ORT is not currently collecting this subset of inputs to emission equations. If you choose to report these inputs to EPA by including them in a file uploaded to this page, please note that the inputs may be subject to public release.
	Reporting Information Landfill Details Facility Overview	OPEN
		6

As before, when you get into the subpart TT module, this is what you see. Click OPEN next to Landfill Details to get started.

🕑 e-GGRT Help	HH-C Landfill 2 Subpart TT: Industrial Waste Landfills (2012) Subpart Overview » Landfill Details
	LANDFILL DETAILS Much of the information on the form below is necessary to determine which annual reporting requirements apply to your landfill (e.g., does your landfill have a landfill gas collection system?) The answers you provide on this screen will determine what greenhouse gas reporting elements are made available on your Subpart IT Overview page. For additional information about the facility information required by Subpart IT, please use the e-GGRT Help link(s) provided.
	In 2012, was the landfill open * Open (actively accepted waste in the reporting year or expects to receive waste in fut or closed? years)
	First year the landfill accepted (year) waste
	LANDFILL CAPACITY
	Landfill capacity (metric tons)

The first question is the same as before, whether the landfill was open or closed.



In this example, the landfill is open, so the next questions that need to be answered for all open landfills is when it first accepted waste and when it is expected to close. These are slightly different from past years' reporting.



If the landfill is closed, the next questions that need to be answered for all closed landfills is when it first accepted waste and the last year it accepted waste. Again, these are slightly different from past years' reporting (Arrow #1).

Then for all landfills, open or closed, report the landfill capacity in metric tons (Arrow #2).

Subpart T	T – Landfill Detai	ils (4) 🛛 🚺 🚺
		ATAL PROT
	page. For additional information about the facility informatio please use the e-GGRT Help link(s) provided.	n required by Subpart 11, • denotes a required field
	In 2012, was the landfill open • Open (actively acception or closed? years)	ted waste in the reporting year or expects to receive waste in future
	Closed (no longer ac	cepting waste)
	First year the landfill accepted (year) waste	
	If the landfill is closed, the last year that the landfill received waste (year)	
	LANDFILL CAPACITY	
	Landfill capacity	(metric tons)
	LANDFILL GAS COLLECTION SYSTEM	
	If the landfill has a landfill gas collection system, indicate the in actual cubic feet per minute (actim), and the number of well indicate the entity that designed the gas collection system a is not available, report the manufacturer of the blower. Do not landfill. Also onto use this space to indicate the brand of m concentration.	manufacturer of the gas collection system, the capacity of the system s present at the landfill. For manufacturer of the gas collection system, of the entity that installed the gas collection system. If this information use this space to indicate the manufacturer of the flares in place at the easurement equipment used to monitor landfill gas flow or methane
	Does the landfill have a landfill* 💿 Yes	
	gas collection system	
	Manufacturer of the gas	à
	Capacity of the gas collection system	(acfm)
	Number of wells	(wells)
	Annual operating hours	(hours)
	LANDFILL PASSIVE VENTS AND LEACHATE RECIRCULAT	TION
	Passive vents and/or flares are (check if true)	10

Next, as in the previous version of e-GGRt you are asked whether your landfill has a gas collection system. If you indicate that your landfill does has a gas collection system, you must now report the annual operating hours of the gas collection system in addition to the information that was previously reported about the gas collection system.

ıbpart TT – Land	fill Detail	s (5)
Passive vents and/or flares are present (vents or flares that are not considered part of the gas collection system)	(check if true)	
An indication of whether leachate recirculation was used during the reporting year	C (check if true)	
The typical frequency of use of leachate recirculation over the past ten (10) years	Select	×
COVER MATERIALS		
Identify each cover material used an	d report the surface area in squar	e meters for each cover type selected.
Identify each type of cover material used	Organic cover	(square meters)
	Sand cover	
	Clay cover	(square meters)
	Other soil mixture	
EQUATION TT-1 DETAILS		<u>2</u>
The fraction of CH4 in landfill gas (F) is based on a measured value (not the default)	✓ (check if true)	
Fraction by volume of CH4 in landfill gas		(fraction by volume)
An MCF value other than the default of 1 was used	✓ (check if true)	
Methane Correction Factor		(fraction)
ACTIVE AERATION INFORMATION		
Aeration blower capacity		(scfm)

Two more changes on the Landfill Details page are shown here.

First, when you identify each cover material that is used, you must also report the surface area in square meters for each cover type selected (Arrow #1).

Second, there the same check boxes for MCF and F. However, this time the values used for these terms must also be reported. The defaults are automatically used if you do not check the boxes. But if you do check the boxes, then you must enter the values you used for the calculations.

As before, if you say you used an MCF other than the default, you have to enter data about active aerations at your landfill. This was covered in the previous webinars and has not changed so detail is not being provided here.

	Other factors used as a basis for the selected MCF value	
	Description of the aeration system	
ME	THOD #3 (EQUATION TT-4A) DA	NTA
Hot	e: The following data are required to b te streams. If you did not use Equation	e reported only if you used Method #3 (Equation TT-4a) to estimate historic waste quantities for one or more I TT-4a to estimate historic waste quantities for any waste stream, you do not need to report this data.
Ca t	pacity of the landfill used (or he total quantity of waste-in- place) at the end of the Data" from design drawings	(metric tons)
	or engineering estimates Are waste quantity data available?	O waste quantity data are available for some years
		waste quantity data are not available for any years
Т	he year in which the landfill last received waste(YrData)	
	Do you know the year when the landfill opened?	O Yes O No
re	The year the landfill first ceived waste from company cords, or 1960 (whichever is more recent)	1960
NUI	MBER OF WASTE STREAMS -	
	Number of waste streams added	0
	The	number of waste streams is automatically calculated by e-GGRT based on the

The last few questions on the landfill details page are contingent upon the methods you used to figure out the quantity of each waste stream that was placed in your landfill.

Take note of the Note in the yellow box: "The following data are required to be reported only if you used Method #3 (Equation TT-4a) to estimate historic waste quantities for one or more waste streams. If you did not use Equation TT-4a, you do not need to report this data. below."

If you used Equation TT-4a, complete these fields and click SAVE, then Subpart Overview

Pedge Schnetz [] My Profile Pedge Schnetz [] My Profi				Servin .
OVERVIEW OF SUBPART REPORTING REQUIREMENTS Subpart TT requires industrial waste landfills to report methane (CH4) generation and emissions quantities. First, provide the information requested in the Landfill Details page and e-GGRT will determine what additional information is required for reporting based on the information you provide about your landfill. Next, identify each waste stream placed into the landfill and provide the associated information requested by e- GGRT. For additional information about Subpart TT reporting, please use the e-GGRT method is indexed in the Landfill and provide the sacciated information requested by e- GGRT. For additional information about Subpart TT reporting, please use the e-GGRT method by the sacciated information requested in the Landfill Details EVENTION reporting Information Reporting Information Event to page, please not think may be subject to public release wipoded to the page, to be the theory outcomes to the second request to public release WASTE STREAM SUMMARY Name/D Status Deletion	e-GGRT Help	HH-C Landfill 2 Subpart TT: Industrial Waste Landfills (2012) Subpart Overview	Hello, Rachel Schm	eltz My Protile Log
Reporting Information Landfill Details Image: Control of		OVERVIEW OF SUBPART REPORTING REQUIREMENTS Subpart TT requires industrial waste landfills to report methane (CH4) generation and emissions quantifies. First, provide the information requested in the Landfill Details page and e-GGRT will determine what additional information is required for reporting based on the information you provide about your landfill. Next, identify each waste stream placed into the landfill and provide the associated information requested by e- GGRT. For additional information about Subpart TT reporting, please use the e-GGRT Help link(s) provided.	EA has insized a to dealine for reporting used as inputs to emis receive the inputs to emis receive the inputs of the records of the accords on the accords on the inputs may be subject with the inputs may be subject Subpart TT:	I that defers the certain data elements con equations for rech 31, 2015. See 76 upgat25, 2019 and ing additional inputs in upgat25, 2019 in August 13, 2019, in use, ex-GORT is not a subset of inputs to you choose to report inclusing them in a the please note that the to public release.
Landfill Details Methane Generation and Emissions for Landfills without LFG Collection Systems WASTE STREAM SUMMARY Name/ID Status Delet		Reporting Information		
Methane Generation and Emissions for Landfills without LFG Collection Systems WASTE STREAM SUMMARY Name/ID Status Delet		Landfill Details		OPEN
WASTE STREAM SUMMARY Name/ID Status Delet		Methane Generation and Emissions for Landfills without LFG Collection Systems		OPE
Name/ID Status Delet				
No stragge have been added		WASTE STREAM SUMMARY		
NU Streams nave been audeu		WASTE STREAM SUMMARY Name/ID	Status	Delete
ADD a Waste Stream		WASTE STREAM SUMMARY Name/ID S No streams have been added	Status	Delete

A big change in the subpart TT module is that <u>before</u> proceeding with entering data related to methane generation and emissions, you must first report data about your waste streams. Some of this data entry is the same as previous versions of e-GGRT. Some is different.

