



**e-GGRT Training Webinar on
Updates to Reporting GHG Data for
Subpart HH – Municipal Solid Waste Landfills and
Subpart TT – Industrial Waste Landfills**

U.S. Environmental Protection Agency

Greenhouse Gas Reporting Program (GHGRP)

February 2014



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For today's webinar please only submit questions regarding e-GGRT functionality, particularly on the updates covered in this webinar. Question on other topics (rule requirements, legal issues, etc.) should be submitted to GHGReporting@epa.gov.

Purpose of Webinar



- Review GWP change effective with 2013 reports
- Walk through
 - Changes to subpart TT reporting
 - Changes to subpart HH reporting
 - Changes to reporting that impact all landfills
- Provide update on Validation Reports including new Critical Validation Errors
- Review other helpful tips for successfully completing reports

Updated GWPs



- Update based on IPCC Fourth Assessment Report (AR4).
- Methane GWP is now 25 (was 21)
 - Applicable for RY2013 and after
 - Not applicable to past reports (RY2010, RY2011, or RY2012)
- Impact on landfills, expect more so for MSW
 - Some open landfills will meet threshold sooner
 - Some closed landfills will report for more years

Beginning in reporting year 2013, the global warming potential (GWP) for methane was changed from 21 to 25 based on updated, internationally-accepted data from the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (AR-4) report. EPA expects that this change will result in some open landfills meeting the 25,000 metric ton CO₂ equivalent methane generation threshold, and therefore reporting a year or two earlier than they otherwise would have. EPA also expects that some closed landfills may have to continue to report to the program for more years than they otherwise would have.

Landfills that first become subject to reporting only because of the GWP changes are not subject to reporting in 2014, but must start monitoring January 2014 and submit their report for the calendar year 2014 in March of 2015.

Update to GWPs



- EPA is providing a specific exemption for certain small, older, closed MSW landfills
 - That did not receive waste after January 1, 2013
 - With methane generation less than 1,190 metric tons CH₄ in 2013
 - Were not required to report to the GHGRP in reporting years prior to 2013
- All 3 of these conditions must be met to qualify for the exemption

A specific exemption was added to section 98.340 in Subpart HH of the rule that exempts certain smaller, older, and/or closed municipal solid waste landfills from reporting as a result of the increased GWP for methane. These landfills are exempted if they: (a) did not receive waste after January 1, 2013; (b) generated methane less than 1,190 metric tons of CH₄ in the 2013 reporting year as determined using Equation HH-5 and, if applicable, Equation HH-7; and (c) were not required to submit an annual report under any requirement of Part 98 (including for other subparts) for any reporting year prior to reporting year 2013. All three of these conditions must be met in order to qualify for the exemption.

Data Carry-Over



- Certain data elements will be carried over to your RY 2013 reports like in years past
- These data elements include:
 - Waste disposal quantities
 - Inputs to Equation HH-1 or TT-1 for all years except the current reporting year

Data from past years will be carried over to your current year report. In particular, waste quantities and other inputs to Equations HH-1 and TT-1, the methane generation equations.

You are strongly encouraged to check over the data that is carried over to make sure it is accurate.

Then add data for the current year of reporting.

The screenshot shows the EPA e-GGRT web application interface. At the top, there is a blue banner with the text "Subpart TT - Changes" and the EPA logo. Below this is a navigation menu with options: HOME, FACILITY REGISTRATION, FACILITY MANAGEMENT, and DATA REPORTING. The main content area is titled "Test Facility 5 for XML" and "Subpart TT: Industrial Waste Landfills (2013)". It includes a "LANDFILL DETAILS" section with a text box explaining the information required and a form with radio buttons for "Open" and "Closed" status, and input fields for "First year the landfill accepted waste" (2008) and "If the landfill is open, the estimated year of landfill closure" (2020). There is also a "LANDFILL CAPACITY" section with an input field for "Landfill capacity" (500000 metric tons).

There were a few changes to subpart TT that will impact reporting

This slide shows the top of the Landfill Details page for Subpart TT



Equation TT-4b Reporting

(clear all)

METHOD #4 (EQUATION TT-4B) DATA

Note: The following data are required to be reported only if you used Method #4 (Equation TT-4b) to estimate historic waste quantities for one or more waste streams. If you did not use Equation TT-4b to estimate historic waste quantities for any waste stream, you do not need to report this data.

Quantity of waste-in-place at the start of the reporting year from design drawings or engineering estimates (metric tons)

Cumulative quantity of waste placed in the landfill for the years for which disposal quantities are available from company records or from Equation TT-3 of this subpart (metric tons)

The year prior to the year when waste disposal data are first available (YrData)

Do you know the year when the landfill opened? Yes No

The year the landfill first received waste from company records, or 1960 (whichever is more recent)

The number of years, from YrOpen to YrLast in Equation TT-4b, for which annual waste disposal quantities are available from company records or the number of years used to calculate Equation TT-3 (years)

(clear all)

NUMBER OF WASTE STREAMS

Scrolling down to the bottom of the Landfill Details page for TT, there are **new** reporting requirements if Equation TT-4b was used to estimate waste quantities for the landfill.

These include:

- The waste-in-place (WIP) at the start of the reporting year from design drawings or engineering estimates in metric tons for open landfills. For closed landfills for which the WIP quantities are not available, this equals the landfill design capacity.
- The cumulative quantity of waste placed in the landfill for the years for which disposal quantities are available from company records or from Equation TT-3
- The YrLast, YrOpen, and NYrData terms in Equation TT-4b.

Note the “Clear All” feature at the bottom of this section. Can be used to clear all data entered in this section.

Other changes/notes on Subpart TT



- Revised Table TT-1
 - Separated out “Industrial Sludge” from other industrial waste categories
- Error in current version of the rule in e-CFR
 - Equation TT-4b is shown twice
 - Equation TT-4a is not shown
 - November 29, 2013 FR notice is correct and is legally binding
 - We are working on fixing this error

Added DOC and k-values for industrial sludge and specified that other waste types were “other than industrial sludge”

E-CFR is not legally binding. The November 29, 2013 FR notice is legally binding.

The screenshot displays the EPA e-GGRT interface for reporting Subpart HH data. The header features the EPA logo and the e-GGRT title. The navigation menu includes 'HOME', 'FACILITY REGISTRATION', 'FACILITY MANAGEMENT', and 'DATA REPORTING'. The user is logged in as 'Rachel Schmetz'. The main content area is titled 'Subpart HH: Municipal Solid Waste Landfills (2013)' and contains the following sections:

- LANDFILL DETAILS - REPORTING YEARS**: A section with instructions explaining that the information is used to determine reporting requirements based on whether the landfill has a gas collection system.
- 2013 Status**: A question 'In 2013, was the landfill open or closed?' with radio button options for 'Open (actively accepting waste)' (selected) and 'Closed (no longer accepting waste)'.
- Waste Acceptance**: An input field for 'First year the landfill accepted waste' with the value '2000'.
- Closure**: An input field for 'Estimated year of landfill closure' with the value '2020'.
- FIRST YEAR OF EMISSIONS REPORTING**: A section explaining that reporting requirements vary slightly for years prior to the first reporting year. An input field shows '2012' as the 'First year of emissions reporting'.
- WASTE QUANTITIES/METHODS SINCE FIRST YEAR OF REPORTING**: A section header for the next part of the form.

Subpart HH has a few more changes that will impact reporting. Some of these changes will also affect the Subpart TT facilities that have gas collection and control systems.

First address change that is Subpart HH-specific.

From Subpart Overview page, click on Landfill Details – Reporting Years and most of the data entry will be the same as last year with one exception.



MCF and F Reported Once

Typical frequency of use for leachate recirculation system

Scales are present at the landfill in the reporting year (check if true)

COVER MATERIALS

Identify each cover material used and report the surface area in square meters for each cover type selected.

