Subpart O Entering Equation Inputs Using IVT for RY2014 and Later

This document includes those e-GGRT webpages that contain Inputs Verifier Tool (IVT) equations, i.e., that use an IVT module. The IVT is used in subpart O for RY2014 and later years.

HCFC-22 PRODUCTION PROCESS INFORMATION table

RY2017 and Later

You must add each HCFC-22 production process at the facility. Click "+ADD HCFC-22 Production Process." Users must enter the process name and equation used to calculate emissions.

After selecting the appropriate equation, click "SAVE." e-GGRT will populate the HCFC-22 Production Process Information table with each unique process.

For each production process in the table, click the "OPEN" button to provide information on each process. The HCFC-22 Production web page, for RY2014 and later, includes IVT equations.

>> *Click this link to expand*

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Using e-GGRT for Subpart O reporting

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Subpart O: HCFC-22 Production and HFC-23 Destruction (2018)
Subpart Overview

OVERVIEW OF SUBPART REPORTING REQUIREMENTS
Subpart O requires affected facilities to report HFC-23 emissions from HCFC-22 production processes and HFC-23 destruction processes. Use this page to identify each production process, off-site destruction facility, and on-site destruction process, as appropriate. For additional information about Subpart O reporting, please use the e-GGRT Help link(s) provided.

Annual mass of HFC-23 (metric tons)   0

⚠ Subpart O: View Validation

SUBPART O FACILITY INFORMATION (change)

The facility produces HCFC-22	Yes
The facility sends HFC-23 offsite for destruction	Yes
The facility destroys HFC-23 onsite	Yes

HCFC-22 PRODUCTION PROCESS INFORMATION

Unique Name/Identifier	Mass of HCFC-22 produced (metric tons)	HFC-23 emissions (metric tons)	Status[1]		Delete
📝 test1		0	Incomplete	OPEN	✖
📝 test2		0	Incomplete	OPEN	✖

➕ ADD HCFC-22 Production Process

OFF-SITE HFC-23 DESTRUCTION FACILITY INFORMATION

Unique Name/Identifier	Quantity of HFC-23 sent (metric tons)	Status[1]	Delete
No off-site destruction facilities have been added			

➕ ADD an Off-Site Destruction Facility

ON-SITE HFC-23 DESTRUCTION PROCESS INFORMATION
(Only destruction devices that are not directly connected to HCFC-22 production equipment.)

Unique Name/Identifier	Mass of HFC-23 emitted (metric tons)	Status[1]	Delete
📝 O/8		Incomplete	✖

➕ ADD an On-Site Destruction Process

⬅ Facility Overview

[1]A status of "Incomplete" means that one or more elements of required GHG INFO is incomplete. See the Data Completeness validation messages for details by clicking the "View Validation" link above (Note, if there are no validation messages for this subpart you will not see this link.)

>> *Click this link to expand*

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Subpart C Alt Part 75
Subpart O: HCFC-22 Production and HFC-23 Destruction (2017)
Subpart Overview » HCFC-22 Production Process Information

HCFC-22 PRODUCTION
Use this page to report information about the facility's on-site HCFC-22 production process.

	0
HFC-23 emissions (metric tons)	

PROCESS IDENTIFIER

Unique Product Process Name/ID   Process-4

SUBPART O PROCESS INFORMATION

Annual mass of HCFC-22 produced by the Process (Calculated Using Equation O-3)   [   ] (metric tons)

Use Inputs Verifier to calculate   **GO**

Reactants Fed into the Process

Reactant	Annual mass fed into the process (metric tons)	Delete

✚ ADD a Reactant

The combined mass of all materials other than HCFC-22 and HFC-23 (i.e., unreacted reactants, HCl and other by-products) that occur in more than trace concentrations and that are permanently removed from the process   [   ] (metric tons)

Indicate whether the annual mass of combined mass of all materials other than HCFC-22 and HFC-23 for the process is based on a missing data procedure
○ Yes
○ No

Number of hours that a missing data procedure was used to determine the annual mass of combined mass of all materials other than HCFC-22 and HFC-23   [   ] (hours)

Method for tracking startups, shutdowns, and malfunctions and HFC-23 generation/emissions during these events   [   ]

HFC-23 EMISSIONS (Output of Equation O-4)

Annual HFC-23 Emissions from the Process (Calculated Using Equation O-4)   [   ] (metric tons)

Use Inputs Verifier to calculate   **GO**

SAVE   **CANCEL**

Subpart C Alt Part 75

Subpart O: HCFC-22 Production and HFC-23 Destruction (2017)

Subpart Overview » HCFC-22 Production Process Information

HCFC-22 PRODUCTION

Use this page to report information about the facility's on-site HCFC-22 production process.

	0

HFC-23 emissions (metric tons)

PROCESS IDENTIFIER

Unique Product Process Name/ID   Process-4

SUBPART O PROCESS INFORMATION

Annual mass of HCFC-22 produced by the Process (Calculated Using Equation O-3)   (metric tons)

Use Inputs Verifier to calculate   **GO**

Reactants Fed into the Process

Reactant	Annual mass fed into the process (metric tons)	Delete

➕ ADD a Reactant

The combined mass of all materials other than HCFC-22 and HFC-23 (i.e., unreacted reactants, HCl and other by-products) that occur in more than trace concentrations and that are permanently removed from the process   (metric tons)

Indicate whether the annual mass of combined mass of all materials other than HCFC-22 and HFC-23 for the process is based on a missing data procedure   ○ Yes   ○ No

Number of hours that a missing data procedure was used to determine the annual mass of combined mass of all materials other than HCFC-22 and HFC-23   (hours)

Method for tracking startups, shutdowns, and malfunctions and HFC-23 generation/emissions during these events

HFC-23 EMISSIONS (Output of Equation O-4)

Annual HFC-23 Emissions from the Process (Calculated Using Equation O-4)   (metric tons)

Use Inputs Verifier to calculate   **GO**

SAVE   **CANCEL**

Next to the question "Annual mass of HCFC-22 produced by the Process (Calculated Using Equation O-3)," you will see a field labeled "Use Inputs Verifier to calculate" and a green "Go" button. Click "Go" to open the inputs verifier module. More information on entering data for Equation O-3 can be found under "Entering Data Using IVT " below.

In the "Reactants Fed into the Process" table, add each reactant to the table by clicking the "+ADD a Reactant" button. Indicate the reactant fed, the annual mass fed, and any use of missing data. If you select "Yes," a missing data procedure was used to calculate the annual mass of reactant fed into the process, report the following information regarding the missing data procedure used for each parameter (e.g., mass of stream and/or concentration in those streams):

- Identify the parameter for which the missing data procedure was used. If you select "Other," you are required to write the parameter type in a new cell.
- Number of hours a missing data procedure was used to determine that parameter.
- If a missing data procedure was used for more than one parameter (e.g., both mass-flow and concentration), select "Other" for the parameter type. A new cell will appear so that you can write in the actual parameter type. In that cell, list each parameter individually, as well as the number of hours a missing data procedure was used for that parameter. (In the cell for "Number of hours a missing data procedure was used to determine the annual mass of reactant fed into the process," provide the **sum** of all of the hours a missing data procedure was used for all parameters.)

