

Greenhouse Gas Reporting Program

XML Reporting Instructions for Subpart PP – Suppliers of Carbon Dioxide

United States Environmental Protection Agency
Climate Change Division
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These instructions explain how to report the required data for the applicable regulations. Owners and operators of units should refer to the applicable regulations for information about what data are required to be reported.

EPA has finalized a rule that defers the deadline for reporting data elements used as inputs to emission equations for direct emitters. (See <http://www.epa.gov/climatechange/emissions/notices.html> for a pre-publication version of the rule). In accordance with the rule, e-GGRT is not currently collecting data used as inputs to emission equations.

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I. Introduction

The U.S. Environmental Protection Agency's (EPA's) electronic greenhouse gas reporting tool (e-GGRT) extensible markup language (XML) Reporting Schema contains all of the data elements needed to comply with the Greenhouse Gas Reporting Program (GHGRP) beginning with the 2010 data collection year. The XML schema defines expected data elements and attributes, allowable data formats for each data element, and the hierarchical structure and sequence in which data elements must appear in the XML file. Similar to an architectural blueprint that describes the structural design of a house, an XML schema describes the structural design of an XML file. In some cases, it also defines which elements are optional and which are required and the maximum number of occurrences allowed for each element.

The e-GGRT XML schema is made up of a root data element (GHG) and complex and simple data elements. A simple element is a single piece of data. A complex element is a group of simple elements which are logically grouped together. The root data element is the base of the XML schema.

The schema's structure can be thought of as a family tree. The elements are related to each other in parent-child relationships. The root element is the parent element of the entire schema. Complex elements are children of the root element, and complex elements can also be children of other complex elements. The XML upload method may be used for reporting a facility or supplier's annual greenhouse gas (GHG) data; however, the following actions can only be performed using the e-GGRT web forms:

- User, facility and supplier registration
- Certificate of Representation and Notice of Delegation signing
- Facility representative and agent changes
- Facility and supplier address changes
- Notice of intent to not submit an annual GHG report

All XML files submitted to e-GGRT must be well formed and will be accepted only if they conform to the current version of the e-GGRT XML schema.

An XML submission must only contain GHG data for a single facility or supplier. All data for a facility or supplier must be submitted in a single file as a complete report and must include all of the relevant Subparts. It is not possible to submit a subset of any portion of a facility's data to add, delete, correct or update. The entire report must be resubmitted to make any modification at all. Each subsequent submission for the same facility replaces all of the previously submitted data.

The e-GGRT XML schema contains enumerated lists of the units of measures for some data elements and allowable values for some data elements. For rules regarding the unit of measure or allowable values for a specific data element, please refer to the appropriate Data Element Definitions table.

The e-GGRT XML Reporting Schema is available for download at the e-GGRT help website: <http://www.ccdsupport.com/confluence/display/help/XML+Reporting+Instructions>. The zip file contains:

- **GHG_Final.xsd and Included Files**
- **SchemaChanges.xlsx**

Table 1
Reporting Numbers

Number Format	Description
Rounding	<ul style="list-style-type: none"> • CO₂e and CO₂ emissions data expressed in metric tons should be rounded to one decimal place. This should be done regardless of the level of data collection (e.g., unit-level, facility-level). Quantities less than 0.05 metric tons would round to 0.0 and be reported as such. Quantities greater than or equal to 0.05 metric tons would round up to 0.1 and be reported as such. • CH₄ emissions data expressed in metric tons should be rounded to two decimal places. • N₂O emissions data expressed in metric tons should be rounded to three decimal places. • Emissions data for all GHGs other than CO₂, N₂O and CH₄ expressed in metric tons should be rounded to the fourth digit to the right of the decimal (one tenth of a kilogram, or 1 ten thousandth of a metric ton). This rounding should be applied regardless of the level of data collection (unit, facility, etc.). • Other (non-emissions) quantitative data reported by the user (e.g., a monthly HHV sample result, an annual production quantity) will not need to be rounded. • In the case of aggregation/roll-ups, those calculations should be performed on the rounded values.
Percentages	If a value must be reported as a percentage, then the number should be within the range of 0 to 100 (percent), e.g. 85.5% should be reported as 85.5.
Fractions	If a value must be reported as a decimal fraction, then the number should be within the range of 0 and 1, e.g., 1/4 should be reported as 0.25. Leading zeroes are optional.

Key XML Terms

- XML: A markup language for documents containing structured information. The XML specification defines a standard way to add markup to documents. Its primary purpose is to facilitate the sharing of structured data across different information systems, particularly via the internet.
- XML Schema: An XML schema describes the structure of an XML document. The schema also defines the set of rules to which the XML document must conform in order to be considered "valid".
- XML file: A file containing data organized into a structured document using XML markup.

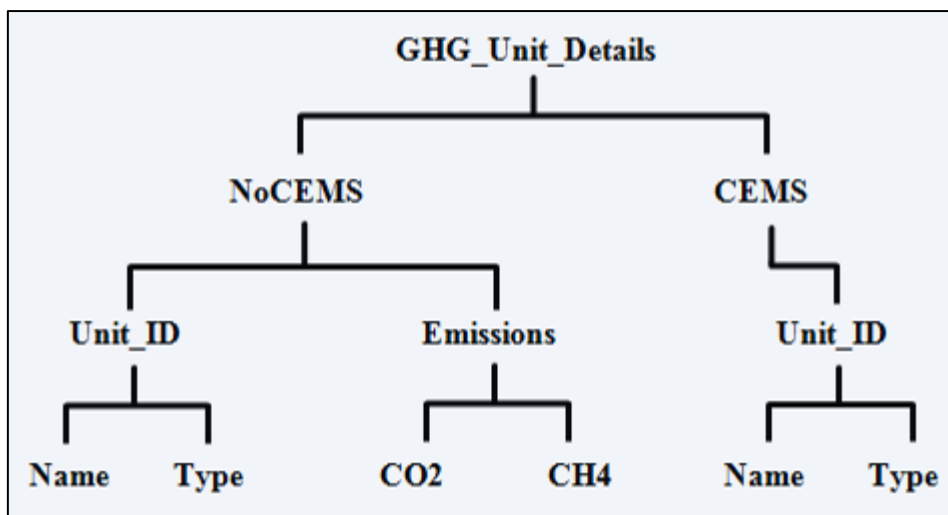
- **Data Element:** An XML data element is used for storing and classifying data in an XML file. Opening and closing tags represent the start and end of a data element. An opening tag looks like <elementName>, while a closing tag has a slash that is placed before the element's name </elementName>. The following example shows how to report the facility's identification number: <FacilitySiteIdentifier>23222</FacilitySiteIdentifier>. The information shaded in blue represents the data element's value.

