

# Subpart Q Emissions Information for Units NOT Monitored by CEMS for RY2014 and Later Years

This page provides step-by-step instructions on how to enter and edit Subpart Q Iron and Steel Production emissions information for process units that are NOT monitored by a Continuous Emissions Monitoring System (CEMS).

## Step 1. Select a Process Unit

To select a process unit NOT monitored by CEMS for which to enter emissions data, find the unit in the UNITS table and click OPEN.



If the CO<sub>2</sub> process emissions from the selected unit will be estimated using the **carbon mass balance method**, proceed to Section A - Carbon Mass Balance Method and execute **steps A1-A5** for each type of process unit.

If the CO<sub>2</sub> process emissions from the selected unit will be estimated using the **site-specific emission factor method**, proceed to Section B - Site-specific Emission Factor Method and execute **steps B1-B3** for each process unit.

>> [Click this link to expand](#)

The screenshot shows the EPA e-GGRT (Electronic Greenhouse Gas Reporting Tool) interface for Subpart Q reporting. The user is logged in as Matt Foley. The main heading is "Matt Foley's Rocking Facility" and "Subpart Q: Iron and Steel Production (2014)".

**OVERVIEW OF SUBPART Q REPORTING REQUIREMENTS**

Subpart Q requires affected facilities to report carbon dioxide (CO<sub>2</sub>) from each taconite indurating furnace, basic oxygen furnace, non-recovery coke oven battery combustion stack, coke pushing operation, sinter process, electric arc furnace, decarburization vessel and direct reduction furnace. Within this module, you must also report CO<sub>2</sub> emissions from flares that burn blast furnace gas and coke oven gas according to procedures set out in Subpart Y of Part 98. First, under the heading "Units" below, use this page to identify each taconite indurating furnace, basic oxygen process furnace, non-recovery coke oven battery, sinter process, decarburization vessel, direct reduction furnace and electric arc furnace. Similarly, identify coke pushing operations and flares under their respective headings. After adding a process unit, coke pushing operation or flare, click on "Open" to enter Greenhouse gas (GHG) data required by Subpart Q. Annual mass of fuel consumed, non-fuel consumed, products and by products used, are summed across all units at a facility for which the mass balance method were used. For additional information about Subpart Q reporting and Subpart Y, please use the e-GGRT Help link(s) provided in the sidebar.

**SUBPART Q SUMMARY INFORMATION FOR THIS FACILITY**

Annual mass of fuel consumed (metric tons)	Annual mass of non-fuel consumed (metric tons)	Annual mass of products and byproducts used (metric tons)

[OPEN](#)

**UNITS**

Add any of the following as units: taconite indurating furnace, basic oxygen process furnace, non-recovery coke oven battery, sinter process, electric arc furnace, decarburization vessel and direct reduction furnace.

Name/ID	Type	CO <sub>2</sub> (metric tons)	Status <sup>1</sup>	Delete
No Units Present				

[ADD a Unit](#)

**UNIT SUMMARY (Units monitored by CEMS)**

Name/ID	Type	Status <sup>1</sup>	Delete
No units have been added			

[ADD a CEMS Unit](#)

**COKE PUSHING OPERATIONS**

Name/ID	Type	CO <sub>2</sub> (metric tons)	Status <sup>1</sup>	Delete
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[ADD a Coke Pushing Operation](#)

**FLARES**

Name/ID	Type	CO <sub>2</sub> (metric tons)	Status <sup>1</sup>	Delete
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[ADD a Flare](#)

[Facility Overview](#)

<sup>1</sup>A status of "Incomplete" means that one or more required data elements are incomplete. For details, refer to the Data Completeness validation messages in your Validation Report by clicking the "View Validation" link above (note: if there are no validation messages for this subpart you will not see this link).