Click "SAVE" and complete entry for each reactant.

>> *Click this link to expand*

Provide the information for the combined mass of all materials other than HCFC-22 and HFC-23, any use of missing data, and tracking information for startups, shutdowns, and malfunctions. If you select "Yes," a missing data procedure was used to calculate the annual mass of all materials other than HCFC-22 and HFC-23, report number of hours a missing data procedure was used to determine the parameter.

If the facility selected use of Equation O-4 for this process, then Equation O-4 will be shown under HFC-23 EMISSIONS (Output of Equation O-4). Next to the question "Annual HFC-23 emissions from the Process (Calculated Using Equation O-4)", you will see a field labeled "Use Inputs Verifier to calculate" and a green "Go" button. Click "Go" to open the inputs verifier module. More information on entering data for Equation O-4 can be found under, "Entering Data Using IVT"" below.

If the facility selected use of Equation O-5 for this process, then Equation O-5 and the associated variables will be shown. Provide the equipment leak emissions and the process vent emissions along with details of any use of missing data for each. If you select "Yes," a missing data procedure was used for process vents or equipment leaks, report the following information regarding the missing data procedure used for each parameter (e.g., mass of stream and/or concentration in those streams):

- Identify the parameter for which the missing data procedure was used. If you select "Other," you are required to write the parameter type in a new cell.
- Number of hours a missing data procedure was used to determine that parameter.
- If a missing data procedure was used for more than one parameter (e.g., both mass-flow and concentration), select "Other" for the parameter type. A new cell will appear so that you can write in the actual parameter type. In that cell, list each parameter individually, as well as the number of hours a missing data procedure was used for that parameter. (In the cell for "Number of hours a missing data procedure was used to determine the annual mass of combined mass of all materials other than HCFC-22 and HFC-23 for the process," provide the **sum** of all of the hours a missing data procedure was used for all parameters.)

For the "Annual HFC-23 emissions from the Process (Calculated Using Equation O-5)", provide the annual HFC-23 emissions result for Equation O-5, including equipment leak emissions, process vent emissions, and the destruction device emissions. Click "SAVE" (Note: There is no IVT for Equation O-5).

Repeat the data entry steps for each HCFC-22 Production Process listed in the "HCFC-22 PRODUCTION PROCESS INFORMATION" table by clicking the "OPEN" button.

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Subpart C Alt Part 75
Subpart O: HCFC-22 Production and HFC-23 Destruction (2017)
Subpart Overview » HCFC-22 Production Process Information

HCFC-22 PRODUCTION
Use this page to report information about the facility's on-site HCFC-22 production process.

| | 0 |
HFC-23 emissions (metric tons)

PROCESS IDENTIFIER

Unique Product Process Name/ID   Process-5

SUBPART O PROCESS INFORMATION

Annual mass of HCFC-22 produced by the Process (Calculated Using Equation O-3)   [   ]   (metric tons)

Use Inputs Verifier to calculate   GO

Reactants Fed into the Process

Reactant	Annual mass fed into the process (metric tons)	Delete

➕ ADD a Reactant

The combined mass of all materials other than HCFC-22 and HFC-23 (i.e., unreacted reactants, HCl and other by-products) that occur in more than trace concentrations and that are permanently removed from the process	[ ] (metric tons)

Indicate whether the annual mass of combined mass of all materials other than HCFC-22 and HFC-23 for the process is based on a missing data procedure
○ Yes
○ No

Number of hours that a missing data procedure was used to determine the annual mass of combined mass of all materials other than HCFC-22 and HFC-23   [   ] (hours)

Method for tracking startups, shutdowns, and malfunctions and HFC-23 generation/emissions during these events   [   ]

EQUIPMENT LEAKS, EL (part of Equation O-5)

Annual mass of HFC-23 emitted from all equipment leaks from the process   [   ] (metric tons)

Indicate whether the annual mass of HFC-23 emitted from all equipment leaks from the process is based on a missing data procedure
○ Yes
○ No

PROCESS VENTS, EPV (part of Equation O-5)

Annual mass of HFC-23 emitted from all process vents for the process   [   ] (metric tons)

Indicate whether the annual mass of HFC-23 emitted from all process vents for the process is based on a missing data procedure
○ Yes
○ No

HFC-23 EMISSIONS (Output of Equation O-5)

$$E_{23} = E_L + E_{PV} + E_D$$

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

Annual HFC-23 Emissions from the Process (Calculated Using Equation O-5)   [   ] (metric tons)

SAVE   CANCEL

RY2014 to RY2016

Once you select "OPEN" on the "HCFC-22 Production Process Information" table, the HCFC-22 Production web page will open.

>> *Click this link to expand*

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Subpart O: HCFC-22 Production and HFC-23 Destruction (2015)

Subpart Overview » HCFC-22 Production Process Information

HCFC-22 PRODUCTION

Use this page to report information about the facility's on-site HCFC-22 production process.

🖩	0
HFC-23 emissions (metric tons)	

SUBPART O FACILITY INFORMATION

Annual mass of HCFC-22 produced Calculated Using Equation O-3 ☐ (metric tons)

Use Inputs Verifier to calculate **GO**

Reactants Fed into the Process

Reactant	Annual mass fed into the process (metric tons)	Delete

➕ ADD a Reactant

The combined mass of all materials other than HCFC-22 and HFC-23 (i.e., unreacted reactants, HCl and other by-products) that occur in more than trace concentrations and that are permanently removed from the process ☐ (metric tons)

Indicate whether the annual mass of combined mass of all materials other than HCFC-22 and HFC-23 at the facility is based on a missing data procedure ⚪ Yes ⚪ No

Number of hours that a missing data procedure was used to determine the annual mass of combined mass of all materials other than HCFC-22 and HFC-23 ☐ (hours)

Method for tracking startups, shutdowns, and malfunctions and HFC-23 generation/emissions during these events ☐

HFC-23 EMISSIONS (Output of Equation O-4)

Annual HFC-23 Emissions from the Facility Calculated Using Equation O-4 ☐ (metric tons)

Use Inputs Verifier to calculate **GO**

EQUIPMENT LEAKS, EL (part of Equation O-5)

Annual mass of HFC-23 emitted from all equipment leaks at the facility ☐ (metric tons)

Was the annual mass of HFC-23 emitted from all equipment leaks at the facility based on a missing data procedure? ⚪ Yes ⚪ No

PROCESS VENTS, EPV (part of Equation O-5)

Annual mass of HFC-23 emitted from all process vents at the facility ☐ (metric tons)

Was the annual mass of HFC-23 emitted from all process vents at the facility based on a missing data procedure? ⚪ Yes ⚪ No

HFC-23 EMISSIONS (Output of Equation O-5)

Annual HFC-23 Emissions from the Facility Calculated Using Equation O-5 ☐ (metric tons)

SAVE **CANCEL**

Next to the question "Annual mass of HCFC-22 produced Calculated Using Equation O-3", you will see a field labeled "Use Inputs Verifier to calculate" and a green "Go" button. Click "Go" to open the inputs verifier module. More information on entering data for Equation O-3 can be found under "Entering Data Using IVT" below.