Click on ADD a Waste Stream

HH-C Landfill 2 Subpart TT: Indust Subpart Overview » Add a Stre	rial Waste	e Landfills <mark>(2012)</mark>	
WASTE STREAM INFORMA Subpart TT requires a facility described below for each was information about adding and link(s) provided.	TION to uniquely idi ite stream plac editing a wast	entify and provide the information ced into the landfill. For additional e stream, please use the e-GGRT Help	* denotes a required field
WASTE STREAM INFORMATI	ON		
Name or Identifier*		(40 charao	ters maximum)
Waste Stream Description			· · · · · · · · · · · · · · · · · · ·
	(List the type: sludge digest	s of materials in the waste stream, e.g., b er.)	iosolids from wastewater
Identify each type of wast the w	e present in aste stream	food processing	
		pulp and paper wood and wood product	
		construction and demolition	
		inert waste	

The first part of the Add a Stream page, shown on this slide, remains unchanged so it will not be detailed now.

													a and
ut	opa	art		: A	Add a V	V	ast	e S	tre	am (3))		VIRONALES
													ALF
METH	IOD(S) US	SED TO D	ETERMIN	E WAST	E STREAM QUANTITIES	3							
Use th metho	ne grid bel od may be	low to sel	ect the m for a give	ethod(s) u n year. Si	used to determine waste ee the explanation of met	streathod	am quantitie s below the	es in each arid.	year this w	aste stream was placed	in th	e landfill. More than one	
If this 1	waste str	eam was	not place	d in the la	indfill during one or more	year	rs, do not c	heck any i	boxes corre	sponding to those years	. If y	ou wish to reduce the	
numbe	er of years	s displaye	id in the g	rid below,	, enter a 'first' and 'last' ye	ear b	elow and cl	lick the FII	LTER GRID	button.			
Note the	hat the fir	rst' and 1a	ist' years tream Ple	are not re	porting requirements and that filtering the grid to n	i will	not be inclu ve rows will	uded in yo	ur annual G	HG report; they are only the hox selections assoc	prov	ided to manage the size o with the years removed	if
the ge	d for ess.			1000 11010	that having no govern	orne.	10 10 10 10	0100.001	no any one		10110-	multile pouro romente	1
Fi	irst year was pla	this wast	e landfill	19	60 (year)							M	/
L	ast year was pla	this wast	te stream e landfill	20	112 (year)							Filter Grid	
			Waste Q	uantity In	formation			DC	C Value In	formation		Ň.	
	Meth	hod Used Waste	l to Deter Quantity	mine			Method	Used to D DOC Valu	etermine e				
BY	#1	#2	#3	#4	Quantity of Waste		Default from Table TT 1	60-day AB* Tost	Volatile Solids	DOC Value		kvalue	
					Clear All Quantities					Clear All Quantities		Clear All Quantities	
1960													*
1961]]		
1962]							
1963]		
1964											1		
1965											1		
1966											1		
	-										1		_
1967		_											

The next section is about methods used to determine waste stream quantities and it is also for the quantities of waste which must now be reported. e-GGRT uses the same grid structure as in the previous version. The difference is that a lot more information needs to be entered into this grid.

Start by filtering the grid as you did before. Enter the first year that this particular waste stream was placed in the landfill and the last year it was placed there. Click Filter Grid

Notice that the first year defaults to 1960.

	was placed in the landfill											
	Mot	l heell hor	Waste Qu	uantity In mine	formation		Method I	DO Ised to D	C Value In	formation 2		
	men	Waste	Quantity				l	OC Valu	0			
RY	#1	#7	#3	#4	Quantity of Waste	D fr Ti T	efault om able T.1	60-day AB* Test	Volatile Solids Test	DOC Value	kyalue	i.
	00	00	00	00	Clear All Quantities		00	00	00	Clear All Quantities	Clear Al	Quantities
2009						*					*	4
2010											1	
2011												
2012												
- IVIP	thod #1	Used one	A TH THE MA	asie duari	ity measurement methor			20 40.112112				
 Me ma or i Me as Me as 	thod #1: asurem ss of pro containe thod #2: posal qu uation T thod #3: determin thod #4:	Used one ents multip cess out Per 98.40 Per 98.40 Per 98.40 Per 98.40 Per 98.40 hed by oth	oli the wa plied by w puts), or t 53(a)(2)(ii) ir historic 53(a)(2)(ii) ier metho 53(a)(2)(ii) ier metho	aste quan vaste strea he numbe years in v (C), calcu ds are ava (C), calcu ds are ava	ing measurement method in density, mass balanc, r of loads multiplied by th of loads multiplied by th which direct waste dispos lated an average annual i liable consecutively for th lated an average annual i liable for sporadic (non-c	os spe e proci- ne mas e waste sal mea bulk wa he mos bulk wa onseci-	edures (d ss of wast e disposa asuremer raste disp st recent raste disp utive) yea	no.465(a)(2 lifference b il rate per load nits are not osal quan disposal y osal quan irs (Equati	etween the based on t Equation TT available us ity for histo ears (Equat ity for histo on TT-4b).	reases of process input: he working capacity of -2 and calculated the w sing historical productio ric years when waste q ion TT-4a). ric years when waste q	s and the the vehicle aste n data per uantity data uantity data	

The slide shows the grid filtered for just a few years, so you can see the rest of the page.

Under Waste Quantity Information, you need to check the boxes for which methods you used to determine your waste quantities. These are Methods #1 - #4. Below the grid you see an explanation as to what the methods refer to. These methods are also fully defined in the rule language itself.

You also have to enter the quantity of waste in metric tons for each year in the grid for that waste stream (Arrow #1).

Then under DOC Value Information is where you indicate which method you used to determine the DOC value, also in the same grid. And you must also enter the DOC value and k-value you used for this waste type in Equation TT-1 which is the First Order Decay Model used to calculate modeled methane generation (Arrows #2).

Two features to point out on the grid. First the Clear All Quantities feature under the title of the columns where you have to enter numbers. This is if you have to start over entering the numbers. Second if the same value needs to be entered for all years in the grid, click the little blue arrow to the right of the first box in that column to automatically populate all values in the column with the same number.

The last question on this page is the same as asked in the previous version of e-GGRT, it is just in a different location. It used to be on the landfill details page and now it is here on the Add a Waste Stream page.



One more item to note on the methods used for DOC. As before, if you click the box that you used the 60-day anaerobic biodegradation test as a method used to Determine DOC values, you need to answer the same series of questions as before about which method you used from a pick list. And if you choose other, you will have to specify the method.

When you are done with this page click SAVE and go to Subpart Overview to see your waste stream listed there.

- GGRT Help	HH-C Landfill 2 Subpart TT: Industrial Waste Landfills (2012) Subpart Overview		
	OVERVIEW OF SUBPART REPORTING REQUIREMENTS Subpart TT requires industrial waste landfills to report methane (CH4) generation and emissions quantities. First, provide the information requested in the Landfill Details based on the information you provide about your landfill. Next, identify each waste stream placed into the landfill and provide the associated information requested by e- GGRT. For additional information about Subpart TT reporting, please use the e-GGRT Help link(s) provided.	EPA has finalized a rule desidine for reporting co- used as inputs to emissi direct emitters until More. FR 53057 (updathed Au 77 FR 48072 (concernin this subpert, published d accordance with the rul currefly collecting this emission equations. If ye here inputs to EPA by in updotade to the PA by inputs may be subject to Subpart TT: N	that defers the rain older elements on equations for h 31, 2015. See 76 yours 25, 2019 and g edditional inputs in yours 13, 2019, In e, e-OORT is not vubered to inputs to vubered to report vibulang them in a file public release. Yiew Validation
	Reporting Information		
	Landfill Details		OPEN
	Methane Generation and Emissions for Landfills without LFG Collection Systems		OPEN
	WASTE STREAM SUMMARY		
	Name/ID	S	tatus Delete

Since this landfill does not have gas collection as indicated on the Landfill Details page, this is what the Subpart Overview page looks like.

Click OPEN next to Methane Generation and Emissions for Landfills without LFG Collection Systems.



Then what happens is e-GGRT walks you through the results of each of the equations starting with Equation TT-1. For landfills without gas collection, this is very straight forward since there are only two equations: Equation TT-1 and TT-6.

The numbers in the Summary and Result section, under the column CH4, are automatically calculated by e-GGRT based on previously entered data.



You can see in the gray box that Equation TT-1 is bolded (Arrow #1).

As is stated in the yellow box, the information reported on the Landfill Details page and the Waste Stream Details page are used by e-GGRT to calculate the Equation TT-1 result.

The calculated result is displayed in the table as well as some, if not all, of the inputs (Arrow #2).

You are then asked whether you want this calculated result reported or you want to instead report a different value. You may want a different value because you did the calculation separately and got a different result for some reason.

The page will default to using the calculated value, but it is recommended that if you do want the calculated value to be used in your report, you should still click the radio button to accept the calculated value even though it is already checked. This will ensure that your response is registered in the system.

Contraction of the second			PROTE
	using Equation TT-6 of this information, please use the	subpart), reported in metric tons of CH4. For additional e-GGRT Help link(s) provided.	
	Select a specific equation I appear in your annual GHG the bottom of each equation the equations. Equation TT-1 S	below to review the equation summary and result that will 6 report. Alternatively, select the NEXT or BACK buttons at n summary and result page to move consecutively through Summary and Result	
	December 2015 Equation 11-6 Sum	imary and Result	
		$G_{CH4} = \sum_{x \in S} \left\{ W_x \times MCF \times DOC \times DOC_F \times F \times \frac{10}{12} \times \left(e^{-k(T-x-1)} \right) \right\}$.e ^{-k(T-x)}) }
	Note: The information report	Hover over an element in the equation above to reveal a definition of the rted on the Landfill Details and Waste Stream Details pages are used by	at element. e-GGRT to automatically
	Note: The information repor calculate the Equation TT-1	Hover over an element in the equation above to reveal a definition of the ted on the Landfill Details and Waste Stream Details pages are used by result.	at element. e-GGRT to automatically Calculated Resul
	Note: The information repor calculate the Equation TT-1 S (start yea 199	Hover over an element in the equation above to reveal a definition of the tred on the Landfill Details and Waste Stream Details pages are used by result.	at element. e-GGRT to automatically Calculated Resul 308.4
	Note: The information repor calculate the Equation TT-1 S (start yea 199 What result do you want to report to EPA?	Hover over an element in the equation above to reveal a definition of the ted on the Landfill Details and Waste Stream Details pages are used by result. arr by	at element. e-GGRT to automatically Calculated Resul 308.4
	Note: The information repor calculate the Equation TT-1 S (start yea 195 What result do you want to report to EPA? Report this value	Hover over an element in the equation above to reveal a definition of the tend on the Landfill Details and Waste Stream Details pages are used by result. a) T (current reporting year) 90 2012 C Use the calculated result rounded (308.41 metric tons) C Enter my own result (value will be rounded) (metric tons CH4)	at element. e-GGRT to automatically Calculated Resul 308.4

If you click enter my own value, you are then provided a box to do so.