Page: Paperwork Reduction Act Burden Statement | Contact Us | e-GGRT RY2014 R20 | Q(overview)

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Using e-GGRT for Subpart Q reporting

Matt Foley's Rocking Facility

Subpart Q: Iron and Steel Production (2014)

Subpart Overview

OVERVIEW OF SUBPART Q REPORTING REQUIREMENTS

Subpart Q requires affected facilities to report carbon dioxide (CO<sub>2</sub>) from each taconite indurating furnace, basic oxygen furnace, non-recovery coke oven battery combustion stack, coke pushing operation, sinter process, electric arc furnace, decarburization vessel and direct reduction furnace. Within this module, you must also report CO<sub>2</sub> emissions from flares that burn blast furnace gas and coke oven gas according to procedures set out in Subpart Y of Part 98. First, under the heading "Units" below, use this page to identify each taconite indurating furnace, basic oxygen process furnace, non-recovery coke oven battery, sinter process, decarburization vessel, direct reduction furnace and electric arc furnace. Similarly, identify coke pushing operations and flares under their respective headings. After adding a process unit, coke pushing operation or flare, click on "Open" to enter Greenhouse gas (GHG) data required by Subpart Q. Annual mass of fuel consumed, non-fuel consumed, products and by products used, are summed across all units at a facility for which the mass balance method were used. For additional information about Subpart Q reporting and Subpart Y, please use the e-GGRT Help link(s) provided in the sidebar.

Subpart Q: View Validation

SUBPART Q SUMMARY INFORMATION FOR THIS FACILITY

Annual mass of fuel consumed (metric tons)	Annual mass of non-fuel consumed (metric tons)	Annual mass of products and byproducts used (metric tons)	
			OPEN

UNITS

Add any of the following as units: taconite indurating furnace, basic oxygen process furnace, non-recovery coke oven battery, sinter process, electric arc furnace, decarburization vessel and direct reduction furnace.

Name/ID	Type	CO <sub>2</sub> (metric tons)	Status <sup>1</sup>	Delete
No Units Present				

ADD a Unit

UNIT SUMMARY (Units monitored by CEMS)

Name/ID	Type	Status <sup>1</sup>	Delete
No units have been added			

ADD a CEMS Unit

COKE PUSHING OPERATIONS

Name/ID	Type	CO <sub>2</sub> (metric tons)	Status <sup>1</sup>	Delete
---------	------	-------------------------------	---------------------	--------

ADD a Coke Pushing Operation

FLARES

Name/ID	Type	CO <sub>2</sub> (metric tons)	Status <sup>1</sup>	Delete
---------	------	-------------------------------	---------------------	--------

ADD a Flare

Facility Overview

<sup>1</sup>A status of "Incomplete" means that one or more required data elements are incomplete. For details, refer to the Data Completeness validation messages in your Validation Report by clicking the "View Validation" link above (Note: if there are no validation messages for this subpart you will not see this link).

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## Section A - Carbon Mass Balance Method

### Step A1: Access the Inputs Verifier Tool (IVT)

For each process unit that is NOT monitored by CEMS at your facility and for which CO<sub>2</sub> process emissions will be estimated using the carbon mass balance method, Subpart Q requires the following emissions information:

- The annual CO<sub>2</sub> process emissions (the results from Equation Q-1, Q-2, Q-3, Q-4, Q-5, Q-6, or Q-7 in metric tons)

In the Equation Summary and Result section, you will see a block labeled "Use Inputs Verifier to calculate" and a green "Go" button. Click "Go" to open the inputs verifier module for Subpart Q.

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Using e-GGRT for Subpart Q reporting

### Matt Foley's Rocking Facility

## Subpart Q: Iron and Steel Production (2014)

[Subpart Overview](#) » [Direct Reduction Furnace](#) » [GHG Info](#)

#### GREENHOUSE GAS DATA AND ASSOCIATED INFORMATION

Use this page to enter the GHG data required by Subpart Q. Please enter the information shown for this taconite indurating furnace, basic oxygen process furnace, non-recovery coke oven battery, sinter process, decarburization vessel, direct reduction furnace or electric arc furnace, as applicable. For additional information about the data collected on this page, please use the e-GGRT Help link(s) provided.