In the "Reactants Fed into the Process" table, add each reactant to the table by clicking the "+ADD a Reactant" button. Indicate the reactant fed, the annual mass fed, and any use of missing data. If you select "Yes," a missing data procedure was used to calculate the annual mass of reactant fed into the process, report the number of hours a missing data procedure was used to determine that parameter.

Click "SAVE" and complete entry for each reactant.

Provide the information for the combined mass of all materials other than HCFC-22 and HFC-23, any use of missing data, and tracking information for startups, shutdowns, and malfunctions. If you select "Yes," a missing data procedure was used to calculate the annual mass of combined materials other than HCFC-22 and HFC-23, report the number of hours a missing data procedure was used to determine that parameter.

If the facility selected use of Equation O-4 for this process, then Equation O-4 will be shown under HFC-23 EMISSIONS (Output of Equation O-4). Next to the question "Annual HFC-23 emissions from the Facility Calculated Using Equation O-4", you will see a field labeled "Use Inputs Verifier to calculate" and a green "Go" button. Click "Go" to open the inputs verifier module. More information on entering data for Equation O-4 can be found under "Entering Data Using IVT" below.

If the facility selected use of Equation O-5 for this process, then Equation O-5 and the associated variables will be shown. Provide the equipment leak emissions and the process vent emissions along with details of any use of missing data for each. If you select "Yes," a missing data procedure was used for process vents or equipment leaks, report the number of hours a missing data procedure was used to determine that parameter.

For the "Annual HFC-23 emissions from the Facility Calculated Using Equation O-5", provide the annual HFC-23 emissions result for Equation O-5, including equipment leak emissions, process vent emissions, and the destruction device emissions. Click "SAVE" (Note: There is no IVT for Equation O-5).

ON-SITE HFC-23 DESTRUCTION FACILITY INFORMATION Web Form

For RY2014 and later years, the web form page for entering destruction process information is called "On-Site Destruction Facility Information." After clicking "+ADD an On-Site Destruction Process", the web form page "ON-SITE DESTRUCTION FACILITY INFORMATION" opens, and this web page includes IVT equations.

For RY 2017 and later years, you are required to enter the following information:

>> *click this link to expand*

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Subpart O: HCFC-22 Production and HFC-23 Destruction (2018)
Subpart Overview » On-Site Destruction Process

ON-SITE DESTRUCTION FACILITY INFORMATION
Use this page to report information about each on-site HFC-23 destruction process. **This screen is only for destruction processes not directly connected to an on-site HCFC-22 production process.** Destruction Devices connected to an on-site production process should be entered by clicking the OPEN button on the Subpart Overview for that process.

Annual mass of HFC-23 emitted from the destruction process (metric tons)

*denotes a required field

DESTRUCTION PROCESS
Unique Name/Identifier* [   ]

Description of Destruction Process [   ]

Was the HFC-23 fed into the on-site destruction process originally generated by an on-site HCFC-22 production process?*
○ Yes
○ No

HFC-23 FED INTO THE DESTRUCTION DEVICE
Is the annual mass of HFC-23 fed into the destruction device at the facility based on a missing data procedure?
○ Yes
○ No

HFC-23 EMITTED FROM THE DESTRUCTION DEVICE
Is the annual mass of HFC-23 emitted from the destruction device at the facility based on a missing data procedure?
○ Yes
○ No

HFC-23 CONCENTRATION
Concentration of HFC-23 measured at the outlet of the destruction device during the facility's annual HFC-23 concentration measurements at the outlet of the device [   ] (mass fraction)

Is the concentration below the detection limit?
○ Yes
○ No

Was the HFC-23 concentration measured pursuant to §98.154(l) greater than that measured during the performance test that was the basis for the destruction efficiency?
○ Yes
○ No

HFC-23 OTHER
Have you made changes that affect the HFC-23 destruction efficiency or the methods used to record the quantity destroyed?
○ Yes
○ No

HFC-23 EMISSIONS (Output Equation O-8)
Annual mass of HFC-23 emitted from the destruction process (device) [   ] (metric tons)
[Use Inputs Verifier to calculate GO]

EQUATION O-9
Mass of HFC-23 destroyed annually [   ] (metric tons)
[Use Inputs Verifier to calculate GO]

The Equation O-9 result calculated by IVT is not an annual reporting requirement and will not be included in your annual report. This calculated result will be used in determining your facility's total annual HFC-23 process emissions emitted from the destruction process (Equation O-8).

[SAVE]   [CANCEL]

- Unique Name/Identifier (and description of destruction process)

- If the HFC-23 fed into the on-site destruction process was originally generated by an on-site HCFC-22 production process.
- Whether the HFC-23 emissions destroyed on-site originated from an on-site HCFC-22 production process
- In the "HFC-23 FED INTO THE DESTRUCTION DEVICE" section and in the "HFC-23 EMITTED FROM THE DESTRUCTION DEVICE" section, indicate whether a missing data procedure was used to calculate the amounts fed to the device or emitted from the device using the "Yes" or "No" radio buttons (if you provide information for a missing data procedure that was used to calculate the amounts fed to the device, you do not need to repeat the same information for the amounts emitted from the device). If you select "Yes," report the following information regarding the missing data procedure used for each parameter (e.g., mass of streams flowing to the device and/or HFC-23 concentration in those streams):
    - Parameter type. If you select "Other," you are required to write the parameter type in a new cell.
    - Number of hours a missing data procedure was used to determine that parameter.
    - If a missing data procedure was used for more than one parameter (e.g., both mass-flow and concentration), select "Other" for the parameter type. A new cell will appear so that you can write in the actual parameter type. In that cell, list each parameter individually, as well as the number of hours a missing data procedure was used for that parameter. (In the cell for "number of hours a missing data procedure was used to determine the quantity of HFC-23 sent to this facility," provide the **sum** of all of the hours a missing data procedure was used for any parameter.)
- HFC-23 concentration measured at the outlet of the device and whether the concentration is below the detection limit
    - If you selected "Yes," the concentration is below the detection limit, you are required to enter the detection limit concentration.
- Whether the HFC-23 concentration measured under §98.154(l) is greater than the concentration measured during the performance test that is the basis for the destruction efficiency.
    - If you select "Yes," you are required to indicate whether the method you used to determine the revised destruction efficiency was §98.154 (l)(1) or (l)(2).
- Changes that have been made which affect destruction efficiency or recording destroyed quantities. If you select "Yes," provide information on the methods used to determine the destruction efficiency, method used to record the mass destroyed, and other relevant regulations that apply to the destruction process.