Keep in mind that it is likely if you do enter your own value, that EPA will follow up with you during the verification process with an e-GGRT message asking for an explanation as to why you used a different value.

After you enter your own value click next.

Subpart Overview » GHG Reporting
CH4 EMISSIONS (FOR LANDFILLS WITHOUT A GAS COLLECTION SYSTEM) 277.57 Landfills that do not have a landfill gas collection system, are required to report annual CH4 emissions (i.e., the CH4 generation, adjusted for oxidation, calculated using Equation TT-6 of this subpart), reported in metric tons of CH4. For additional information, please use the e-GGRT Help link(s) provided. 277.57 Select a specific equation below to review the equation summary and result that will appear in your annual GHG report. Alternatively, select the NEXT or BACK buttons at the bottom of each equation summary and result page to move consecutively through the equations. Image: Constraint of CH4 generation of CH4. For additional information. Image: Constraint of CH4. Image: Constraint of CH4. For additional information. Image: Constraint of CH4. For additional information. Select a specific equation summary and result page to move consecutively through the equations. Image: Constraint of CH4. For additional information. Image: Constraint of CH4. Image: Constraint of CH4. Image: Constraint of CH4. Image: Constraint of CH4. Image: Constraint of CH4. Image: Constraint of CH4. Image: Constraint of CH4. Image: Constraint of CH4. Image: Constraint of CH4. Image: Constraint of CH4. Image: Constraint of CH4. Image: Constraint of CH4. Image: Constraint of CH4. Image: Constraint of CH4. Image: Constraint of CH4. Image: Constraint of CH4.
EQUATION TT-6 SUMMARY AND RESULT
MG=G _{CH4} × (1 - OX)
Hover over an element in the equation above to reveal a definition of that element.
G _{CH4} OX Calculated Res
308.41 0.1 277.5
What result do you want to report to FPA?

Then you are taken to the Equation TT-6 page. Again you can confirm that your report should contain the result calculated by e-GGRT or your own value.

Then click FINISHED

e-GGRT Help	HH-C Landfill 2	
	Subpart TT: Industrial Waste Landfills (2012)	
	Subjart Overwew » Gird Reporting	
	CH4 EMISSIONS (FOR LANDFILLS WITHOUT A GAS COLLECTION SYSTEM)	
	annual CH emissions (i.e., the CH generation, adjusted for oxidation, calculated using Equation TT-6 of this subpart), reported in metric tons of CH4. For additional information, please use the e-GGRT Help link(s) provided.	
	Select a specific equation below to review the equation summary and result that will appear in your annual GHG report. Alternatively, select the NEXT or BACK buttons at the bottom of each equation summary and result page to move consecutively through the equations	
	Equation TT-1 Summary and Result	
	₽ Equation TT-6 Summary and Result	
	- SUMMARY AND RESULT	
	Equation	CH4
	Total annual modeled CH ₄ generation (TT-1)	308.41
	Modeled CH ₄ generation, adjusted for oxidation (TT-6)	277.57

You are taken back to the GHG Reporting page here and can see your results. Then click Subpart Overview. If you click NEXT again it will take you back through the two equations.

e-GGRT Help	HH-C Landfill 2	
	Subpart TT: Industrial Waste Landfills (2012) Subpart Overview	
	OVERVIEW OF SUBPART REPORTING REQUIREMENTS Subpart TI requires industrial waste landfills to report methane (CH4) generation and emissions quantities. First, provide the information requested in the Landfill Details page and e-GGRT will determine what additional information is required for reporting based on the information you provide about your landfill. Next, identify each waste stream placed into the landfill and provide the associated information requested by e- GGRT. For additional information about Subpart TI reporting, please use the e-GGRT Help link(s) provided.	EPA has thatized a null multi arters the deadline for reporting certain data elements used as inputs to emission equations for direct emitters unt March 31, 2015 See 78 EPS 50507 (published August 13, 2017) and TPF 8007 (concerning additional inputs in this nulleyert, published August 13, 2017), the accordinge with the null e, e-Goff II and currently collecting this subact of inputs to emission equations. If you choose to report these inputs to EPA by including them in a tile inputs may be subject to public release.
	Reporting Information	
	Landfill Details	OPEN
	Methane Generation and Emissions for Landfills without LFG Collection Systems	OPEN
	WASTE STREAM SUMMARY	
	Name/ID	Status Delete
	Waste Stream 1	Incomplete 🗱
	PADD a Waste Stream	

Back at the Subpart Overview page, click Facility Overview to add another subpart or proceed to generating and submitting your report.

e-GGRT Help	HH-C Landfill 2 Subpart TT: Industrial Waste Landfills (2012)	
	OVERVIEW OF SUBPART REPORTING REQUIREMENTS Subpart TT requires industrial waste landfills to report methane (CH4) generation and emissions quantities. First, provide the information requested in the Landfill Details page and e-GGRT will determine what additional information is required for reporting based on the information you provide about your landfill. Next, identify each waste stream placed into the landfill and provide the associated information requested by e- GGRT. For additional information about Subpart TT reporting, please use the e-GGRT Help link(s) provided.	EPA has finalized a rule that defers the deadine for reporting certain data elements used as injugats to emission equations for direct emitters until March 31, 2015. See 76 FR 53057 (published August 32, 2011) and 77 FR 48072 (concerning additional inputs in this subpart, published August 13, 2012). In accordance with the rule, e-GGRT is not currently collecting this subset of inputs to emission equations, if you choose to report these inputs to EPA by including them in a file uploaded to this page, please note that the inputs may be subject to public release.
		Subpart TT: View Validation
	Reporting Information	
		OPEN
	Estimated Waste Denths	ODEN

Backtrack to show the steps for landfills with gas collection.

If instead I said yes to the landfill gas collection system question back on the landfill details page, a different path of pages will now be shown on the Subpart Overview page.

Click OPEN next to Estimated Waste Depths.

			AND AND A
			_
e-GGRT Help	Subpart TT: Industrial Waste Landfills (2 Subpart Overview - Estimated Waste Depth	012)	
	WASTE DEPTH ESTIMATIONS		
	Please provide the estimated depth of each of the areas of the below. For additional information, please use the e-GGRT Help	landfill, as shown link(s) provided.	
	A1:		
	Estimated waste depth of area with no waste in-place	(meters)	
	Surface area of area with no waste in- place	(square meters)	
	A2:		
	Estimated waste depth of area without active gas collection, regardless of cover type	(meters)	
	Surface area of area without active gas	(square meters)	
	A3:		
	Estimated waste depth of area with daily soil cover and active gas collection	(meters)	
	Surface area of area with daily soil cover and active gas collection	(square meters)	
	A4:		
	Estimated waste depth of area with an intermediate soil cover, or a final soil cover not meeting the criteria for A5	(meters)	
	Surface area of area with an intermediate soil cover, or a final soil	(square meters)	

For landfills with gas collection, you must now enter the estimate waste depths (in meters) and the surface area (in square meters) for each of the areas listed in Table HH-3 of the rule, Areas A1 through A5.

You'll notice the language has switched over to referring to subpar HH. Recall that industrial landfills with gas collection are referred to the monitoring and data reporting requirements of subpart HH, since the same requirements hold and so few industrial landfills have gas collection.



Now click OPEN next to Methane Generation and Emissions for Landfills <u>with</u> Gas Collection Systems.



This section lists all of the equations that need to be used to calculate generation and emissions for landfills with gas collection. You see Eq TT-1 and then the list of subpart HH equations, again because landfills with gas collection are referred to subpart HH. The numbers in the Summary and Result section, under the column CH_4 , are automatically calculated by e-GGRT based on previously entered data.



Underneath the Summary and Result table for the equations is a section that has been covered in previous webinars and has not changed. This is where you enter the annual volume of landfill gas collected, the annual average methane concentration and if substitute data was used for either of those and how many times substitute data was used.



Below that is more that is much the same in terms of entering information about temperature, pressure, and moisture. This functionality is as before.

What is new relates to where destruction occurred (the last question on the page). If all destruction occurs off-site then nothing has changed. If destruction occurred on-site at the facility or occurred both on-site and off-site, additional data must be entered.



If destruction occurred either on-site or both on-site and off-site, in addition to entering whether a back-up device is present, also enter the annual operating hours of the primary destruction device and the destruction efficiency used.



Then if a back-up destruction device is present, enter annual operating hours of that backup device.

Click SAVE and then NEXT



Then what happens, is e-GGRT walks you through the results of each of the equations, starting with Equation TT-1.

You can see in the gray box that Equation TT-1 is bolded (Arrow #1).

Again, the calculated result is displayed in the table as well as some, if not all, of the inputs (Arrow #2).

Same as before, you are then asked whether you want this calculated result reported or you want to instead report a different value.