Annual CO<sub>2</sub> mass emissions from the Direct Reduction Furnace (metric tons)

#### EQ. Q-7: CO<sub>2</sub> EMISSIONS CALCULATION

Use equation Q-7 to calculate annual CO<sub>2</sub> mass emissions for this Direct Reduction Furnace.

#### FACILITY'S INPUTS VERIFIER FILE

**What is the Inputs Verifier File?**

**No inputs verifier file exists**

**Instructions:** No Inputs Verifier file exists because you have not yet begun data entry of equation inputs. After entering equation inputs you will be able to save a file copy of the inputs you have entered to your computer. **It is important to save a copy before you log off as e-GGRT will not save or store equation inputs data!** For more information use the "What is the Inputs Verifier File?" link provided.

#### EQUATION Q-7 SUMMARY AND RESULT

$$\text{CO}_2 = \frac{44}{12} \left[ (F_{\text{D}}) \times (C_{\text{D}}) + \left( \frac{\text{MW}}{\text{MVC}} \times 0.001 \times (\text{Ore}) \times (C_{\text{Ore}}) + (\text{Carbon}) \times (C_{\text{Carbon}}) + (\text{Other}) \times (C_{\text{Other}}) - ((\text{Iron}) \times (C_{\text{Iron}}) - (\text{NM}) \times (C_{\text{NM}}) - (\text{R}) \times (C_{\text{R}})) \right]
 \right.$$

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

Annual CO<sub>2</sub> mass emissions (metric tons)

Use Inputs Verifier to calculate

#### INPUT: GASEOUS FUEL - FUEL 1

☐ Annual mass or volume is based on one or more substitute monthly data values

Number of months that missing data procedures were followed, if applicable

Method used to develop the substitute data value(s), if applicable

Carbon content determination method

Select "other" ONLY when identifying the methods used to determine carbon content of process inputs that are FUELS (see monitoring and QA/QC requirements for fuel inputs in 98.174(b)(2)(iv) and reporting requirement 98.176(e)(2)).

#### OUTPUT: IRON PRODUCED - OUTPUT 1

☐ Annual mass or volume is based on one or more substitute monthly data values

Number of months that missing data procedures were followed, if applicable

Method used to develop the substitute data value(s), if applicable

Carbon content determination method

Select "other" ONLY when identifying the methods used to determine carbon content of process outputs that are FUELS (see monitoring and QA/QC requirements for fuel outputs in 98.174(b)(2)(iv) and reporting requirement 98.176(e)(2)).

CANCEL

SAVE

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### Matt Foley's Rocking Facility

## Subpart Q: Iron and Steel Production (2014)

[Subpart Overview](#)
» [Direct Reduction Furnace](#)
» [GHG Info](#)

#### GREENHOUSE GAS DATA AND ASSOCIATED INFORMATION

Use this page to enter the GHG data required by Subpart Q. Please enter the information shown for this taconite indurating furnace, basic oxygen process furnace, non-recovery coke oven battery, sinter process, decarbonization vessel, direct reduction furnace or electric arc furnace, as applicable. For additional information about the data collected on this page, please use the e-GGRT Help link(s) provided.

Annual CO<sub>2</sub> mass emissions from the Direct Reduction Furnace (metric tons)

#### EQ. Q-7: CO<sub>2</sub> EMISSIONS CALCULATION

Use equation Q-7 to calculate annual CO<sub>2</sub> mass emissions for this Direct Reduction Furnace.

#### FACILITY'S INPUTS VERIFIER FILE

**No inputs verifier file exists**

**Instructions:** No Inputs Verifier file exists because you have not yet begun data entry of equation inputs. After entering equation inputs you will be able to save a file copy of the inputs you have entered to your computer. **It is important to save a copy before you log off as e-GGRT will not save or store equation inputs data!** For more information use the "What is the Inputs Verifier File?" link provided.