In the "HFC-23 EMISSIONS (Output Equation O-8)" section for Equation O-8, e-GGRT will require you to use the IVT module to calculate emissions using Equation O-8. You will see a field labeled "Use Inputs Verifier to calculate" and a green "Go" button. Click "Go" to open the inputs verifier module. More information on entering data for Equations O-8 and O-9 can be found under, "Entering Data Using IVT" below.

In the "EQUATION O-9" section, it is important to note that the "Mass of HFC-23 destroyed annually" (Output Equation O-9) is not a reporting requirement and while calculated by IVT, it is not reported to the EPA.

After adding the destruction information, click "SAVE." e-GGRT will populate the "ON-SITE HFC-23 DESTRUCTION PROCESS INFORMATION" table with each unique on-site destruction process.

For RY2014 through RY2016, the procedure is similar. You are required to enter the following information:

- Unique Name/Identifier (and description of destruction process)
- In the "HFC-23 FED INTO THE DESTRUCTION DEVICE" section and in the "HFC-23 EMITTED FROM THE DESTRUCTION DEVICE" section, indicate whether a missing data procedure was used to calculate the amounts fed to the device or emitted from the device using the "Yes" or "No" radio buttons (if you provide information for a missing data procedure that was used to calculate the amounts fed to the device, you do not need to repeat the same information for the amounts emitted from the device). If you select "Yes," report the number of hours a missing data procedure was used to determine that parameter.
- HFC-23 concentration measured at the outlet of the device and whether the concentration is below the detection limit
    - If you selected "Yes," the concentration is below the detection limit, you are required to enter the detection limit concentration.
- Whether the HFC-23 concentration measured under §98.154(l) is greater than the concentration measured during the performance test that is the basis for the destruction efficiency.
    - If you select "Yes," you are required to provide the concentrations and flow rates at the outlet of the destruction device, along with the emission rate.

- Changes that have been made which affect destruction efficiency or recording destroyed quantities. If you select "Yes," provide information on the methods used to determine the destruction efficiency, method used to record the mass destroyed, and other relevant regulations that apply to the destruction process.

>> *Click this link to expand*

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Subpart O: HCFC-22 Production and HFC-23 Destruction (2015)
Subpart Overview » On-Site Destruction Process

ON-SITE DESTRUCTION FACILITY INFORMATION
Use this page to report information about each on-site HFC-23 destruction process.

Annual mass of HFC-23 emitted from the destruction process (metric tons)

* denotes a required field

DESTRUCTION PROCESS

Unique Name/Identifier *	
Description of Destruction Process	

HFC-23 FED INTO THE DESTRUCTION DEVICE

Is the annual mass of HFC-23 fed into the destruction device at the facility based on a missing data procedure?
○ Yes
○ No

HFC-23 EMITTED FROM THE DESTRUCTION DEVICE

Is the annual mass of HFC-23 emitted from the destruction device at the facility based on a missing data procedure?
○ Yes
○ No

HFC-23 CONCENTRATION

Concentration of HFC-23 measured at the outlet of the destruction device during the facility's annual HFC-23 concentration measurements at the outlet of the device
[   ] (mass fraction)

Is the concentration below the detection limit?
○ Yes
○ No

Was the HFC-23 concentration measured pursuant to §98.154(l) greater than that measured during the performance test that was the basis for the destruction efficiency?
○ Yes
○ No

HFC-23 OTHER

Have you made changes that affect the HFC-23 destruction efficiency or the methods used to record the quantity destroyed?
○ Yes
○ No

HFC-23 EMISSIONS (Output Equation O-8)

Annual mass of HFC-23 emitted from the destruction process (device)
[   ] (metric tons)
Use Inputs Verifier to calculate **GO**

EQUATION O-9

Mass of HFC-23 destroyed annually
[   ] (metric tons)
Use Inputs Verifier to calculate **GO**

The Equation O-9 result calculated by IVT is not an annual reporting requirement and will not be included in your annual report. This calculated result will be used in determining your facility's total annual HFC-23 process emissions emitted from the destruction process (Equation O-8).

[SAVE] [CANCEL]

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Subpart O: HCFC-22 Production and HFC-23 Destruction (2015)
Subpart Overview » On-Site Destruction Process

ON-SITE DESTRUCTION FACILITY INFORMATION
Use this page to report information about each on-site HFC-23 destruction process.

Annual mass of HFC-23 emitted from the
destruction process (metric tons)

* denotes a required field

DESTRUCTION PROCESS

Unique Name/Identifier *

Description of Destruction
Process

HFC-23 FED INTO THE DESTRUCTION DEVICE

Is the annual mass of HFC-23 fed into the
destruction device at the facility based on a
missing data procedure?
○ Yes
○ No

HFC-23 EMITTED FROM THE DESTRUCTION DEVICE

Is the annual mass of HFC-23 emitted from the
destruction device at the facility based on a
missing data procedure?
○ Yes
○ No

HFC-23 CONCENTRATION

Concentration of HFC-23 measured at the outlet
of the destruction device during the facility's
annual HFC-23 concentration measurements at
the outlet of the device
(mass fraction)

Is the concentration below the detection limit?
○ Yes
○ No

Was the HFC-23 concentration measured
pursuant to §98.154(l) greater than that
measured during the performance test that was
the basis for the destruction efficiency?
○ Yes
○ No

HFC-23 OTHER

Have you made changes that affect the HFC-23
destruction efficiency or the methods used to
record the quantity destroyed?
○ Yes
○ No

HFC-23 EMISSIONS (Output Equation O-8)

Annual mass of HFC-23 emitted from the
destruction process (device)
(metric tons)

Use Inputs Verifier to calculate   GO

EQUATION O-9

Mass of HFC-23 destroyed annually
(metric tons)

Use Inputs Verifier to calculate   GO

The Equation O-9 result calculated by IVT is not an annual reporting requirement and
will not be included in your annual report. This calculated result will be used in
determining your facility's total annual HFC-23 process emissions emitted from the
destruction process (Equation O-8).

SAVE   CANCEL

For RY 2014 and later years, in the HFC-23 Emissions section for Equation O-8, e-GGRT will require you to use the IVT to calculate emissions using equation O-8. You will see a field labeled "Use Inputs Verifier to calculate" and a green "Go" button. Click "Go" to open the inputs verifier module. More information on entering data for Equations O-8 and O-9 can be found under "Entering Data Using IVT" below.

The mass of HFC-23 destroyed annually (Output Equation O-9) is not a reporting requirement and while calculated by IVT, it is not reported to the EPA.

Click "SAVE."