₽ Equation in table HH	I-3 Summary and Result		
₽ Equation HH-4 Sum	mary and Result		
Equation HH-5 Sum	mary and Result		
Equation HH-6 Sum	mary and Result		
₽ Equation HH-7 Sum	mary and Result		
P Equation HH-8 Sum	mary and Result		
FOUNTION TT-1 SUMMARY	AND RESULT		
	$G_{CH4} = \sum_{x-S}^{T-1} \{ W_x \times MC \}$	$F \times DOC \times DOC_F \times F \times \frac{16}{12} \times (e^{-k(T-x-1)})$.e ^{-k(T-x)})}
Note: The information report	$G_{CH4} = \sum_{x=S}^{T-1} \left\{ W_x \times MC \right\}$ Hover over an element in ed on the Landfill Details a esult.	$F \times DOC \times DOC_F \times F \times \frac{16}{12} \times (e^{+i(T-x-1)})$ the equation above to reveal a definition of th nd Waste Stream Details pages are used by	e-k(T-x)) } at element.
Note: The information report calculate the Equation TT-1 r S (start year	$G_{CH4} = \sum_{x=S}^{T-1} \{ W_x \times MC \}$ Hover over an element in ed on the Landfill Details a esult.	$F \times DOC \times DOC_F \times F \times \frac{16}{12} \times (e^{-k(T-x-1)})$ the equation above to reveal a definition of th nd Waste Stream Details pages are used by T (current reporting year)	e-k(T-x)) } at element. e-GGRT to automatically Calculated Result
Note: The information report calculate the Equation TT-1 r S (start year 199	$G_{CH4} = \sum_{x=S}^{T-1} \left\{ W_x \times MC \right\}$ Hover over an element in ed on the Landfill Details a esult.	$F \times DOC \times DOC_F \times F \times \frac{16}{12} \times (e^{-k(T-x-1)})$ the equation above to reveal a definition of th and Waste Stream Details pages are used by T (current reporting year) 2012	e-e ^{-k(T-x)}) } at element. e-GGRT to automatically Calculated Result 308.41
Note: The information report calculate the Equation TT-1 r S (start year 199 What result do you want	$G_{CH4} = \sum_{x=S}^{T-1} \left\{ W_x \times MC \right\}$ Hover over an element in ed on the Landfill Details a esult.	$F \times DOC \times DOC_F \times F \times \frac{16}{12} \times (e^{-k(T-x-1)})$ the equation above to reveal a definition of th nd Waste Stream Details pages are used by <u>T (current reporting year)</u> 2012 esult rounded (308.41 metric tons)	e-k(T-x)) } at element. e-GGRT to automatically Calculated Result 308.41
Note: The information report calculate the Equation TT-1 r S (start year 199 What result do you want to report to EPA?	$G_{CH4} = \sum_{x=S}^{T-1} \left\{ W_x \times MC \\ \text{Hover over an element in easult.} \\ 0 \\ \bigcirc \text{ Use the calculated result} \\ \bigcirc \text{ Enter my own result} \\ \end{array} \right.$	$F \times DOC \times DOC_F \times F \times \frac{16}{12} \times (e^{-i(T-x-1)})$ the equation above to reveal a definition of th and Waste Stream Details pages are used by <u>T (current reporting year)</u> 2012 esult rounded (308.41 metric tons) (value will be rounded)	e ^{-k(T-x)}) } at element. e-GGRT to automatically <u>Calculated Result</u> 308.41

If you click to enter you own value, you are then provided a box in which to do so.

Again if you do enter your own value, that EPA will follow up with you during the verification process with an e-GGRT message asking for an explanation as to why you used a different value.

After you enter your value, click NEXT



You are taken to the Equation in Table HH-3 which is for the average collection efficiency. This is also based on previously entered values on surface area by area type from the Estimated Waste Depths page.



Again you can accept the calculated value or enter your own.

Then click NEXT



Next is the page for Eq HH-4. This is the one equation that is not automatically calculated because e-GGRT does not collect all of the inputs.



This Equation is handled similarly to the previous version of e-GGRT. You must calculate it yourself. You may use the calculation spreadsheet via the link on this page to calculate the result which you must then enter into the red box.

Although not shown on this slide, you can hover over an equation term to see how it is defined.



The system continues to walk through the rest of the calculations which are handled the same way as Equation TT-1. The system calculates the result and you can either accept the result or enter your own result. At the bottom of each page, click NEXT until you finish with Equation HH-8.



One note on the page displaying the result of Equation HH-6 for methane generation.

The page displays the results of both Equation TT-1 and Equation HH-4. Recall that Equation HH-6 is constructed so that you are to use with the modeled methane generation rate from Equation TT-1 or the quantity of recovered methane from Equation HH-4, whichever is greater. E-GGRT automatically chooses the larger of the two. This is so that the result of Equation HH-6 is not a negative value.

Again, you can accept the calculated result or enter your own.

Then click NEXT.



When you are done with the page for Equation HH-8, which is the last equation, click FINISHED



You are taken you back to this page to view all of your equation results. I was having some trouble getting the calculated results on the Staging Server, so I punted and am showing the full results page from subpart HH. This will look the same as the one for subpart TT, except it will say Equation TT-1 and TT-6 instead of HH-1 and HH-5. This slide will be corrected before the webinar is posted on the website.

If you want, you can click on any of the Equation links in the top box to go back to the page for that Equation.

If all is OK, click SAVE and then Subpart Overview at the bottom of the page. Not shown on this slide, but there is still the NEXT button at the bottom of this page but if you keep clicking NEXT it will take you through all of the individual equation pages again.

	1	Startage
sart ×	2017/dha/datareportina/subpartit/it: overview.do?action=emissions:2?action=emissions:18cc	
🕢 e-GGRT Help	HH-C Landfill 2 Subpart TT: Industrial Waste Landfills (2012)	
	OVERVIEW OF SUBPART REPORTING REQUIREMENTS Subpart TI requires industrial waste landfills to report methane (CHo) generation and emissions quartites. First, proced the information requested in the Landfill Details page and e-GGRT valid determine what additional information is required for reporting based on the information or provide about your provide about your provide about your GGRT Fra-additional information about Subpart TI reporting, please use the e-GGRT Help link(c) provided.	EPA has finalized a rule that deters the dealines for reporting certain disk elements used as input to remotive against the 76 PPS 50057 (politiked August 55, 2011) and PPS 50057 (politiked August 15, 2012), in according with the nuk, =-0.041 is not currently collecting this subset 13, 2012), in according the subset 13, 2012, in according the subset 11, 2012, in according to the subset 10, 2012, in according to the subset
	Reporting Information	_
	Landfill Details	OPEN
	Methane Generation and Emissions for Landfills with LFG Collection Systems	OPEN
	Estimated Waste Depths	OPEN
	WASTE STDEAM SIMMADY	
	Name/ID	Status Delete
	🐼 Waste Stream 1	Incomplete 🗱
	ADD a Waste Stream	
	← Facility Overview	

Now you are back at the Subpart Overview page. If you are all done with your report for this subpart, then click Facility Overview. At this point, you should have completed entering all your data and checking and/or correcting all of your validation messages.

That completes the module for Subpart TT.

Next we will move onto Subpart II for Industrial Wastewater Treatment.



This is a detailed list of Inputs to equations whose deferral has expired for Subpart II.

Much of what is listed is related to the methane generation equations, Equation II-1 and II-2. But also inputs related to biogas recovery and anaerobic process emissions.



This slide presents the flow of data entry for subpart II. It is a busy chart but the meat of it is in the purple box where a reporter completes the various tabs on the Excel reporting forms.



This is the subpart overview page for subpart II.

It has not changed from previous versions. At Arrow #1 you can download the reporting form. Please make sure to download this new reporting form as it is very different from past year's forms.

At Arrow #2 is where you upload the form once you have completed it.



Now we will walk through the Subpart II reporting form, so you can see what information needs to be included.

The forms are color coded. Use the blue input cells to enter all data specific to your facility. Gray informational cells contain parameter names, column and row headings, equation constants, subtotals, and other instructional items. As you go through the reporting form, some blue input cells may change to black deactivated cells. Black cells are not applicable to you based on previous data entries in the form. Do not enter data into these cells. All cells that are not blue input cells are locked and cannot be modified or do not require data from you.

As you enter data, you may get a Stop message if you enter a value that is invalid or a Warning message if you enter a value that is outside of EPA's expected range for a data element. For invalid entries, the Stop messages will not let you proceed and you will have to re-enter valid data in order to keep going. For Warning messages, you are alerted to the issue, but you are given the option to continue if you think the entered value is accurate.

There are 7 tabs in this file, 6 data entry and calculation tabs, and one reference tab with values from Tables II-1 and II-2. The tabs required for completion vary depending on whether or not there is biogas recovery at the facility.

Every facility will need to complete worksheet 1 which is the Introduction worksheet shown on this slide. As you can see these forms are regular Excel files. We will drill down into these worksheets so you can see them better. The text here is really small.

		TAL
D38 - 🔿 🍂	Anaerobic Shallow Lagoon	
c c	D E	F
Subpart II - Industrial Wastewater Tree 1.) Introduction	atment	
Vorksheet Instructions:		
Fill out the tables in this worksheet in s	sequential order as follows:	
1.) Fill out the table with general inform	nation about this facility:	
2.) In e-GGRT, provide a separate file	with either a description or a diagram of the facility wastewater treatment system [\$98.356(a)	0
3.) Identify all anaerobic processes at	t the facility [\$98.356(a)]	
4.) Continue to worksheet '2. CH4 Ger	neration' for all processes except Anaerobic Sludge Digesters; complete worksheet "3. Equa	tion II-18:II-
2' for all processes except Anaerobic	Sludge Digesters; complete worksheet '4. Biogas Recovery & Monitoring' for all processes; c	
worksheet '5 Fouation II-4' all process		compiece
1	ses: complete worksheet '6. Calculate GHG Emissions' for all processes	compiete
Version:	ses: complete worksheet '6: Calculate GHG Emissions' for all processes	complete
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This slide focuses in on the top of Worksheet 1.

The top section is the same on each worksheet. It consists of the introductory language, some key links to both the help content for subpart II and other resources about the subpart such as the rule language itself. There are also links to the other tabs.