If a data element does not contain a value, then a single empty tag name may be used. An empty tag has a slash placed after the element's name <FacilitySiteIdentifier/>. **Note:** If you do not intend to report a value for a particular data element, then it is recommended that you do not include the data element in the XML file.

- **Attribute:** An XML attribute contains additional information about a specific data element. An attribute for a data element is placed within the opening tag. The syntax for including an attribute in an element is <elementName attributeName="value">. For example, <TotalCH4CombustionEmissionsmassUOM="Metric Tons">.
- **Root/Parent/Child Element:** The schema's structure can be thought of as a family tree. At the top of the tree is some early ancestor and at the bottom of the tree are the latest children. With a tree structure you can see which children belong to which parents and many other relationships.

XML data elements are sometimes referenced in terms of how they relate to each other, e.g., parent-child relationships, within the schema's tree structure, also known as hierarchy. The top of the XML tree is considered the root – it is the parent to all data elements within the schema. In the example below, "GHG_Unit_Details" is the root, and just like in many other family trees, there is more than one item with the same name (e.g., "Unit_ID"). The easiest way to distinguish these items is by referencing them in terms of their parent-child relationships, e.g., NoCEMS /Unit_ID vs. CEMS/Unit_ID.

Figure 1
Example of an XML Tree



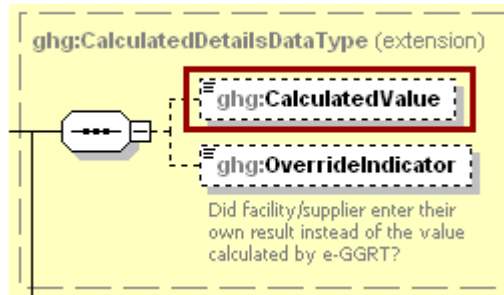
This document provides a step-by-step description of how to report emissions data using the XML schema. Please note the following:

- **Non-applicable data elements should not be included in the facility's XML file.** The schema contains many data elements, some of which may not be applicable to XML reporters in general or to a particular situation. If a data element is not referenced in the instructions (definition tables), then **do not** report or include it in the facility's XML file.
- **Data elements must be reported in a specific order.** The figures and tables in this document depict the specific sequence in which data elements must be arranged in the facility's XML file in order to produce a well-formed XML report.
- **Enumerations are case sensitive.** Many data elements have a defined set of allowable values, also known as enumerations. Values for enumerations must be entered exactly as they are defined within the schema (including punctuation marks) in order to be accepted by schema validation. See the definition tables for a complete list of enumerations.
- **Schema diagrams depict the hierarchy (or tree structure).** The primary purpose of the schema diagrams is to indicate the sequence in which data elements must appear within the facility's XML file and to identify the data elements that are required (must be reported) and conditionally required (see last bullet). Required data elements are boxed in red and conditionally required data elements are noted.
- **Definition tables provide details for required and conditionally required data elements.** The tables are designed to provide unique instructions for reporting a given data element, including the list of enumerations and required units of measure, if defined. As noted above, there are some data elements in the schema that are not applicable to XML reporters or to a particular situation. For example, the "OverrideIndicator" data element is used solely by e-GGRT to indicate that the web form reporter chose to override the system's calculated value with their own. These non-applicable data elements **are not** included in the definition tables. If a data element is not referenced in a definition table, then **do not** report or include it in the facility's XML file.
- **Commonly used data types are not depicted in the schema diagrams nor listed separately in the definition tables.** The schema diagrams display almost every data element in the schema except those that are associated with the three most commonly occurring data types:
 - Calculated Details
 - Measurement Details
 - Unit Identification Details

Once defined, these data types (static collection of data elements) are then associated as children to every data element in the schema containing a measured or calculated value or unit details. These child data elements do not appear in the diagrams and are not listed on separate rows in the definition tables in order to reduce their redundancy. They are however, referenced in the tables in the description of their parent data element. See Figures 2-4 and Tables 2-4.

- **Some data elements are conditionally required.** Data elements which are conditionally required are noted in the schema diagrams and the data element definitions tables. If your facility meets the condition specified for the data element, then the data element is required and you must report it in the facility's XML file. If your facility does not meet the condition specified for the data element, then **do not** include the data element in the facility's XML file. If a parent element is not required, then **do not** include any of its child data elements in the facility's XML file.

Figure 2
Calculated Details Data Type Schema Diagram

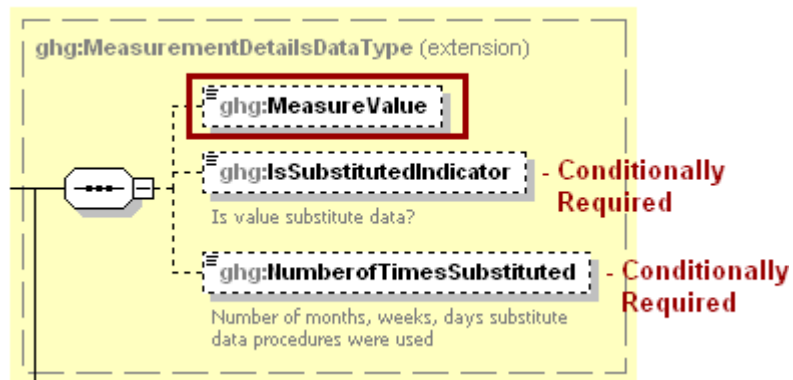


Note: Data elements boxed in red are required.

