



**e-GGRT Training Webinar on
Reporting GHG Data for Subparts II and TT**

U.S. Environmental Protection Agency
Greenhouse Gas Reporting Program (GHGRP)
June 2012



This training is provided by EPA solely for informational purposes. It does not provide legal advice, have legally binding effect, or expressly or implicitly create, expand, or limit any legal rights, obligations, responsibilities, expectations, or benefits in regard to any person.

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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 GHGReporting@epa.gov.

Also, today's webinar focuses on using e-GGRT to report emissions for subparts II and TT only. For more general information on registering a facility and reporting via e-GGRT, please go to the Training and Testing Opportunities Tab on our website and download the webinar slides that are posted. Webinars for other subparts may be found there as well.

Of particular note is a Sandbox Testing period that is currently underway starting today. This is a preview opportunity that will allow reporters to become familiar with the look, feel, and function of the RY2011 electronic reporting forms. The Sandbox will be open from today through June 15th and you can register to be a Sandbox tester at the Training and Testing Opportunities tab on the website as well. The URLs for the various webpages are on the last slide of this webinar.

The screenshot shows the EPA e-GGRT web interface. At the top, there's a blue header with the title "Adding Subparts" and the EPA logo. Below the header, there's a navigation menu with options: HOME, FACILITY REGISTRATION, FACILITY MANAGEMENT, and DATA REPORTING. The user is logged in as "Rachel Schmetz".

The main content area is titled "HH-Landfill 1" and "e-GGRT Greenhouse Gas Data Reporting (2011)". It includes a "FACILITY OR SUPPLIER OVERVIEW" section with instructions on how to add subparts and a "REPORT DATA" section. In the "REPORT DATA" section, there's a table with columns for "2011 Reporting Source or Supplier Category", "Validation Messages?", and "Subpart Reporting". Below this table, there's a link that says "ADD or REMOVE Subparts", which is highlighted by a green arrow.

At the bottom of the page, there's a "SUBMIT ANNUAL REPORT" section with a table that has columns for "Report", "Uploaded File Name", "Status", "Submitted Date", and "Certification Date".

Subpart II – Industrial Wastewater Treatment and Subpart TT - Industrial Waste Landfills have different formats in the e-GGRT system. Subpart II reporters will use a simplified reporting format, whereas Subpart TT reporters will follow the webforms format.

Regardless of which subpart you are submitting for, in order to begin reporting for that subpart, you must add that subpart to your list of subparts on your Facility Overview page.

Click ADD or REMOVE a Subpart just below the Report Data box.

The screenshot shows the EPA e-GGRT interface for facility management. The main heading is "Adding a Subpart". The page title is "e-GGRT Greenhouse Gas Data Reporting (2011)". The user is logged in as "Rachel Schmetz". The page displays a list of subparts for selection, categorized into Facility Subparts, General Stationary Fuel Combustion, Landfill Subparts, and Supplier Subparts. A green arrow points to the "TT—Industrial Waste Landfills" subpart option under the "LANDFILL SUBPARTS" section.

You will be brought to a list of all subparts in the GHG Reporting Program. Check the box next to Subpart II or TT depending upon which you are going to work on. We will click subpart TT first, since that subpart will be covered first in this webinar.

Note that un-checking a subpart will erase any data that was entered for that subpart.

You must then scroll down to the bottom of the page and click SAVE in order for this subpart to be added to your report.

Opening a Subpart



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

HH-C Landfill 2
e-GGRT Greenhouse Gas Data Reporting (2011)
Select Facility » Facility or Supplier Overview

FACILITY OR SUPPLIER OVERVIEW
This page allows you to add the source and/or supplier categories for which your facility or supplier will be reporting, then to access those data reporting screens using the OPEN buttons.
After data reporting is complete, you can initiate the annual report review and submission process from this page by using the SUBMIT button (or RESUBMIT for subsequent submissions if needed).
Facility's GHG Reporting Method: Data entry via e-GGRT web-forms (Change)

REPORT DATA
2011 Reporting Source or Supplier Category Validation Messages? Subpart Reporting
Subpart A—General Information None OPEN
Subpart TT—Industrial Waste Landfills None OPEN

ADD or REMOVE Subparts

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

SUBMIT ANNUAL REPORT

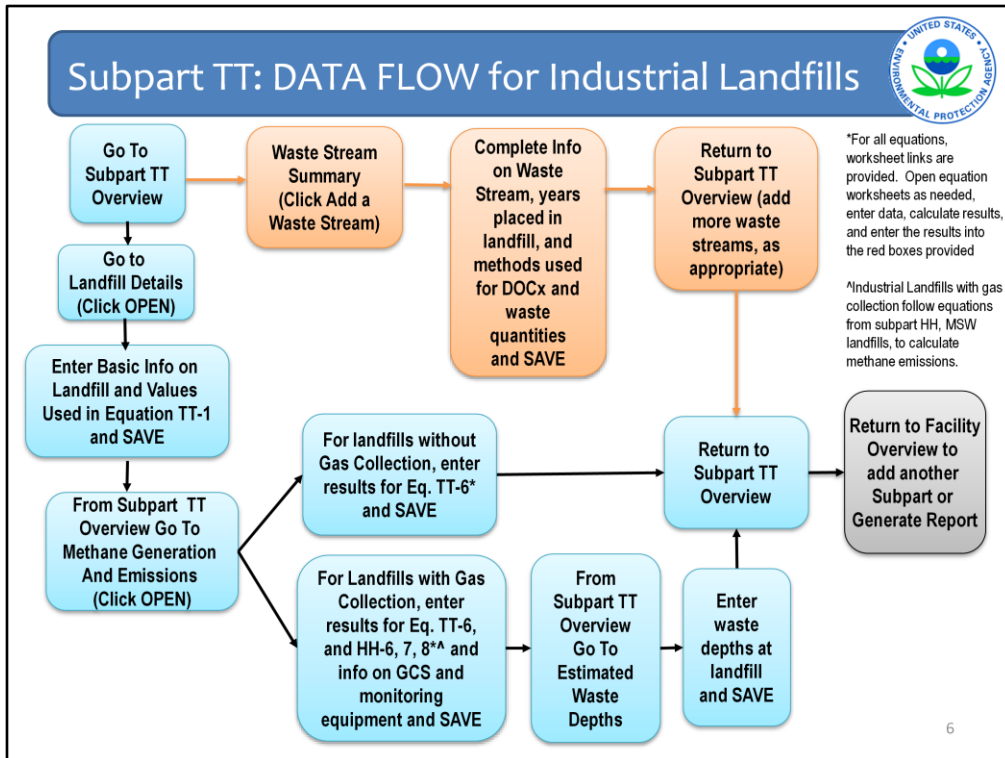
Report	Uploaded File Name	Status	Submitted Date	Certification Date

GENERATE / RESUBMIT

VIEW REPORTS: Annual Report reviewable formats (including public, non-CBI versions and trend reports) for all submissions this reporting year can be accessed on the View Reports page.

NOT SUBMITTING AN ANNUAL REPORT FOR 2011

When you get back to the Facility Overview page you now see that Subpart TT has been added to your Report Data box. Click OPEN next to Subpart TT in order to begin data entry for this subpart.



This slide presents the flow of data entry for subpart TT. It is a busy chart because there is a lot of information to provide for Industrial landfills especially those that have landfill gas collection.

Each step in the process is provided in more detail in the rest of this webinar, so we will not spend time on each one here. However, this slide may be useful for future reference, such as when you are entering your actual facility data in e-GGRT.

The screenshot shows the EPA e-GGRT interface for Subpart TT reporting. The page is titled "Subpart TT: Subpart OVERVIEW" and is for facility "HH-C Landfill 2". The main heading is "Subpart TT: Industrial Waste Landfills (2011)". A "Subpart Overview" section provides an overview of reporting requirements, stating that Subpart TT requires industrial waste landfills to report methane (CH₄) generation and emissions quantities. A yellow callout box notes that EPA has finalized a rule deferring the reporting deadline to August 25, 2011. A "Reporting Information" section shows "Landfill Details" with an "OPEN" button. Below this is a "WASTE STREAM SUMMARY" table with columns for Name/ID, Status, and Delete. The table currently shows "No streams have been added". A sidebar on the left contains an "e-GGRT Help" link, highlighted by a green arrow labeled "1". A warning icon with a yellow triangle and exclamation mark is labeled "Subpart TT: View Validation" and highlighted by a green arrow labeled "2". A green arrow labeled "3" points to the "OPEN" button next to the "Landfill Details" link.

Now we will go through screen by screen so you can see the information you will need to enter. Different features on the screens will also be pointed out.

When you click OPEN next to subpart TT, you are taken to the Subpart Overview page. This is your “navigation page” for the entire module. Since we are just beginning the subpart TT module for this facility, all you see listed is the Landfill Details page.

Take note of Arrow #1 for the link to the e-GGRT Help pages.

Arrow #2 will tell you if you have any validation messages, that is, if there are any issues with your report so far. For example, if you did not complete a data field that is required or if the value you entered is out of the expected range of values for that field.

The gray boxes at the top of each page give a brief description of what that page is about. In this particular screen shot, the grey box provides an overview of the subpart reporting requirements and tells you to go the Landfill Details page first.

Click OPEN next to Landfill Details (Arrow #3) to proceed.

This is the Landfill Details page. It is very long so it has been broken up into sections for this webinar.

The first question is whether in 2011 the landfill was open or closed? A landfill is considered open if it is actively receiving waste in the reporting year. A landfill that closed during the reporting year, but also received waste during the reporting year is considered an open landfill for the particular reporting year. A landfill is considered closed if it did not receive waste in the reporting year.

Per the definition in the GHG reporting rule, an industrial waste landfill includes all disposal areas at the facility. In answering whether the landfill is open or closed, the reporter must answer that it is open if any sections and/or cells of the facility are open, even if some are closed.

In the subpart TT module as well as other modules, depending on how certain questions get answered, other questions might pull down for viewing and answering.

A good example is the second question here.

If the landfill does not have a landfill gas collection system, click “no” and continue answering the rest of the questions on the page.

Subpart TT: Landfill Details (2)

In 2011, was the landfill open* or closed Open (actively accepting waste)
 Closed (no longer accepting waste)

LANDFILL GAS COLLECTION SYSTEM

Does the landfill have a landfill gas collection system Yes No

Manufacturer of the gas collection system PDH Industries

Capacity of the gas collection system 25000 (acfm)

Number of wells 15 (wells)

LANDFILL PASSIVE VENTS AND LEACHATE RECIRCULATION

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 (check if true)

The typical frequency of use of leachate recirculation over the past ten (10) years

Select

- Select
- Used several times a year for the past ten (10) years
- Used at least once a year for the past ten (10) years
- Used occasionally but not every year over the past ten (10) years
- Not used for the past ten (10) years

COVER MATERIALS

Identify each type of cover

Organic cover Sand cover

If you say yes, that you do have gas collection, as is shown in this slide (Arrow #1), you then must indicate the manufacturer of the gas collection system, the capacity of the system in actual cubic feet per minute (acfm), and the number of wells present at the landfill (Arrow #2).


The ideal information to enter into the manufacturer of the gas collection system field is the designer or installer of the system, including if it was done in-house. If, for some reason, this information is not available, please enter the manufacturer of the fan or blower. Do not use this space to indicate the manufacturer of any flares at your facility. Please also do not use this space to indicate the brand of measurement equipment used to monitor landfill gas flow or methane concentration.

The indication of a gas collection system is a key piece of information because not only do you then have to answer these additional questions on the Landfill Details page, but your answer for gas collection also dictates the path of screens for the rest of your data entry. You will see this later in the webinar.

Next, indicate if passive vents and/or flares are present (other than as part of a gas collection system as defined in the rule) Check the box if you have passive vents or flares at your landfill. (Arrow #3)

You are then asked about leachate recirculation. Check the box if leachate recirculation was used at the landfill during the reporting year. (Arrow #4).

Next, answer the typical frequency with which leachate recirculation was used over the past ten years. You are given a pull-down menu from which you should pick the most appropriate option (Arrow #5).



Subpart TT: Landfill Details (3)

LANDFILL PASSIVE VENTS AND LEACHATE RECIRCULATION

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 (check if true)

The typical frequency of use of leachate recirculation over the past ten (10) years Used several times a year for the past ten (10) years

COVER MATERIALS

Identify each type of cover material used

Organic cover Sand cover

Clay cover Other soil mixture

EQUATION TT-1 DETAILS

The fraction of CH₄ in landfill gas (F) is based on a measured value (not the default) (check if true)

An MCF value other than the default of 1 was used (check if true)

Note: The following data elements may or may not be required to be reported based on the methods you have employed to determine waste quantities disposed of at your landfill in years prior to the current reporting year. These methods are indicated by waste stream in the Waste Stream Summary section.

Continuing on the Landfill Details page, answer the question about the cover types used at your landfill. You may choose more than one answer if it is appropriate for your landfill. (Arrow #1)

Next, you are asked to consider two questions about the inputs used in Equation TT-1 for your facility. Recall that Equation TT-1 is used to calculate the amount of methane generated at your landfill.

The first question under Equation TT-1 Details (Arrow #2) asks about the fraction of CH₄ in landfill gas and whether you used the default value of 0.5. Check the box if the default was NOT used.

The second question (Arrow #3) asks about the methane correction factor (MCF) value used. Again, if the default of 1.0 was NOT used, check the box.

Subpart TT: Landfill Details (4)



The typical frequency of use of leachate recirculation over the past ten (10) years

COVER MATERIALS

Identify each type of cover material used

Organic cover Sand cover
 Clay cover Other soil mixture

EQUATION TT-1 DETAILS

The fraction of CH₄ in landfill gas (F) is based on a measured value (not the default) (check if true)

An MCF value other than the default of 1 was used (check if true)

ACTIVE AERATION INFORMATION

Aeration blower capacity (scfm)

Fraction of the landfill containing waste affected by the aeration (percentage expressed as decimal fraction)

Total hours during the year aeration blower was operated (hours)

Other factors used as a basis for the selected MCF value

Description of the aeration system

Note: The following data elements may or may not be required to be reported based on the methods you have employed to determine waste quantities disposed of at your landfill in years prior to the current reporting year. These methods are indicated by waste stream in the Waste Stream Summary section.