Section 1 is where you enter information about your facility including your facility name, e-GGRT ID, and any comments or details that you think we need to know about. As in previous reporting years, it is important to match the facility name and e-GGRT ID to those given to you when you registered for e-GGRT.

Section 2 in this tab asks for the diagram and description of the wastewater treatment system at your facility. As in previous reporting years, you will need to attach a separate file with this information to the Subpart Overview page for your facility.

nay un underobie processes at a	e racinty (350.550(a))	Describe the Process			Describe Biogas Recove
Unique Identifier	Anaerobic Process	Indicate what diagram or document uploaded to e-GGRT (per number 2 above) pertains to this process	If you identified an anaerobic lagoon, what is the average depth of the lagoon (meters)?	Does the facility measure COD or BODs concentration of the wastewater entering the anaerobic process? [\$98.356(b)(1)]	Is biogas that is generated in the proces recovered?
low Lagoon 1					
Provide a unique identifier for the					
anaerobic process					

Section 3 is where you enter information about each anaerobic process at your facility. As shown here, when you click on each cell, a yellow comment box will appear with an additional brief description of the information you need to enter in that cell.

It is important to note that the Unique Identifier ("Shallow Lagoon 1" in this example) needs to be the same across all tabs in the reporting form.

Section 4 notes that worksheet 2. CH4 Generation should be completed for all lagoons and anaerobic reactors with results confirmed in worksheet 3. Equation II-1 & II-2.

Section 5 notes that worksheets 4. Biogas Recovery & Monitoring and 5. Equation II-4 Input should be completed for all processes with biogas recovery.

All facilities are required to complete worksheet 6. Calculate GHG Emissions.



Back to Section 3. After a Unique Identifier is indicated, the next column contains a pull down list for you to choose the type of anaerobic process. After you choose the appropriate process, indicate the name of the document that you will attach with the description and/or diagram of your wastewater process.

Also, if a cell is blacked out, please do not enter any data into it. A blacked out cell indicates that data entry is not allowed in that cell. For instance, the average depth of anaerobic lagoons should not be filled in unless the anaerobic process indicated is an anaerobic lagoon. As you can see above in the first row, the column for average depth is no longer blacked out once a lagoon is indicated as the anaerobic process.

In the next column facilities will indicate whether they measure COD or BOD5 for every anaerobic process listed. If an anaerobic sludge digester is indicated as the anaerobic process, the corresponding cell in COD/BOD5 column will be blacked out, since a response to this question is not required for anaerobic sludge digesters.

In the next column, facilities must indicate if biogas is recovered for each process indicated.

All facilities that have anaerobic reactors or lagoons will then proceed to worksheet 2. CH4 Generation.

It is important to note that as with any data entry, please make sure you save the file periodically so that you do not lose any data that you've entered.

In addition, please do not skip any rows when entering data into tables. This can cause errors in the data collection software.

C Inique Identifier for Process 2	Anaerobic Process Anaerobic Process Anaerobic Process COMPLETE THIS SECTION FOR \$4,000C DOUGSTERS TCOMPLETE THIS SECTION FOR \$4,000C DOUGSTERS	E Week	F Does the facility measure COD or BOD ₄ concentration of the wastewater entering the anaerobic process? [§98.356(b)(1)] As Entered in Tab 1.	G Weekly average COD o BOD ₄ concentration of th wastewater entering th anaerobic treatment process for each week that the anaerobic process was operated (kg/m ²)
Jnique Identifier for Process 2	Anaerobic Process Of COMPLETE THIS SECTION FOR \$LUGGE DOCISTERS T COMPLETE THIS SECTION FOR SLUGGE DOCISTERS T COMPLETE THIS SECTION FOR SLUGGE DOCISTERS IT COMPLETE THIS SECTION FOR SLUGGE DOCISTERS IT COMPLETE THIS SECTION FOR SLUGGE DOCISTERS	Week	Does the facility measure COD or BOD, concentration of the wastewater entering the anaerobic process ? [§93.356(b)(1)] As Entered in Tab 1.	Weekly average COD o BOD ₄ concentration of th wastewater entering th anaerobic treatment process for each week that the anaerobic process operated (kg/m*)
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igester DO I	NOT COMPLETE THIS SECTION FOR SLUDGE DIGESTERS			

Moving on, this is the first part of the second worksheet, CH4 Generation. This worksheet must be completed for all lagoons and reactors listed in the introduction worksheet. This worksheet should not be completed for anaerobic sludge digesters.

Even though these terms can sometimes be used interchangeably, for the purposes of Subpart II, anaerobic reactors are processes used to treat wastewater, while anaerobic sludge digesters are processes used to treat sludge.

As shown above, if a unique identifier for an anaerobic sludge digester is selected in column C, a warning will appear in column D stating that this section (Worksheet 2) should not be completed for digesters.

For every anaerobic process (other than digesters) listed in the introduction worksheet, the second worksheet, CH4 Generation, should be completed.

As shown above, column C will contain a pull-down menu with all unique identifiers indicated in Worksheet 1. Introduction. Once a unique identifier is selected, assuming it is not a digester, Column D will be automatically populated with the anaerobic process type and column F will be automatically populated with either BOD5 or COD as was indicated on Tab 1.

This worksheet contains 10 such tables and one table must be completed for as many anaerobic processes as you listed in worksheet 1.

First you must enter a week number for each week the anaerobic process was operating, up to 52 weeks per year. **[aba: SAIC may change this?]**

For each week, the average COD/BOD5 concentration and the weekly volume of wastewater entering the anaerobic treatment process must be entered.

G	н	L	J
Weekly average COD or BOD _c concentration of the wastewater entering the anaerobic treatment process for each week that the anaerobic process was operated (kg/m ²)	Indicate if a missing data procedure was used to determine the weekly average COD or BOD ₄ concentration [§98.3(c)(8)]	Weekly volume of wastewater entering the anaerobic treatment process for each week (m²) [§98.356(b)(2)]	Indicate if a missing data procedure was used to determine the weekly volume of wastewater [§98.3(c)(8)]

This is the next couple of columns on Worksheet #2.

We already covered column G. In addition, for each week, reporters must indicate if a missing data procedure was used to determine both COD/BOD5 and weekly volume of wastewater.

Note that "missing data" and "substitute data" mean the same things for purposes of this rule. The rule reference for these procedure are provided on the column headers if you need to refer back to them.

	Subpart 2. CH4 G	n: Comp eneratio	n(3)	eporting	g Forms:			AVIRONAL PROTECT
	к	L	м	N	0	P	Q	R
22				÷			If COD is measured, apply Equation II-1	If BOD ₆ is measure apply Equation II-2
24	Confirm the CH ₄ production potential (B ₀) [§98.356(b)(3)]	What B _o value do you want to report to EPA? (Calculated result initially selected by default)	CH _a production potential (B _o) [§98.356(b)(3)] Use alternate value from Table II-1	Confirm the Methane Conversion Factor (MCF). [§98.356(b)(4)]	What MCF value do you want to report to EPA? (Calculated result initially selected by default) A3	Methane Conversion Factor Value (MCF) [§98.356(b)(4)] Use alternate value from Table II-1	CH ₄ G ₈ = Annual mass CH4 generated from the anaerobic wastewater treatment process (metric tons CH ₄)	CH ₄ G _n = Annual mas CH4 generated from ti anaerobic wastewalt treatment process (me tons CH ₄)
25							0	0
26	0.25	Foter own value	Ŷ	0.2	Use the value provided		0	N/A
27	Use the val	we provided	_	0.2	Use the value provided		0	N/A
28	Enter own		down menu to	0.2	Use the value provided		Ő	N/A
29	0.25	Use the value indicate wh	nether you would like	0.2	Use the value provided		0	N/A
30	0.25	Use the value to report th	e calculated value	0.2	Use the value provided		0	N/A
31	0.25	Use the value (displayed	in column to the left),	0.2	Use the value provided		0	N/A
32	0.25	Use the value or an altern	ative value (to be	0.2	Use the value provided		0	N/A
33	0.25	Use the value entered in	column to the right).	0.2	Use the value provided		0	N/A
34	0.25	Use the value Initially, cal	culated values are	0.2	Use the value provided		0	N/A
35	0.25	Use the value selected for	r reporting by default.	0.2	Use the value provided		0	N/A
36	0.25	Use the value		0.2	Use the value provided		0	N/A
37	0.25	Use the value provided		0.2	Use the value provided		0	N/A
38	0.25	Use the value provided		0.2	Use the value provided		0	N/A
59	0.25	Use the value provided		0.2	Use the value provided		0	N/A
40	0.25	Use the value provided		0.2	Use the value provided		0	N/A
42	0.25	Use the value provided		0.2	Use the value provided		0	N/A
43	0.25	Use the value provided		0.2	Use the value provided		0	N/A
44	0.25	Use the value provided		0.2	Use the value provided		0	N/A
45	0.25	Use the value provided		0.2	Use the value provided		0	N/A
46	0.25	Use the value provided		0.2	Use the value provided		0	N/A
47	0.25	Use the value provided		0.2	Use the value provided		0	N/A
48	0.25	Use the value provided		0.2	Use the value provided		0	N/A
49	0.25	Use the value provided		0.2	Use the value provided		0	N/A
50	0.25	Use the value provided		0.2	Use the value provided		0	N/A
51	0.25	Use the value provided		0.2	Use the value provided		0	N/A
52	0.25	Use the value provided		0.2	Use the value provided		0	N/A
53	0.25	Use the value provided		0.2	Use the value provided		0	N/A
54	0.25	Use the value provided		0.2	Use the value provided		0	N/A
55	0.25	Use the value provided		0.2	use the value provided		0	NA

The remainder of worksheet 2, which could not fit on the previous slides, asks for reporters to confirm the CH4 production potential (Bo) and the methane conversion factor (MCF) in columns L and O for all reactors and lagoons. The values provided in columns K and N are used by default and are calculated by the spreadsheet based on whether facilities monitor COD/BOD5 (for Bo) and the type of process indicated (for MCF). In the unlikely event that reporters need to override these values, the dropdown shown above has an option to "Enter own value". In this case, column M or P will no longer be blacked out, and alternate values can be entered. However, only values listed in Table II-1 (available in worksheet 7 for reference) can be used to override the spreadsheet-generated value.