Entering Data Using IVT

Use of the Inputs Verifier File

If you have previously entered these inputs and saved your inputs file locally, you should import your locally saved inputs file. See the section below on "Saving and Reloading Your Inputs Verifier File." If you are having trouble locating your inputs file or would like to "Reset" and recreate your inputs file, please review our help content reviewing these processes at t Reloading Your Inputs Verifier File or Resetting your Facility To Create a New Inputs Verifier file.

Inputs Verifier Tool Module

Once you enter an Inputs Verifier Tool (IVT) module, you will note that these screens are formatted with a grey background and an "Inputs Verifier Tool" header. Here you are asked to provide emissions inputs to allow the IVT to calculate emissions.

> ⚠ The screenshots below are from the Subpart O IVT page for calculation of annual HFC-23 mass emissions and are displayed as an example. The screens for other inputs verifier modules within Subpart O may differ slightly.

HCFC-22 PRODUCTION

Equation O-3 Inputs

For Equation O-3, enter the values for each variable and click "SAVE". The IVT module will automatically calculate the value for Equation O-3 and autofill the value.

You may also provide an alternate result if the IVT value does not agree with the facility's calculated value. Click on "Enter/Report Alternate Result" and provide the facility's alternate result.

>> Click this link to expand

Equation O-4 Inputs

For Equation O-4, enter the values for each variable and click "SAVE". The IVT module will automatically calculate the value for Equation O-4 and autofill the value.

You may also provide an alternate result if the IVT value does not agree with the facility's calculated value. Click on "Enter/Report Alternate Result" and provide the facility's alternate result.

>> *Click this link to expand*

EPA United States
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e-GGRT
Inputs Verifier Tool
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Subpart C Alt Part 75
Subpart O: HCFC-22 Production and HFC-23 Destruction (2017)
Subpart Overview » Eq. O-4

EQUATION O-4 INPUTS

Use this page to enter the inputs to Equation O-4 for HCFC-22 Production and HFC-23 Destruction. The inputs to equations will be used for verification purposes only, and will not be stored by EPA. The results of the verification checks (the verification summary, viewable from the "Subpart Overview" page) will be stored by EPA. For additional information about the data collected on this page, please use the e-GGRT Help link(s) provided.

Input will not be stored by EPA **IVT**

EQUATION O-4

Equation O-4 $E_{23} = G_{23} - (S_{23} + OD_{23} + D_{23} + I_{23})$

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

G_{23}	Mass of HFC-23 generated annually	**IVT**	(metric tons)
S_{23}	Mass of HFC-23 sent off site for sale annually	**IVT**	(metric tons)
OD_{23}	Mass of HFC-23 sent off site for destruction annually	**IVT**	(metric tons)
D_{23}	Mass of HFC-23 destroyed on site	**IVT**	(metric tons)
$I_{23, end}$	HFC-23 in storage at end of year	**IVT**	(metric tons)
$I_{23, begin}$	HFC-23 in storage at beginning of year	**IVT**	(metric tons)

SAVE **CANCEL**

Equations O-8 and O-9 Inputs

For Equations O-8 and O-9, enter the values for each variable and click "SAVE". The IVT module will automatically calculate the values for Equations O-8 and O-9 and autofill the output value. You are required to enter the following information:

- Enter the Mass of HFC-23 fed into the destruction device annually (Input to Equation O-8 and O-9)
- Select the appropriate method for describing how the destruction efficiency is determined:
  - Directly. If select "Directly," also provide the "Destruction efficiency of the destruction device".
  - 98.154(l)(1) Method
  - 98.154(l)(2) Method

Directly method:

>> *Click this link to expand*

EPA United States Environmental Protection Agency

e-GGRT
Inputs Verifier Tool

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Angkor
Subpart O: HCFC-22 Production and HFC-23 Destruction (2018)
Subpart Overview » Eq. O-8/9

EQUATION O-8/9 INPUTS
Use this page to enter the inputs to Equation O-8/9 for HCFC-22 Production and HFC-23 Destruction. The inputs to equations will be used for verification purposes only, and will not be stored by EPA. The results of the verification checks (the verification summary, viewable from the "Subpart Overview" page) will be stored by EPA. For additional information about the data collected on this page, please use the e-GGRT Help link(s) provided.

Input will not be stored by EPA IVT

EQUATION O-8 AND O-9 INPUTS

Equation O-8 $E_D = F_D - D_{23}$

Equation O-9 $D_{23} = F_D \times DE$

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

F_D Mass of HFC-23 fed into the destruction device annually (Input to Equation O-8 and O-9)   IVT   (metric tons)

Identify if destruction efficiency is entered directly, or is calculated using 98.154(l)(1), or is calculated using 98.154(l)(2)
◉ Directly
○ 98.154(l)(1) Method
○ 98.154(l)(2) Method

DE Destruction efficiency of the destruction device (Input to Equation O-9)   IVT (decimal fraction)

SAVE CANCEL

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e-GGRT RY2018.R26-j404 | O-onsitedestructionfac

98.154(l)(1) Method:

If you selected "98.154(l)(1) Method" as the calculation method, enter the values for each variable and click "SAVE".

>> *Click this link to expand*

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e-GGRT
Inputs Verifier Tool

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Subpart C Alt Part 75
Subpart O: HCFC-22 Production and HFC-23 Destruction (2017)
Subpart Overview » Eq. O-8/9

EQUATION O-8/9 INPUTS
Use this page to enter the inputs to Equation O-8/9 for HCFC-22 Production and HFC-23 Destruction. The inputs to equations will be used for verification purposes only, and will not be stored by EPA. The results of the verification checks (the verification summary, viewable from the "Subpart Overview" page) will be stored by EPA. For additional information about the data collected on this page, please use the e-GGRT Help link(s) provided.

Input will not be stored by EPA **IVT**

EQUATION O-8 AND O-9 INPUTS

Equation O-8	$E_D = F_D - D_{23}$
Equation O-9	$D_{23} = F_D \times DE$

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

F_D **Mass of HFC-23 fed into the destruction device annually** (Input to Equation O-8 and O-9)
[_____] **IVT** (metric tons)

Identify if destruction efficiency is entered directly, or is calculated using 98.154(l)(1), or is calculated using 98.154(l)(2)
○ Directly
◉ 98.154(l)(1) Method
○ 98.154(l)(2) Method

Volumetric flow rate from destruction device from previous test (Input to Equation O-9)
[_____] **IVT** (kg/hr)

Concentration of HFC-23 from destruction device from most recent measurement (Input to Equation O-9)
[_____] **IVT** (weight fraction)

Volumetric flow rate at the inlet of destruction device from previous test (Input to Equation O-9)
[_____] **IVT** (kg/hr)

Concentration of HFC-23 at the inlet of destruction device from previous test (Input to Equation O-9)
[_____] **IVT** (weight fraction)

[SAVE] [CANCEL]

Subpart C Alt Part 75
Subpart O: HCFC-22 Production and HFC-23 Destruction (2017)
Subpart Overview » Eq. O-8/9

EQUATION O-8/9 INPUTS

Use this page to enter the inputs to Equation O-8/9 for HCFC-22 Production and HFC-23 Destruction. The inputs to equations will be used for verification purposes only, and will not be stored by EPA. The results of the verification checks (the verification summary, viewable from the "Subpart Overview" page) will be stored by EPA. For additional information about the data collected on this page, please use the e-GGRT Help link(s) provided.