Identify each type of cover material used

Organic cover

Sand cover

Clay cover

Other soil mixture

Total surface area of the landfill containing waste 0 (square meters)

FRACTION OF METHANE IN LANDFILL GAS AND METHANE CORRECTION FACTOR

The fraction of CH₄ in landfill gas (F) is based on a measured value (not the default value of 0.5) (check if true)

Fraction by volume of CH₄ in landfill gas (fraction by volume)

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

Methane correction factor (decimal fraction)

LANDFILL GAS COLLECTION SYSTEM

Does the landfill have a landfill gas collection system Yes No

If the landfill has a landfill gas collection system, 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. For manufacturer of the gas collection system, indicate the entity that designed the gas collection system and the entity that installed the gas collection system. If this information is not available, report the manufacturer of the blower. Do not use this space to indicate the manufacturer of the flares in place at the

The one change on this page is that the fraction of methane in landfill gas (F) and methane correction factor (MCF) data are now collected on the Landfill Details Reporting Years Page only. These data elements were previously collected with Waste Characterization Information and were required to be reported by year and waste type. Starting in RY 2013, they are collected only once on this first page.

You must indicate if the fraction of methane in the landfill gas used in Equation HH-1 is based on a measured value and not the default value of 0.5. Check the box if the value for F is based on a measured value and if so, enter the value used in the box. If you do not check the box, the default of 0.5 will automatically populate the box.

You must also indicate if a methane correction factor other than the default value of 1.0 is used in Equation HH-1. If a value other than the default is used, check the box and report the value used. Also remember that if you use a value other than the default, you must have active aeration at your landfill and you will have to provide additional information about the aeration system on a later screen. If you do not check the box indicating that a value other than the default was used, the default value of 1.0 will automatically populate the box below.

Oxidation Fraction

United States Environmental Protection Agency

e-GGRT
Electronic Greenhouse Gas Reporting Tool

HOME FACILITY REGISTRATION FACILITY MANAGEMENT DATA REPORTING

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Test Facility 4 for XML

Subpart HH: Municipal Solid Waste Landfills (2013)

Subpart Overview

OVERVIEW OF SUBPART REPORTING REQUIREMENTS

Subpart HH requires municipal solid waste landfills to report methane (CH₄) generation and emissions quantities. First, provide the information requested in the two Landfill Details pages and e-GGRT will determine what additional information is required for reporting based on the information you provide about your landfill. For additional information about Subpart HH reporting, please use the e-GGRT Help link(s) provided.

Reporting Information

Landfill Details - Reporting Years	OPEN
Landfill Details - Historical Years	OPEN
Waste Characterization Information	OPEN
Annual Waste Type Details	OPEN
Methane Generation and Emissions for Landfills without LFG Collection Systems	OPEN

[Subpart HH: View Validation](#)

[Facility Overview](#)

There were changes to the allowable values for oxidation fraction that impact both subparts HH and TT reporters.

To see the changes, from the Subpart Overview page, we will first cover landfills without gas collection. Click OPEN at the bottom line.

Oxidation Fraction

EPA United States Environmental Protection Agency

e-GGRT Electronic Greenhouse Gas Reporting Tool

HOME FACILITY REGISTRATION FACILITY MANAGEMENT DATA REPORTING

Test Facility 4 for XML

Subpart HH: Municipal Solid Waste Landfills (2013)

Subpart Overview » Methane Generation and Emissions

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 HH-5 of this subpart), reported in metric tons of CH₄. For additional information, please use the e-GGRT Help link(s) provided.

Methane Generation and Emissions Summary

- Methane Oxidation Fraction
- Equation HH-1 Summary and Result
- Equation HH-5 Summary and Result

SUMMARY AND RESULTS

Equation	CH ₄
Total annual modeled CH ₄ generation (HH-1)	159.87
Modeled CH ₄ generation, adjusted for oxidation (HH-5)	

Subpart Overview NEXT

The methane generation and emissions summary screen now includes a page to enter the methane oxidation fraction used in Equation HH-5 (methane generation adjusted for oxidation).

Oxidation Fraction



The screenshot shows the EPA e-GGRT interface for "Test Facility 4 for XML". The main heading is "Subpart HH: Municipal Solid Waste Landfills (2013)". Below this, there is a section for "CH₄ EMISSIONS (FOR LANDFILLS WITHOUT A GAS COLLECTION SYSTEM)". A list of links includes "Methane Oxidation Fraction", which is highlighted. Below the links, there is a form titled "METHANE OXIDATION FRACTION" with instructions to select a value from a table. A dropdown menu is open, showing options: 0.00, 0.10, 0.25, and 0.35. Navigation buttons for "BACK" and "NEXT" are visible at the bottom of the form.

For landfills without gas collection systems, you need to select the methane oxidation fraction used in Equation HH-5 from the drop-down menu. These oxidation fractions are presented in Table HH-4 of the rule.

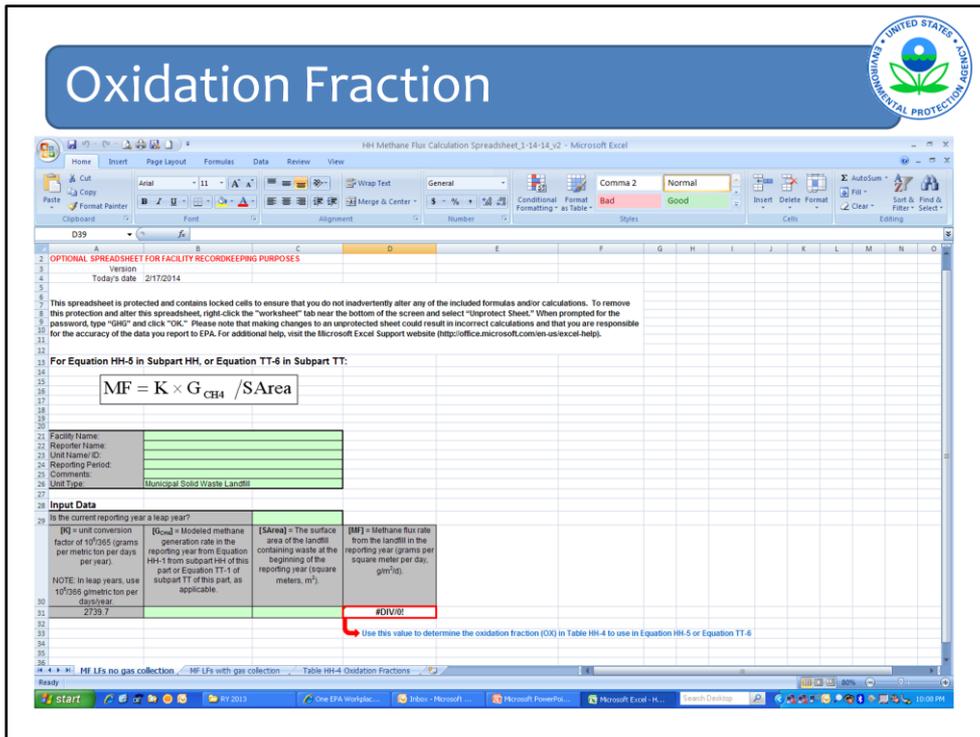
We created an optional calculation spreadsheet to help calculate the methane flux rate that can be used to select the appropriate oxidation fraction. You can go to the e-GGRT HELP page by clicking on e-GGRT Help in the upper left column of this page (and every page) and in the middle column, there will be a link to the Optional Calculation Spreadsheets.

Oxidation Fraction



	Equation Y-23 Calculation Spreadsheet.xls
Z - Phosphoric Acid	Equation Z-1a, Z-1b Calculation Spreadsheet.xls
	Equation AA-1 Calculation Spreadsheet.xls
AA - Pulp and Paper	Equation AA-2 Calculation Spreadsheet.xls
	Equation AA-3 Calculation Spreadsheet.xls
BB - Silicon Carbide	Equation BB-1, BB-2 Calculation Spreadsheet.xls
CC - Soda Ash	Equation CC-3, CC-4, CC-5 Calculation Spreadsheet.xls
EE - Titanium Dioxide	Equation EE-2 Calculation Spreadsheet.xls
	Equation EE-3 Calculation Spreadsheet.xls
	Equation HH-1 Calculation Spreadsheet.xls
	Equation HH-4 Calculation Spreadsheet.xls
HH - Landfills	Equation HH-5 Calculation Spreadsheet.xls
	Equation HH-6 HH-7 HH-8 Calculation Spreadsheet.xls
	Methane Flux Calculation Spreadsheet.xls
II - Industrial Wastewater Treatment	Equation II-4 Calculation Spreadsheet.xls
SS - Electrical Equipment Manufacturer or Refurbishment	Equation SS-2 Calculation Spreadsheet.xls
	Equation SS-3 SS-4 Calculation Spreadsheet.xls
	Equation TT-1 Calculation Spreadsheet.xls
	Equation TT- 6 Calculation Spreadsheet.xls

Scroll down to the spreadsheets for subpart HH. Click to the Methane Flux Calculation Spreadsheet.