#### EQUATION Q-7 SUMMARY AND RESULT

$$CO_2 = \frac{44}{12} \times \left[ (F_p) \times (C_{gl}) \times \frac{MW}{MVC} \times 0.001 + (Ore) \times (C_{Ore}) + (Carbon) \times (C_{Carbon}) + (Other) \times (C_{Other}) - (Iron) \times (C_{Iron}) - (NM) \times (C_{NM}) - (R) \times (C_R) \right]$$

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

Annual CO<sub>2</sub> mass emissions (metric tons)
 (metric tons)

Use Inputs Verifier to calculate
GO

#### INPUT: GASEOUS FUEL - FUEL 1

Annual mass or volume is based on one or more substitute monthly data values ☐

Number of months that missing data procedures were followed, if applicable  (months)

Method used to develop the substitute data value(s), if applicable

Carbon content determination method  Select

Select "other" ONLY when identifying the methods used to determine carbon content of process inputs that are FUELS (see monitoring and QA/QC requirements for fuel inputs in 98.174(b)(2)(vi) and reporting requirement 98.176(e)(2)).

#### OUTPUT: IRON PRODUCED - OUTPUT 1

Annual mass or volume is based on one or more substitute monthly data values ☐

Number of months that missing data procedures were followed, if applicable  (months)

Method used to develop the substitute data value(s), if applicable

Carbon content determination method  Select

Select "other" ONLY when identifying the methods used to determine carbon content of process outputs that are FUELS (see monitoring and QA/QC requirements for fuel outputs in 98.174(b)(2)(vi) and reporting requirement 98.176(e)(2)).

CANCEL
SAVE

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## Step A2: Enter Equation Inputs in IVT

See [Subpart Q Entering Equation Inputs Using IVT](#) for instructions on how to enter your equation inputs in the inputs verifier module.

After entering your equation inputs in the inputs verifier module, the results will be displayed on the Greenhouse Gas Data and Associated Information page.

NOTE: If you wish to report your own result, click on the "Enter/Report Alternate Result" check box and enter the data in the "Enter Own Result" field.

## Step A3: Input and Output Substitute Data

For each input and output assigned to the process unit, enter the following substitute data information:

- Annual mass or volume is based on one or more substitute monthly data values. If this is not selected or is not applicable, you must enter zero, "0" in the box for the number of months with missing data. If you do not remember, you will receive a UNIT level validation message indicating that you have not completed entering data on this form in the validation report.
- Number of months that missing data procedures were followed, if applicable
- Method used to develop the substitute data value(s), if applicable. Enter information only if you applied missing data procedures, otherwise leave blank.
- Carbon content determination method, selected from the following, be sure the method selected is appropriate to the material being tested:
  - Supplier
  - ASTM C25-06
  - ASTM D5373-08
  - ASTM E1915-07a
  - ASTM E1019-08
  - ASM CS-104 UNS No. G10460
  - ISO/TR 15349-3:1998
  - Other (specify)

## Step A4: Save Your Data

When you have finished entering annual emissions, inputs and outputs and identifying whether substitute data were used to determine mass or volume of input/outputs, click SAVE. You will then return to the Subpart Overview page and you should see the status of data entry for the unit change to "Complete" in the Status column in the UNITS table.

After you save the data on this page, the next time you open the page, the calculator on the top of the page will display the CO<sub>2</sub> process emissions, rounded to the nearest 0.1 of a metric ton. The value displayed is for informational purposes only.

## Step A5: Repeat Steps A1-A4

Repeat Steps A1-A4 until data have been entered for all process units NOT monitored by CEMS for which emissions were estimated using the carbon mass balance methods provide in the rule.

## Section B - Site-specific Emission Factor Method

### Step B1. Access the Inputs Verifier Tool (IVT)

For each process unit that is NOT monitored by CEMS at your facility and for which CO<sub>2</sub> process emissions will be estimated using the site-specific emission factor method, Subpart Q requires the following emissions information:

- The annual CO<sub>2</sub> process emissions (the results from Equation Q-8 and associated procedures in 98.73(b)(2)(i)-(iv) multiplied by the total amount of feed or production, as applicable, for the reporting period, in metric tons)
- The number of times that missing data procedures were followed and the performance test was repeated to determine the site-specific emission factor
- The number of times that missing data procedures were followed or the performance test was repeated to determine the site-specific emission factor
- Average hourly CO<sub>2</sub> emission rate during test (in metric tons/hour)

In the Annual Result section, you will see a block labeled "Use Inputs Verifier to calculate" and a green "Go" button. Click "Go" to open the inputs verifier module for Subpart Q.