Table 2
Calculated Details Data Element Definitions

Data Element Name	Description
CalculatedDetailsDataType	
CalculatedValue	Calculated value (decimal).
OverrideIndicator	Note: Do not include this data element in the facility’s XML file because it only applies to web form reporters. It is a flag set by e-GGRT to indicate that the system-calculated value was overridden with the web form reporter’s value.

Figure 3
Measurement Details Data Type Schema Diagram

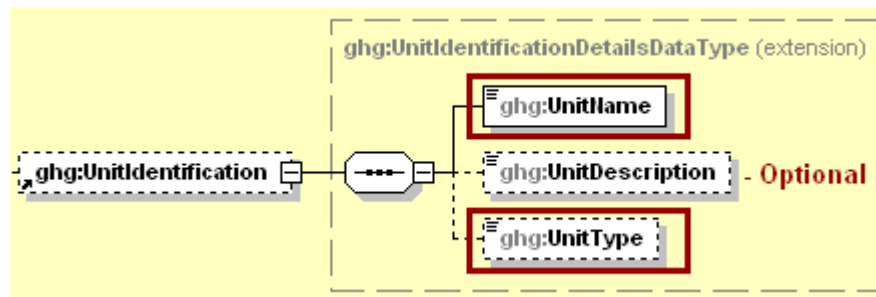


Note: Data elements boxed in red are required. Please see page 4 of this document for more information on conditionally required elements.

Table 3
Measurement Details Data Element Definitions

Data Element Name	Description
MeasurementDetailsDataType	
MeasureValue	Measured value (decimal).
IsSubstitutedIndicator	An indication (Y/N) that the measure value contains substituted data. Note: Do not include this data element in your XML file unless noted in the instructions for the particular measured value.
NumberOfTimesSubstituted	The number (integer) of days, months, weeks or hours in the reporting year that missing data procedures were followed. Note: Do not include this data element in your XML file unless noted in the instructions for the particular measured value.

Figure 4
Unit Identification Details Data Type Schema Diagram



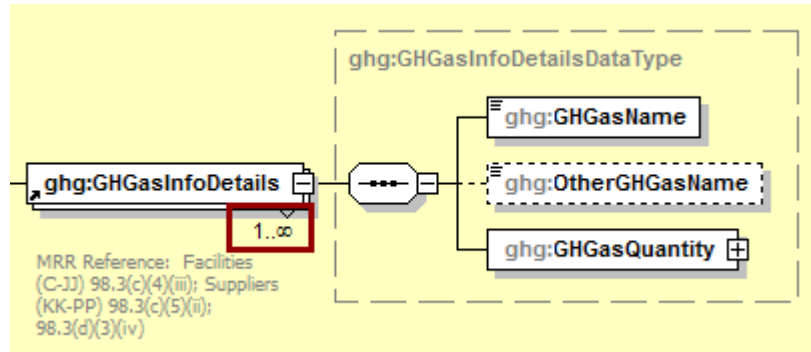
Note: Data elements boxed in red are required.

Table 4
Unit Identification Details Data Element Definitions

Data Element Name	Description
UnitIdentificationDetails	
UnitName	A unique name (ID) for each unit so that the data for different units can be recorded, maintained and retrieved clearly.
UnitDescription	Optional brief description of the unit.
UnitType	The type of unit. The list of allowable values varies. For more information, see the instructions for the specific unit process to be reported. For example, if reporting Flare Gas details, the unit type would be “Flare”.

The XML symbol “1..∞” shown in Figure 5 means that the parent element is “unbounded” so that multiple instances of the parent element can be reported. XML Excerpt 1 shows an example of reporting multiple instances of a parent element.

Figure 5
“Unbounded” Symbol in Schema Diagram



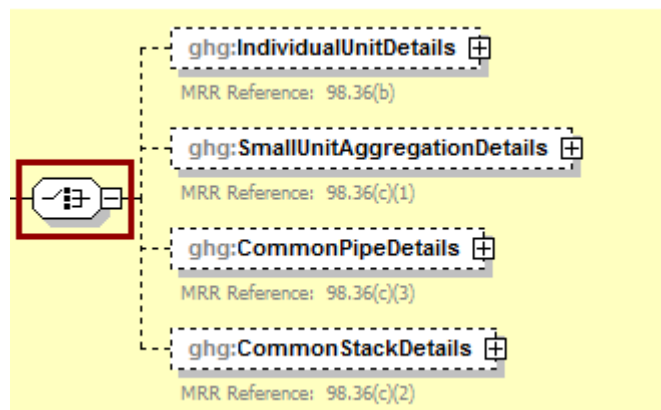
XML Excerpt 1
Example for “Unbounded” Parent Element

```
<ghg:GHGasInfoDetails>
  <ghg:GHGasName>Carbon Dioxide </ghg:GHGasName>
  <ghg:GHGasQuantity massUOM="Metric Tons">
    <ghg:CalculatedValue>384781.2</ghg:CalculatedValue>
  </ghg:GHGasQuantity></ghg:GHGasInfoDetails>
<ghg:GHGasInfoDetails>
<ghg:GHGasInfoDetails>
  <ghg:GHGasName>Methane</ghg:GHGasName>
  <ghg:GHGasQuantity massUOM="Metric Tons">
    <ghg:CalculatedValue>4004.12</ghg:CalculatedValue>
  </ghg:GHGasQuantity></ghg:GHGasInfoDetails>
<ghg:GHGasInfoDetails>
```

Note: The code excerpt above is presented here to demonstrate the concept of reporting greenhouse gas quantity data.