This spreadsheet is organized into 2 categories for landfills with and without gas collection and control systems. The page shown here is for landfills without gas collection systems and shows the equation to calculate the methane flux rate that can be used so select the appropriate oxidation fraction in Table HH-4 to use in either Equation HH-5 or TT-6. The page for landfills with gas collection systems is similar and shows equations to calculate the methane flux rate to determine the oxidation fraction to use in Equations HH-5/TT-6, HH-6, HH-7, and HH-8.

Oxidation Fraction

United States Environmental Protection Agency

e-GGRT
Electronic Greenhouse Gas Reporting Tool

HOME FACILITY REGISTRATION FACILITY MANAGEMENT DATA REPORTING

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e-GGRT Help
Using e-GGRT for Subpart HH reporting

Test Facility 1 for XML

Subpart HH: Municipal Solid Waste Landfills (2013)

[Subpart Overview](#)

OVERVIEW OF SUBPART REPORTING REQUIREMENTS

Subpart HH requires municipal solid waste landfills to report methane (CH₄) generation and emissions quantities. First, provide the information requested in the two Landfill Details pages and e-GGRT will determine what additional information is required for reporting based on the information you provide about your landfill. For additional information about Subpart HH reporting, please use the e-GGRT Help link(s) provided.

Subpart HH: View Validation

Reporting Information	
Landfill Details - Reporting Years	OPEN
Landfill Details - Historical Years	OPEN
Waste Characterization Information	OPEN
Annual Waste Type Details	OPEN
Active Aeration Information	OPEN
Estimated Waste Depths	OPEN
Methane Generation and Emissions for Landfills with LFG Collection Systems	OPEN

[Facility Overview](#)

Similar changes were made for landfills with LFG Collections Systems.

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

Oxidation Fraction



Test Facility 1 for XML

Subpart HH: Municipal Solid Waste Landfills (2013)

Subpart Overview » **Methane Generation and Emissions**

CH₄ EMISSIONS (FOR LANDFILLS WITH A GAS COLLECTION SYSTEM)

Landfills that have a landfill gas collection system are required to report two sets of CH₄ generation and CH₄ emissions values. CH₄ generation, adjusted for oxidation, must be reported as calculated using both Equations HH-5 and HH-7, and CH₄ emissions must be reported as calculated using both Equations HH-6 and HH-8. For additional information, please use the e-GGRT Help link(s) provided.

Select a specific equation below to review the equation summary and result that will appear in your annual GHG report. Alternatively, select the NEXT or BACK buttons at the bottom of each equation summary and result page to move consecutively through the equations.

Methane Generation and Emissions Summary

- ▶ Methane Oxidation Fractions
- ▶ Equation HH-1 Summary and Result
- ▶ Equation in Table HH-3 Summary and Result
- ▶ Equation HH-4 Landfill Gas Measurement Locations
- ▶ Equation HH-5 Summary and Result
- ▶ Equation HH-6 Summary and Result
- ▶ Equation HH-7 Summary and Result
- ▶ Equation HH-8 Summary and Result

Note: When performing calculations, only the final number calculated by e-GGRT is rounded to two decimal places. e-GGRT does not round the values for any inputs used in the equations when performing the calculations. However, when an input to an equation is presented, such as the value of the collection efficiency calculated using Table HH-3, a rounded value will be presented.

SUMMARY AND RESULT	
Equation	CH ₄
Total annual modeled CH ₄ generation (DU 4)	4,204.84

Most of this screen looks the same as last year, except there is a new listing for Methane Oxidation Fractions.

Oxidation Fraction



▶ Methane Generation and Emissions Summary

▶ **Methane Oxidation Fractions**

▶ Equation HH-1 Summary and Result

▶ Equation in Table HH-3 Summary and Result

▶ Equation HH-4 Landfill Gas Measurement Locations

▶ Equation HH-5 Summary and Result

▶ Equation HH-6 Summary and Result

▶ Equation HH-7 Summary and Result

▶ Equation HH-8 Summary and Result

Note: When performing calculations, only the final number calculated by e-GGRT is rounded to two decimal places. e-GGRT does not round the values for any inputs used in the equations when performing the calculations. However, when an input to an equation is presented, such as the value of the collection efficiency calculated using Table HH-3, a rounded value will be presented.

METHANE OXIDATION FRACTIONS

Select the appropriate oxidation fraction default value from Table HH-4 of this subpart. In Table HH-4, the methane flux rate is the mass flow rate of methane per unit area at the bottom of the surface soil prior to any oxidation and can be calculated using the Methane Flux equations spreadsheet.

Methane oxidation fraction used to calculate equation HH-5	0.10	(decimal fraction)
Methane oxidation fraction used to calculate equation HH-6	0.10	(decimal fraction)
Methane oxidation fraction used to calculate equation HH-7	0.10	(decimal fraction)
Methane oxidation fraction used to calculate equation HH-8	0.10	(decimal fraction)

◀ BACK NEXT ▶

Enter the oxidation values used in all applicable equations.

As mentioned earlier, the tab for landfills with gas collection in the optional methane flux calculation spreadsheet can be used.

This screen shows what Methane Oxidation Fractions page looks like for Industrial Waste Landfills with LFG collection reporting under Subpart TT. Note, this shows Equation TT-6 which is methane generation adjusted for oxidation for industrial landfills. The rest is the same as for subpart HH since subpart TT directly references Subpart HH for calculations related to emissions from landfill with gas collection systems.

CH₄ Concentration in LFG–Monthly



Total annual quantity of recovered CH ₄ from measurement locations (HH-4)	3,700.00
Modeled CH ₄ generation, adjusted for oxidation (HH-5)	1,084.33
CH ₄ emissions from the landfill in the reporting year (HH-6)	50.07
Measured CH ₄ generation, adjusted for oxidation (HH-7)	31,089.68
CH ₄ emissions from the landfill in the reporting year (HH-8)	27,809.75

LANDFILL GAS COLLECTED FOR DESTRUCTION

Annual volume of landfill gas collected for destruction (scf)

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

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

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

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

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)

If CH₄ is monitored monthly, the number of months substitute data was used to determine the annual average CH₄ concentration of landfill gas collected for destruction (months)

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

There are several other significant changes to reporting requirements for landfills with gas collection. These apply to both subparts HH and TT reporters.

First is the allowance for monthly monitoring of CH₄ concentration in the landfill gas. Previously monitoring had to be done weekly if a continuous monitoring system was not already in place.

This screen is the bottom of the Methane Generation and Emissions page and is where information about landfill gas flow and concentration are entered. You can see here that the change in the reporting of substitute data has been made from weekly to monthly.

Equation HH-4

Test Facility 1 for XML

Subpart HH: Municipal Solid Waste Landfills (2013)

Subpart Overview » Methane Generation and Emissions » **Equation HH-4 Landfill Gas Measurement Locations**

CH₄ EMISSIONS (FOR LANDFILLS WITH A GAS COLLECTION SYSTEM)

Landfills that have a landfill gas collection system are required to report two sets of CH₄ generation and CH₄ emissions values. CH₄ generation, adjusted for oxidation, must be reported as calculated using both Equations HH-5 and HH-7, and CH₄ emissions must be reported as calculated using both Equations HH-6 and HH-8. For additional information, please use the e-GGRT Help link(s) provided.

Select a specific equation below to review the equation summary and result that will appear in your annual GHG report. Alternatively, select the NEXT or BACK buttons at the bottom of each equation summary and result page to move consecutively through the equations.

- ↳ Methane Generation and Emissions Summary
- ↳ Methane Oxidation Fractions
- ↳ Equation HH-1 Summary and Result
- ↳ Equation in Table HH-3 Summary and Result
- ↳ Equation HH-4 Landfill Gas Measurement Locations**
- ↳ Equation HH-5 Summary and Result
- ↳ Equation HH-6 Summary and Result
- ↳ Equation HH-7 Summary and Result
- ↳ Equation HH-8 Summary and Result

Note: When performing calculations, only the final number calculated by e-GGRT is rounded to two decimal places. e-GGRT does not round the values for any inputs used in the equations when performing the calculations. However, when an input to an equation is presented, such as the value of the collection efficiency calculated using Table HH-3, a rounded value will be presented.