The spreadsheet will then calculate the results of Equation II-1 or II-2 depending on whether BOD5 or COD is measured.

Optional Calculation spreadsheets are also available for the subpart II equations, such as Equation II-3 on this slide. The spreadsheets can be accessed via the help links on the subpart overview page. They follow the same format as previous years so we will not cover them in detail here. As before these spreadsheets should not be provided to EPA. Instead they should be part of the facility's recordkeeping.

A3 They should not be allowed to override... But I'm not sure if SAIC is making this change. aba, 2/13/2013

Subpart I 3. Equation	l: Completing on II-1 & II-2 (1	Reporting For)	ms:	G	ENVIRONMENT
Subpart II - Industrial Wastewate 3.) Equation II-1 & II-2 Worksheet Instructions: Fill out the tables in this workshi	r Treatment		1		
1.) Complete the table for each a Version: R.02 External Links:	naerobic reactor, deep lagoon, and shallow la	agoon identified on tab 1 (Introduction)			
Subpart II Resources Page Reporting Form Help Content Optional Calculation Workbook Workbook Navigation:	http://www.epa.gov/climatechange/emissio http://www.ccdsupport.com/confluence/disa http://www.ccdsupport.com/confluence/disa	ns/subpart/ii.html slav/help/Reporting+Form+Instructions slav/help/Optional+Calculation+Spreadsheet+Inst	ructions		
Introduction CH4 Generation Sequation II-1 & II-2 4 Biogas Recovery & Monitoring	í.				
Equation II-4 Input 6. Calculate GHG Emissions 7. Table II-1 & Table II-2 Referen Complete the table for each an	<u>Ce</u> serobic reactor, deep lacoon, and shallow la	non process identified on tab 4 (Introduction)			
Unique Identifier	Anaerobic Process	CH _G s = Annual mass CH4 generated from the anaerobic wastewater treatment process (metric tons CH ₄) Calculated Result of Equation II-1 or II-2 from Tab 2 CH. Generation	What result do you war report to EPA? (Calcula result initially selected default unless otherw indicated)	t to sted to tise CH ₄ G ₈ = Annual mass CH generated from the anaerobic wastewater treatment process (metric tons CH ₄) 	4 CH ₄ G _n = Annual mass i generated from the anad wastewater treatment pr (metric tons CH ₄)
Shallow Lagoon 1	Anaerobic Shallow Lagoon	(Enter my own result (value rounded)	User Override	report
			Use the calculate Use the calculate Use the calculate Use the calculate Use the calculate Use the calculate Ose the calculate or an alt	whether you would like the calculated value td in column to the left), emative value (to be	
			Use the calculate Initially, Use the calculate selected	calculated values are for reporting by default.	
) Complete worksheet '4. Biogas) Complete worksheet '6. Calcula	Recovery & Monitoring' and '5. Equation II-4 tte GHG Emissions' for all processes.	Input' for all processes from which biogas is re	covered		
					54

Worksheet 3. Equation II-1 & II-2 will automatically pull in results of Equations II-1 or II-2 for each anaerobic process indicated in worksheet 1. Introduction.

The spreadsheet default is to use the calculated result, which will be displayed in column H as the value that will be included in the report; however, facilities may override this value by selecting "Enter my own result (value will be rounded)" in column F. Once this is selected, as shown above, the appropriate cell in column G will be activated and data can be entered there. Column H will then contain the user override value and this is what will be included in the report.

Please note, if you do choose to enter your own value other than what is calculated by the spreadsheet, you will likely be contacted by EPA during the report verification process and asked to explain the differences in the calculated and user-provided values.

4. Biogas P	Recovery & Mon	hitoring(1)	5.		WINDOW AND A PROTECT
c	D	E	F	G	н
Complete the table for those anaerob	bic process units identified on tab 1 (Introduction	n) that have biogas recovered			
Unique Identifier for Process 1 Recovering Biogas	Anaerobic Process	Does the facility conduct weekly monitoring of the CH, concentration in the biogas collected for destruction in the anaerobic process?	Week	For continuous monitoring, weekly cumulative volumetric biogas flow for each week that biogas is collected for destruction (acf) [§98.356(d)(2)]	Indicate if a missing di procedure was used i determine the volumet biogas flow for a wee that biogas was collect for destruction [§98.3(c)(8)]
Shallow Lagoon 1	ABLE OILLY REQUIRED FOR BIOGA'S RECOVERY				
Shallow Lagoon 1		Ĩ			
Shallow Lagoon 1					
Shallow Lagoon 1					
Shallow Lagoon 1					
Shallow Lagoon 1					
Shallow Lagoon 1					
Shallow Lagoon 1					
Shallow Lagoon 1					
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Shallow Lagoon 1					
Shallow Lagoon 1					

Facilities that have anaerobic processes from which some biogas is recovered must complete worksheet 4. Biogas Recovery & Monitoring.

Facilities may only complete this page for processes that answered "Yes" to the question in Column H on the introduction worksheet: Is biogas that is generated in the process recovered.

If a process is selected that was indicated to not have recovery in worksheet 1, column D will be blacked out as displayed here.

Subpar 4. Biog	rt II: Comple [.] gas Recovery	ting Reporting & Monitoring	g Fori g(2)	ms:		the Constant	AL PROTECTION
C Complete the table for those some	D archic process units identified on tab 1 (Into	E	F	G	н	1	j,
complete me table for most and	Tobic process units identified on work price	Juction) that have brogas recovered					
Unique Identifier for Process 1 Recovering Biogas	Anaerobic Process	Does the facility conduct weekly monitoring of the CN ₄ concentration in the biogas collected for destruction in the americate process?	Week	For continuous monitoring, weekly cumulative volumetric biogas flow for each week that biogas is collected for destruction [acf] [§88.356(d)(2)]	Indicate if a missing data procedure was used to determine the volumetric biogas flow for a week that biogas was collected for destruction [§88.3(c)(8)]	For continuous monitoring, weekly average CH ₄ concentration for each week that biogas is collected for destruction (%) [§38.356(d)(3)]	Indicate if a missi data procedure w used to determine weekly average (concentration fo week that biogas collected for destruction [§98.3(c)(8)]
Shallow Lancon 1	Anaerohic Shallow Lagoon	10					
Shalow Lappon 1	Anaerobic Shallow Lapoon	Yes					
Shallow Lappon 1	Anaerobic Shallow Lapoon		H4 Conc.				
Shallow Lagoon 1	Anaerobic Shallow Lagoon	No Indicate yes or no					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	No					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	No					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	No					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	No					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	No					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	No					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	No					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	No					
Shallow Lacoon 1	Anaerobic Shallow Lagoon	No					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	No					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	No					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	No					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	No					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	No					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	No					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	No					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	No					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	No					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	No					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	No					
and the second se		No.					

Selecting a unique identifier in column C that indicated in the introduction worksheet that the process did have recovery will result in auto-populating the unique identifier and the anaerobic process.

If weekly monitoring does not occur for this process, "No" should be selected in column E. This indicates that this process is continuously monitored.

In column F, a week number must be entered for each week that biogas was collected for destruction, up to 52 weeks per year.

For each week, weekly cumulative volumetric biogas flow and weekly average CH4 concentration must be entered. In addition, for each week, reporters must indicate if a missing data procedure was used to determine both volumetric biogas flow and CH4 concentration.

Subpart II: Completing Reporting Forms: 4. Biogas Recovery & Monitoring (3)							
R C	0	F	F	6	н		1
1.) Complete the table for those anae	probic process units identified on tab 1 (Intro	duction) that have biogas recovered					
Unique Identifier for Process 1 Recovering Biogas	Anaerobic Process	Does the facility conduct weekly monitoring of the CN, concentration in the biogas collected for destruction in the asserobic process?	Week	For continuous monitoring, weekly cumulative volumetric biogas flow for each week that biogas is collected for destruction [§98.358(d)(2)]	Indicate if a missing data procedure was used to determine the volumetric biogas flow for a week that biogas was collected for destruction [§98.3(c)(8)]	For continuous monitoring, weekly average CH, concentration for each week that biogas is collected for destruction (%) [§98.356(d)(3)]	Indicate if a missing data procedure was used to determine th weekly average CH, concentration for a week that biogas wa collected for destruction [§98.3(c)(8)]
Shalow Lancon 1	Ansarohia Shallow Lagoon	Var					
Challen Lagoon 1	Anaerooic analiow Lagoon	165					
Challow Lagoon 1	Anaerobic Shallow Lagoon	No	H4 Conc.	_			
Shalow Lagoon 1	Anaerobic Shalow Lagoon	Ves Indicate yes or no		-			
Shallow Lagoon 1	Anaerobic Shallow Lagoon	Vas					
Shalow Lagoon 1	Anaerobic Shallow Lagoon	Vec					
7 Shallow Langoon 1	Anaerobic Shallow Lagoon	Yes		_			
Shallow Lagoon 1	Anaerobic Shallow Lagoon	Yes					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	Yes					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	Yes		_			
Shalow Lancon 1	Anaerohic Shallow Lagoon	Yes					
2 Shalow Lagoon 1	Anaerobic Shallow Lagoon	Yes					
3 Shallow Lapoon 1	Anaerobic Shallow Lagoon	Yes					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	Yes					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	Yes					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	Yes					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	Yes					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	Yes					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	Yes					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	Yes					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	Yes					
2 Shallow Lagoon 1	Anaerobic Shallow Lagoon	Yes					
3 Shallow Lagoon 1	Anaerobic Shallow Lagoon	Yes					
Shallow Lagoon 1	Anaerobic Shallow Lagoon	Yes					
p Isnatow Laocon 1	TAnaerotic Shallow Laocon	IYes					57

If weekly monitoring **does** occur for this process, "Yes" should be selected in column E. This indicates that this has weekly monitoring.