The XML symbol for a logical “Or” shown in Figure 5 means that **only one** of the data elements following the symbol can be reported for the current instance of the parent element.

Figure 6
Logical “Or” Symbol in Schema Diagram



II. Summary of Changes

The following modifications were applied to the GHG XML schema in relation to Subpart PP (GHG_SubPartPP_v2.0.xsd).

**Table 5
Summary of Changes to the Schema for Subpart PP**

No.	Change Description
1	Changed the attribute for data element “ ConcentrationofCO2 ” from “ massUOM ” to “ fractionUOM ”. (XPath = MeterDetails/MassDetails/ConcentrationofCO2)
2	Added enumerated values for data element “ QuarterName ”. (XPath = MeterDetails/VolumeDetails/QuarterName)
3	Changed the attribute for data element “ ConcentrationofCO2WeightPercent ” from “ massUOM ” to “ fractionUOM ”. (XPath = MeterDetails/VolumeDetails/ConcentrationofCO2WeightPercent)
4	Changed the attribute for data element “ ConcentrationofCO2VolumePercent ” from “ massUOM ” to “ fractionUOM ”. (XPath = MeterDetails/VolumeDetails/ConcentrationofCO2VolumePercent)
5	Updated the MRR Reference to 98.426(b)(4) for data element “ DensityofCO2 ”. (XPath = MeterDetails/VolumeDetails/DensityofCO2)
6	Added enumerated values for data element “ MeasuringEquipmentType ”. (XPath = EquipmentCalibrationDetails/MeasuringEquipmentType)

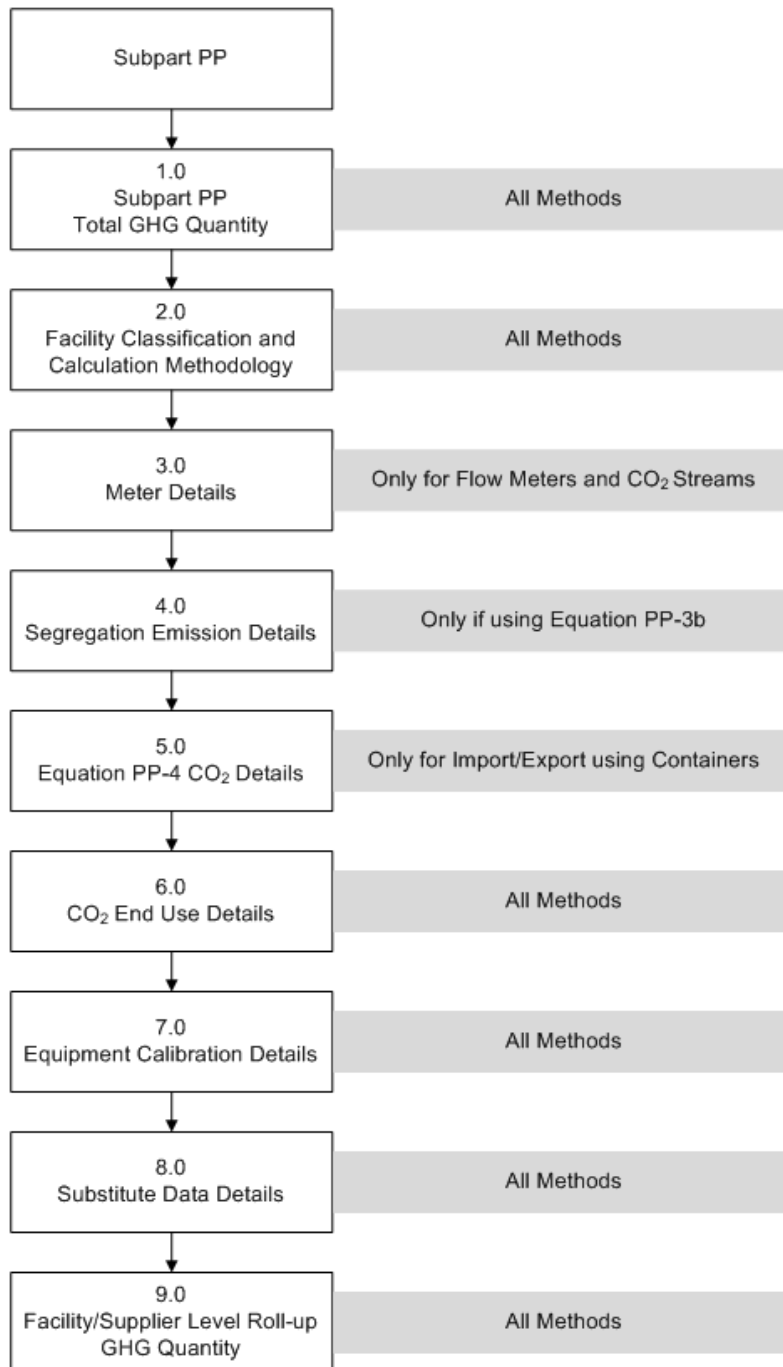
Document Changes:

3-21-2012 - Modified some of the emissions values within the XML excerpts to emphasize the rounding rules (see [Table 1](#)). Added “ParentCompanyDetails” to sample XML documents.

III. Subpart PP Overview

This document provides a step-by-step description of how to report data for Subpart PP Suppliers of Carbon Dioxide and the overall total Subpart PP GHG data for a facility using the XML schema.