Input will not be stored by EPA **IVT**

EQUATION O-8 AND O-9 INPUTS

Equation O-8 $E_D = F_D - D_{23}$

Equation O-9 $D_{23} = F_D \times DE$

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

F_D	Mass of HFC-23 fed into the destruction device annually (Input to Equation O-8 and O-9)	[_____] **IVT**		(metric tons)
	Identify if destruction efficiency is entered directly, or is calculated using 98.154(l)(1), or is calculated using 98.154(l)(2)	○ Directly		
		⦿ 98.154(l)(1) Method		
		○ 98.154(l)(2) Method		
	Volumetric flow rate from destruction device from previous test (Input to Equation O-9)	[_____] **IVT** (kg/hr)		
	Concentration of HFC-23 from destruction device from most recent measurement (Input to Equation O-9)	[_____] **IVT** (weight fraction)		
	Volumetric flow rate at the inlet of destruction device from previous test (Input to Equation O-9)	[_____] **IVT** (kg/hr)		
	Concentration of HFC-23 at the inlet of destruction device from previous test (Input to Equation O-9)	[_____] **IVT** (weight fraction)		

[SAVE] [CANCEL]

98.154(I)(2) Method:

If you selected "98.154(I)(2) Method" as the calculation method, enter the values for each variable and click "SAVE".

>> *Click this link to expand*

Subpart C Alt Part 75
Subpart O: HCFC-22 Production and HFC-23 Destruction (2017)
Subpart Overview » Eq. O-8/9

EQUATION O-8/9 INPUTS

Use this page to enter the inputs to Equation O-8/9 for HCFC-22 Production and HFC-23 Destruction. The inputs to equations will be used for verification purposes only, and will not be stored by EPA. The results of the verification checks (the verification summary, viewable from the "Subpart Overview" page) will be stored by EPA. For additional information about the data collected on this page, please use the e-GGRT Help link(s) provided.

Input will not be stored by EPA **IVT**

EQUATION O-8 AND O-9 INPUTS

Equation O-8	$E_D = F_D - D_{23}$
Equation O-9	$D_{23} = F_D \times DE$

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

F_D	Mass of HFC-23 fed into the destruction device annually (Input to Equation O-8 and O-9)	[_____] **IVT** (metric tons)
	Identify if destruction efficiency is entered directly, or is calculated using 98.154(l)(1), or is calculated using 98.154(l)(2)	○ Directly ○ 98.154(l)(1) Method ◉ 98.154(l)(2) Method
	Volumetric flow rate from destruction device during current test (Input to Equation O-9)	[_____] **IVT** (kg/hr)
	Concentration of HFC-23 from destruction device during current test (Input to Equation O-9)	[_____] **IVT** (weight fraction)
	Volumetric flow rate at the inlet of destruction device during current test (Input to Equation O-9)	[_____] **IVT** (kg/hr)
	Concentration of HFC-23 at the inlet of destruction device during current test (Input to Equation O-9)	[_____] **IVT** (weight fraction)

[SAVE] [CANCEL]

You may also provide an alternate result if the IVT value does not agree with the facility's calculated value. Click on "Enter/Report Alternate Result" and provide the facility's alternate result.

Once you have completed all of your inputs, click the SAVE button.

Saving and Reloading Your Inputs Verifier File

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

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

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

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

>> *Click this link to expand*

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

>> *Click this link to expand*

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Siem Reap
Subpart S: Lime Manufacturing (2014)
Subpart Overview » Subpart S Summary Information » Equation S-1 Inputs

EQUATION S-1 PRODUCT INPUTS
Use this page to enter the inputs to equation S-1. The inputs to equations will be
used for verification purposes only, and will not be stored by EPA. The results of the
verification checks (the verification summary, viewable from the "Subpart Overview"
page) will be stored by EPA.

FACILITY'S INPUTS VERIFIER FILE   **What is the Inputs Verifier File?**

🛑 **Inputs Data Not Saved**   A file has not yet been saved for this facility. Be sure to use the "Save Inputs Data Locally" link to save a
                                      copy of your equation inputs data before you log off as e-GGRT will not save or store equation inputs
                                      data!

💾 Save Inputs Data Locally

EQUATION INPUTS (1 OF 2)

Product or By-Product Name (type)   ▶▶ **Product 1 (product)** ✅ **all inputs entered**
                                     ▶ By Product A (by-product sold) ✅ **all inputs entered**

[Equation S-4 Summary] [←PREV] [NEXT→]

Equation S-1: $EF_{LIME,i,n} = [(SR_{CaO} \times CaO_{i,n}) + (SR_{MgO} \times MgO_{i,n})] * \frac{2000}{2205}$

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

JANUARY

Calcium oxide content, determined according to §98.194(c)	0.66 (will not be stored by EPA)	(metric ton CaO/metric ton lime) Make all months same
Magnesium oxide content, determined according to §98.194(c)	0.4 (will not be stored by EPA)	(metric ton MgO/metric ton lime) Make all months same
Emission factor for lime type (calculated input to Equation S-4)	0.8659	(metric tons CO2/ton lime)
Weight or mass of lime type produced (input to Equation S-4)	520 (will not be stored by EPA)	(tons) Make all months same

DECEMBER

Calcium oxide content, determined according to §98.194(c)	0.66 (will not be stored by EPA)	(metric ton CaO/metric ton lime)
Magnesium oxide content, determined according to §98.194(c)	0.4 (will not be stored by EPA)	(metric ton MgO/metric ton lime)
Emission factor for lime type (calculated input to Equation S-4)	0.8659	(metric tons CO2/ton lime)
Weight or mass of lime type produced (input to Equation S-4)	520 (will not be stored by EPA)	(tons)

[CANCEL] [SAVE]

Entering Data Using the IVT

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

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

>> *Click this link to expand*

United States Environmental Protection Agency

Siem Reap

Subpart S: Lime Manufacturing (2014)

Subpart Overview » Subpart S Summary Information » Equation S-1 Inputs

EQUATION S-1 PRODUCT INPUTS

Use this page to enter the inputs to equation S-1. The inputs to equations will be used for verification purposes only, and will not be stored by EPA. The results of the verification checks (the verification summary, viewable from the "Subpart Overview" page) will be stored by EPA.

FACILITY'S INPUTS VERIFIER FILE

What is the Inputs Verifier File?

🚫 **Inputs Data Not Saved**

A file has not yet been saved for this facility. Be sure to use the "Save Inputs Data Locally" link to save a copy of your equation inputs data before you log off as e-GGRT will not save or store equation inputs data!