LANDFILL GAS MEASUREMENT LOCATIONS

Information about all measurement locations at your facility must be added. Select the Add a Measurement Location link at the

Recovered CH₄ — Eq. HH-4 (metric tons)
2,200.00

There are also changes to the pages for Equation HH-4 to collect information about measurement locations and destruction devices at the landfill.



Measurement Location(s)

Equation HH-4 Landfill Gas Measurement Locations

- Equation HH-5 Summary and Result
- Equation HH-6 Summary and Result
- Equation HH-7 Summary and Result
- Equation HH-8 Summary and Result

Note: When performing calculations, only the final number calculated by e-GGRT is rounded to two decimal places. e-GGRT does not round the values for any inputs used in the equations when performing the calculations. However, when an input to an equation is presented, such as the value of the collection efficiency calculated using Table HH-3, a rounded value will be presented.

LANDFILL GAS MEASUREMENT LOCATIONS

Information about all measurement locations at your facility must be added. Select the Add a Measurement Location link at the bottom of this table to add a measurement location at your facility. Only one measurement location can be added at a time. After selecting the Add a Measurement Location link, you will be taken to a page (Equation HH-4 Landfill Gas Measurement Locations) where you must enter a unique identifier name or ID, the annual quantity of recovered methane, and the annual operating hours for the measurement location. A text description can also be added to assist with differentiating this measurement location from others. You can also specify the destruction device(s) associated with each measurement location on the Equation HH-4 Landfill Gas Measurement Locations page.

Name	Number of Destruction Device(s)	Destruction Efficiency (DE) ¹	Fraction of Hours Destruction Device was Operating (f _{Dest}) ²	Fraction of Hours Recovery System was Operating (f _{Rec}) ³	Annual Recovered CH ₄ Quantity (R, metric tons) ⁴	Delete
ML2	2	0.985	1	0.0571	850.00	
ML1	0	1	1	0.6701	900.00	
ML4	0	1	1	0.04	450.00	
Total R _n					2,200.00	

[ADD a Measurement Location](#)

[←BACK](#) [NEXT→](#)

Note: Rounded values are presented for the terms in this table, but unrounded values are used in the equation calculations. The values for DE, f_{Dest}, f_{Rec}, and R are either reported directly on other pages or are calculated from reported data elements on other pages.

¹ DE is directly reported for each destruction device through each respective destruction device page. A destruction device can be added through a Measurement Location page. If more than one destruction device is associated with a given measurement location, the

You are required to enter data about each measurement location and destruction device at your facility. Only one measurement location can be added at a time using the 'ADD a Measurement Location' button underneath the table shown here.

Measurement Location(s)

Test Facility 1 for XML
Subpart HH: Municipal Solid Waste Landfills (2013)
 Subpart Overview » Methane Generation and Emissions » Equation HH-4 Landfill Gas Measurement Locations

LANDFILL GAS MEASUREMENT LOCATION

Landfills with gas collection systems must enter information about the landfill gas measurement locations at their facility. This information includes a unique identifier name or ID for the measurement location, a text description of the measurement location, the annual quantity of recovered methane, and the annual operating hours for the measurement location. If a destruction device is associated with this measurement location, select the ADD a destruction device link at the bottom of the page. Add all destruction devices (one at a time) that are associated with this measurement location. If no destruction devices are associated with this measurement location, do not select the Add a Destruction Device link. For additional information about the data collected on this page, please use the e-GGRT Help link(s) provided. * denotes a required field

MEASUREMENT LOCATION DETAILS

Name or ID*

Description

EQUATION HH-4 ANNUAL QUANTITY OF RECOVERED CH₄

$$R = \sum_{n=1}^N \left((V)_n \times (K_{MC})_n \times \frac{(C_{CH_4})_n}{100\%} \times 0.0423 \times \frac{520^{\circ}R}{(T)_n} \times \frac{(P)}{1 \text{ atm}} \times \frac{0.454}{1,000} \right)$$

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

Note: The e-GGRT system cannot calculate the result of Equation HH-4 because the input parameters to Equation HH-4 are not required to be reported. Therefore, you must calculate the value of Equation HH-4 and enter the result below.

Annual quantity of recovered CH₄ (metric tons CH₄)

After clicking the 'ADD a Measurement Location' button, you are taken to this screen where you can enter data on the measurement location including:

- A unique identifier for and text description of that measurement location
- The annual quantity of recovered CH₄ associated with that location

Destruction Device(s)

EQUATION HH-4 ANNUAL QUANTITY OF RECOVERED CH₄

$$R = \sum_{n=1}^N \left((V)_n \times (K_{MC})_n \times \frac{(C_{CH_4})}{100\%} \times 0.0423 \times \frac{520^\circ R}{(T)_n} \times \frac{(P)_n}{1 \text{ atm}} \times \frac{0.454}{1,000} \right)$$

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

Note: The e-GGRT system cannot calculate the result of Equation HH-4 because the input parameters to Equation HH-4 are not required to be reported. Therefore, you must calculate the value of Equation HH-4 and enter the result below.

Annual quantity of recovered CH₄ (metric tons CH₄)
 Use Subpart HH-4 equation spreadsheets to calculate
 Spreadsheets are also available for calculating inputs to Equation HH-4.

Annual operating hours for the measurement location (hours)

DESTRUCTION DEVICES

If a destruction device is associated with this measurement location, select the ADD a Destruction Device link below. Add all destruction devices (one at a time) that are associated with this measurement location. If a destruction device is associated with this measurement location, but is located off-site, select the ADD a Destruction Device link and enter the total annual hours for the reporting year (8760, or 8784 if it is a leap year) and enter a value of 1 for destruction efficiency (DE). If no destruction devices are associated with this measurement location, do not select the Add a Destruction Device link.

Name	Annual Operating Hours	Destruction Efficiency (DE)	Delete
+ ADD a Destruction Device			

CANCEL SAVE

At the bottom of this page, you must also report:

- Annual operating hours for the measurement location.
- Identify all destruction devices used to destroy recovered landfill gas from that measurement location. This can be done only if you indicated that the collected landfill gas is destroyed on-site (at the facility) or both (on-site and off-site) on a previous page. If you indicate that the collected landfill gas is destroyed off-site, the option to add destruction devices for each measurement location indicated is not made available.

You can add a destruction device that is association with a given measurement location by clicking the ADD a Destruction Device button at the bottom of the page.

If you indicated that the collected landfill gas was destroyed either at the facility or both, the option to add a destruction device for each measurement location is made available. After clicking the "Add a Destruction Device" button, you will be taken to this Destruction Device page. If multiple destruction devices are associated with one measurement location, the destruction devices must be added one at a time in a similar fashion from the specific measurement location page.

For each destruction device associated with a measurement location, you must provide:

- Name or ID for each Destruction Device
- Annual operating hours for the destruction device
- Destruction efficiency used (report the lesser of the manufacturer's specified destruction efficiency or 0.99).

If you indicated that the collected landfill gas was destroyed both on-site and off-site, you must provide the information on the destruction devices located on-site. For the destruction devices that are located off-site, you should still add the destruction device and report the total hours in the reporting year (8760 or 8784 if it is a leap year) and report a value of 1 for the destruction efficiency.

If you add a measurement location, but do not add an associated destruction device, a validation message will appear in your validation report and e-GGRT will make the assumption that the values for DE and fDest for this measurement location are both 1. Reporting this information for the off-site destruction devices will eliminate the validation message.

Click SAVE at the bottom and you will be taken back to the previous measurement location page.



Destruction Device(s)

EQUATION HH-4 ANNUAL QUANTITY OF RECOVERED CH₄

$$R = \sum_{n=1}^N \left((V)_n \times (K_{MC})_n \times \frac{(C_{CH_4})}{100\%} \times 0.0423 \times \frac{520^\circ R}{(T)} \times \frac{(P)}{1 \text{ atm}} \times \frac{0.454}{1,000} \right)$$

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

Note: The e-GGRT system cannot calculate the result of Equation HH-4 because the input parameters to Equation HH-4 are not required to be reported. Therefore, you must calculate the value of Equation HH-4 and enter the result below.