If you checked true for the second question about MCF, that means that you did not use the default value of 1.0 and that also means that you must have active aeration at your landfill. You must then enter the following information about the aeration system used at your landfill:

- The aeration blower capacity (include the total capacity of all blowers)
- The fraction of the landfill containing waste affected by aeration
- The total number of hours during the year in which the aeration blower was operated
- Other factors that were used as a basis for the MCF value that you used, and
- Any additional description of the aeration system that you would like to provide (for example, the number of blowers).

Subpart TT: Landfill Details (5)

Identify each type of cover material used

Organic cover Sand cover
 Clay cover Other soil mixture

EQUATION TT-1 DETAILS

The fraction of CH₄ in landfill gas (F) is based on a measured value (not the default) (check if true)

An MCF value other than the default of 1 was used (check if true)

Note: The following data elements may or may not be required to be reported based on the methods you have employed to determine waste quantities disposed of at your landfill in years prior to the current reporting year. These methods are indicated by waste stream in the Waste Stream Summary section of your report. The following data elements serve as inputs to certain historical waste quantity equations and - in those cases - their reporting deadline has been deferred. See 76 FR 53057 (published August 25, 2011). Otherwise, they must be reported. Please follow the instructions provided below.

Number of waste streams added: 0
 The number of waste streams is automatically calculated by e-GGRT based on the number of waste streams added on the Subpart Overview page.

If the landfill is open, the estimated year of landfill closure: (year)
 Please report this data only if you DID NOT employ Equation TT-4a or TT-4b to calculate waste disposal quantities as described in 98.346(a)(2)(i)(C).

Landfill capacity: (metric tons)
 Please report this data only if you DID NOT employ Equation TT-4a or TT-4b to calculate waste disposal quantities as described in 98.346(a)(2)(i)(C).

Range of years for which both disposal and production data were used in Equation TT-2 to calculate the average waste disposal factor for the landfill:
 Please report the range of years only if you employed Equation TT-2 and TT-3 to calculate waste disposal quantities as described in 98.346(a)(2)(i)(A) and (B).

← Subpart Overview CANCEL SAVE

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The last few questions on the landfill details page are contingent upon whether your landfill is open or closed and, more importantly, 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 elements may or may not be required to be reported based on the methods you have employed to determine the waste quantities disposed at your landfill in years prior to the current reporting year . . . The following data elements serve as inputs to certain historical waste quantity equations and, in those cases, their reporting deadline has been deferred....Otherwise they must be reported. Please follow the instructions provided below.”

Right under the yellow box is a field that is automatically populated by e-GGRT based on how many waste streams you reported at your landfill. We have not yet entered any waste stream information, and so this field is at zero. The process for entering information about the waste streams disposed at the landfill will be covered in later slides.

The next two questions are only supposed to be answered if you did not use Equations TT-4a or TT-4b to calculate waste disposal quantities in years prior to the reporting year.

In this case the landfill is open, therefore if you did not use either of the two equations to calculate waste quantities, you must enter the year that the landfill is expected to close. You must also provide the landfill capacity in metric tons.

The last question should only be answered if you used Equations TT-2 and TT-3 to calculate waste disposal quantities in years prior to the reporting year.

If you used these equations, you must provide the range of years for which both disposal and production data were used in Equation TT-2 to calculate the average waste disposal factor for the landfill.

Subpart TT: Landfill Details (6)



Identify each type of cover material used

Organic cover Sand cover
 Clay cover Other soil mixture

EQUATION TT-1 DETAILS

The fraction of CH₄ in landfill gas (F) is based on a measured value (not the default) (check if true)

An MCF value other than the default of 1 was used (check if true)

Note: The following data elements may or may not be required to be reported based on the methods you have employed to determine waste quantities disposed of at your landfill in years prior to the current reporting year. These methods are indicated by waste stream in the Waste Stream Summary section of your report. The following data elements serve as inputs to certain historical waste quantity equations and - in those cases - their reporting deadline has been deferred. See 78 FR 53057 (published August 25, 2011). Otherwise, they must be reported. Please follow the instructions provided below

Number of waste streams added: 0
The number of waste streams is automatically calculated by e-GGRT based on the number of waste streams added on the Subpart Overview page.

If the landfill is closed, the last year that the landfill received waste: (year)
Please report this data only if you DID NOT employ Equation TT-4a or TT-4b to calculate waste disposal quantities as described in 98.346(a)(2)(ii)(C).

Landfill capacity: (metric tons)
Please report this data only if you DID NOT employ Equation TT-4a or TT-4b to calculate waste disposal quantities as described in 98.346(a)(2)(ii)(C).


Range of years for which both disposal and production data were used in Equation TT-2 to calculate the average waste disposal factor for the landfill:
Please report the range of years only if you employed Equation TT-2 and TT-3 to calculate waste disposal quantities as described in 98.346(a)(2)(ii)(A) and (B).

[Subpart Overview](#) [CANCEL](#) [SAVE](#)

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This is the version of the same questions when the landfill is closed. Please note that in this case you must fill in the last year that the landfill received waste.

Subpart TT: Landfill Details (7)





closure
Please report this data only if you DID NOT employ Equation TT-4a or TT-4b to calculate waste disposal quantities as described in 98.346(a)(2)(i)(C).

Landfill capacity (metric tons)
Please report this data only if you DID NOT employ Equation TT-4a or TT-4b to calculate waste disposal quantities as described in 98.346(a)(2)(i)(C).

Range of years for which both disposal and production data were used in Equation TT-2 to calculate the average waste disposal factor for the landfill
Please report the range of years only if you employed Equation TT-2 and TT-3 to calculate waste disposal quantities as described in 98.346(a)(2)(i)(A) and (B).

[↑ Subpart Overview](#) [CANCEL](#) [SAVE](#)

Click **SAVE**. This brings you back to the top of the page. Check your entries. Then click **Subpart Overview** to move on to the next section.

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When you have entered all of the information on the Landfill Details page, click **SAVE** by Arrow #1 on this slide. You will be brought back to the top of the Landfill Details page at which time you may check over the information you entered. When you have completed your check, click the **Subpart Overview** button by Arrow #2 to return to the Subpart Overview page.

Screen Errors if data is not entered

The screenshot displays the 'Subpart TT: Industrial Waste Landfills (2011)' page in the e-GGRT system. A yellow banner highlights the 'SCREEN ERRORS' section, which contains two red error icons and messages: 'In 2011, was the landfill open or closed. This data element is required.' and 'Does the landfill have a landfill gas collection system? This data element is required.' The form below includes radio buttons for 'Open (actively accepting waste)' and 'Closed (no longer accepting waste)', radio buttons for 'Yes' and 'No' for the gas collection system, and checkboxes for 'Passive vents and/or flares are present' and 'An indication of whether leachate recirculation was used'. A dropdown menu is present for 'The typical frequency of use of leachate recirculation over the past ten (10) years'. The page also features the EPA logo, e-GGRT logo, navigation tabs, and a user profile.

If you did not enter certain information that was required to proceed in e-GGRT, you will get screen error messages such as these telling you that you need to answer certain questions by selecting something, entering in values, or filling in text boxes. You will not be able to return to the Subpart Overview page and continue in e-GGRT until you enter this information and click SAVE.

Subpart TT: Methane Generation and Emissions for Landfills without Gas Collection (1)

United States Environmental Protection Agency

e-GGRT Electronic Greenhouse Gas Reporting Tool

HOME FACILITY REGISTRATION FACILITY MANAGEMENT DATA REPORTING

Hello, Rachel Schmetz | My Profile | Logout

e-GGRT Help

HH-C Landfill 2

Subpart TT: Industrial Waste Landfills (2011)

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 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 deadline for reporting data elements used as inputs to emission equations for direct emitters. See 76 FR 53057 (published August 25, 2011). In accordance with the rule, e-GGRT is not currently collecting data used as inputs to emission equations.

⚠ Subpart TT: View Validation

Reporting Information

Reporting Information	
Landfill Details	OPEN
Methane Generation and Emissions for Landfills without LFG Collection Systems	OPEN

WASTE STREAM SUMMARY

Name/ID	Status	Delete
No streams have been added		

[+ ADD a Waste Stream](#)

[↑ Facility Overview](#)

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Now we move onto the portion of subpart TT related to reporting emissions.

How you answered the question about whether a landfill gas collection system is present at your facility will dictate which screens are now available for you to answer.

Let's say I said that my landfill did not have a gas collection system. A line will appear on the Subpart Overview page for Methane Generation and Emissions for Landfills without LFG Collection Systems. Click OPEN on this line.

Subpart TT: Methane Generation and Emissions for Landfills without Gas Collection (2)

The screenshot displays the EPA e-GGRT interface for reporting methane generation and emissions. The main heading is "Subpart TT: Industrial Waste Landfills (2011)". Below this, there is a section titled "CH₄ EMISSIONS (FOR LANDFILLS WITHOUT A GAS COLLECTION SYSTEM)" which explains that landfills without gas collection systems must report annual CH₄ emissions using Equation TT-6. The equation is shown as $MG = G_{CH_4} \times (1 - OX)$. A text box prompts the user to enter the "CH₄ generation, adjusted for oxidation, from the landfill in the reporting year" in metric tons CH₄. A red arrow points to a "Use Subpart TT-6 equation spreadsheet to calculate" link. At the bottom of the form are "Subpart Overview", "CANCEL", and "SAVE" buttons.

Here you see Equation TT-6 which is used to estimate CH₄ generation, adjusted for oxidation, from the landfill in the reporting year (in metric tons of CH₄).

Subpart TT: Methane Generation and Emissions for Landfills without Gas Collection (3)

United States Environmental Protection Agency

e-GGRT Electronic Greenhouse Gas Reporting Tool

HOME FACILITY REGISTRATION FACILITY MANAGEMENT DATA REPORTING

Hello, Rachel Schmetz | My Profile | Logout

e-GGRT Help

HH-Landfill 1
Subpart TT: Industrial Waste Landfills (2011)
 Subpart Overview » GHG Reporting

CH₄ EMISSIONS (FOR LANDFILLS WITHOUT A GAS COLLECTION SYSTEM)
 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.

Methane generation, adjusted for oxidation, from the landfill in the reporting year (metric tons CH₄).

EQUATION TT-6 SUMMARY AND RESULT

$$MG = G_{CH_4} \times (1 - OX)$$

Hover over G_{CH_4} to read the definition of that element.

Modeled methane generation rate in reporting year from Equation HH-1 of this section (metric tons CH₄). Use the Subpart HH-1, and HH-2, HH-3 spreadsheets to calculate G_{CH_4} for input into this equation.

Use Subpart TT-6 equation spreadsheet to calculate

Spreadsheets are also available for calculating inputs to Equation TT-6. Use the Subpart TT-1, TT-2/TT-3, and TT-4a/TT-4b spreadsheets to calculate inputs to Equation TT-6 as needed.

Use the OPTIONAL e-GGRT Calculation Spreadsheet to calculate the Equation Result that is entered here. Inputs to emission equations for direct reporters are not currently collected by e-GGRT consistent with the signed Final Rule Deferring Collection of Inputs. See www.epa.gov/ghgreporting/reporters/cbi/index.html

Subpart Overview CANCEL SAVE

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You can hover over an element in the equation to read a definition of that element as needed. Here you see the definition of G_{CH_4} in the yellow box.

EPA is providing OPTIONAL calculation spreadsheets that you can use to perform the calculations called for in the emission equations.

If you choose to use the worksheets, download them by clicking the link labeled “Use TT-6 spreadsheet to calculate.”

Note: If you have used previous version of the calculation spreadsheets, please be sure to download the most recent version when performing your calculations for the current reporting year.

Confidential Business Information



- All elements included in e-GGRT are required reporting elements, as applicable
- E-GGRT reflects the final rule deferring the reporting deadline for inputs to emission equations for direct emitters (76 FR 53057, published Aug. 25, 2011)
- Data elements that have been determined to be CBI and those that have no determination must be reported
- Reporting elements that have been determined to be CBI will be protected under the Clean Air Act (Sec. 114(c)) and EPA regulations (40 CFR Part 2)

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E-GGRT currently reflects the final rule deferring reporting of inputs to emission equations for direct emitters until either 2013 or 2015 depending upon the data element.

This means that in certain web forms in e-GGRT, you can view a required equation, but you will only enter the RESULT of that equation into e-GGRT. If you are using the XML upload option, the XML schema will also only include the RESULT of the equation as a data element.

The inputs of the equation are NOT currently collected by e-GGRT.

As stated previously, EPA is providing OPTIONAL calculation spreadsheets that you can use to perform the calculations called for in the emission equations. These Microsoft Excel spreadsheets can be downloaded and opened on your own computer. Just click the hyperlink on the web-form to view and download the appropriate calculation spreadsheet for the equation you are working on. You can enter the data, including equation inputs, necessary to perform the calculation for the equation, and the spreadsheets will calculate the result for you. Once you have calculated the result, enter the result onto the e-GGRT web form.

E-GGRT will NOT collect the calculation spreadsheets and you do NOT need to submit them outside of e-GGRT. The use of these calculation spreadsheets is voluntary. The spreadsheets are meant to support reporters as they complete the e-GGRT online reporting process. You do not need to use EPA's spreadsheets to perform the calculations for the emissions equations, but you do need to keep records of these calculations (under 40 CFR 98.3(g) and additional subpart-specific provisions) whether or not you use the calculation spreadsheets provided by EPA. If you do use the spreadsheets, you may choose to maintain copies to help meet your record-keeping requirements.

Subpart TT: Calculation Worksheets (1)



EPA United States Environmental Protection Agency

e-GGRT Electronic Greenhouse Gas Reporting Tool

Home • GHG Reporting Instructions • Resources Provided to Support Target and Sandbox Testing • RY2011 Optional Calculation Spreadsheets for Target Testing

RY2011 Optional Calculation Spreadsheets for Target Testing

e-GRT Sandbox Disclaimer

All aspects of the e-GRT Sandbox are provided for testing and familiarization purposes only. The e-GRT sandbox system and the resources supporting this system (i.e., help content, reporting forms, calculation spreadsheets, etc.) are preliminary, subject to change and, in most cases, will not be used for actual reporting in their current state. Data in the sandbox system is NOT considered confidential and will not be protected as confidential. Data entered into the sandbox environment will not be accessible to the user once the sandbox period closes and will not be held over for official reporting. All submitted information may be monitored, recorded, read, copied, and disclosed by and to authorized personnel.