💾 Save Inputs Data Locally

EQUATION INPUTS (1 OF 2)

Product or By-Product Name (type) ▶ **Product 1 (product)** ✅ **all inputs entered**
　　　　　　　　　　　　　　　　　　▶ By Product A (by-product sold) ✅ **all inputs entered**

[Equation S-4 Summary] [←PREV] [NEXT→]

Equation S-1: $EF_{LIME,i,n} = \left[\left(SR_{CaO} \times CaO_{i,n} \right) + \left(SR_{MgO} \times MgO_{i,n} \right) \right] * \frac{2000}{2205}$

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

JANUARY

Calcium oxide content, determined according to §98.194(c)	0.66 _will not be stored by EPA_	(metric ton CaO/metric ton lime) Make all months same
Magnesium oxide content, determined according to §98.194(c)	0.4 _will not be stored by EPA_	(metric ton MgO/metric ton lime) Make all months same
Emission factor for lime type (calculated input to Equation S-4)	0.8659	(metric tons CO2/ton lime)
Weight or mass of lime type produced (input to Equation S-4)	520 _will not be stored by EPA_	(tons) Make all months same

DECEMBER

Calcium oxide content, determined according to §98.194(c)	0.66 _will not be stored by EPA_	(metric ton CaO/metric ton lime)
Magnesium oxide content, determined according to §98.194(c)	0.4 _will not be stored by EPA_	(metric ton MgO/metric ton lime)
Emission factor for lime type (calculated input to Equation S-4)	0.8659	(metric tons CO2/ton lime)
Weight or mass of lime type produced (input to Equation S-4)	520 _will not be stored by EPA_	(tons)

[CANCEL] [SAVE]

Saving Data Entered in the IVT

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

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

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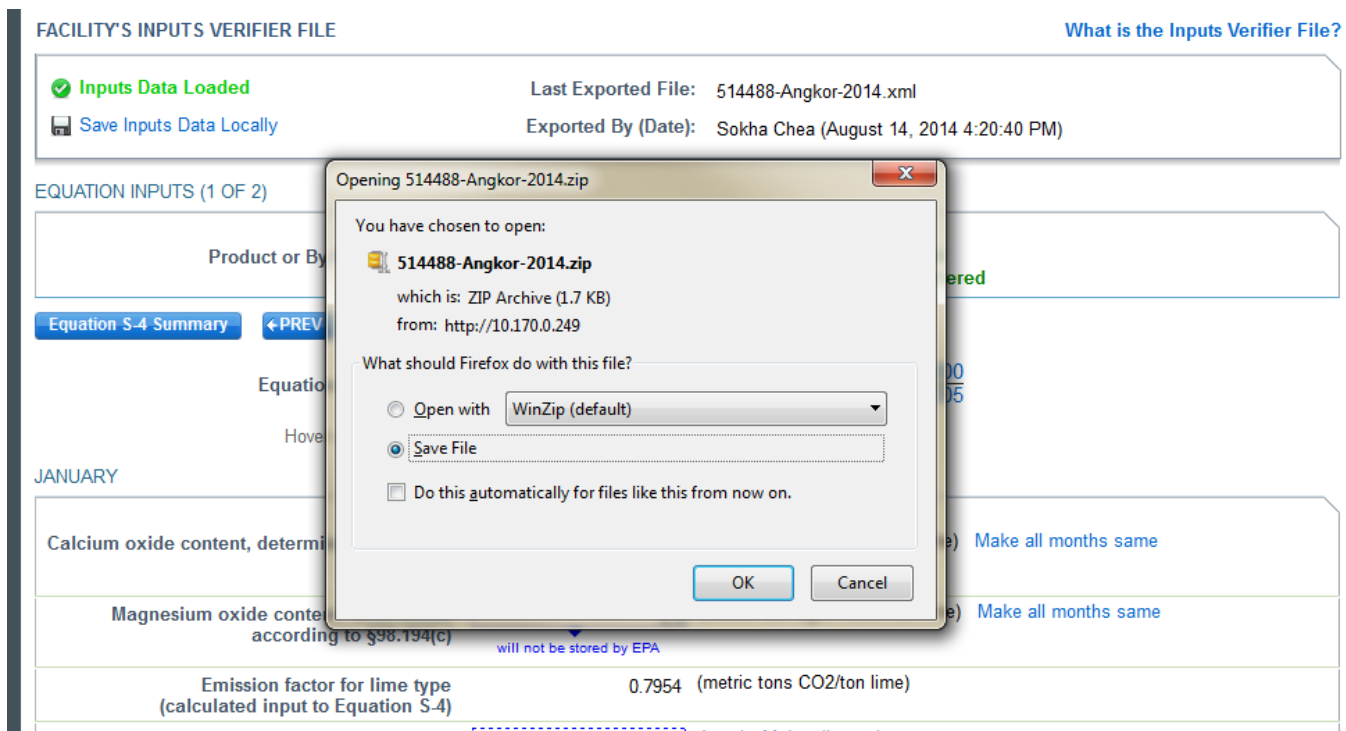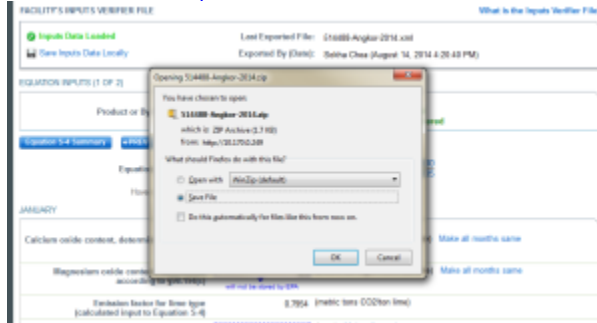
Once you have saved the file, the inputs verifier file status box will display "**Inputs Data Saved**" in green text and the "Saved By (Date):" field that shows the name of the user who most recently saved an inputs verifier file and the date and time." Each time you click "Save Inputs Data Locally",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

Reloading an Inputs Verifier File

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

Temporarily load Inputs Verifier data

Last Saved File: 515408-Subpart_C-2015-v4.0.5
Saved By (Date): Vincent Vega (February 17, 2016 10:52 AM)

To proceed, locate the Last Saved File above with the Browse (or Choose File) field below and click LOAD.

Choose File   No file chosen

LOAD   CANCEL

If you are unable to locate the Last Saved File above, or know it to be lost:
1. You may load an older version of your inputs file. Doing so will require the system to re-calculate and re-validate all equations based on the inputs contained in that inputs file version.
2. You may "reset" your facility. The reset process will enable you to enter this subpart; but, the reset process will remove ALL previously calculated Inputs Verifier Tool results and will require you to re-enter ALL Inputs Verifier Tool equation inputs data for ALL of this facility's subparts.