Annual quantity of recovered CH₄ (metric tons CH₄)

Use Subpart HH-4 equation spreadsheets to calculate

Spreadsheets are also available for calculating inputs to Equation HH-4.

Annual operating hours for the measurement location (hours)

DESTRUCTION DEVICES

If a destruction device is associated with this measurement location, select the ADD a Destruction Device link below. Add all destruction devices (one at a time) that are associated with this measurement location. If a destruction device is associated with this measurement location, but is located off-site, select the ADD a Destruction Device link and enter the total annual hours for the reporting year (8760, or 8784 if it is a leap year) and enter a value of 1 for destruction efficiency (DE). If no destruction devices are associated with this measurement location, do not select the Add a Destruction Device link.

Name	Annual Operating Hours	Destruction Efficiency (DE)	Delete
DD4	8520	0.99	

[ADD a Destruction Device](#)

If more destruction devices are associated with this measurement location, click ADD a Destruction Device again, as many times as appropriate.

If no more destruction devices are associated with this measurement location, click SAVE and you will be taken back to the HH-4 summary table of measurement locations (MLs) and destruction devices (DDs).

Measurement Location(s)



LANDFILL GAS MEASUREMENT LOCATIONS

Information about all measurement locations at your facility must be added. Select the Add a Measurement Location link at the bottom of this table to add a measurement location at your facility. Only one measurement location can be added at a time. After selecting the Add a Measurement Location link, you will be taken to a page (Equation HH-4 Landfill Gas Measurement Locations) where you must enter a unique identifier name or ID, the annual quantity of recovered methane, and the annual operating hours for the measurement location. A text description can also be added to assist with differentiating this measurement location from others. You can also specify the destruction device(s) associated with each measurement location on the Equation HH-4 Landfill Gas Measurement Locations page.

Name	Number of Destruction Device(s)	Destruction Efficiency (DE) ¹	Fraction of Hours Destruction Device was Operating (f_{DEST}) ²	Fraction of Hours Recovery System was Operating (f_{REC}) ³	Annual Recovered CH ₄ Quantity (R, metric tons) ⁴	Delete
ML2	2	0.985	1	0.0571	850.00	✖
ML7	1	0.99	0.985	0.9874	1,500.00	✖
ML1	0	1	1	0.6701	900.00	✖
ML4	0	1	1	0.04	450.00	✖
Total R _n					3,700.00	

[ADD a Measurement Location](#)

[BACK](#) [NEXT](#)

Note: Rounded values are presented for the terms in this table, but unrounded values are used in the equation calculations. The values for DE, f_{DEST} , f_{REC} , and R are either reported directly on other pages or are calculated from reported data elements on other pages.

¹ DE is directly reported for each destruction device through each respective destruction device page. A destruction device can be added through a Measurement Location page. If more than one destruction device is associated with a given measurement location, the arithmetic average of the DE values for all destruction devices associated with a particular measurement device is presented.

² f_{DEST} is calculated from the value of the reported annual operating hours for a specific destruction device (i.e., $f_{DEST} = \text{annual operating hours}/8760$ [or 8784 if it is a leap year]). If more than one destruction device is associated with a given measurement location, e-GGRT is unable to correctly calculate a value for f_{DEST} because the rule does not require the number of hours flow was sent to each destruction device to be reported. Therefore, when more than one destruction device is associated with one measurement location, e-GGRT assumes $f_{DEST,n} = 1$ in the calculations.

³ After adding a measurement location, f_{REC} is calculated from the value of the annual operating hours reported for that measurement location divided by the annual operating hours in the year (i.e., $f_{REC} = \text{annual operating hours}/8760$ [or 8784 if it is a leap year]).

This is the HH-4 summary table of MLs and DDs on the Equation HH-4 Summary and Results page. It shows a summary for each measurement location and the total amount of recovered CH₄ at the facility (Total R_n) as shown in this screen. There are a lot of notes at the bottom of this screen some of which are cut off on this screenshot. We will walk through those now.

First note is that rounded values are presented for the terms in this table, but unrounded values are used in the equation calculations. The values for DE, f_{DEST} , f_{REC} , and R are either reported directly on other pages or are calculated from data reported on other pages.

If the collected landfill gas is destroyed on-site or both, the destruction efficiency (DE) can be directly reported for each destruction device through each respective destruction device page. If more than one destruction device is associated with a given measurement location, the arithmetic average of the DE values for all destruction devices associated with this particular measurement location is presented in the table.

Again, if all of the collected landfill gas is destroyed off-site, the option to add a destruction device is not made available and a value of 1 will be shown in the Equation HH-4 summary table and used in the equation calculations.

The fraction of hours the destruction device associated with each measurement location was operating (f_{DEST}) is calculated from the value of the reported annual operating hours for a specific destruction device divided by the total hours in the year (i.e., $f_{DEST} = \text{annual operating hours}/8760$ [or 8784 if a leap year]). If more than one destruction device is associated with a given measurement location, e-GGRT may not be able to correctly calculate a value for f_{DEST} because the rule does not require the number of hours that gas flow was sent to each destruction device to be reported. Therefore, when more than one destruction device is associated with one measurement location, e-GGRT assumes $f_{DEST,n} = 1$ and that value is shown in the Equation HH-4 summary table and used in the calculations.

Values for DE and f_{DEST} will only appear in the table if at least one destruction device has been associated with a specific measurement location.

The fraction of hours the recovery system was operating, f_{REC} will be calculated from the value of the annual operating hours reported for that measurement location divided by the annual operating hours in the year (i.e., $f_{REC} = \text{annual operating hours}/8760$ [or 8784 if a leap year]).

R is added separately for each measurement location after a given measurement location is added.

Click NEXT and you will be taken through rest of methane generation and emissions equations like last year.

f_{DEST} and f_{REC}



- Part 98 does not require facilities to report the values of f_{Dest} and f_{Rec}
- e-GGRT will calculate values for f_{Dest} and f_{Rec} based on information reported for each destruction device
- You may enter your own calculated value for Eq's HH-6, HH-7, and HH-8 if e-GGRT is not calculating f_{Dest} and f_{Rec} correctly

Another item on f_{DEST} and f_{REC} . Part 98 currently does not require facilities to report the value of f_{Dest} and f_{Rec} used in Equations HH-6, HH-7, and HH-8. However, beginning in reporting year 2013, facilities may enter information about multiple measurement locations and destruction devices, such that a facility can determine values for f_{Rec} and f_{Dest} that incorporate data for multiple devices. As in previous reporting years, if you are reporting through e-GGRT, you may enter your own calculated values for Equations HH-6, HH-7, and HH-8 rather than use the e-GGRT calculated values if deemed appropriate.

Other tips for successful reporting



- Percent by weight must equal 1
- For MSW landfills, DOC and k-values in report must be from Table HH-1
- For Industrial Landfills, k-values in report must be from Table TT-1
- Waste depths and surface areas
 - Enter zero is area type does not exist at your facility

A few other key tips for successful reporting which will hopefully limit the number of messages EPA has to send and you have to reply to after report submission.

First tip is that when entering the percent by weight for the various waste types, those percentages should add up to 1 for each year.

Second, the DOC and k-values reported for MSW landfills should only be those from Table HH-1. DOC and k-values that are not in Table HH-1 will be flagged and you will be asked to revise those values.

For Industrial landfills, you may use measured DOC values but the k-values must be from Table TT-1 or the values will be flagged.

If the waste depth and/or surface area by area type from Table HH-3 is zero, or that area type does not exist at your landfill, you should actually enter a zero in that field, don't leave it blank.

Calculating Collection Efficiency



- You must use the area weighted average for all area types present (A1 through A5) in Table HH-3
- Be wary of overriding e-GGRT calculated CE value
 - A rounded value for CE is presented in e-GGRT, but the unrounded value is used in the equation calculations
- Using the default value for CE of 75% is not an alternative to the area-weighted method

Under section 98.343(c) of the rule, the collection efficiency (CE) estimated at the landfill is calculated using an area-weighted average (see Table HH-3 of this subpart) that accounts for system coverage, operation, and cover system materials. Please be wary of overriding the e-GGRT calculated CE value because you will receive messages from EPA asking why the value was overridden. If you are concerned that e-GGRT is using a rounded value in the equation calculations, please do not be. e-GGRT will present a value for CE, rounded to two decimal places, but uses unrounded values for all inputs in the equation calculations.