To register to participate in or access the e-GRT sandbox preview, go to <http://e2.sandbox.epa.gov/epa>. If you have questions regarding the e-GRT sandbox please contact the ghgrp-help@epa.gov.

E-GRT currently reflects rule deferring reporting of inputs to emission equations for direct emitters. This means that in e-GRT, you can view a required equation, but you will only enter the RESULT of that equation into e-GRT. If you are using the XML upload option, the XML schema will also only include the RESULT of the equation as a data element. The inputs of the equation are NOT currently collected in e-GRT. E-GRT will be updated to reflect the final deferral rule.

EPA is providing OPTIONAL calculational spreadsheets that you can use to perform the calculations called for in the emission equations. These Microsoft Excel spreadsheets can be downloaded and opened on your own computer. Just click the hyperlinks on the web-form to view and download the appropriate calculation spreadsheet for the equation you are working on. You can enter the data, including equation inputs, necessary to perform the calculation for the equation, and the spreadsheets will calculate the result for you. Once you have calculated the result, enter the result onto the e-GRT web form.

E-GRT will NOT collect the calculation spreadsheets and you do NOT need to submit them outside of e-GRT. The use of these calculation spreadsheets is voluntary. The spreadsheets are meant to support reporters as they complete the e-GRT online reporting process. You do not need to use EPA's spreadsheets to perform the calculations for the emissions equations, but you do need to keep records of these calculations (under 40 CFR 63.30) and additional subject-specific provisions, whether or not you use the calculation spreadsheets provided by EPA. If you do use calculation spreadsheets, you may choose to maintain copies to help meet your record-keeping requirements.

For RY2011 annual report, calculation spreadsheets include no rounding of results. All calculations in these spreadsheets are conducted using double decimal precision, as native in MS Excel, presented on the spreadsheet displaying 7 decimals of precision. Users may copy the results from spreadsheets into e-GRT manually or by using a copy and paste command.

Subpart	Calculation Spreadsheets (click to download)
I - Electronics Manufacturing	Equation I-1, I-2 & I-3 Calculation Spreadsheet.xls
T - Magnesium Production	Equation T-1 & T-2 Calculation Spreadsheet.xls
W - Petroleum and Nat. Gas	Equation W-1 thru W-4 Calculation Spreadsheet.xls
TT - Industrial Landfills	Equation TT-1 Calculation Spreadsheet.xls
TT - Industrial Landfills	Equation TT-2 Calculation Spreadsheet.xls
TT - Industrial Landfills	Equation TT-3, TT-4a, TT-4b Calculation Spreadsheet.xls
TT - Industrial Landfills	Equation TT-5 Calculation Spreadsheet.xls
TT - Industrial Landfills	Equation TT-6 Calculation Spreadsheet.xls
TT - Industrial Landfills	Equation TT-7, TT-7a, TT-7b Calculation Spreadsheet.xls

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Again, if you choose to use the optional worksheets, download them by clicking the links on the screen that contains the Equation you want to use.

This is what you will see when you click on the worksheet link. You can click the links to access the worksheets themselves. You can see here that this is a screen specific to the testing period. This link and screen will be updated for when the e-GGRT system goes live for reporting in August of 2012.

Subpart TT: Calculation Worksheets (2)



you will only enter the RESULT of that equation into e-GGRT. If you are using the XML upload option, the XML schema will also only include the RESULT of the equation as a data element. The inputs of the equation are NOT currently collected by e-GGRT. E-GGRT will be updated to reflect the final deferral rule.

EPA is providing OPTIONAL calculational spreadsheets that you can use to perform the calculations called for in the emission equations. These Microsoft Excel spreadsheets can be downloaded and opened on your own computer. Just click the hyperlink on the web-form to view and download the appropriate calculation spreadsheet for the equation you are working on. You can enter the data, including equation inputs, necessary to perform the calculation for the equation, and the spreadsheets will calculate the result for you. Once you have calculated the result, enter the result onto the e-GGRT web form.

E-GGRT will NOT collect the calculation spreadsheets and you do NOT need to submit them outside of e-GGRT. The use of these calculation spreadsheets is voluntary. The spreadsheets are meant to support reporters as they complete the e-GGRT online reporting process. You do not need to use EPA's spreadsheets to perform the calculations for the emissions equations, but you do need to keep records of these calculations (under 40 CFR 98.3(g) and additional subpart-specific provisions) whether or not you use the calculation spreadsheets provided by EPA. If you do use calculation spreadsheets, you may choose to maintain copies to help meet your record-keeping requirements.

For RY2011 annual report, calculation spreadsheets include no rounding of results. All calculations in these spreadsheets are conducted using double decimal precision, as native in MS Excel, presented on the spreadsheet displaying 7 decimals of precision. Users may copy the results from spreadsheets into e-GGRT manually or by using a copy and paste command.

Subpart	Calculation Spreadsheets (click to download)
T - Magnesium Production	Equation T-1 Calculation Spreadsheet.xls
T - Magnesium Production	Equation T-2, T-3 Calculation Spreadsheet.xls
W - Petroleum and Nat. Gas	Equation W-1 thru W-40 Calculation Spreadsheet.xls
II - Wastewater Treatment	Equation II-1 thru II-7 Calculation Spreadsheet.xls
TT - Industrial Landfills	Equation TT-1 Calculation Spreadsheet.xls
TT - Industrial Landfills	Equation TT-2 Calculation Spreadsheet.xls
TT - Industrial Landfills	Equation TT-3, TT-4a, TT-4b Calculation Spreadsheet.xls
TT - Industrial Landfills	Equation TT-5 Calculation Spreadsheet.xls
TT - Industrial Landfills	Equation TT-6 Calculation Spreadsheet.xls
TT - Industrial Landfills	Equation HH-6, HH-7, HH-8 Calculation Spreadsheet.xls

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Here is a closer look at the list of calculation spreadsheets available for subpart TT. As we will discuss in later slides, industrial waste landfills that have gas collection follow the equations from subpart HH in order to calculate their methane emissions. That is why this list includes both subpart TT and subpart HH calculation spreadsheets. Click on the link for the equation you are looking to calculate. In this case we are looking to calculate methane emissions from a landfill without gas collection using Equation TT-6.

Subpart TT: Calculation Worksheets (3)



Equation TT-6 Calculation Spreadsheet_RTL.xls [Compatibility Mode] - Microsoft Excel

Home Insert Page Layout Formulas Data Review View

Subpart TT - Industrial Waste Landfills - Calculating Methane Generation Adjusted for Oxidation Using Equation TT-6

1 Subpart TT - Industrial Waste Landfills - Calculating Methane Generation Adjusted for Oxidation Using Equation TT-6
 2 OPTIONAL SPREADSHEET FOR FACILITY RECORDKEEPING PURPOSES
 3 Version e-GGRT R12011.R.01
 4 Today's date 5/30/2012
 5
 6
 7 This spreadsheet is protected and contains locked cells to ensure that you do not inadvertently alter any of the included formulas and/or calculations. To remove
 8 this protection and alter this spreadsheet, right-click the "worksheet" tab near the bottom of the screen and select "Unprotect Sheet." When prompted for the
 9 password, type "0HG" and click "OK". Please note that making changes to an unprotected sheet could result in incorrect calculations and that you are
 10 responsible for the accuracy of the data you report to EPA. For additional help, visit the Microsoft Excel Support website ([http://office.microsoft.com/en-us/excel-](http://office.microsoft.com/en-us/excel-help)
 11 help).
 12
 13
 14 Equation TT-6: $MG = G_{CH_4} \times (1 - OX)$
 15
 16
 17
 18 Facility Name:
 19 Reporter Name:
 20 Unit Name/ID:
 21 Reporting Period:
 22 Comments:
 23 Unit Type: Industrial Waste Landfill
 24
 25 Input Data
 26 G_{CH_4} = Modeled methane generation rate in reporting year from Equation TT-1 (metric tons CH₄)
 27 OX = Oxidation fraction. Use the default value of 0.1
 28
 29 Methane Generation Adjusted for Oxidation (metric tons) from Equation TT-6
 30 MG = Methane generation, adjusted for oxidation, from the landfill in the reporting year (metric tons CH₄). 0.000000
 31
 32 Enter this value in e-GGRT
 33
 34
 35
 36

22

This is the Equation TT-6 worksheet. Again, note that this worksheet is optional.

Your input data goes into the green boxes. The grey boxes contain standard fields such as variable definitions and required default values to use in the equation. The red box contains the equation result that you will then have to enter into the red boxes back on the e-GGRT data entry pages.

Some green boxes represent inputs to the equation that are the results of a calculation itself. Such is the case here with G_{CH_4} which is the result of Equation TT-1. In these cases, you can also access an optional calculation worksheet and help screen to assist you in calculating the result of that equation (see previous slide).

Subpart TT: Methane Generation and Emissions for Landfills without Gas Collection (4)

The screenshot shows the EPA e-GGRT interface for reporting methane generation. The main heading is "Subpart TT: Industrial Waste Landfills (2011)". Below this, there is a section for "CH₄ EMISSIONS (FOR LANDFILLS WITHOUT A GAS COLLECTION SYSTEM)". The text explains that landfills without a gas collection system must report annual CH₄ emissions using Equation TT-6. The equation is displayed as $MG = G_{CH_4} \times (1 - OX)$. A calculator is shown with the input field for "CH₄ generation, adjusted for oxidation, from the landfill in the reporting year" set to 3500. The calculator result is 3,500.00. A green arrow labeled '1' points to the input field, and another green arrow labeled '2' points to the calculator result. The page includes navigation tabs (HOME, FACILITY REGISTRATION, FACILITY MANAGEMENT, DATA REPORTING), user information (Hello, Rachel Schmetz), and a "SAVE" button.

Take the value calculated in the red box from the worksheet or from however else you derived your methane generation value adjusted for oxidation via Equation TT-6 and enter it into the red box on this screen in e-GGRT indicated by arrow #1.

You'll then see these numbers in the calculator as shown by arrow #2.

That is all that is needed in terms of equation results for landfills without gas collection.

You will then click SAVE, check your value, and then go back to the Subpart Overview page

If you change key data elements (1)

The screenshot shows the EPA e-GGRT interface. At the top, there are navigation tabs: HOME, FACILITY REGISTRATION, FACILITY MANAGEMENT, and DATA REPORTING. The user is logged in as Rachel Schmetz. The main content area is titled 'HH-C Landfill 2' and 'Subpart TT: Industrial Waste Landfills (2011)'. A 'Subpart Overview' section provides an overview of reporting requirements. A yellow callout box states: 'EPA has finalized a rule that defers the deadline for reporting data elements used as inputs to emission equations for direct emitters. See 76 FR 53057 (published August 25, 2011). In accordance with the rule, e-GGRT is not currently collecting data used as inputs to emission equations.' Below this, a table under 'Reporting Information' has two rows: 'Landfill Details' and 'Methane Generation and Emissions for Landfills without LFG Collection Systems', both with an 'OPEN' button. A green arrow points to the 'OPEN' button for 'Landfill Details'. At the bottom, there is a 'WASTE STREAM SUMMARY' table with columns for Name/ID, Status, and Delete, and a '+ ADD a Waste Stream' button.

Let's say I realized that my landfill really does have gas collection and I made a mistake in saying that it did not.

Back at the Subpart Overview screen I can click OPEN next to Landfill Details to change the information about the gas collection system.

If you change key data elements (2)



You will get a warning message that some of your data may be lost:

[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 TT Overview page. For additional information about the facility information required by Subpart TT, please use the e-GGRT Help link(s) provided. * denotes a required field

Windows Internet Explorer

Changing the answer to Does the landfill have a landfill gas collection system, will result in deleting any emissions data you may have already entered on the Landfills GHG Reporting screen.

Click OK to continue with making this change.

OK

LANDFILL PASSIVE VENTS AND LEACHATE RECIRCULATION.

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 (check if true)

The typical frequency of use of

25

But when I go to change my answer to the question about whether my landfill has a gas collection system, I get this warning message.

This warning message is telling me that I am about to make a major change to my facility data that will have significant implications. For example, by making this change I am in effect erasing a whole subset of data from my record. Do I really want to do that? If I really do, as is the case here because I do have gas collection, I click OK.

If you change key data elements (3)



Greenhouse gas reporting elements are made available on your Subpart TT Overview page. For additional information about the facility information required by Subpart TT, please use the e-GGRT Help link(s) provided.

* denotes a required field

In 2011, was the landfill open or closed * Open (actively accepting waste)
 Closed (no longer accepting waste)

LANDFILL GAS COLLECTION SYSTEM

Does the landfill have a landfill gas collection system * Yes
 No



Manufacturer of the gas collection system

Capacity of the gas collection system (acfm)

Number of wells (wells)

LANDFILL PASSIVE VENTS AND LEACHATE RECIRCULATION

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 (check if true)

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When I clicked OK, and the answer changes to Yes that I do have a gas collection system. Then I'm prompted to answer the questions about my gas collection system including the manufacturer, capacity, and number of wells discussed on a previous slide.

I then click SAVE at the bottom of the page, check my answers and then click Subpart Overview to proceed with the rest of the data entry.

Subpart TT: Methane Generation and Emissions for Landfills with Gas Collection (1)

Subpart TT: Industrial Waste Landfills (2011)
 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 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 deadline for reporting data elements used as inputs to emission equations for direct emitters. See 76 FR 53057 (published August 25, 2011). In accordance with the rule, e-GGRT is not currently collecting data used as inputs to emission equations.

Reporting Information

Landfill Details	OPEN
Methane Generation and Emissions for Landfills with LFG Collection Systems	OPEN
Estimated Waste Depths	OPEN

WASTE STREAM SUMMARY

Name/ID	Status	Delete
No streams have been added		


[ADD a Waste Stream](#)
[Facility Overview](#)

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Because I said yes to the landfill gas collection system question on the landfill details page, a different path of pages now appears on the Subpart Overview page.