Figure 7
Subpart PP Reporting Diagram
Suppliers of Carbon Dioxide



The XML schema includes the following areas for reporting for Subpart PP as shown in the reporting diagram:

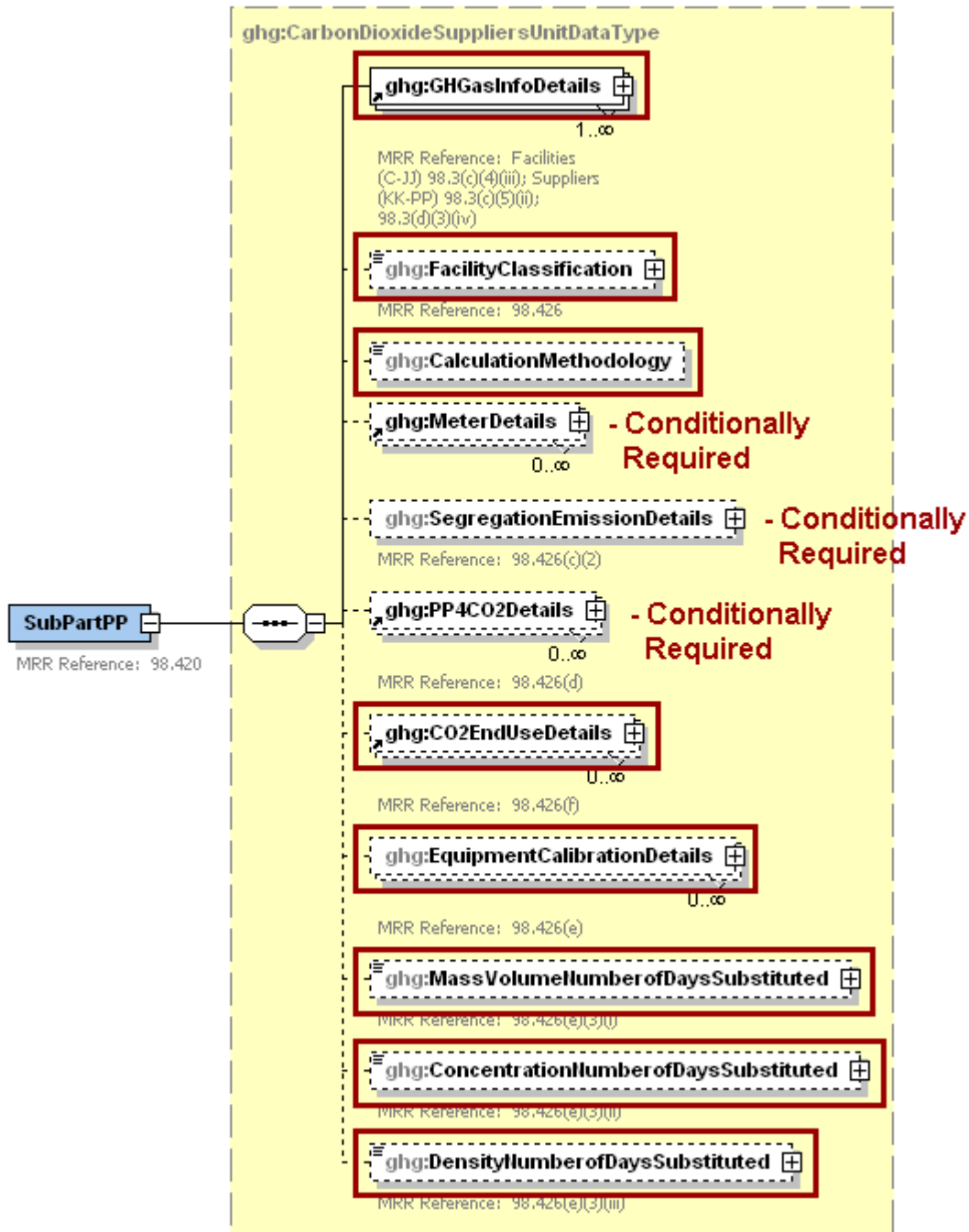
- 1.0 Subpart PP Total GHG Quantity: includes how to report the total quantity of carbon dioxide.
- 2.0 Facility Classification and Calculation Methodology: includes facility/supplier classification and calculation methodology information.
- 3.0 Meter Details: includes flow meter and CO₂ stream information to report based on the facility/supplier classification and calculation methodology.
- 4.0 Segregation Emission Details: includes CO₂ GHG information to report if the facility uses Equation PP-3b.
- 5.0 Equation PP-4 CO₂ Details: includes CO₂ GHG information to report if the facility imports or exports CO₂ in containers.
- 6.0 CO₂ End Use Details: includes CO₂ GHG information for each end-use application.
- 7.0 Equipment Calibration Details: includes equipment and calibration information for each type of equipment used to measure the total flow of the CO₂ stream or the total mass in CO₂ containers.
- 8.0 Substitute Data Details: includes information on the number of days substitute data was used to measure mass or volume, concentration and density.
- 9.0 Facility/Supplier Level Roll-up GHG Quantity: includes information on how to add GHG quantity data to facility level totals.

NOTE: If your facility is subject to reporting under Subpart PP (Suppliers of Carbon Dioxide), EPA recommends that you also consider the following source categories in your facility applicability determination:

- Subpart C (General Stationary Fuel Combustion),
- Subpart D (Electricity Generation),
- Subpart G (Ammonia Manufacturing),
- Subpart H (Cement Production),
- Subpart P (Hydrogen Production),
- Subpart Q (Iron and Steel Production),
- Subpart W (Petroleum and Natural Gas Systems),
- Subpart OO (Suppliers of Industrial Greenhouse Gases),
- Subpart RR (Geologic Sequestration of Carbon Dioxide) and
- Subpart UU (Injection of Carbon Dioxide).

These source categories are only provided as suggestions - additional Subparts may be relevant for a given facility/supplier and not all listed Subparts are relevant for all facilities/suppliers.