As for cases of continuous monitoring, in column F, a week number must be entered for each week that biogas was collected for destruction, up to 52 weeks per year.

You will notice, that if weekly monitoring occurs, weekly cumulative volumetric biogas flow and weekly average CH4 concentration should not be entered, you can see the cells are blacked out. For weekly monitoring, reporters must only indicate if a missing data procedure was used to determine volumetric biogas flow or CH4 concentration.

This worksheet contains 10 such tables and one table must be completed for as many anaerobic processes as you listed in worksheet 1.

Sub 4. E	opart II: Co Biogas Rec	omplet overy	ing Repo & Monit	orting For oring(4)	ms:		States to the states
A	8	с	D	1	F	G	н
Is the biogas temperature incorporated into the monitoring equipmen internal calculations (§98.3(d)(4)) 24	If biogas temperature is not incorporated into the monitoring equipment, provide the weekly average biogas temperature for each week at which flow is measured for biogas collected for destruction (*R) [§98.356(d)(4)]	Is the biogas pressure incorporated into the monitoring equipment internal (aclusions? [§98.3(d)(6)]	If biogas pressure is not incorporated into the monitoring equipment, provide the weekly average biogas pressure for each week at which flow is measured for biogas collected for destruction (atm) [§8.356(d)(6)]	Is the moisture content for the bigas incorporated into the monitoring explanment internal calculations? [§98.356(d)(5)]	If the meisture content is not incorporated into the monitoring equipment, indicate whether the biogas flow is measured on a wet or dry basis. [§98.356(d)(5)]	If the moisture content is not incorporated into the monitoring equipment, indicate whether the CH4, concentration in the biogas flow is measured on a wet or dry basis. [§98.356(0)(5)]	If moisture content for the bidgas is not incorporated line the monitoring equipment and is not consistently measured on a very of or basis for both bidgas flow and CH ₄ concentration, provide the weekly are range mosture content of the bidgas flow for acch week at which flow is measured for bidgas collected for devaluation (cutic feet water gen calacit cett bidgas) (§89.356(n)(5)
25 Yes		Yes		Yes		-	
26 NO		No		No	Wet Basis	Wet Basis	
27 No		No		No	Wet Basis	Dry Basis	
Impact Impact 31 Impact 32 Impact 33 Impact 34 Impact 35 Impact 36 Impact 37 Impact 38 Impact 40 Impact 41 Impact 42 Impact 43 Impact 44 Impact 45 Impact 46 Impact 47 Impact 48 Impact 49 Impact							
							58

The remainder of worksheet 4, which could not fit on the previous slides, requires input of biogas temperature, pressure, and moisture content data for continuously monitoring facilities.

As you can see above (the first row), where temperature, pressure and moisture content are incorporated into internal monitoring equipment calculations, no additional answers are required.

If temperature and pressure are not incorporated into monitoring equipment (second and third rows), weekly average biogas temperature is required in column B and weekly average biogas pressure is required in column D.

If the moisture content is not incorporated into monitoring equipment and biogas flow and CH4 concentration are both measured on the same basis (both wet or both dry), moisture content is not required to be entered in column H. However, if biogas flow and CH4 concentration are measured on a different basis (one wet and one dry), the moisture content must be entered in column H.

It is important to note that in columns B, D and H, if the values given are outside of the range expected by EPA, a warning message will appear asking you if you wish to revised your value or continue with the value as entered. These warning messages are present throughout the worksheets.

Subpar 5. Equa	t II: Completing tion II-4 Input (g Reporting Fo 1)	orms:		AUNTED STATES
B C	D	E	F	G	н
Subpart III - Industrial Wastewater 6. J Equation III-4 Input Worksheet Instructions: Fill out the tables in this worksheet 1. Occupiete the table for those a Worksheet International Complete the table Response of the sources Page Response	Treatment It in sequential order as follows: Inseroic process units identified on lab 1 (intod Into itematical analysis and a source of the second se	uction) that have blogas recovery usboardii html halo/Deconal=Carculation=Spreadsheet=Inst	uctions		
.) Complete the table for those and	erobic process units identified on tab 1 (Introd Anaerobic Process	uction) that have biogas recovery $R_n = Annual quantity of CH_4 recovered from the anaerobic reactor, sludge digester, or lagoon (metric tons CH_4/yr) Calculated Using Equation II-4$	What result do you want to report to EPA? (Calculated result initially selected by default unless otherwise indicated)	Re = Annual quantity of CH4 recovered from the anaerobic reactor, sludge digester, or lagoon (metric tons CH4)yr) liser Override Value	R _e = Annual quantity of CH ₄ recovered from the anaerobic reador, sludge digester, or lagoon (metric tons CH ₄)yr) Value that will be included in recent
1 Digester	Anaerobic Sludge Digester		Enter my own result (value will be		0
2			Use the calculated result rounded		0
3			Use the calculate indicate whethe	menu to	0
4			Use the calculate to report the cal	culated value	0
6			Use the calculate (displayed in co	lumn to the left),	0
7			Use the calculate on an alternative	value (to be	0
8			Use the calculate Initially, calculate	ted values are	0
9			Use the calculate selected for rep	orting by default.	0
10			Use the calculate d resurt		0
					59

Worksheet 5. Equation II-4 Input must be completed for all anaerobic processes identified in worksheet 1 that have biogas recovery.

Each unique identifier can be selected from a drop-down menu in column C. This will populate column D with the correct anaerobic process.

For each process with recovery, Equation II-4 must be calculated separately, and the result should be entered in column E. You can use the calculation spreadsheet available through the e-GRRT Help Content. This is because the system does not collect all of the inputs needed to calculate Equation II-4, so you must calculate it yourself. Although worksheet #5 is structured as the other ones allowing you to override your value, this is really not correct for this instance. In this case, since you must always enter your own value, you can complete this worksheet one of two ways after you enter your calculated value: either choose "Enter my own result" in column F and enter your calculated value again in column G or choose "Use the calculated result rounded" and column G will black out. The latter one obviously has less effort, but you can do it either way. Either way, be sure that the correct result ends up on column H so that you report will be accurate.

Subpart 5. Equat	: II: Completing tion II-4 Input (rms:		AUTOR STATES	
B C	D	E	F	G	н
Subpart II - Industrial Wastewater 5.) Equation II-4 Input	Treatment				
Worksheet Instructions:		1	1		
Fill out the tables in this workshe	et in sequential order as follows:		1		
1.) Complete the table for those a	naerobic process units identified on tab 1 (Introd	luction) that have biogas recovery			
Version:			4		
R.02			-		
Subpat Il Resources Page	http://www.ena.gov/climatechange/emissions/	subpadii himi	1		
Reporting Form Help Content	http://www.ccdsupport.com/confluence/display/	help/Reporting+Form+Instructions			
Optional Calculation Workbook	http://www.ccdsupport.com/confluence/display/	help/Optional+Calculation+Spreadsheet+Inst	ructions		
Workbook Navigation:			and the second se		
1. Introduction			1		
2. CH4 Generation					
3. Equation II-1 & II-2					
5 Equation II-4 Input					
6. Calculate GHG Emissions					
7. Table II-1 & Table II-2 Reference	20				
4.) Complete the table for these and	eachie process units identified on tab 4 (Introd	untion) that have bigger receiver.			
1.) Complete the table for those and	lerobic process units identified on tab 1 (introd	Uction) that have blogas recovery		P = Appual quantity of CH	P = Appual quantity of CH
		R _a = Annual quantity of CH ₄ recovered from	What result do you want to	recovered from the	recovered from the anaerobic
		the anaerobic reactor, sludge digester, or	report to EPA? (Calculated	anaerobic reactor, sludge	reactor, sludge digester, or
Unique Identifier	Anaerobic Process	lagoon (metric tons CH ₄ /yr)	result initially selected by	digester, or lagoon (metric	lagoon (metric tons CH ₄ /yr)
			default unless otherwise	tons CH ₄ /yr)	
		Calculated Using Equation II-4	indicated)		Value that will be included in
			Lies the selected result	User Override value	report
1 Shallow Lagoon 1	ONLY REQUIRED FOR BIOGAS RECOVERY		rounded		0
2		Ĭ	Use the calculated result		0
3			Use the calculated result		0
4			Use the calculated result		0
6			Use the calculated result		0
7			Use the calculated result		0
8			Use the calculated result		0
9			Use the calculated result		0
10			Use the calculated result		0
					60
					60

One more note on worksheet #5. If the unique identifier is selected for an anaerobic process that was indicated to have no recovery in the introduction worksheet, an error will appear in column D and all columns will be blacked out for that row as displayed here.