Click OPEN next to Methane Generation and Emissions for Landfills with Gas Collection Systems.

Subpart TT: Methane Generation and Emissions for Landfills with Gas Collection (2)



EQUATION TT-6 SUMMARY AND RESULT

$$MG = G_{CH_4} \times (1 - OX)$$

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

Modeled CH₄ generation, adjusted for oxidation 2569 (metric tons CH₄)

↪ Use Subpart TT-6 equation spreadsheets to calculate

Spreadsheets are also available for calculating inputs to Equation TT-6. Use the Subpart TT-1, TT-2/TT-3, and TT-4a/TT-4b spreadsheets to calculate inputs to Equation TT-6 as needed.

EQUATION HH-7 SUMMARY AND RESULT

$$MG = \frac{R}{CE \times f_{Rec}} \times (1 - OX)$$

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

Measured CH₄ generation, adjusted for oxidation 2463 (metric tons CH₄)

↪ Use Subpart HH-7 equation spreadsheets to calculate

Spreadsheets are also available for calculating inputs to Equation HH-7. Use the Subpart HH-4 spreadsheet to calculate inputs to Equation HH-7.

EQUATION HH-6 SUMMARY AND RESULT

$$Emissions = [(G_{CH_4} - R) \times (1 - OX) + R \times (1 - (DE \times F_{Dest}))]$$

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

CH₄ emissions from the landfill in the reporting year 770 (metric tons CH₄)

↪ Use Subpart HH-6 equation spreadsheets to calculate

8

Next enter the appropriate values in metric tons of CH₄ for all of the red boxes.

First, the modeled CH₄ generation, adjusted for oxidation using Equation TT-6

You will notice that Subpart TT starts referencing Subpart HH Equations here. Subpart HH is the subpart for Municipal Solid Waste landfills and rather than recreate the wheel, the rule directly references Subpart HH for all monitoring requirements and calculations related to landfill gas collection systems. So, if your industrial waste landfill has a gas collection system, you must follow the subpart HH equations to complete your methane generation and emissions calculations and complete the remainder of the red boxes in e-GGRT for:

- Measured CH₄ generation, adjusted for oxidation using Equation HH-7
- CH₄ emissions from the landfill during the reporting year using Equation HH-6, and
- CH₄ emissions from the landfill during the reporting year using Equation HH-8

As mentioned previously, for each equation:

- You can hover over an element in the equation to see the definition of that element.
- You may calculate the result using the worksheet tools provided, but you are not required to do so. Again, worksheets are also available for calculating inputs to the equations.
- If you choose to use the worksheets, download them, fill in the green boxes, and then copy the value of CH₄ calculated by the worksheet to this page in the corresponding red boxes.

Note that for Equations HH-6, HH-7 and HH-8, the optional calculation spreadsheet file has several tabs which are appropriate for different numbers of destruction devices and different numbers of monitoring/measurement locations at the landfill. Please consult the help screens when you click to the spreadsheets to ensure the appropriate use of the various tabs.

Subpart TT: Methane Generation and Emissions for Landfills with Gas Collection (3)



Use Subpart HH-7 equation spreadsheets to calculate
 Spreadsheets are also available for calculating inputs to Equation HH-7. Use the Subpart HH-4 spreadsheet to calculate inputs to Equation HH-7.

EQUATION HH-6 SUMMARY AND RESULT

$$\text{Emissions} = [(G_{CH_4} - R) \times (1 - OX) + R \times (1 - (DE \times F_{Dest}))]$$

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

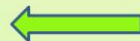
CH₄ emissions from the landfill in the reporting year (metric tons CH₄)

Use Subpart HH-6 equation spreadsheets to calculate

Spreadsheets are also available for calculating inputs to Equation TT-6. Use the Subpart TT-1, TT-2/TT-3, TT-4a/TT-4b, and HH-4 spreadsheets to calculate inputs to Equation TT-6 as needed.

For HH-6 was the value for CH₄ generation (G_{CH₄}) modeled or measured

Modeled (output of equation TT-1)
 Measured (output of equation HH-4)



EQUATION HH-8 SUMMARY AND RESULT

$$\text{EMISSIONS} = [(\frac{R}{CE \times f_{Rec}} - R) \times (1 - OX) + R \times (1 - (DE \times f_{Dest}))]$$

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

You must also indicate whether the input to Equation HH-6 was modeled or measured, that is, was the value the result of Equation TT-1 or Equation HH-4.

Subpart TT: Methane Generation and Emissions for Landfills with Gas Collection (4)



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

CH₄ emissions from the landfill in the reporting year (metric tons CH₄)
Use Subpart HH-8 equation spreadsheet to calculate.
Spreadsheets are also available for calculating inputs to Equation HH-8. Use the Subpart HH-4 spreadsheet to calculate inputs to Equation HH-8.

LANDFILL GAS COLLECTED FOR DESTRUCTION

Annual volume of landfill gas collected for destruction (scf) ← 1

A missing data procedure was used to determine the volume of landfill gas collected for destruction (check if true) ← 2

Number of days substitute data procedure was used to determine the volume of landfill gas collected for destruction (days) ← 2a

Annual average CH₄ concentration of landfill gas collected for destruction (percent) ← 3

A missing data procedure was used to determine CH₄ concentration of landfill gas collected for destruction (check if true) ← 4

If CH₄ is monitored daily, the number of days substitute data was used to determine the annual average CH₄ concentration of landfill gas collected for destruction (days) ← 4a

If CH₄ is monitored weekly, the number of weeks substitute data was used to determine the annual average CH₄ concentration of landfill gas collected for destruction (weeks) ← 4b

Was temperature incorporated into internal calculations run by the collection system's monitoring equipment? Yes No

Was pressure incorporated into Yes

30

Next enter the annual volume of landfill gas collected for destruction (Arrow #1).

Indicate if a missing data procedure was used to determine the volume of the landfill gas collected for destruction (Arrow #2). Information about appropriate procedures for estimating missing data is found in §98.345.

If a missing data procedure was used, enter the number of days when substitute data were used to determine the volume of the landfill gas collected for destruction (Arrow #2a).

Enter the annual average concentration of CH₄ in the landfill gas collected for destruction (Arrow #3).

Indicate if a missing data procedure was used to determine the concentration of CH₄ in landfill gas collected for destruction (Arrow #4). Information about appropriate procedures for estimating missing data are found in §98.345.

If a missing data procedure was used and the CH₄ concentration is monitored continuously, enter the number of days substitute data were used to determine the annual average CH₄ concentration of landfill gas collected for destruction (Arrow #4a).

If a missing data procedure was used and the CH₄ concentration is monitored weekly, enter the number of weeks substitute data were used to determine the annual average CH₄ concentration of landfill gas collected for destruction (Arrow #4b).

If your landfill has multiple measurement locations, you may enter values for both days and weeks in cases where you monitor CH₄ concentration continuously at some locations and weekly at others.

Subpart TT: Methane Generation and Emissions for Landfills with Gas Collection (5)




volume of landfill gas collected for destruction	<input type="text"/>	(percent)
Annual average CH ₄ concentration of landfill gas collected for destruction	<input type="text"/>	(percent)
A missing data procedure was used to determine CH ₄ concentration of landfill gas collected for destruction	<input type="checkbox"/>	(check if true)
If CH ₄ is monitored daily, the number of days substitute data was used to determine the annual average CH ₄ concentration of landfill gas collected for destruction	<input type="text"/>	(days)
If CH ₄ is monitored weekly, the number of weeks substitute data was used to determine the annual average CH ₄ concentration of landfill gas collected for destruction	<input type="text"/>	(weeks)
Was temperature incorporated into internal calculations run by the collection system's monitoring equipment?	<input type="radio"/>	Yes
	<input type="radio"/>	No
Was pressure incorporated into internal calculations run by the collection system's monitoring equipment?	<input type="radio"/>	Yes
	<input type="radio"/>	No
Was landfill gas flow measured on a wet or dry basis?	<input type="radio"/>	Wet basis
	<input type="radio"/>	Dry basis
Was CH ₄ concentration measured on a wet or dry basis?	<input type="radio"/>	Wet basis
	<input type="radio"/>	Dry basis
Destruction occurred at the facility or off-site	<input type="radio"/>	At the facility (on-site)
	<input type="radio"/>	Off-site
Subpart Overview <input type="button" value="CANCEL"/> <input type="button" value="SAVE"/>		

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Indicate (yes/no) if temperature was incorporated into internal calculations run by the collection system's monitoring equipment

Subpart TT: Methane Generation and Emissions for Landfills with Gas Collection (6)



Was temperature incorporated into internal calculations run by the collection system's monitoring equipment? Yes No

Temperature is not already incorporated so have to correct for it

AVERAGE MONTHLY TEMPERATURE AT WHICH FLOW IS MEASURED

January	<input type="text"/>	(degrees Rankine)
February	<input type="text"/>	(degrees Rankine)
March	<input type="text"/>	(degrees Rankine)
April	<input type="text"/>	(degrees Rankine)
May	<input type="text"/>	(degrees Rankine)
June	<input type="text"/>	(degrees Rankine)
July	<input type="text"/>	(degrees Rankine)
August	<input type="text"/>	(degrees Rankine)
September	<input type="text"/>	(degrees Rankine)
October	<input type="text"/>	(degrees Rankine)
November	<input type="text"/>	(degrees Rankine)
December	<input type="text"/>	(degrees Rankine)

Was pressure incorporated into internal calculations run by the collection system's monitoring equipment? Yes No

Was landfill gas flow measured on a wet or dry basis? Wet basis Dry basis

Was CH₄ concentration measured on a wet or dry basis? Wet basis Dry basis

Destruction occurred at the facility or off-site? At the facility (on-site) Off-site

[Subpart Overview](#)
CANCEL
SAVE

32

If temperature was not incorporated into the internal calculations run by the monitoring equipment, enter the average monthly temperature at which landfill gas flow was measured (in degrees Rankine) for each month of the reporting year.

Same thing with pressure. Indicate (yes/no) if pressure was incorporated into internal calculations run by the collection system's monitoring equipment.

If pressure was not incorporated into the internal calculations run by the collection system's monitoring equipment, the month list would pull down and you would enter the average monthly pressure at which the landfill gas flow was measured (in atmospheres) for each month of the reporting year.

Subpart TT: Methane Generation and Emissions for Landfills with Gas Collection (7)



equipment?

Was pressure incorporated into internal calculations run by the collection system's monitoring equipment? Yes No

Was landfill gas flow measured on a wet or dry basis? Wet basis Dry basis

Was CH₄ concentration measured on a wet or dry basis? Wet basis Dry basis

AVERAGE MONTHLY MOISTURE CONTENT

January	<input type="text"/>	(expressed as a decimal fraction)
February	<input type="text"/>	(expressed as a decimal fraction)
March	<input type="text"/>	(expressed as a decimal fraction)
April	<input type="text"/>	(expressed as a decimal fraction)
May	<input type="text"/>	(expressed as a decimal fraction)
June	<input type="text"/>	(expressed as a decimal fraction)
July	<input type="text"/>	(expressed as a decimal fraction)
August	<input type="text"/>	(expressed as a decimal fraction)
September	<input type="text"/>	(expressed as a decimal fraction)
October	<input type="text"/>	(expressed as a decimal fraction)
November	<input type="text"/>	(expressed as a decimal fraction)
December	<input type="text"/>	(expressed as a decimal fraction)

Destruction occurred at the facility or off-site At the facility (on-site) Off-site Both


[Subpart Overview](#)

Flow and concentration measured on different bases have to correct for moisture content.

Indicate whether landfill gas flow was measured on a wet or a dry basis and whether the CH₄ concentration was measured on a wet or a dry basis.

If landfill gas flow was measured on a wet basis and CH₄ concentration was measured on a dry basis, or vice versa, provide the monthly average moisture content (expressed as a decimal fraction) for each month of the reporting year.

Subpart TT: Methane Generation and Emissions for Landfills with Gas Collection (8)



Was pressure incorporated into internal calculations run by the collection system's monitoring equipment? Yes No

Was landfill gas flow measured on a wet or dry basis? Wet basis Dry basis

Was CH₄ concentration measured on a wet or dry basis? Wet basis Dry basis

Destruction occurred at the facility or off-site At the facility (on-site) Off-site Both ← 1

A back-up destruction device is present (check if true) ← 2

↑ Subpart Overview
CANCEL
SAVE


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Indicate whether landfill gas destruction occurred at the facility (on-site) or off-site (Arrow #1). In the case where some gas is transported off-site and some is consumed on-site, check “both.”


If any landfill gas destruction occurred at the facility (you answered either “at the facility” or “both” to the previous question), indicate if a back-up destruction device is present at the facility (Arrow #2).

When you are done answering all of the questions and entering all of the data, click SAVE. You will be brought back to the top of the page, at which time you can check your entries. Then click Subpart Overview to return to the Subpart Overview page.

Subpart TT: Methane Generation and Emissions for Landfills with Gas Collection – Waste Depths (1)



United States Environmental Protection Agency



Electronic Greenhouse Gas Reporting Tool

HOME FACILITY REGISTRATION FACILITY MANAGEMENT DATA REPORTING
Hello, Rachel Schmetz | My Profile | Logout

e-GGRT Help

HH-C Landfill 2

Subpart TT: Industrial Waste Landfills (2011)

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 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 deadline for reporting data elements used as inputs to emission equations for direct emitters. See 76 FR 53057 (published August 25, 2011). In accordance with the rule, e-GGRT is not currently collecting data used as inputs to emission equations.

Subpart TT: View Validation

Reporting Information	
Landfill Details	OPEN
Methane Generation and Emissions for Landfills with LFG Collection Systems	OPEN
Estimated Waste Depths	OPEN

WASTE STREAM SUMMARY

Name/ID	Status	Delete
No streams have been added		

[+ ADD a Waste Stream](#)
[← Facility Overview](#)

From the Subpart Overview page, press the OPEN button located opposite “Estimated Waste Depths.”