**Figure 8
Subpart PP Schema Diagram**

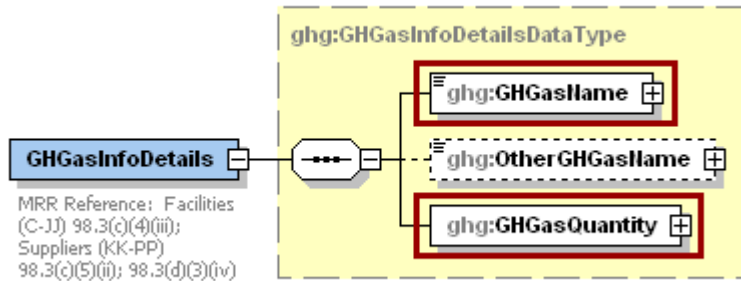


Note: Data elements boxed in red are required. Please see page 4 of this document for more information on conditionally required elements

1.0 Subpart PP Total GHG Quantity

Greenhouse gas information details comprise a collection of data elements to report the total annual greenhouse gas (GHG) quantity of each GHG listed in Table A-1 of 40 CFR 98 Mandatory Reporting of Greenhouse Gases reported under Subpart PP, expressed in metric tons.

**Figure 9
Greenhouse Gas Information Details Schema Diagram**



Note: Data elements boxed in red are required.

For Subpart PP, report the total GHG quantity for carbon dioxide (CO₂) using the following guidelines:

- Capture – Flow Meter: Report the annual mass of CO₂ across all flow meters (result of Equation PP-3a or Equation PP-3b) in metric tons.
- Capture/Extract – Container Method: Report the annual mass of CO₂ across all streams (result of Equation PP-3a) in metric tons.
- Extract – Flow Meter with No Aggregation: Report the total annual mass of CO₂ extracted (result of Equation PP-1 or PP-2 summed for all flow meters) in metric tons.
- Import/Export – Container Method: Report the annual mass of CO₂ in all containers imported in metric tons minus the annual mass of CO₂ in all containers exported (result of Equation PP-4) in metric tons.
- Import/Export – Flow Meter with No Aggregation: Report the annual mass of CO₂ imported total (result of Equation PP-1 or PP-2 summed for all import flow meters) in metric tons minus the annual mass of CO₂ exported total (result of Equation PP-1 or PP-2 summed for all export flow meters) in metric tons.

Note: You must follow the rounding rules found in [Table 1](#).

Table 6
Greenhouse Gas Information Details Data Element Definitions

Data Element Name	Description
GHGasInfoDetails	Parent Element: A collection of data elements containing the total annual greenhouse gas quantity of each greenhouse gas (GHG) listed in Table A-1 of 40 CFR 98 Mandatory Reporting of Greenhouse Gases reported under this Subpart, expressed in metric tons.
GHGasName	Specify the name of the GHG: Carbon Dioxide
GHGasQuantity	A collection of data elements that quantify the annual greenhouse gas emissions from this supplier category. Report the value in the child data element CalculatedValue using the guidelines above. Set the units of measure to “Metric Tons” in the attribute massUOM .

XML Excerpt 2
Example for Greenhouse Gas Information Details

```

<ghg:SubPartPP>
  <ghg:GHGasInfoDetails>
    <ghg:GHGasName>Carbon Dioxide</ghg:GHGasName>
    <ghg:GHGasQuantity massUOM="Metric Tons">
      <ghg:CalculatedValue>6269.4</ghg:CalculatedValue>
    </ghg:GHGasQuantity>
  </ghg:GHGasInfoDetails>

```

Note: The code excerpt above is presented here to demonstrate the concept of reporting greenhouse gas quantity data.

2.0 Facility Classification and Calculation Methodology

The facility/supplier must report one of the following classifications to describe the facility/supplier [98.426]:

- **Capture Facility:** As required by 98.420(a)(1), a facility with production process units that capture a CO₂ stream for purposes of supplying CO₂ for commercial applications or that capture and maintain custody of a CO₂ stream in order to sequester or otherwise inject it underground. Capture refers to the initial separation and removal of CO₂ from a manufacturing process or any other process.
- **Extract Facility:** As required by 98.420(a)(2), A facility with CO₂ production wells that extract or produce a CO₂ stream for purposes of supplying CO₂ for commercial applications or that extract and maintain custody of a CO₂ stream in order to sequester or otherwise inject it underground.
- **Importer/Exporter:** As required by 98.420(a)(3).

The facility/supplier must report the calculation method used to estimate quantities of CO₂. Subpart PP allows for different calculation methods based on the classification of the facility/supplier. Only the following facility classification and calculation methodology combinations may be reported:

- (1) For a **Capture Facility**, the following calculation methods may be used:
 - (a) **Flow Meters 1:** Flow Meters with no segregation or measurement is after segregation. Use Equation PP-1 or PP-2 for each meter and aggregate at the facility level using Equation PP-3a. [98.423(a)(3)(i)]
 - (b) **Flow Meters 2:** Flow Meters with segregation or measurement is ahead of segregation. Use Equation PP-1 or PP-2 for each meter and aggregate at the facility level using Equation PP-3b. [98.423(a)(3)(ii)]
 - (c) **Streams:** CO₂ that is supplied in containers. Use Equation PP-1 or PP-2 for each stream used to deliver CO₂ to a container and aggregate at the facility level using Equation PP-3a. CO₂ concentration measurement is required. [98.423(b)]
- (2) For an **Extract Facility**, the following calculation methods may be used:
 - (a) **Flow Meters 3:** Flow Meters with no system segregation Use Equation PP-1 or PP-2 for each meter and report supply data at the facility level.
 - (b) **Streams:** CO₂ that is supplied in containers. Use Equation PP-1 or PP-2 for each stream used to deliver CO₂ to a container and aggregate at the facility level using Equation PP-3a. CO₂ concentration measurement is required. [98.423(b)]
- (3) For an **Importer or Exporter**, the following calculation methods may be used:
 - (a) **Flow Meters 3:** Use Equation PP-1 or PP-2 for each meter and report supply data at the corporate level. (*Flow Meters 3*)

- (b) Import/Export **Containers**: Report supply results at the corporate level using Equation PP-4. This method assumes CO₂ concentration is 100%. [98.423(c)]

Figure 10
Facility Classification and Calculation Methodology Schema Diagram



Note: Data elements boxed in red are required.