Finally, using the default value of 75% for the CE is not an alternative to the area-weighted method.

Using the default CE of 75%



- There are certain instances where you may use the default collection efficiency of 75%:
 - If you do not know the relative areas of daily, intermediate, and final soil cover (as described in Table HH-3)
 - You can only use the 75% for the areas under active gas collection, not the area of the entire landfill
 - You cannot use 75% for the A2 area type, “Area without active gas collection, regardless of cover type”

You can only use the default value of 75% if:

The area by soil cover type information is not available for all areas under active influence of the gas collection system. Please note that landfills with Area Type A2 as defined in Table HH-3, i.e., “Area without active gas collection, regardless of cover type,” cannot simply use the default of 0.75 for CE in Equations HH-7 and HH-8.

We want to be clear that the 75% value is not an alternative to the area-weighted methodology for all landfills. The 0.75 alternative can only be used for those that do not know the relative areas of daily, intermediate, and final soil covers (as described in Table HH-3). It also does not apply to the entire landfill; it only applies to that portion of the landfill under active influence of the gas collection system.

If there are areas of the landfill that are not under active influence of the gas collection system, you must report that area under Area Type A2 and then use the resulting area-weighted average CE in Equations HH-7 and HH-8, even if you use the default of 0.75 for all areas under active gas collection.

Validation Report

EPA United States Environmental Protection Agency

e-GGRT Electronic Greenhouse Gas Reporting Tool

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e-GGRT Help

Using e-GGRT for Subpart HH reporting

Test Facility 1 for XML

Subpart HH: Municipal Solid Waste Landfills (2013)

[Subpart Overview](#)

OVERVIEW OF SUBPART REPORTING REQUIREMENTS

Subpart HH requires municipal solid waste landfills to report methane (CH₄) generation and emissions quantities. First, provide the information requested in the two Landfill Details pages and e-GGRT will determine what additional information is required for reporting based on the information you provide about your landfill. For additional information about Subpart HH reporting, please use the e-GGRT Help link(s) provided.

 [Subpart HH: View Validation](#)

Reporting Information	
Landfill Details - Reporting Years	OPEN
Landfill Details - Historical Years	OPEN
Waste Characterization Information	OPEN
Annual Waste Type Details	OPEN
Active Aeration Information	OPEN
Estimated Waste Depths	OPEN
Methane Generation and Emissions for Landfills with LFG Collection Systems	OPEN

[Facility Overview](#)

Next, we will look at the changes to the validation reports. These changes are applicable to all subparts.

To access the Validation messages for your GHG report click “View Validation” next to the yellow triangle with the exclamation point.

Validation Report

EPA United States Environmental Protection Agency

e-GGRT Electronic Greenhouse Gas Reporting Tool

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Test Facility 1 for XML
Subpart HH: Municipal Solid Waste Landfills (2013)
 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 Quality	HH026	Landfill capacity. 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.
Data Completeness	HH038	The frequency of leachate circulation. This data element is required.
Data Completeness	HH070	The annual volume of landfill gas collected for destruction has not been reported. This data element is required.
Data Completeness	HH076	The annual average methane concentration of landfill gas collected for destruction has not been reported. This data element is required.
Data Completeness	HH165	A type of cover material (organic, clay, sand, and/or other soil mixture) has not been reported for the landfill. This is required per section 98.346(f).
Data Quality	HH183	Surface area of area with no waste in-place (square meters). 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.
Data Quality	HH189	Surface area of area with daily soil cover and active gas collection (square meters). 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.
Data Quality	HH192	Surface area of area with an intermediate soil cover, or a final soil cover not meeting the criteria for A5 (square meters). The value you have provided is outside the EPA estimated range for this

Here is an example of a Validation Report for Subpart HH. It looks much the same as in previous reporting years.

Validation Report

correct, please submit the value as is.

Data Quality	HH195	Surface area of area with a final soil cover of 3 feet or thicker of clay and/or geomembrane cover system and active gas collection (square meters). 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.
Data Completeness	HH329	The value for the oxidation factor (OX) used in Equation HH-5 has not been provided. This is a required data element.

HISTORICAL AND AERATION DATA VALIDATION MESSAGES

Validation Type ¹	ID ²	Details	Message ³
Data Completeness	HH023		Reason for using the estimation method selected. This data element is required.

[← Subpart Overview](#)

Critical Validation Error: Messages that appear with the stop sign icon will prevent you from generating and submitting your annual report. You should first address the errors described. If you feel you have received one of these messages in error, or there's a reason why your report should be submitted despite the message, please [submit a request to the e-GGRT Help Desk](#).

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.

The Validation Report shows several types of checks, some of which are new for RY 2013:

- Screen errors: a data condition that requires correction and would stop the user from saving a particular screen.
- Equation completeness: if there is data missing that prevents e-GGRT from calculating an equation result
- Data Completeness: Data required for reporting that are missing or incomplete, other than an equation input
- Data Quality: Data that are outside of the expected range of values.
- Invalid emissions: if the resulting emission value is negative or outside a reasonable range

Then there are Critical Errors which must be corrected in order to submit your report. These are indicated by the red stop signs.

If you think you received one of these messages in error, or there is a reason why your report should be submitted despite the message, you should submit a request to the e-GGRT Help Desk.

In the right hand column is a description of the issue and a link to the page on which you can find and correct the issue, as needed. Note that the link does not take you directly to the area where the issue is; it just takes you to the specific page. Of the 3 validation messages shown in this example, the 2nd one with the red stop sign next to it is a Critical Validation Error indicating that the oxidation factor used in Equation HH-5 has not been reported. This data element must be reported before your report can be submitted.

Validation Report

Select a specific equation below to review the equation summary and result that will appear in your annual GHG report. Alternatively, select the NEXT or BACK buttons at the bottom of each equation summary and result page to move consecutively through the equations.

- ↳ Methane Generation and Emissions Summary
- ↳ **Methane Oxidation Fractions**
- ↳ Equation HH-1 Summary and Result
- ↳ Equation in Table HH-3 Summary and Result
- ↳ Equation HH-4 Landfill Gas Measurement Locations
- ↳ Equation HH-5 Summary and Result
- ↳ Equation HH-6 Summary and Result
- ↳ Equation HH-7 Summary and Result
- ↳ Equation HH-9 Summary and Result

Note: When performing calculations, only the final number calculated by e-GGRT is rounded to two decimal places. e-GGRT does not round the values for any inputs used in the equations when performing the calculations. However, when an input to an equation is presented, such as the value of the collection efficiency calculated using Table HH-3, a rounded value will be presented.

METHANE OXIDATION FRACTIONS

Select the appropriate oxidation fraction default value from Table HH-4 of this subpart. In Table HH-4, the methane flux rate is the mass flow rate of methane per unit area at the bottom of the surface soil prior to any oxidation and can be calculated using the Methane Flux equations spreadsheet.

Methane oxidation fraction used to calculate equation HH. 5	Select (decimal fraction)
Methane oxidation fraction used to calculate equation HH. 6	0.10 (decimal fraction)
Methane oxidation fraction used to calculate equation HH. 7	0.10 (decimal fraction)

After clicking on the Critical Validation Error message for the missing oxidation factor, you're taken back to the page where that validation issue can be found. Indeed, a value for the oxidation fraction used in Equation HH-5 has not been reported. To fix this issue, you need to select the value used and press SAVE at the bottom and that particular Critical Validation Error will go away.

Critical Errors

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e-GGRT Help
Using e-GGRT for Subpart HH reporting

Test Facility 1 for XML

Subpart HH: Municipal Solid Waste Landfills (2013)

[Subpart Overview](#)

OVERVIEW OF SUBPART REPORTING REQUIREMENTS

Subpart HH requires municipal solid waste landfills to report methane (CH₄) generation and emissions quantities. First, provide the information requested in the two Landfill Details pages and e-GGRT will determine what additional information is required for reporting based on the information you provide about your landfill. For additional information about Subpart HH reporting, please use the e-GGRT Help link(s) provided.

Subpart HH: View Validation

Reporting Information	
Landfill Details - Reporting Years	OPEN
Landfill Details - Historical Years	OPEN
Waste Characterization Information	OPEN
Annual Waste Type Details	OPEN
Active Aeration Information	OPEN
Estimated Waste Depths	OPEN
Methane Generation and Emissions for Landfills with LFG Collection Systems	OPEN

[Facility Overview](#)

If you do not fix your Critical Validation Errors, you will not be able to generate and submit your report. The next slides illustrate this scenario. To submit your report, you need to be on your Facility Overview page and can get there by clicking the Facility Overview button on your Subpart Overview page as shown here.