Subpart TT: Methane Generation and Emissions for Landfills with Gas Collection – Waste Depths (2)

The screenshot shows the EPA e-GGRT interface. At the top, there is a navigation bar with 'HOME', 'FACILITY REGISTRATION', 'FACILITY MANAGEMENT', and 'DATA REPORTING'. The user is logged in as 'Rachel Schmeitz'. The main content area is titled 'HH-C Landfill 2' and 'Subpart TT: Industrial Waste Landfills (2011)'. Below this is a section for 'WASTE DEPTH ESTIMATIONS' with the instruction: 'Please provide the estimated depth of each of the areas of the landfill, as shown below. For additional information, please use the e-GGRT Help link(s) provided.' The section is divided into five rows, each representing a different waste depth category (A1-A5) with a corresponding input field and a value in parentheses:

Area	Description	Estimated Depth (meters)
A1	Depth of area with no waste in-place	10
A2	Depth of area without active gas collection, regardless of cover type	15
A3	Depth of area with daily soil cover and active gas collection	25
A4	Depth of area with an intermediate soil cover, or a final soil cover not meeting the criteria for A5	15
A5	Depth of area with a final soil cover of 3 feet or thicker of clay and/or geomembrane cover system and active gas collection	15

At the bottom of the form are buttons for 'Subpart Overview', 'CANCEL', and 'SAVE'. The page number '36' is visible in the bottom right corner.

For landfills with gas collection, you must enter the estimated waste depths (in meters) for each of the areas listed on this screen. These are also listed in Table HH-3 of the rule.

When you have entered the information, click **SAVE** and check your entries. When you have completed your check, click **Subpart Overview** to return to the Subpart Overview page.

Subpart TT: Industrial Waste Landfills (2011)

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 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 deadline for reporting data elements used as inputs to emission equations for direct emitters. See 76 FR 53057 (published August 25, 2011). In accordance with the rule, e-GGRT is not currently collecting data used as inputs to emission equations.

Reporting Information

Landfill Details	OPEN
Methane Generation and Emissions for Landfills with LFG Collection Systems	OPEN
Estimated Waste Depths	OPEN

WASTE STREAM SUMMARY

Name/ID	Status	Delete
No streams have been added		

[+ ADD a Waste Stream](#)

[Facility Overview](#)

[Subpart TT: View Validation](#)

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You have entered all of the data about your landfill characteristics and the methane generation and emissions and now you are back on the subpart overview page.

Let's move onto the second part of data entry for industrial waste landfills, which contains information about the waste streams disposed of at the landfill (Arrow #1). You see on this screen that so far no streams have been added (Arrow #2). To add a waste stream, click on ADD a Waste Stream to begin this part (Arrow #3).

The screenshot displays the EPA e-GGRT interface for reporting industrial waste landfills. The main heading is "Subpart TT: Industrial Waste Landfills (2011)". The form is titled "WASTE STREAM INFORMATION" and includes a "Name or Identifier" field (containing "Waste Stream 1") and a "Waste Stream Description" dropdown menu (containing "Biosolids from wastewater sludge digester"). Below the description is a list of waste types with checkboxes: food processing (checked), pulp and paper, wood and wood product, construction and demolition, inert waste, and other industrial solid waste. The page also includes EPA and e-GGRT logos, navigation tabs, and a user profile.

For each waste stream disposed of in your industrial landfill, you must provide a name or some sort of unique identifier (Arrow #1) and a description of that waste stream (Arrow #2). The description should be detailed and include a list of the types of materials that are contained in that waste stream. You'll see the example here is for biosolids from a wastewater sludge digester, but it could be something like food waste from a date processing plant, wood processing residuals, boiler or furnace ash from a pulp and paper facility, or foundry waste/sludges.

Next you must check the box next to the type of waste present in the waste stream. If you own or operate a landfill located at the facility generating the waste, "waste stream" refers to waste material generated by a specific manufacturing process, so we expect that each waste stream would have only one "waste type" and you would only check one item from this list.

If you own or operate a commercial landfill that received wastes from a number of clients, the "waste stream" refers to wastes generated and/or received from a specific client. As the wastes received from a single client may include wastes from a number of different processes, it may be appropriate to list multiple waste types for a given client's waste stream.

Subpart TT: Waste Stream Summary (3)



Information about using the online form to create a waste stream profile is available at [this link](#). * denotes a required field

link(s) provided.

WASTE STREAM INFORMATION

Name or Identifier* (40 characters maximum)

Waste Stream Description

(List the types of materials in the waste stream, e.g., biosolids from wastewater sludge digester.)

Identify each type of waste present in the waste stream

- food processing
- pulp and paper
- wood and wood product
- construction and demolition
- inert waste
- other industrial solid waste

DEGRADABLE ORGANIC CARBON (DOCx)

Identify the method used for determining DOCx for this waste stream

- Default value from Table TT-1 for all years
- A measured value using a 60-day anaerobic biodegradation test for all years
- A value based on total and volatile solids measurements for all years
- Different methods for determining DOCx were used for different years

Select the 60-day anaerobic biodegradation test method used¹

ASTM D5526-94

Select

ASTM D5511-11

ASTM D5526-94

ASTM E2170-01

ISO 11734

OECD Test No. 311

OPPTS 835.3400

OPPTS 835.3420

Other (specify)

METHOD(S) USED TO DETERMINE HISTORICAL QUANTITIES

Use the grid below to select the method(s) used to determine historical waste stream quantities in each year this waste stream was placed in the landfill. More than one method may be used in a year. See the explanation of methods below the grid.

If this waste stream was not placed in the landfill in a particular year, do not check any boxes corresponding to those years. If you wish to reduce the number of years displayed, enter a 'first' and 'last' year below and click the FILTER GRID button.

QUANTITY

Local intranet

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Next you are asked to identify the method used to determine DOCx for this waste stream and you are given a few options. If you used the same method for all years in which the waste stream was placed in the landfill, then check the appropriate method from the first 3 methods listed: default value from Table TT-1, measured using a 60-day anaerobic biodegradation test, or based on total and volatile solids measurements. If you used different methods for different years select the fourth method in this list.

In this case, I used the 60-day anaerobic biodegradation test, and so when I click that it asks me to select which test method was used. Check which method you used. If you used a method other than the ones listed, check Other on the list and fill in the text box that will appear underneath with the method you used.

Subpart TT: Waste Stream Summary (4)



DEGRADABLE ORGANIC CARBON (DOCx)

Identify the method used for determining DOCx for this waste stream

- Default value from Table TT-1 for all years
- A measured value using a 60-day anaerobic biodegradation test for all years
- A value based on total and volatile solids measurements for all years
- Different methods for determining DOCx were used for different years

If different methods were used for DOCx, identify each method and provide the range of years the method was used. If the range of years is not consecutive, identify individual years as well, e.g., 1990-1995, 2001, 2006-2011.

Default value from Table TT-1

Range of years default value from Table TT-1 was used

A measured value using a 60-day anaerobic biodegradation test


Range of years a measured value using a 60-day anaerobic biodegradation test was used

A value based on total and volatile solids measurements

Range of years a value based on total and volatile solids measurements was used

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If you chose the fourth method on the list because you used different methods to determine the DOCx of your waste stream for different years, you are then asked which method you used and the range of years in which you used that method. For the range of years, we provided a text box so that you may provide as accurate a response as possible. For example, if the range of years is not consecutive, you can provide individual years as needed. You can see an example of how to do this in the text just above these questions.



Subpart TT: Waste Stream Summary (5)

using a voluntary unmercuric biodegradation test was used

A value based on total and volatile solids measurements

Range of years a value based on total and volatile solids measurements was used

METHOD(S) USED TO DETERMINE HISTORICAL WASTE STREAM QUANTITY

Use the grid below to select the method(s) used to determine historical waste stream quantities in each year this waste stream was placed in the landfill. More than one method may be selected for a given year. See explanation of methods below the grid. If this waste stream was not placed in the landfill during one or more years, do not check any boxes corresponding to those years. If you wish to reduce the number of years displayed in the grid below, enter a 'first' and 'last' year below and click the FILTER GRID button. Note that the 'first' and 'last' years are not reporting requirements and will not be included in your annual GHG report ‐ they are only provided to manage the size of the grid for each waste stream. Please note that filtering the grid to remove rows will also remove any check box selections associated with the years removed

First year this waste stream was placed in the landfill (year) ← 1

Last year this waste stream was placed in the landfill (year) ← 2 Filter Grid

RY	Method #1	Method #2	Method #3	Method #4
	Select All Deselect All	Select All Deselect All	Select All Deselect All	Select All Deselect All
2009	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2008	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2007	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2006	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2005	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2004	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2003	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2002	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2000	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1999	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1998	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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For this last part of the Waste Stream Summary page you are asked to identify the methods used to determine the quantity of the waste stream placed in the landfill for all years in which it was placed in your landfill. Per the rule, you must account for all waste streams placed in your landfill since the landfill started accepting waste, or 1960, whichever is later.

To facilitate this part, e-GGRT provides a grid for years 1960 to the current reporting year, the top of which you can see on this slide. Use the grid to identify the years in which the method(s) were used. We'll get into what each Method refers to on the next slide.

In addition to the fact that your landfill may have opened post 1960, we also recognize that a waste stream may not have found its way to your landfill in every year in which the landfill accepted waste. This is especially true for a commercial landfill that accepts waste from several clients. Therefore, you are able to filter the grid somewhat so that you only see the years this particular waste stream was disposed of at your landfill. If you wish to use the filter function, enter the first year the waste stream was disposed in your landfill and the last year it was disposed there (Arrow #1) and click Filter Grid (Arrow #2). For this example, I have filtered the grid to show the years 2001 to 2009.

Subpart TT: Waste Stream Summary (6)

RY	Method #1		Method #2		Method #3		Method #4	
	Select All	Deselect All	Select All	Deselect All	Select All	Deselect All	Select All	Deselect All
2009	<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
2008	<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
2007	<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
2006	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
2005	<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
2004	<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
2003	<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
2002	<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
2001	<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	

- Method #1: Used one of the waste quantity measurement methods specified in 98.463(a)(2)(i): direct mass measurements, direct volume measurements multiplied by waste stream density, mass balance procedures (difference between the mass of process inputs and the mass of process outputs), or the number of loads multiplied by the mass of waste per load based on the working capacity of the vehicle or container.
- Method #2: Calculated the average waste disposal rate per Equation TT-2 and calculated the waste disposal quantities for historic years in which direct waste disposal measurements are not available using historical production data per Equation TT-3.
- Method #3: Calculated an average annual bulk waste disposal quantity for historic years when waste quantity data as determined by other methods are available consecutively for the most recent disposal years (Equation TT-4a).
- Method #4: Calculated an average annual bulk waste disposal quantity for historic years when waste quantity data as determined by other methods are available for sporadic (non-consecutive) years (Equation TT-4b).

¹Refer to the e-GGRT Help link(s) provided for a complete description of each DOCx test method provided in the pick list

[Subpart Overview](#)
CANCEL
SAVE

Once you filter for the start and end years you see an abbreviated grid. If there are years in between in which the waste stream was not placed in the landfill, simply leave these rows blank. You may have used more than one method in a year, in which case you should check more than one box in a row.

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.

In this example, this waste stream was disposed of in this landfill from 2001 to 2009, so these are the only years that appear on my grid. And from 2007 to 2009 direct measurements were used to determine waste quantities. In 2006, direct measurements were only available for part of the year and for the rest, waste quantities were calculated by using historical production data and an average waste disposal rate. So two boxes for that year are checked. For the years prior to 2006 only the production data and average waste disposal rate were used to determine waste quantities.

You can also use the “Select All” feature at the top of each column. And if you change your mind, use the “Deselect All” feature as needed.

Once you have checked all of the appropriate boxes in the grid, click SAVE at the bottom of the page and review the data you entered to make sure it is correct. Then click Subpart Overview.

Subpart TT: Industrial Waste Landfills (2011)

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 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 deadline for reporting data elements used as inputs to emission equations for direct emitters. See 76 FR 53057 (published August 25, 2011). In accordance with the rule, e-GGRT is not currently collecting data used inputs to emission equations.

Reporting Information

Landfill Details	OPEN
Methane Generation and Emissions for Landfills with LFG Collection Systems	OPEN
Estimated Waste Depths	OPEN

WASTE STREAM SUMMARY

Name/ID	Status	Delete
Waste Stream 1	Incomplete	✖

[ADD a Waste Stream](#)

[Facility Overview](#)

Subpart TT: View Validation

When you get back to the subpart overview page you will see that the status for the waste stream you just completed data entry for is “Complete.” If you need to add more waste streams, do so by clicking ADD Waste Stream (Arrow #1) and follow the steps we just went over.

Notice that there is a yellow triangle next to the View Validation box on this screen. That means that there are validation messages for your report that you need to review. So click on View Validation to see what it says (Arrow #2).

Subpart TT: Validation Messages (1)



EPA United States Environmental Protection Agency

e-GGRT Electronic Greenhouse Gas Reporting Tool

HOME FACILITY REGISTRATION FACILITY MANAGEMENT DATA REPORTING

Hello, Rachel Schmeitz | My Profile | Logout

e-GGRT Help

HH-C Landfill 2

Subpart TT: Industrial Waste Landfills (2011)

Subpart Overview » Validation Report

SUBPART VALIDATION REPORT

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

Print-friendly version

FACILITY-LEVEL VALIDATION MESSAGES

Validation Type ¹	ID ²	Message ³
Data Completeness	TT008	The frequency of leachate circulation. This data element is required.
Data Completeness	TT063	Modeled methane generation, adjusted for oxidation (Equation HH-5). This data element is required.
Data Completeness	TT066	Measured methane generation, adjusted for oxidation (Equation HH-7). This data element is required.
Data Completeness	TT069	Please indicate if the value for methane generation (GCH4) used in Equation HH-6 was modeled or measured. This element is required.
Data Completeness	TT070	Annual volume of landfill gas collected for destruction. This data element is required.
Data Completeness	TT076	Annual average methane concentration of landfill gas collected for destruction. This data element is required.
Data Completeness	TT083	Please indicate if temperature was incorporated into internal calculations run by the collection systems monitoring equipment, or click CANCEL.
Data Completeness	TT096	Please indicate if pressure was incorporated into internal calculations run by the collection systems monitoring equipment, or click CANCEL.
Data Completeness	TT109	Was landfill gas flow measured on a wet or dry basis? This data element is required. Please make a selection or click CANCEL.
Data Completeness	TT110	Was CH4 concentration measured on a wet or dry basis? This data element is required. Please make a selection or click CANCEL.
Data Completeness	TT125	Depth of area without active gas collection, regardless of cover type (meters). This data element is required.
Data Completeness	TT128	Depth of area with daily soil cover and active gas collection (meters). This data element is required.
Data Completeness	TT131	Depth of area with an intermediate soil cover, or a final soil cover not meeting the criteria for A5 (meters). This data element is required.