Table 7
Facility Classification Data Element Definitions

Data Element Name	Description
FacilityClassification	An indication that the type of facility reporting is a capture facility, an extract facility, or an importer or exporter. See list of allowable values: capture 98.420(a)(1) extract 98.420(a)(2) import/export 98.420(a)(3)
CalculationMethodology	Report the calculation methodology used. See list of allowable values: Flow Meters 1 Flow Meters 2 Flow Meters 3 Streams Containers

XML Excerpt 3
Example for Facility Classification

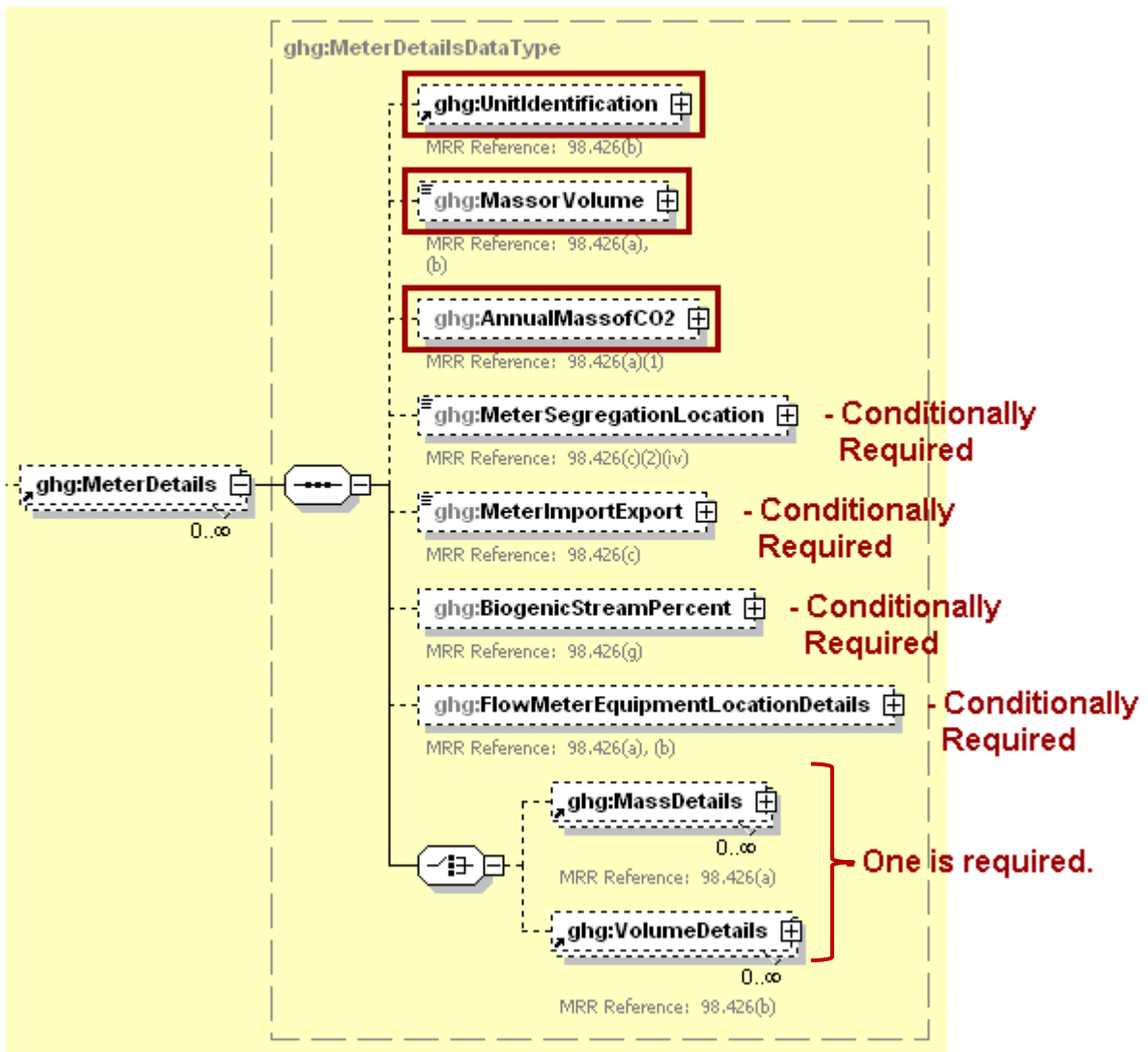
```
<ghg:FacilityClassification>capture 98.420(a)(1)</ghg:FacilityClassification>
<ghg:CalculationMethodology>Flow Meters 1</ghg:CalculationMethodology>
```

Note: The code excerpt above is presented here to demonstrate the concept of reporting greenhouse gas quantity data.

3.0 Meter Details

Conditionally Required: The facility/supplier must report meter details for all methods which use flow meters and CO₂ streams supplied in containers.