For assistance in calculating the average hourly CO<sub>2</sub> emission rate during test, access the calculation spreadsheets for this subpart by clicking the link titled "Use Q EF spreadsheet to calculate," located below the "Average hourly CO<sub>2</sub> emission rate during test" data entry box, then follow the instructions provided (*Note that the Equation Q-8 EF Approach Calculation Spreadsheet executes the additional step of dividing the result of Equation Q-8 by the total amount of feed or production, as applicable and required by the rule, for the reporting period to calculate annual CO<sub>2</sub> process emissions for the process unit*).

When you have finished entering the required emissions data, click SAVE.

After you save the data on this page, the next time you open the page, the calculator on the top of the page will display the CO<sub>2</sub> process emissions, rounded to the nearest 0.1 of a metric ton.

### Step B2: Enter Equation Inputs in IVT

See [Subpart Q Entering Equation Inputs Using IVT](#) for instructions on how to enter your equation inputs in the inputs verifier module.

### Step B3: Repeat Steps B1-B2

Repeat Steps B1-B2 until data have been entered for all process units for which emissions were estimated using the site-specific emission factor method.

When you have finished entering the required emissions data, click SAVE.

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**EPA** United States Environmental Protection Agency

**e-GGRT** Electronic Greenhouse Gas Reporting Tool

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**Subpart Q: Iron and Steel Production (2014)**

Subpart Overview » EAF/Decarburization Vessel Exhausting to Common Stack/Vent » GHG Info

**CO<sub>2</sub> EMISSIONS USING SITE SPECIFIC METHOD**

Use the method in §98.173(b)(2) to determine the annual CO<sub>2</sub> mass emissions.

Annual CO<sub>2</sub> mass emissions from the EAF/Decarburization Vessel Exhausting to Common Stack/Vent (metric tons)

**FACILITY'S INPUTS VERIFIER FILE**

**No inputs verifier file exists**

Instructions: No Inputs Verifier file exists because you have not yet begun data entry of equation inputs. After entering equation inputs you will be able to save a file copy of the inputs you have entered to your computer. **It is important to save a copy before you log off as e-GGRT will not save or store equation inputs data!** For more information use the "What is the Inputs Verifier File?" link provided.

**ANNUAL RESULT**

Annual CO<sub>2</sub> mass emissions (metric tons)  (metric tons)

Use Inputs Verifier to calculate **GO**

The number of times that missing data procedures were followed and the performance test was repeated to determine the site-specific emission factor  (months)

Average hourly CO<sub>2</sub> emission rate during test  (metric tons/hour)

Use Q EF spreadsheet to calculate

**CANCEL SAVE**

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**EPA** United States Environmental Protection Agency

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[Back to Top](#)

## See Also

[Using e-GGRT to Prepare Your Subpart Q Report for RY2014 and Later Years](#)

- [Subpart Q Summary Information for this Facility for RY2014 and Later Years](#)
- [Subpart Q Process Unit Information for Units NOT Monitored by CEMS for RY2014 and Later Years](#)
- [Subpart Q Process Unit Information for Units Monitored by CEMS for RY2014 and Later Years](#)
- [Subpart Q Coke Pushing Operations Information for RY2014 and Later Years](#)
- [Subpart Q Flares Information for RY2014 and Later Years](#)
- [Subpart Q Emissions Information for Units NOT Monitored by CEMS for RY2014 and Later Years](#)
- [Subpart Q Emissions Information for Units Monitored by CEMS for RY2014 and Later Years](#)
- [Subpart Q Emissions Information for Coke Pushing Operations for RY2014 and Later Years](#)
- [Subpart Q Emissions Information for Flares for RY2014 and Later Years](#)
- [Subpart Q Entering Equation Inputs Using IVT](#)

[Screen Errors](#)

[Subpart Validation Report](#)