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When you click to View Validation, several validation messages may appear depending on how and whether or not you completed the questions. This list represents everything you either did wrong or didn't do throughout the module. You do not have to wait until the end to look at this list. Each time you go back to the Subpart Overview page you can see if you have messages. You can look at what they are and go back and fix them along the way.

Subpart TT: Validation Messages (2) - Links

Data Completeness	TT110	Was CH4 concentration measured on a wet or dry basis?. This data element is required. Please make a selection or click CANCEL.
Data Completeness	TT125	Depth of area without active gas collection, regardless of cover type (meters). This data element is required.
Data Completeness	TT128	Depth of area with daily soil cover and active gas collection (meters). This data element is required.
Data Completeness	TT131	Depth of area with an intermediate soil cover, or a final soil cover not meeting the criteria for A5 (meters). This data element is required.
Data Completeness	TT134	Depth of area with a final soil cover of 3 feet or thicker of clay and/or geomembrane cover system and active gas collection. This data element is required.
Data Completeness	TT158	Methane emissions (Equation HH-8). This data element is required.
Data Completeness	TT161	Depth of area with no waste in-place (meters). This data element is required.
Data Completeness	TT164	Methane emissions from the landfill in the reporting year (Equation HH-6). This data element is required.
Data Completeness	TT401	The last year that the landfill received waste. This data element is required.
Data Completeness	TT402	Landfill Capacity. This data element is required.
Data Completeness	TT403	Range of years for which both disposal and production data were used in Equation TT-2 to calculate the average waste disposal factor for the landfill. This data element is required.

STREAM-LEVEL VALIDATION MESSAGES

Validation Type ¹	ID ²	Stream Name	Message ³
No stream-level validation messages found.			

[← Subpart Overview](#)

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

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

² ID: Each validation message contains a unique identifier. If you contact the e-GGRT Help Desk with a question about a validation message, please include this unique identifier with your request.

³ The absence of a validation message does not indicate that the information provided is without error.

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The bottom text (Arrow #1) explains the different types of validation messages. For example, Data completeness means you did not complete a data element. Data quality means that the value you entered is out of the expected range for that data element, and so on.

Click on the right column (Arrow #2) for links to the screen where the potential error occurred.

This message told me that I did not enter the depth of the area with no waste-in-place. If you click on it, you will be taken to the page where the issue occurs.



The screenshot shows the EPA e-GGRT interface. At the top, there's a blue header with the title 'Subpart TT: Validation Messages (3)' and the EPA logo. Below that, the user is logged in as 'Rachel Schmetz'. The main content area is titled 'HH-C Landfill 2' and 'Subpart TT: Industrial Waste Landfills (2011)'. A validation message box is displayed, titled 'WASTE DEPTH ESTIMATIONS', with instructions to provide estimated depths for five areas (A1-A5). A1 is empty, while A2-A5 have values of 9, 15, 15, and 15 meters respectively. A green arrow points to the empty A1 field, with a text box stating 'Links back to the screen where the data is missing or the error occurred'. At the bottom of the form are buttons for 'Subpart Overview', 'CANCEL', and 'SAVE'.

Here is the page with the validation issue. I did not enter the depth of the area with no waste-in-place. I can enter that information now and the message will disappear from my validation list. Keep in mind, that even if the depth is zero, you need to enter the zero and click save.

Go through each validation message to make sure everything is complete and accurate before submitting your report. There are data quality validation messages, where your answer may be accurate but just outside of EPA’s anticipated range of values. In this case, you may ignore the validation message (after you have made sure the value you entered is correct) and still proceed with completing your e-GGRT report.

Once you have addressed all of your validation messages, click Subpart Overview at the bottom of the Validation Report page.

Data Entry is Complete (1)

Hello, Rachel Schmetz | My Profile | Logout

e-GGRT Help

HH-C Landfill 2

Subpart TT: Industrial Waste Landfills (2011)

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 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 deadline for reporting data elements used as inputs to emission equations for direct emitters. See 76 FR 53057 (published August 25, 2011). In accordance with the rule, e-GGRT is not currently collecting data used as inputs to emission equations.

⚠ Subpart TT: View Validation

Reporting Information	
Landfill Details	OPEN
Methane Generation and Emissions for Landfills with LFG Collection Systems	OPEN
Estimated Waste Depths	OPEN

WASTE STREAM SUMMARY

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.

Data Entry is Complete (2)

HH-C Landfill 2
e-GGRT Greenhouse Gas Data Reporting (2011)
 Select Facility » [Facility or Supplier Overview](#)

FACILITY OR SUPPLIER OVERVIEW
 This page allows you to add the source and/or supplier categories for which your facility or supplier will be reporting, then to access those data reporting screens using the OPEN buttons.
 After data reporting is complete, you can initiate the annual report review and submission process from this page by using the SUBMIT button (or RESUBMIT for subsequent submissions if needed).
 Facility's GHG Reporting Method: Data entry via e-GGRT web-forms ([Change](#))

REPORT DATA

2011 Reporting Source or Supplier Category	Validation Messages?	Subpart Reporting
Subpart A—General Information	None	OPEN
Subpart TT—Industrial Waste Landfills	View Messages	OPEN

[+ ADD or REMOVE Subparts](#)

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

SUBMIT ANNUAL REPORT

Report	Uploaded File Name	Status	Submitted Date	Certification Date

CO₂ equivalent emissions from facility subparts C-II and RR-UU (metric tons): 73,500.0
 Biogenic CO₂ emissions from facility subparts C-II and RR-UU (metric tons): 0.0
 CO₂ equivalent emissions from supplier subparts LL-QQ (metric tons): 0.0
[VIEW GHG DETAILS](#)

Note on the Facility Overview page here, that your CO₂ equivalent emissions for subpart TT now show up in the top line of the calculator. So e-GGRT takes your methane emissions multiplies it by the Global Warming Potential of Methane of 21, to arrive at the CO₂ equivalent value.

Now that you have completed your data entry for Subpart TT you can either move on to generating and submitting your report or, if there is another subpart that is applicable to your facility, you can proceed to enter information on another subpart. Let's say you also have industrial wastewater treatment at your facility that falls under the applicability requirements of the rule, then you will need to enter data for Subpart II – Industrial Wastewater Treatment. In this case you will go back to your facility overview page and add another subpart.

Just as you did for Subpart TT, click ADD or REMOVE a Subpart just below the Report Data box.

Adding a Subpart: Subpart Selection

! Note: Removing (un-checking) a subpart will erase any data that has been entered for that subpart.

- Z—Phosphoric Acid Production
Description (SHOW | HIDE)
- AA—Pulp and Paper Manufacturing
Description (SHOW | HIDE)
- BB—Silicon Carbide Production
Description (SHOW | HIDE)
- CC—Soda Ash Manufacturing
Description (SHOW | HIDE)
- DD—Electrical Transmission and Distribution Equipment Use
Description (SHOW | HIDE)
- EE—Titanium Dioxide Production
Description (SHOW | HIDE)
- FF—Underground Coal Mines
Description (SHOW | HIDE)
- GG—Zinc Production
Description (SHOW | HIDE)
- II—Industrial Wastewater Treatment
Description (SHOW | HIDE)
- RR—Geologic Sequestration of Carbon Dioxide
Description (SHOW | HIDE)
- SS—Electrical Equipment Manufacturer or Refurbishment
Description (SHOW | HIDE)
- UU—Injection of Carbon Dioxide
Description (SHOW | HIDE)

CANCEL SAVE

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You will see this screen again. Check the box next to Subpart II, which is toward the bottom of the first column on this page, to begin entering data for your industrial wastewater treatment.

Again, note that un-checking a subpart will erase any data that was entered for that subpart.

Remember that after checking the box for your subpart, you will need to click Save in order to add the subpart and return to the Facility Overview page.

As was mentioned before, data entry for this subpart follows the simplified reporting format in e-GGRT so it will be very different from what was just covered for subpart TT.

The screenshot shows the EPA e-GGRT interface for 'HH-C Landfill 2'. The page title is 'Opening a Subpart'. The user is logged in as Rachel Schmeitz. The main content area shows 'HH-C Landfill 2' and 'e-GGRT Greenhouse Gas Data Reporting (2011)'. A table under 'REPORT DATA' lists subparts with 'OPEN' buttons. A green arrow points to the 'OPEN' button for Subpart II—Industrial Wastewater Treatment.

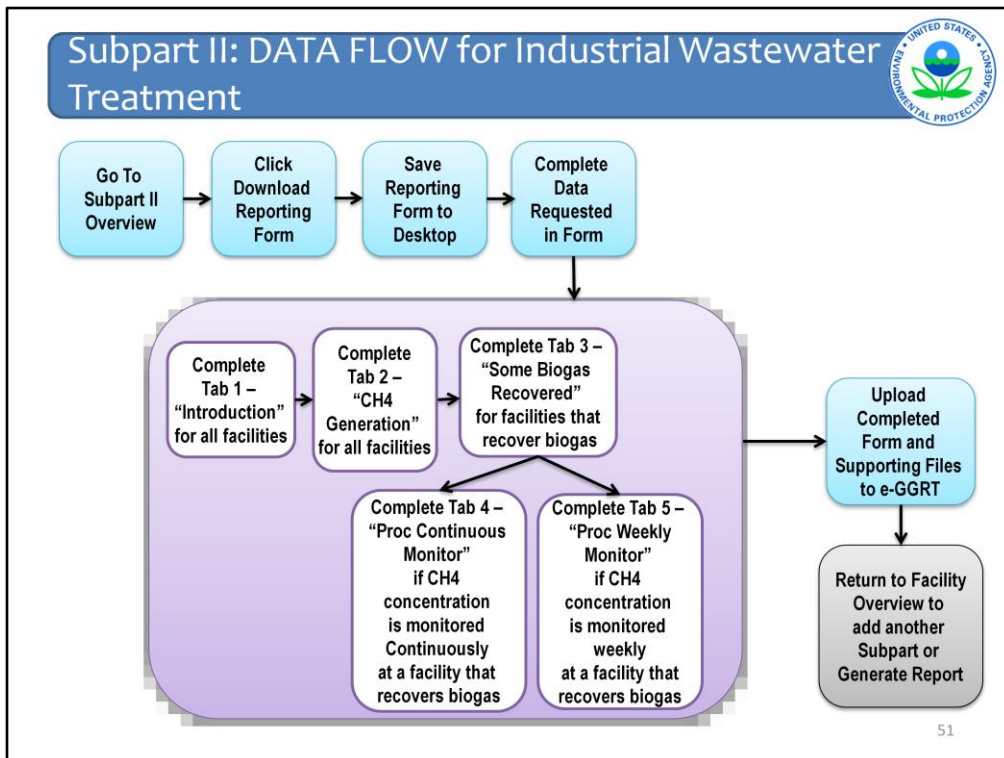
2011 Reporting Source or Supplier Category	Validation Messages?	Subpart Reporting
Subpart A—General Information	None	OPEN
Subpart II—Industrial Wastewater Treatment	None	OPEN
Subpart TT—Industrial Waste Landfills	None	OPEN

Once you have added a Subpart, you may OPEN that subpart to enter or edit data.

Go to the “Report Data” table in the middle of the Facility Overview page and look for the Subpart that you would like to open.

Here you see that Subpart II has been added to the Source Category list.

Once that subpart appears, click OPEN to begin entering your data for Industrial Wastewater Treatment.



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 simplified reporting forms. We will walk through each of these steps in detail in the following slides of this webinar.

Subpart II: Subpart Overview

OVERVIEW OF SUBPART REPORTING REQUIREMENTS
 Subpart II requires affected facilities to report a) CH₄ generation, CH₄ emissions, and CH₄ recovered from treatment of industrial wastewater at each anaerobic lagoon and anaerobic reactor; b) CH₄ emissions and CH₄ recovered from each anaerobic sludge digester; and c) CH₄ emissions and CH₄ destruction resulting from each biogas collection and biogas destruction device. If you are subject to other subparts (e.g. Subpart C) you should return to the Facility Overview page, select the appropriate subpart(s), and complete the data reporting requirements of each subpart. To satisfy the Subpart II reporting requirements you will first download the Subpart II reporting form(s). Use the link provided to access the form(s) and find instructions for completing those forms. Next, you will upload the completed form and e-GGRT will validate the data contained within it. Use the "View Validation" link to review any issues found in your reporting form. If necessary, make any revisions necessary to your reporting form and upload the revised reporting form.

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

SUBPART II SUMMARY INFORMATION FOR THIS FACILITY

1.) DOWNLOAD FORM
 Subpart II GHG Reporting

2.) UPLOAD COMPLETED FORM

⚠ EPA has finalized a rule that defers the deadline for reporting data elements used as inputs to emission equations for direct emitters. See 76 FR 53057 (published August 25, 2011). In accordance with the rule, e-GGRT is not currently collecting data used as inputs to emission equations. If you choose to report these inputs to EPA through these simplified reporting pages, please note that the inputs may be subject to public release.

Uploaded File Name	Attached By	Date	Delete
No files found.			

This is the subpart overview page for subpart II. There are several of the same features as the other subpart overview pages but there are also some differences.

Arrow #1 is the link to the e-GGRT Help pages.

The gray boxes at the top of each page give a description of what that page is about. In this case it gives an overview of the subpart reporting requirements and tells you to download the form (Arrow #2), fill it out, and then upload it back to this page (Arrow #3). This file differs from the optional calculation spreadsheets that were discussed before under Subpart TT, because this file does need to be submitted to EPA.

Once you upload the completed form, e-GGRT will validate the data that you entered. Use the "View Validation" link (Arrow #4) to review any issues found in your reporting form. If necessary, make revisions to your form and upload the revised version.