St 6.	Subpart II: Completing Reporting Forms: 6. Calculate GHG Emissions (1)							Chungen States
В	c		D	E	F	G	н	E
1.) Complete the t	able for each anaer	obic treatr	nent process for which the facility d	oes not recover biogas to calculate emissions acc	cording to Equation II-3			
Unique	9 Identifier		Anaerobic Process	CH ₄ G ₂ = Annual mass CH ₄ generated from the anaerobic wastewater treatment process (metric tons CH ₄)	CH ₄ E ₄ = Annual mass CH ₄ emissions from the anaerobic wastewater treatment process (metric tons CH ₄) Calculated Value	What result do you want to report to EPA? (Calculated result initially selected by default unless otherwise indicated)	CH ₄ E ₄ = Annual mass CH ₄ emissions from the anaerobic wastewater freatment process (metric tons CH ₄) User Override	CH ₄ E ₈ = Annual mass CH ₄ emissions from the anaerobic wastewater treatment process (metric tons CH ₄)
1	Ì				(Use the calculated result		0
2	Anaerobic Proce					Use the calculated result		0
a -	Select an anaerob	Dic				Use the calculated result		0
	process norm the	104				rounded Use the calculated result		
4						rounded		0
5						rounded		0
6						Use the calculated result rounded		0
7					(Use the calculated result		0
						Use the calculated result		0
						rounded		
9					(rounded		0
10					(Use the calculated result rounded		0
2) Complete the t	able for each anaer	obic treatr	nent process for which the facility d	oes recover biogas to calculate emissions accord	ing to Equation II.6			
								R _n = Annual quantity of CH ₄
						HCU destruction accure on	If CU doctruction occurs on	recovered from the
								61

The final worksheet – 6. Calculate GHG Emissions – must be filled out for all anaerobic treatment processes indicated in the introduction worksheet.

Section 1 must be completed for every process that does not recover biogas. As in previous worksheets, once the unique identifier is selected, the anaerobic process will be populated, as will CH4Gn and CH4En. In column G, as in previous worksheets, the calculated result can be used, or a facility can override this value by selecting "Enter my own result (value will be rounded)" in column G, which will then allow for data entry into the appropriate cell in column H.

						AL PROTEC
spiele the table for each anaer	Nic treatment process for which the facility does n Amerobic Process	ecover biogas to calculate emissions accord Does CH, destruction occur at the facility, off site, or both? [§86.356(d)(6)]	ling to Equation 11.6 If CH ₄ destruction occurs on-site or both, mildicate whether a back, up destruction device is present at the factify (§96.356(d)(8))	If CH, destruction occurs on- site or both, indicate the annual destruction device [§98.356(d)(8)]	If CH, destruction occurs on- site or both, indicate the annual operating hours for the back-up destruction device [§98.356(d)(8)]	R _u = Annual quantity of C recovered from the anaerobic reactor, sludj digester, or lagoon (mel tons CH ₄)(r) Output of 5. Equation II Input
		Contraction In Aller	ut 6 Calculate CUC Emission	с 7 Table II.1 II.2 💡		

Section 2 on Worksheet 6 is very long and has been broken up into several slides so that you can more clearly see the text. Section 2 must be completed for every process that does recover biogas as indicated in the introduction worksheet. As in section 1, once the unique identifier is selected the anaerobic process will be populated, along with the Rn output from worksheet 5.

Additional columns in Section 2 address CH4 destruction. In the column after the anaerobic process, the location of CH4 destruction should be indicated as either on-site, off-site or both on-site and off-site.

Subpart I 6. Calcula	Subpart II: Completing Reporting Forms: 6. Calculate GHG Emissions (3)							
F	G	Н	1	J	К			
If CH ₄ destruction occurs on- site or both, indicate whether a back-up destruction device is present at the facility 1\$38.356(d)(8)]	If CH ₄ destruction occurs on-site or both, indicate the annual operating hours for the primary destruction device [\$98.356(d)(8)]	If CH ₄ destruction occurs on-site or both, indicate the annual operating hours for the back-up destruction device [\$38,356(d)(8)]	R _a = Annual quantity of CH ₄ recovered from the anaerobic reactor, sludge digester, or lagoon (metric tons CH ₄ /y) Output of 5. Equation II- 4 Input	CE = CH ₄ collection efficiency of anaerobic process, as specified in Table II-2 (decimal)	CH4L_ = Leakage at the anaerobio process (metric tons CH4)			
					63			

Additional columns in Section 2 ask for information about CH4 destruction.

Columns F, G and H should be filled out only if destruction occurs either on-site or both on and off-site. It's important to note that column H – annual operating hours for the back-up destruction device – should only be answered if the answer to column F is yes, there is a back-up destruction device.

Collection efficiency should be entered in column J, and must be a value from Table II-2, which is available on Worksheet 7 for your reference. Columns I and J are used to calculate the leakage value in column K.

L	М	N	0				
DE ₁ = Primary destruction device CH ₄ destruction efficiency (lesser of manufacturer's specified destruction efficiency and 0.39). If biogas is transported off- site for destruction, use DE ₁ =1	fpert_1 = Fraction of hours the primary destruction device was operating (device operating hours/hours in the year). If biogas is transported off-site for destruction, use fpert_1=1	DE2 = Secondary destruction device CH4 destruction efficiency (lesser of manufacturer's specified destruction efficiency and 0.93). If biogas is transported off-site for destruction, use	fperc_2 = Fraction of hours the secondary destruction device was operating (device operating hours/hours in the year). If biogas is transported off-site for destruction, use fperc_2=1				
	0.00		0.00				
	0.00		0.00				
	0.00		0.00				
	0.00		0.00				
	0.00		0.00				
	0.00		0.00				
	0.00		0.00				

If destruction occurs either on-site or both on and off-site, column L should be filled out for the destruction efficiency of the primary destruction device. If a secondary destruction device is present, as was indicated in column F, column N should be filled out for the destruction efficiency of that destruction device. Columns M and O will be automatically populated depending upon how previous questions were answered.

0	P	Q	B	S
r_{c2} = Fraction of irs the secondary struction device was operating evice operating surs/hours in the ear). If biogas is nsported off-site destruction, use $f_{p,r_{c2}}$ =1	CH4E = Annual mass CH4 emissions from the anaerobic wastewater treatment process (metric tons CH4) Calculated Value	What result do you want to report to EPA? (Calculated result initially selected by default unless otherwise indicated)	CH ₄ E _* = Annual mass CH ₄ emissions from the anaerobic wastewater treatment process (metric tons CH ₄) User Override	CH4E = Annual mass CH4 emissions from the anaerobic wastewater treatment process (metric tons CH4) Value that will be included in report
0.00	0	Use the calculated result rounded		
0.00	0	Use the calculated result rounded		
0.00	0	Use the calculated result rounded		
0.00	0	Use the calculated result rounded		
0.00	0	Use the calculated result rounded		
0.00	0	Use the calculated result rounded		
0.00	0	Use the calculated result rounded		

Column P then calculates CH4En. In column Q, as in previous worksheets, the calculated result can be used, or a facility can override this value by selecting "Enter my own result (value will be rounded)" in column Q, which will then allow for data entry into the appropriate cell in column R. The value you want entered into your report for Annual emissions from each anaerobic process will then be in column S.

Subpart II: 6. Calculate	Completing Reporti e GHG Emissions (6)	ing Forms:	(UNITED STATES - CHERRY
6 7 8 9				
3.) Calculate facility emissions acco Facility Name	rding to Equation II.7 CH ₂ F ₇ = Annual mass CH4 emitted from all anaerobic processes at the facility (metric tons) 0			
↔ M. 1. Introduction / 2. CH4 Gene	ration 🦯 3. Equation II-1 & II-2 🦯 4. Biogas Reco	very & Monitoring 🦯 5. Equation II.4 Inpu	6. Calculate GHG Emissions	s / 7. Table II-1, II)
				66

All the way at the bottom of Worksheet 6, in the red box, is the calculation for total facility emissions from all anaerobic processes. This is a basic summation of column S on the previous slide.

You are not given the opportunity to override this value since you were given the opportunity to override all of the values that go into the sum.

The last Tab on the reporting form, Tab 7 – Table II-1, II-2 is purely for reference purposes. No data entry is required on this tab.

And that concludes the reporting form data entry for Subpart II.

Subpart I	: Upload Completed Form/Files	MENA
	anaerobic reador: b) CH4 emissions and CH4 recovered from each nanerobic sludge collection and biogas destruction device. If you are subject to other subpart (b) g subpart (c) you should return to the Failli Overview page subject to other subpart (c) g subpart (c) you should return to the Failli Overview page subject to appropriate subpart (c) you should return to the Failli Overview page subject to appropriate subpart (c) you should return to the Failli Overview page subject to appropriate form(s). Use the link provided to access the form(s) and find instructions for complete fine data contained within it. Use the "View Validation" link to review any issues found in your reporting form innecessary, taka any revisions necessary to your reporting form and upload the revised reporting form. For additional information about Subpart II reporting, plasse use the e-GGRT Help link (a) provided. SUBPART II SUMMARY INFORMATION FOR THIS FACILITY 1.) DOWNLOAD FORM (b) Subpart II GHG Reporting	
	2.) UPLOAD COMPLETED FORM	
	3) UPLOAD SUPPORTING FILE(S) 2 Upload a file containing a narrative description and/or diagram of each wastewater treatment system. The filename of each file uploaded must be reported on the introduction sheet of the Subpart II Reporting Form. 2 Uploade a file containing a narrative description and/or diagram of each wastewater treatment system. The filename of each file uploaded file Name A tacched By Date Deleter No files found treatment A tacched By Date Deleter Deleter	

Once you have completed the form for your facility, upload it to e-GGRT on the Subpart Overview page at Arrow #1.

Also at this point, you should upload your supporting files including the description and/or diagram of the facility's wastewater treatment system at Arrow #2. Please note that there is a 1MB limit to the size of this file. Do not upload any calculation spreadsheets you may have used to arrive at your equation results.

When you have uploaded your reporting form and your supporting files, your are essentially done with this subpart and can click Facility Overview (Arrow #3) to add another subpart or certify and submit your report to EPA.



This last slide contains important websites where you may find an enormous amount of information about the GHG Reporting Program, on e-GGRT, as well as the XML option for uploading GHG emissions reports. Also listed is a key email address for questions or help requests for e-GGRT or for technical questions about the GHG Reporting Rule itself.

This concludes the e-GGRT module for subpart II and TT.