Critical Errors

Test Facility 1 for XML

e-GGRT Greenhouse Gas Data Reporting (2013)

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 from facility subparts C-II, SS, and TT (metric tons): 2,293,944.8

Biogenic CO₂ emissions from facility subparts C-II, SS, and TT (metric tons): 20,000.0

CO₂ equivalent emissions from supplier subparts LL-QQ (metric tons): 0.0

[VIEW GHG DETAILS](#)

2013 Reporting Source or Supplier Category	Validation Messages?	Subpart Reporting
Subpart A—General Information	None	OPEN
Subpart C—General Stationary Fuel Combustion Sources	Cannot Submit-View Critical Errors	OPEN
Subpart P—Hydrogen Production	None	OPEN
Subpart Y—Petroleum Refineries	Cannot Submit-View Critical Errors	OPEN
Subpart HH—Landfills	View Messages	OPEN
Subpart II—Industrial Wastewater Treatment	Cannot Submit-View Critical Errors	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

On the Facility Overview page, if applicable, you will be alerted that there are critical validation errors for specific subparts and will not be able to submit your report as shown on the next slide. If you do not see any red stop signs, you do not have any critical validation errors and can generate and submit your report.

The screenshot shows the EPA e-GGRT Greenhouse Gas Annual Report Submission (2013) interface. The page title is "Critical Errors". The user is logged in as "Test Facility 1 for XML". The main heading is "e-GGRT Greenhouse Gas Annual Report Submission (2013)". Below this, there is a navigation menu with "Select Facility" and "Facility Overview" links, and a "Generate and Review" button. A "PRE-CERTIFICATION PREPARATION" section contains a message: "Preparation includes generating then reviewing the Annual Report. When complete, you will be able to proceed to certify and submit the Annual Report." A "Print-friendly version" link is also present. A table shows the report status:

Report	Status	Last Generated
2013 Annual Report v1	Generated with errors	02/18/2014 2:26:30 PM

Below the table, there is a "GENERATE REPORT" section with a message: "Generating the report may take from 1 to 10 minutes depending upon the volume of data." A "GENERATE REPORT" button is visible. A red error message states: "Cannot submit until critical validation errors are corrected". Below this, a message explains that the report contains validation errors that must be corrected before submission. A table lists the critical validation errors:

Subpart	Critical Validation Error ID(s)	Action
HH	HH329	View Validation Report
II	II0514, II0514, II0515, II0515, II0521, II0521, II0522, II0522, II0531, II0531, II0531, II0532, II0532, II0532, II0536	View Validation Report

At the bottom, there is a "Need help?" section with a link to the "XML Upload Critical Errors" help page.

If you have critical validation errors and try to generate the report, it will be generated with errors and this message in red text will pop up saying that you cannot submit the report until the critical validation errors are corrected.

e-GGRT will list all of the critical validation errors in this report in all subparts that are included in your report. You can click on the View the Validation Report for the affected subparts to see more details about each critical validation error.

The purpose of preventing a reporter from submitting a report with critical validation errors is so that these issues can be fixed before submission to reduce the number of validation messages a reporter gets after submission. If they are not fixed before submission, then the reporter will get messages saying that you need to review the report and resubmit if there is indeed an error.

See on the very bottom of the page a note for XML reporters with a link to more information about critical errors. Reports submitted via XML will also be checked for critical errors and those errors will be listed here.



Critical Errors

/ Pages / Home / GHG Reporting Instructions / ... / XML Reporting Instructions

XML Upload Critical Errors

Certain validation checks which are considered to represent critical errors must be corrected before you can successfully upload your XML-based submission. These checks are reported to the XML reporter immediately upon attempted upload and signified with a stop sign  in your validation report. The table below provides a list of critical errors along with additional information that will help you diagnose and correct your XML package. If you feel that you have triggered one of these checks in error, or if there's a reason why your report should be submitted despite the check being triggered, please submit a request to the [e-GGRT Help Desk](#).

Enter the Validation Error Code to filter the table below:

Error Code

Error Code	Validation Message Provided by e-GGRT	Xpath
A001	Do reported emissions include emissions from a cogeneration unit. This data element is required.	/GHG/FacilitySiteInformation/FacilitySiteDetails/ CogenerationUnitEmissionsIndica
A010	ZIP code. This data element is required.	/GHG/FacilitySiteInformation/FacilitySiteDetail /ParentCompanyDetails/ParentCon
A067	Use of Subpart L Bamm (Best Available Monitoring Methods) was permitted ONLY in Reporting Year 2012. Please remove these data elements before submitting your report.	FacilitySiteInformation/SubpartBAMMDetails/ SubpartName
A068	Subpart-specific Bamm (Best Available Monitoring Methods) data reporting elements	FacilitySiteInformation/ BestAvailableMonitoringMethodsUsed

The link takes you to the list of critical errors for each subpart. You can search by Error code to more quickly find a certain error message.

At the time of this webinar, parsing of data for XML submissions is not yet functioning. This means XML reporters will not be able to see their validation reports or know their critical errors. This should be resolved by March 1st.

In the meantime you can go to the list of Critical Errors which is at the bottom of the XML reporting Instructions page in the Help content site, to see what the critical errors are and make sure they do not exist in your report.

Critical Errors



HH320	The value for Equation HH-8 (methane emissions) from the landfill in the reporting year has not been reported. You must enter a value that is greater than zero. This data element is required.	GHG\FacilitySiteInformation\FacilitySiteDetails\SubPartInformation\SubPartHH\GasCollectionSystemDetails\MethaneGenerationEquationHH8\CalculatedValue
HH321	The value for Equation HH-7 (back-calculated methane generation) from the landfill in the reporting year has not been reported. You must enter a value that is greater than zero. This data element is required.	GHG\FacilitySiteInformation\FacilitySiteDetails\SubPartInformation\SubPartHH\GasCollectionSystemDetails\MethaneGenerationEquationHH7\CalculatedValue
HH323	The value for Equation HH-6 (methane emissions) from the landfill in the reporting year has not been reported. You must enter a value that is greater than zero. You must correct the current value before continuing.	GHG\FacilitySiteInformation\FacilitySiteDetails\SubPartInformation\SubPartHH\G\CalculatedValue
HH326	The value for Equation HH-1 (modeled methane generation) from the landfill in the reporting year has not been reported. This data element is required.	GHG\FacilitySiteInformation\FacilitySiteDetails\SubPartInformation\SubPartHH\G\AnnualModeledCH4Generation\CalculatedValue
HH328	The value for Equation HH-1 (modeled methane generation) from the landfill in the reporting year has not been reported. This data element is required.	GHG\FacilitySiteInformation\FacilitySiteDetails\SubPartInformation\SubPartHH\N
HH329 With LFGCS	The value for the oxidation factor (OX) used in Equation HH-5 has not been provided. This is a required data element.	GHG\FacilitySiteInformation\FacilitySiteDetails\SubPartInformation\SubPartHH\G\MethaneOxidationFractions\MethaneOxidationFractionHH5
HH329 Without	The value for the oxidation factor (OX) used in Equation HH-5 has not been provided. This is a	GHG\FacilitySiteInformation\FacilitySiteDetails\SubPartInformation\SubPartHH\N\Fractions\MethaneOxidationFractionHH5

Some of the critical errors for subpart HH are shown on this slide.

The Xpaths are provided in the right column so you can locate that data element in your schema to facilitate correcting any errors.

Generate Report

Test Facility 1 for XML
e-GGRT Greenhouse Gas Data Reporting (2013)
 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](#))

⚠ The Annual Report has already been prepared. Any changes you make to report data will not be reflected in that version. After making changes to report data you must choose GENERATE/RESUBMIT below, then click GENERATE REPORT for those changes to be included in an updated version of the Annual Report.