Subpart II: Downloading a Reporting Form

Step 1. Download a Reporting Form

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

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

Subpart	Reporting Forms (click to download)	Current Release	Pre-populated Versions of Reporting Forms for Testing
I - Electronics Manufacturing	Subpart I Reporting Form	V14	Subpart I Test
L - Fluorinated Gas Production	Subpart L Reporting Form	V5	N/A
W - Petroleum and Natural Gas Systems	Subpart W Integrated Reporting Form (Version 3 Candidate)	V3 can.	Subpart W Onshore Test File Subpart W Offshore Test Subpart W LDC Test Subpart W Transmission Test
DD - Use of Electric Transmission and Distribution Equipment	Subpart DD Reporting Form	V4	Subpart DD Test
FF - Underground Coal Mines	Subpart FF Reporting Form	V 2.2	Subpart FF Test
II - Industrial Wastewater Treatment	Subpart II Reporting Form	V5	Subpart II Test
SS - Manufacture of Electric Transmission and Distribution Equipment	Subpart SS Reporting Form		Subpart SS Test

Once all applicable Reporting Forms have been saved to your computer, open each file and enter the required information according to the general help provided below and the instructions provided within each Reporting Form. Always remember to save each completed Reporting Form when finished.

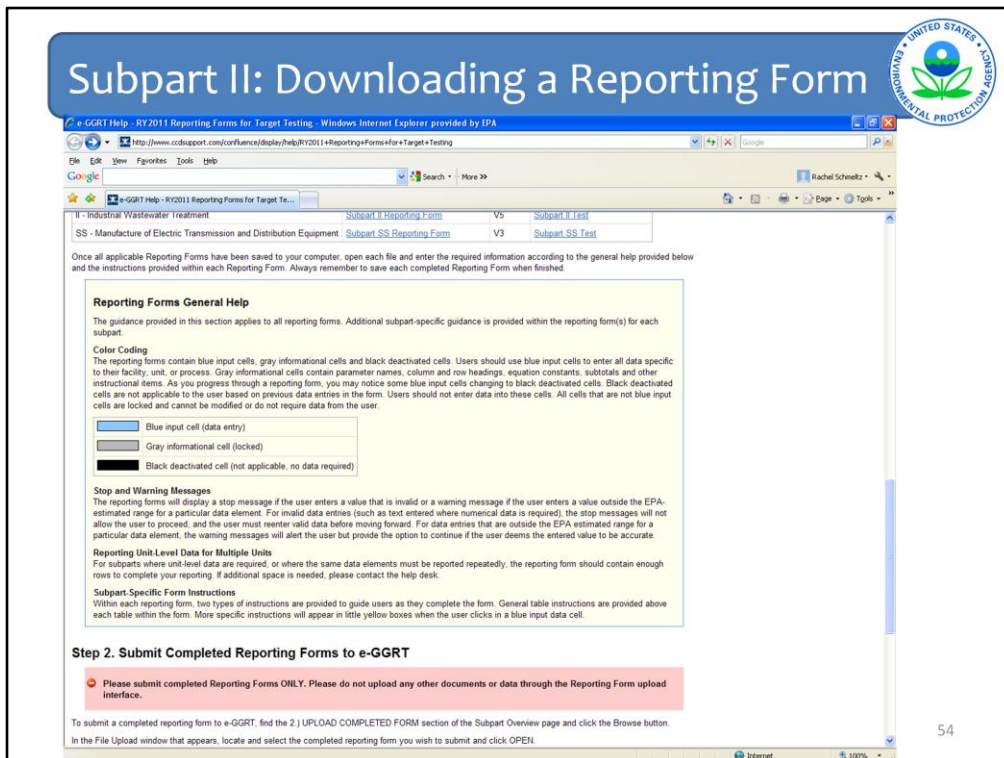
Reporting Forms General Help

53

When you click on Download Form, you are taken to a General Help Screen for use by all reporters that have to use the reporting forms.

Follow the list of 4 items under Step 1 shown on this slide. Find the subpart that you want in the table. In this case, we want subpart II for Industrial Wastewater Treatment. Click on the link in the second column. Save the file to your computer in the location where you want to save it. And do this for any other subpart that is applicable to your facility.

The screen that is shown here is specifically for the testing period. When e-GRRR is launched for reporting in August this last column will not be here.

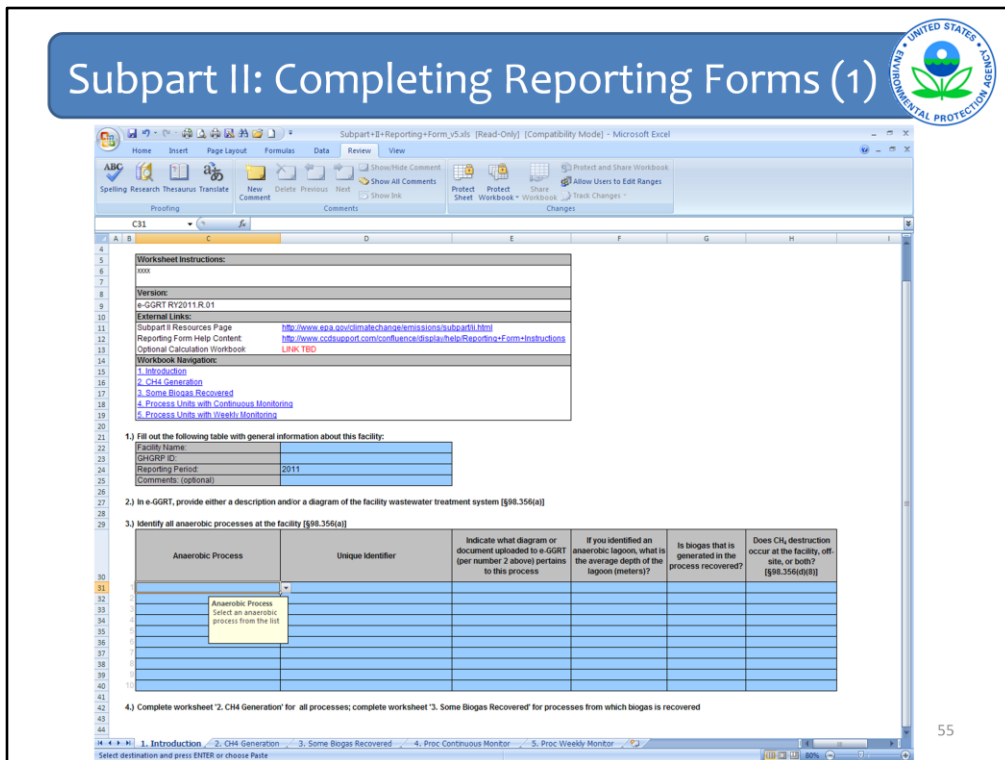


On this same page right below the list of links to the forms is a description of the features in the form that may be helpful to you when completing the forms.

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.

In addition to these general instructions, two types of instructions are provided within each reporting form to guide you through each one. General table instructions may be found above each table in each form. More specific instructions will appear in little yellow boxes when you click in a blue input data cell.



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

There are 5 tabs in this file. Each facility will need to complete a maximum of 4 of these tabs. Some will only need to complete 2 tabs depending upon whether there is biogas recovery at the facility.

Everyone will need to complete Tab #1 which is the Introduction tab shown on this slide. As you can see these forms are regular Excel files. Unfortunately, there are still some placeholders in this slide, such as the text for the introduction, but the important stuff is all here. When these forms are completed, all of the information will be available.


The top section is the same on each tab/spreadsheet. It consists of the introductory language (TBD), 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. It is important to match the facility name and e-GGRT ID to those given to you when you registered for e-GGRT. Otherwise, you could have trouble uploading the file once it is complete if, for example, the e-GGRT IDs don't match.

Section 2 in this tab asks for the diagram and description of the wastewater treatment system at your facility. You will see in later slides that you will need to attach a separate file with this information to the Subpart Overview page for your facility.

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

Subpart II: Completing Reporting Forms (2)



Worksheet Instructions:
 xxx

Version:
 e-GGRT RY2011 R.01

External Links:
 Subpart II Resources Page <http://www.epa.gov/climatechange/emissions/subpartII.html>
 Reporting Form Help Content <http://www.ccdsupport.com/confluence/display/Help/Reporting+Form+Instructions>
 Optional Calculation Workbook [LINK TBD](#)

Workbook Navigation:
 1. Introduction
 2. CH4 Generation
 3. Some Biogas Recovered
 4. Process Units with Continuous Monitoring
 5. Process Units with Weekly Monitoring

1.) Fill out the following table with general information about this facility:

Facility Name:	
GHGRP ID:	
Reporting Period:	2011
Comments (optional):	

2.) In e-GGRT, provide either a description and/or a diagram of the facility wastewater treatment system [§98.356(a)]

3.) Identify all anaerobic processes at the facility [§98.356(a)]

Anaerobic Process	Unique Identifier	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)?	Is biogas that is generated in the process recovered?	Does CH ₄ destruction occur at the facility, off-site, or both? [§98.356(d)(8)]
Anaerobic Reactor					
Anaerobic Shallow Lagoon					
Anaerobic Deep Lagoon					
Anaerobic Sludge Digester					
process from the list					

4.) Complete worksheet '2. CH4 Generation' for all processes; complete worksheet '3. Some Biogas Recovered' for processes from which biogas is recovered

1. Introduction 2. CH4 Generation 3. Some Biogas Recovered 4. Proc. Continuous Monitor 5. Proc. Weekly Monitor

In this case, there is a pull down list for you to choose the anaerobic process. After you choose the appropriate process, indicate a unique identifier name for this process and the name of the document that you will attach with the description and diagram of your wastewater process.

If this process is an anaerobic lagoon, the next column asks you to input the depth of the lagoon (Column F), whether biogas is recovered (Column G), and whether biogas destruction occurs on-site, off-site, or both (Column H).

All facilities will then proceed to Tab 2 – CH4 generation.

Subpart II: Completing Reporting Forms (3)



not one of the options listed

Subpart II - Industrial Wastewater Treatment
1.) Introduction

Worksheet Instructions:
none

Version:
e-GGRT FY2011 R.01

External Links:
Subpart II Resources Page <http://www.epa.gov/climatechange/emiissions/subpartii.html>
Reporting Form Help Content <http://www.ccodsupport.com/confluence/display/ha/Reporting+Form+Instructions>
Optional Calculation Workbook [LINK TBD](#)

Workbook Navigation:
1. Introduction
2. CH₄ Generation
3. Some Biogas Recovered
4. Process Units with Continuous Monitoring
5. Process Units with Wasteli Monitoring

1.) Fill out the following table with general information about this facility:

Facility Name:
GHGRP ID:
Reporting Period: 2011
Comments: (optional)

2.) In e-GGRT, provide either a description and/or a diagram of the facility wastewater treatment system (§98.356(a))

3.) Identify all anaerobic processes at the facility (§98.356(a))

Anaerobic Process	Unique Identifier	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)?	Is biogas that is generated in the process recovered?	Does CH ₄ destruction occur at the facility, off-site, or both? (§98.356(d)(9))
not one of the options listed					
Anaerobic Process Select an anaerobic process from the list					

Microsoft Office Excel
The value you entered is not valid.
A user has restricted values that can be entered into this cell.
Retry Cancel Help


Ready

Start | Subpart II (Wa... | Gmail - Inbo... - Web... | e-GGRT | Microsoft PowerPoint ... | Microsoft Excel - Sub... | 2:39 PM

Before I move onto the next tab, let's look at what happens when you try to enter some erroneous information. If you try to enter something that is not an option on a pull-down menu, you will get an error message as shown here that says the value you entered is not valid. You must then go back and choose from the pull-down list in order to proceed with your data entry.

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

Subpart II: Completing Reporting Forms (4)



Subpart II - Industrial Wastewater Treatment

2.) CH₄ Generation

Worksheet Instructions:

xxxx

Version:

e-GGRT RY2011.R.01

External Links:

Subpart II Resources Page <http://www.epa.gov/climatechange/emiissions/subpartii.html>

Reporting Form Help Content <http://www.ccodsupport.com/confuence/display/Help/Reporting+Form+Instructions>

Optional Calculation Workbook [LINK TBD](#)

Workbook Navigation:

[1. Introduction](#)

[2. CH₄ Generation](#)

[3. Some Biogas Recovered](#)

[4. Process Units with Continuous Monitoring](#)

[5. Process Units with Weekly Monitoring](#)

Complete the table for each anaerobic treatment process identified on tab 1 (Introduction)

Anaerobic Process	Unique Identifier	Indicate if a missing data procedure was used to determine the weekly average COD or BOD ₅ concentration [§98.3(c)(8)]	Provide the number of weeks substitute data were used to determine the weekly average COD or BOD ₅ concentration [§98.3(c)(8)]	Indicate if a missing data procedure was used to determine the weekly volume of wastewater [§98.3(c)(8)]	Provide the number of weeks substitute data were used to determine the weekly volume of wastewater [§98.3(c)(8)]	For processes biogas recov annual CH ₄ this proce Equation 8.3 [§98

Now onto the second Tab – CH₄ Generation.

You must again enter the same anaerobic process from the pull down menu and the same unique identifier. Then enter data on whether you used any missing data procedures when you determined the COD or BOD₅ concentration (Column E) or the weekly volume of wastewater of each process (Column G). If you did use any missing data procedures, then you must also indicate how many weeks the procedures were used in Columns F and H, respectively. 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 II: Completing Reporting Forms (5)



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12	http://www.scdsupport.com/confluence/atsuite/help/Reporting+Form+Instructions				
13	LINK: TED				
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21	obic treatment process identified on tab 1 (Introduction)				
	Unique Identifier	Indicate if a missing data procedure was used to determine the weekly average COD or BOD ₅ concentration [§98.3(c)(8)]	Provide the number of weeks substitute data were used to determine the weekly average COD or BOD ₅ concentration [§98.3(c)(8)]	Indicate if a missing data procedure was used to determine the weekly volume of wastewater [§98.3(c)(8)]	Provide the number of weeks substitute data were used to determine the weekly volume of wastewater [§98.3(c)(8)]
					For processes that have NO biogas recovered, enter the annual CH ₄ emissions for this process (Output of Equation II-3 in metric tons) [§98.256(c)]
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The last column on this tab (Column I), which could not fit on the previous slide, asks for the annual CH₄ emissions for each process from which biogas is not recovered. This is the output of Equation II-3 of the rule.