RESET FACILITY

Temporarily load Inputs Verifier data

Last Saved File: 515408-Subpart_C-2015-v4.0.5
Saved By (Date): Vincent Vega (February 17, 2016 10:52 AM)

To proceed, locate the Last Saved File above with the Browse (or Choose File) field below and click LOAD.

Choose File   No file chosen

LOAD   CANCEL

If you are unable to locate the Last Saved File above, or know it to be lost:
1. You may load an older version of your inputs file. Doing so will require the system to re-calculate and re-validate all equations based on the inputs contained in that inputs file version.
2. You may "reset" your facility. The reset process will enable you to enter this subpart; but, the reset process will remove ALL previously calculated Inputs Verifier Tool results and will require you to re-enter ALL Inputs Verifier Tool equation inputs data for ALL of this facility's subparts.

RESET FACILITY

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

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

CANCEL   I WOULD LIKE TO UPLOAD THIS FILE

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

CANCEL   **I WOULD LIKE TO UPLOAD THIS FILE**

Screen Errors You May Receive

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

>> *Click this link to expand*

Angkor

Subpart S: Lime Manufacturing (2014)

Subpart Overview » Subpart S Summary Information » Equation S-1 Inputs

EQUATION S-1 PRODUCT INPUTS

Use this page to enter the inputs to equation S-1. The inputs to equations will be used for verification purposes only, and will not be stored by EPA. The results of the verification checks (the verification summary, viewable from the "Subpart Overview" page) will be stored by EPA.

FACILITY'S INPUTS VERIFIER FILE   **What is the Inputs Verifier File?**

🛇 **Inputs Data Not Saved**   A file has not yet been saved for this facility. Be sure to use the "Save Inputs Data Locally" link to save a copy of your equation inputs data before you log off as e-GGRT will not save or store equation inputs data!

💾 Save Inputs Data Locally

EQUATION INPUTS (1 OF 2)

Product or By-Product Name (type)   ⏵⏵ **Product 1 (product)** ✅ **all inputs entered**
                                      ⏵ By Product (by-product sold) ✅ all inputs entered

[Equation S-4 Summary] [← PREV] [NEXT →]

SCREEN ERRORS
❌ Calcium oxide content for July, determined according to §98.194(c). This data element is required. Please enter the required data or click CANCEL.

Equation S-1: $EF_{LIME,i,n} = [(SR_{CaO} \times CaO_{i,n}) + (SR_{MgO} \times MgO_{i,n})] * \frac{2000}{2205}$

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

JANUARY

Calcium oxide content, determined according to §98.194(c)	1 (will not be stored by EPA)	(metric ton CaO/metric ton lime) Make all months same
Magnesium oxide content, determined according to §98.194(c)	1 (will not be stored by EPA)	(metric ton MgO/metric ton lime) Make all months same
Emission factor for lime type (calculated input to Equation S-4)	1.7021	(metric tons CO2/ton lime)

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

>> *Click this link to expand*

WARNING! You have not saved data entered into the Inputs Verifier Tool.

If you wish to save this data before logging out, click SAVE INPUTS to return to e-GGRT. If you proceed to logout this data will be discarded as it is not saved by e-GGRT.

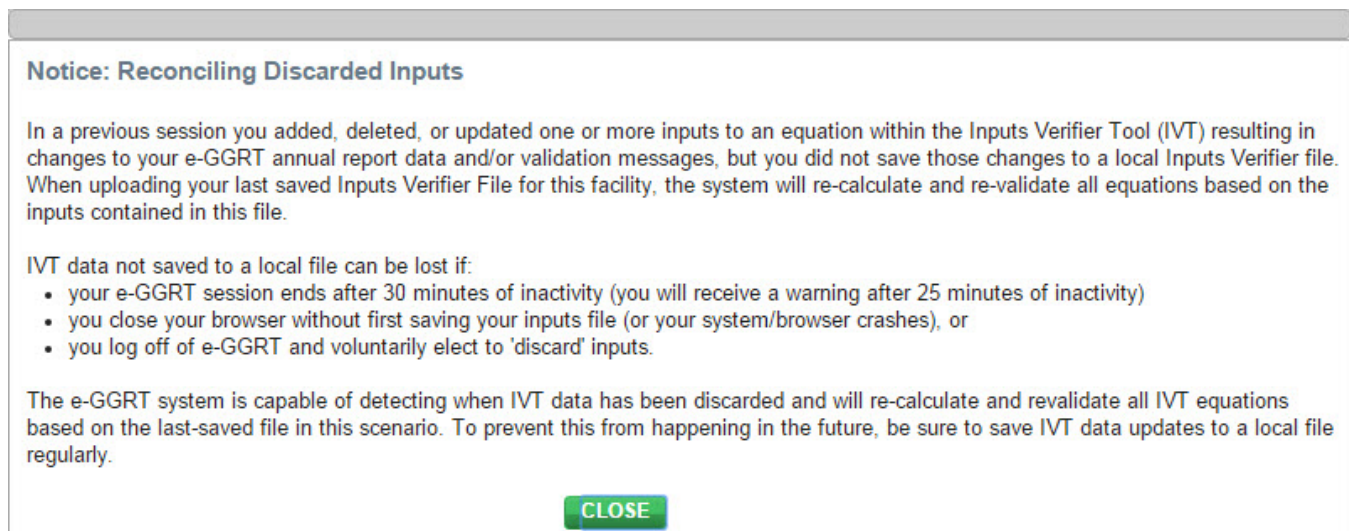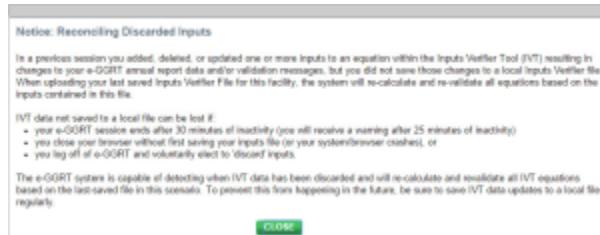[SAVE INPUTS AND LOGOUT] [LOGOUT - DISCARD EQUATION INPUTS DATA] [CANCEL]

The user has three options:

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

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

>> *Click this link to expand*

Notice: Reconciling Discarded Inputs

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

IVT data not saved to a local file can be lost if:
- your e-GGRT session ends after 30 minutes of inactivity (you will receive a warning after 25 minutes of inactivity)
- you close your browser without first saving your inputs file (or your system/browser crashes), or
- you log off of e-GGRT and voluntarily elect to 'discard' inputs.

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

CLOSE

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

FACILITY'S INPUTS VERIFIER FILE   What is the Inputs Verifier File?

🛑 Inputs Data Not Loaded   Last Saved File: 516069-MLH__Resources-2014.xml

💾 Temporarily Load Inputs Data   Saved By (Date):   M Huppert (October 20, 2014 11:28 AM)

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

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

CANCEL   I WOULD LIKE TO UPLOAD THIS FILE