REPORT DATA

2013 Reporting Source or Supplier Category	Validation Messages?	Subpart Reporting
Subpart A—General Information	None	OPEN
Subpart P—Hydrogen Production	None	OPEN
Subpart HH—Landfills	View Messages	OPEN
Subpart II—Industrial Wastewater Treatment	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	
2013 Annual Report		Generated with			GENERATE / SUBMIT

Summary Statistics (Right Panel):
 CO₂ equivalent emissions from facility subparts C-II, SS, and TT (metric tons): 2,293,944.8
 Biogenic CO₂ emissions from facility subparts C-II, SS, and TT (metric tons): 20,000.0
 CO₂ equivalent emissions from supplier subparts LL-DQ (metric tons): 0.0

This is an example of a Facility Overview page where all data have been entered for all applicable subparts and no critical validation errors were found. If the validation messages column shows 'View Messages', you are strongly encouraged to view those messages and correct them, as applicable, before submitting your report. This will again reduce the number of validation messages sent to you after your report is submitted.

As mentioned earlier, if your validation report does not have any critical validation errors, you will be able to generate and submit your report from the facility overview page by clicking the GENERATE/SUBMIT button at the bottom of the Facility Overview page.

The screenshot displays the EPA e-GGRT web interface. At the top right is the EPA logo. The main header reads "View HTML". Below this, a progress bar shows three steps: "Generate and Review" (active), "Certify and Send", and "Confirmation". The page title is "Test Facility 1 for XML" and "e-GGRT Greenhouse Gas Annual Report Submission (2013)". A breadcrumb trail shows "Select Facility » Facility Overview » Generate and Review".

PRE-CERTIFICATION PREPARATION
Preparation includes generating then reviewing the Annual Report. When complete, you will be able to proceed to certify and submit the Annual Report.

Report	Status	Last Generated
2013 Annual Report v1	Ready for review	02/05/2014 4:26:17 PM

GENERATE REPORT
Generating the report may take from 1 to 10 minutes depending upon the volume of data. Once your facility has generated a report, it is still possible to return to the data reporting screens to make changes. Those changes, however, will not be reflected in your Annual Report until you generate it again.

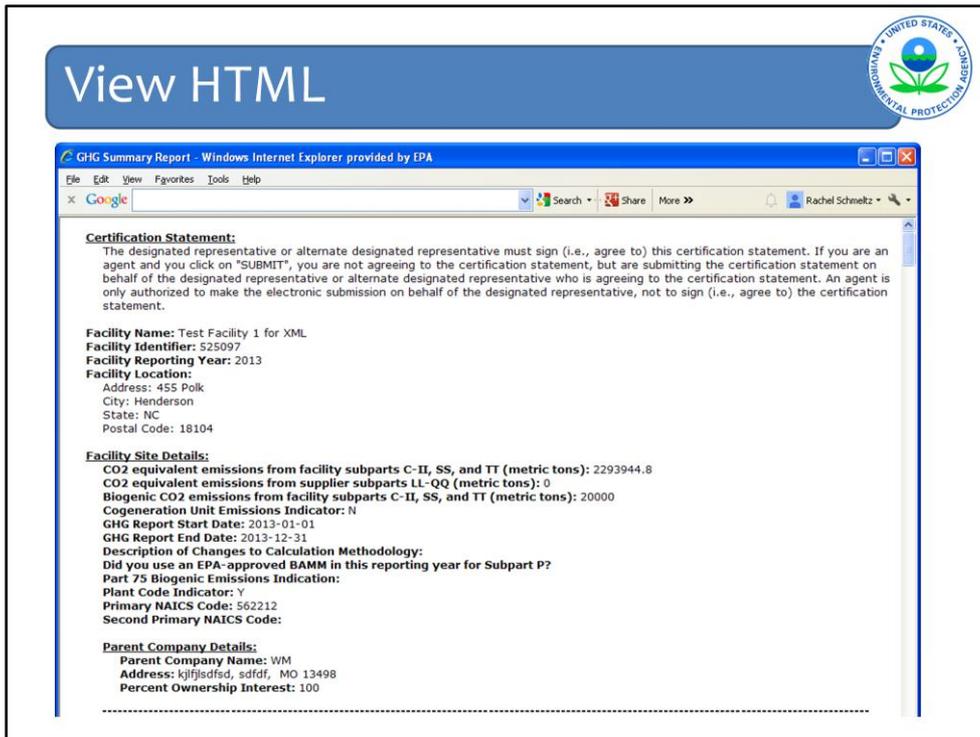
GENERATE REPORT
⚠ The Annual Report has already been prepared. Clicking this button will regenerate the report. This action will reflect any changes that have been made to the reported data.

REVIEW REPORT
Prior to the submission and certification of your report to EPA, you may review it by using either the VIEW REPORT or VIEW XML buttons. You may also review PUBLIC versions of your report which include the information EPA intends to make publicly available through Envirofacts.

Buttons at the bottom: VIEW REPORT, VIEW XML, DOWNLOAD XML, VIEW PUBLIC REPORT, VIEW PUBLIC XML.

TREND REPORT

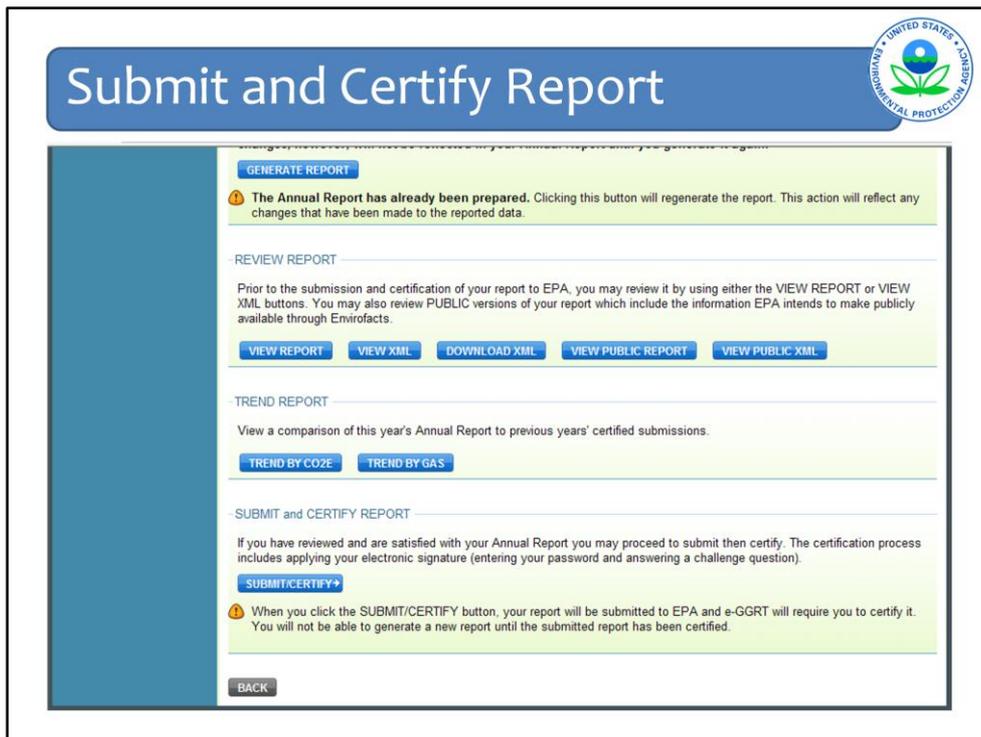
When the report is generated and ready for review, the Status column will indicate such. Various options for viewing the report are provided at the bottom of the screen. The View Public Report and View Public XML are the reports minus any CBI, that the public can see. We recommend that you review the report in some version before you submit it to make sure the data were entered correctly. Click on the version you'd like to view and it will open up in a new screen.



Here is a View of the HTML version of a report. This screen just shows the Subpart A information of facility name, location, other site details, and total facility emissions.

You will need to scroll down to see all of data entered by subpart.

If you see something incorrect, you can go back into your report and the specific subpart to change the data element by navigating back to that subpart from the Facility Overview screen.



After you have reviewed the report, click SUBMIT/CERTIFY to complete the submission of your report.

As it says at the bottom of this screen, the certification process includes applying your electronic signature (entering your password and answering a challenge question). This is the same as past years.

After doing this, your report has now been signed, certified, and officially submitted to EPA.

Any question or issues?



- First check the FAQs and other subpart specific Help Content
 - Click on e-GGRT Help in left column of each screen



- Contact the GHGRP Help Desk with any other questions or issues with completing or submitting your GHG report
 - GHGreporting@epa.gov
 - 1-877-444-1188

Thank you!