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 this page or on the subpart overview page. They follow a similar format to those for TT so we will not cover them in detail here. Again, the spreadsheets are optional and should not be provided to EPA. Instead they should be part of the facility's recordkeeping.

Subpart II: Completing Reporting Forms (6)



Subpart II - Industrial Wastewater Treatment
3.) Some Biogas Recovered

Worksheet Instructions:
xxxx

Version:
e-GRR RY2011 R.01

External Links:
Subpart II Resources Page <http://www.epa.gov/climatechange/airquality/industrial-wastewater-treatment>
Reporting Form Help Content <http://www.cobisupport.com/confluence/display/aihelp/Reporting+Form+Instructions>
Optional Calculation Workbook [LINK TBD](#)

Workbook Navigation:
1. Introduction
2. CH₄ Generation
3. Some Biogas Recovered
4. Process Units with Continuous Monitoring
5. Process Units with Weekly Monitoring

1.) Complete the table for those anaerobic process units identified on tab 1 (Introduction) that have biogas recovered

Anaerobic Process	Unique Identifier	Does the facility conduct continuous monitoring of the CH ₄ concentration in the biogas collected for destruction in the anaerobic process?	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)]	Provide the number of weeks substitute data were used to determine the volumetric biogas flow for each week that biogas was collected for destruction [§98.3(c)(8)]	Indicate if a missing data procedure was used to determine the weekly average CH ₄ concentration for a week that biogas was collected for destruction [§98.3(c)(8)]

2.) Complete tab 4 (Proc Continuous Monitor) if CH₄ concentration is monitored continuously at the facility. Complete tab 5 (Proc Weekly Monitor) if CH₄ concentration is monitored weekly at the facility

Facilities that have anaerobic processes from which some biogas is recovered must complete Tab #3 – Some Biogas Recovered.

On this tab you must indicate by anaerobic process whether there was continuous monitoring of the CH₄ concentration of the biogas recovered (Column E). Your answer to this question determines whether you proceed to Tab 4 or Tab 5 [See 2.) on slide]. But before we get there, you must also indicate if you used any missing data procedures when you monitored for biogas flow (Column F) and if you did, how many times you used missing data (Column G).

Subpart II: Completing Reporting Forms (7)



21	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))	Provide the number of weeks substitute data were used to determine the volumetric biogas flow for each week that biogas was collected for destruction (§98.3(c)(8))	Indicate if a missing data procedure was used to determine the weekly average CH ₄ concentration for a week that biogas was collected for destruction (§98.3(c)(8))	Provide the number of weeks substitute data were used to determine the weekly average CH ₄ concentration for each week that biogas was collected for destruction (§98.3(c)(8))	Enter the annual CH ₄ emissions for this process (Output of Equation II-6 in metric tons) (§98.356(d)(9))
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34	ab 5 (Proc Weekly Monitor) if CH ₄ concentration is monitored weekly at the facility				
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Ready

Scrolling to the right on this spreadsheet, you must also indicate if missing data procedures were used for CH₄ concentration in the biogas that was recovered (Column H) and if so, how many times missing data was used (Column I). Lastly on this tab, you are asked to input the result of Equation II-6 which is the CH₄ emissions for the process in metric tons (Column J).

Subpart II: Completing Reporting Forms (8)



Subpart II - Industrial Wastewater Treatment
4.) Process Units with Continuous Monitoring

Worksheet Instructions:
xxxx

Version:
e-GGRT RY2011 R.01

External Links:
Subpart II Resources Page <http://www.epa.gov/climatechange/emissions/subpartII.html>
Reporting Form Help Content <http://www.ccdsupport.com/confluence/display/help/Reporting+Form+Instructions>
Optional Calculation Workbook [LINK TBD](#)

Workbook Navigation:
1. Introduction
2. CH₄ Generation
3. Some Biogas Recovered
4. Process Units with Continuous Monitoring
5. Process Units with Weekly Monitoring

1.) Complete the table for anaerobic process units identified on tab 3 for which the facility conducts continuous monitoring of the CH₄ concentration in the biogas collected for destruction in the anaerobic process. When requested, be sure to provide weekly values for every week.

Anaerobic Process	Unique Identifier	Week	1. Weekly volumetric biogas flow for each week that biogas is collected for destruction (m ³) [§§9.3(d)(2)]	2. Weekly average CH ₄ concentration for each week that biogas is collected for destruction (%) [§§9.3(d)(3)]	3. Is th into 1

Ready

Processes for which CH₄ concentration of the biogas was monitored continuously, must proceed to Tab 4 – Proc Continuous Monitor.

For each anaerobic process and for each week that biogas is collected, you must enter a series of data elements starting with the two you can see on this slide:

- Volumetric biogas flow
- Average CH₄ concentration

Subpart II: Completing Reporting Forms (9)



	2. Weekly average CH ₄ concentration for each week that biogas is collected for destruction (%) [§98.310(d)(7)]	3. Is the biogas temperature incorporated into the monitoring equipment internal calculations? [§98.310(d)(4)]	4. If the answer to item 3 is no, provide the weekly average biogas temperature for each week at which flow is measured for biogas collected for destruction (°F) [§98.356(d)(4)]	5. Is the biogas pressure incorporated into the monitoring equipment internal calculations? [§98.310(d)(6)]	6. If the answer to item 5 is no, provide the weekly average biogas pressure for each week at which flow is measured for biogas collected for destruction (atm) [§98.356(d)(6)]	7. Is the moisture into the monitor
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Then you must indicate whether temperature is incorporated into the calculations run by the monitoring equipment. If temperature is not incorporated into the calculations then you will need to enter the weekly average temperature of the biogas collected.

Subpart II: Completing Reporting Forms (10)



	F	G	H	I	J
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22	2. Weekly average CH ₄ concentration for each week that biogas is collected for destruction (%) [§98.3(d)(3)]				
23	3. Is the biogas temperature incorporated into the monitoring equipment internal calculations? [§98.3(d)(4)]				
24			Yes		
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If temperature is incorporated into these calculations, then the next column (Column I) will be blacked out, meaning that you do not have to enter anything there.

Next, you do the same thing with pressure. Indicate if biogas pressure is incorporated into the internal calculations run by the monitoring equipment. If it is not incorporated, enter the weekly average pressure. If it is incorporated the next column (Column K) will be blacked out.

Subpart II: Completing Reporting Forms (11)



	K	L	M	N	O
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23	6. If the answer to item 5 is no, provide the weekly average biogas pressure for each week at which flow is measured for biogas collected for destruction (atm) [§98.356(d)(6)]	7. Is the moisture content for the biogas incorporated into the monitoring equipment internal calculations? [§98.356(d)(5)]	8. If the answer to item 7 is no, indicate whether the biogas flow is measured on a wet or dry basis. [§98.356(d)(5)]	9. If the answer to item 7 is no, indicate whether the CH ₄ concentration in the biogas flow is measured on a wet or dry basis. [§98.356(d)(5)]	10. If the answers to items 8 and 9 are [NO] the same, provide the weekly average moisture content of the biogas flow for each week at which flow is measured for biogas collected for destruction (cubic feet water per cubic feet biogas) [§98.356(d)(5)]
24					
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Next, indicate if moisture content is incorporated into the international calculations run by the monitoring equipment (Column L). This question is a little different from the previous ones. If moisture content is incorporated into the calculations, then the next 3 columns are blacked out and you are done with this tab. But if moisture is not incorporated you must first answer two more questions – whether biogas flow is measured on a wet or dry basis (Column M) and whether CH₄ concentration of the biogas is measured on a wet or dry basis (Column N). If they are measured on the same basis, then the last column is blacked out and you are done here. If they are measured on different bases then you must complete the column asking for the weekly average moisture content (Column O).

When you are done with this tab, you are done with simplified reporting for the anaerobic processes that do not monitor CH₄ concentration weekly.

For those processes for which CH₄ concentration of the biogas is monitored weekly, you must complete Tab 5 – Proc Weekly Monitoring.

Subpart II: Completing Reporting Forms (12)



Subpart II - Industrial Wastewater Treatment
5.) Process Units with Weekly Monitoring

Worksheet Instructions:
 xxx

Version:
 e-GGRT 4/2011 R.01

External Links:
 Subpart II Resources Page <http://www.epa.gov/airquality/change/emissions/subpartii.html>
 Reporting Form Help Content <http://www.ccdsupport.com/confluence/display/help/Reporting+Form+Instructions>
 Optional Calculation Workbook [LINK TBD](#)

Workbook Navigator:
 1. Introduction
 2. CH4 Generation
 3. Some Biogas Recovered
 4. Process Units with Continuous Monitoring
 5. Process Units with Weekly Monitoring

1.) Complete the table for anaerobic process units identified on tab 3 for which the facility **DOES NOT** conduct continuous monitoring of the CH₄ concentration in the biogas collected for destruction in the anaerobic process. When requested, provide weekly values for every week.

Anaerobic Process	Unique Identifier	1. Is the biogas temperature incorporated into the monitoring equipment internal calculations? [§98.3(d)(4)]	2. Is the biogas pressure incorporated into the monitoring equipment internal calculations? [§98.3(d)(9)?]	3. Is the moisture content for the biogas incorporated into the monitoring equipment internal calculations? [§98.356(d)(5)]	4. If the answer to item 3 is no, indicate whether the biogas flow is measured on a wet or dry basis. [§98.356(d)(5)]	5. If the answer to item 3 is no, indicate whether the CH ₄ concentration in the biogas flow is measured on a wet or dry basis. [§98.356(d)(5)]

Ready

This Tab is significantly simpler. For each anaerobic process you just need to answer the questions about whether temperature, pressure, and moisture content are incorporated into the internal calculations of the monitoring equipment (Columns E, F, and G). And if the answer for moisture content is no, then answer whether biogas flow and CH₄ concentration are measured on a wet or dry basis (Columns H and I).

After you have completed this tab, save the file and go back into e-GGRT so that you can upload the form file.

collection and biogas destruction device. If you are subject to other subparts (e.g. Subpart C) you should return to the Facility Overview page, select the appropriate subpart(s), and complete the data reporting requirements of each subpart. To satisfy the Subpart II reporting requirements you will first download the Subpart II reporting form(s). Use the link provided to access the form(s) and find instructions for completing those forms. Next, you will upload the completed form and e-GGRT will validate the data contained within it. Use the "View Validation" link to review any issues found in your reporting form. If necessary, make any revisions necessary to your reporting form and upload the revised reporting form.

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

Annual mass of CH₄ (metric tons)

Subpart II: View Validation

SUBPART II SUMMARY INFORMATION FOR THIS FACILITY

1.) DOWNLOAD FORM
 ▾ Subpart II GHG Reporting

2.) UPLOAD COMPLETED FORM
 Browse UPLOAD

! EPA has finalized a rule that defers the deadline for reporting data elements used as inputs to emission equations for direct emitters. See 76 FR 53057 (published August 25, 2011). In accordance with the rule, e-GGRT is not currently collecting data used as 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 maybe subject to public release.

Uploaded File Name	Attached By	Date	Delete
No files found.			

3.) UPLOAD SUPPORTING FILE(S)
 Browse UPLOAD

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.

Uploaded File Name	Attached By	Date	Delete
No files found.			

[Facility Overview](#)

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, you are essentially done with this subpart and can click Facility Overview (Arrow #3).

Generate and Submit a Report

United States Environmental Protection Agency

e-GGRT
Electronic Greenhouse Gas Reporting Tool

HOME | FACILITY REGISTRATION | FACILITY MANAGEMENT | DATA REPORTING

Help, Rachel Schmetz | My Profile | Logout

HH-C Landfill 2
e-GGRT Greenhouse Gas Data Reporting (2011)
Select Facility » Facility or Supplier Overview

FACILITY OR SUPPLIER OVERVIEW
This page allows you to add the source and/or supplier categories for which your facility or supplier will be reporting, then to access those data reporting screens using the OPEN buttons.
After data reporting is complete, you can initiate the annual report review and submission process from this page by using the SUBMIT button (or RESUBMIT for subsequent submissions if needed).
Facility's GHG Reporting Method: Data entry via e-GGRT web-forms (Change)

CO₂ equivalent emissions (excluding biogenic) from subparts C - HH (metric tons) 0.0
Biogenic CO₂ emissions from subparts C - HH (metric tons) 0.0
CO₂ equivalent quantity from supplier categories (metric tons) 73,500.0
[VIEW GHG DETAILS](#)

REPORT DATA

2011 Reporting Source or Supplier Category	Validation Messages?	Subpart Reporting
Subpart A—General Information	None	OPEN
Subpart II—Industrial Wastewater Treatment	None	OPEN
Subpart TT—Industrial Waste Landfills	None	OPEN

[ADD](#) or [REMOVE](#) Subparts

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

SUBMIT ANNUAL REPORT

Report	Uploaded File Name	Status	Submitted Date	Certification Date	
					GENERATE / RESUBMIT

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And from the Facility Overview Page you can either add another subpart or generate your report and submit it.

One last item to note, even if you have submitted your report, e-GGRT does allow you to resubmit a report. For verification purposes, EPA will look at the latest report submitted. However, the rule also says (in §98.3(h)) that if you discover an error in your report, you must submit a revised annual GHG report within 45 days of discovering that error.

Questions?



- e-GGRT Information & Help
 - <http://www.ccdsupport.com>
 - Email: ghgreporting@epa.gov
 - <http://www.epa.gov/ghgreporting/reporters/training/index.html>
- Sandbox Testing Information & Help
 - <http://www.ccdsupport.com>
 - Email: ghgreporting@epa.gov
 - Registration: <http://sandbox.ccdsupport.com>
- GHG Reporting Rule Information & Help
 - <http://www.epa.gov/ghgreporting/reporters/index.html>
 - Email: ghgreporting@epa.gov
- Read more about XML Upload Option
 - www.epa.gov/ghgreporting/reporters/datasystem/e-ggrrt_xml.html

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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.

Lastly, there is the website for information and email for questions on the sandbox testing and the site where you can register for sandbox testing if you have not already done so.

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