Figure 11
Meter Details Schema Diagram

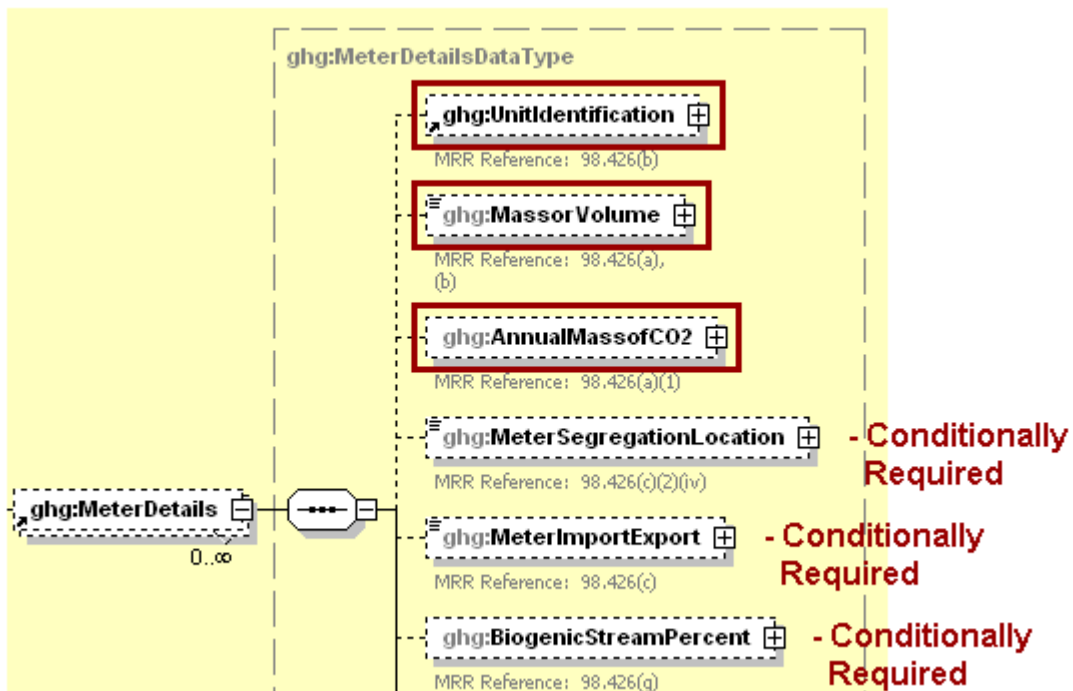


Note: Data elements boxed in red are required. Please see page 4 of this document for more information on conditionally required elements.

The following information is required for each individual flow meter/streams supplied in containers:

- A unique flow meter/stream name or ID, an optional description and the type of unit: "CO2 Flow Meter" or "CO2 Stream".
- An indication as to whether the flow meter/stream utilizes measurements on a mass or volumetric basis.
- Annual mass of CO₂ in metric tons, calculated using Equation PP-1 or PP-2.
- The location of the flow meter in relation to the point of segregation. This data is **conditionally required**: report only if a capture facility using calculation methodology Flow Meters 2 (with segregation) and Equation PP-3b; otherwise, do not include the data element in the XML file.
- An indication of whether the CO₂ metered by the specified flow meter was imported or exported. This data is **conditionally required**: report only if an importer/exporter; otherwise, do not include the data element in the XML file.
- The percentage of the CO₂ stream metered by the flow meter that is biomass-based. This data is also **conditionally required**: report only if a capture facility; otherwise, do not include the data element in the XML file.

Figure 12
Meter Unit Identification and Information Schema Diagram



Note: Data elements boxed in red are required. Please see page 4 of this document for more information on conditionally required elements.

**Table 8
Meter Unit Identification and Information Data Element Definitions**

Data Element Name	Description
MeterDetails	Parent Element (Conditionally Required): A collection of data elements to report about each flow meter used to measure CO ₂ and each CO ₂ stream that supplies CO ₂ in containers.
UnitIdentification	A collection of data elements containing the identity of each flow meter or CO ₂ stream. Report a unique unit name (ID) in the child data element UnitName , an optional brief description in the child data element UnitDescription and the type of unit in the child data element UnitType : "CO ₂ Flow Meter" or "CO ₂ Stream".
MassorVolume	Indicate the measurement type of the specified flow meter or CO ₂ stream. See list of allowable values: Mass Volumetric - concentration in weight percentage Volumetric - concentration in volume percentage
AnnualMassofCO2	A collection of data elements containing the total annual mass of CO ₂ in metric tons calculated using Equation PP-1 or PP-2. Report the value in the child data element MeasureValue . Set the units of measure to "Metric Tons" in the attribute massUOM .
MeterSegregationLocation	Conditionally Required: If the capture facility/supplier reports the flow meter calculation method described in 98.423(a)(3)(ii) (Equation PP-3b), report the location (upstream or downstream) of the specified flow meter in relation to the point of segregation. See list of allowable values: UpStream DownStream
MeterImportExport	Conditionally Required: If the facility/supplier is an importer or exporter of bulk CO ₂ , indicate whether the CO ₂ metered by the specified flow meter was imported or exported. See list of allowable values: Import Export
BiogenicStreamPercent	Conditionally Required: A collection of data elements containing the percentage of the CO ₂ stream metered by the flow meter that is biomass-based. Report only if the facility is a capture facility reporting under 98.423(a)(3)(i) or (ii) (Equation PP-3a or PP-3b). Report the value in the child data element MeasureValue .

XML Excerpt 4

Example for Meter Unit Identification and Information for Capture Facility

```

<ghg:MeterDetails>
  <ghg:UnitIdentification>
    <ghg:UnitName>001</ghg:UnitName>
    <ghg:UnitDescription>Mass basis flow meter</ghg:UnitDescription>
    <ghg:UnitType>CO2 Flow Meter</ghg:UnitType>
  </ghg:UnitIdentification>
  <ghg:MassorVolume>Mass</ghg:MassorVolume>
  <ghg:AnnualMassofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>700.4</ghg:MeasureValue>
  </ghg:AnnualMassofCO2>
  <ghg:MeterSegregationLocation>UpStream</ghg:MeterSegregationLocation>
  <ghg:BiogenicStreamPercent>
    <ghg:MeasureValue>10.6</ghg:MeasureValue>
  </ghg:BiogenicStreamPercent>

```

Note: The code excerpt above is presented here to demonstrate the concept of reporting greenhouse gas quantity data.

XML Excerpt 5

Example for Meter Unit Identification and Information for Exporter

```

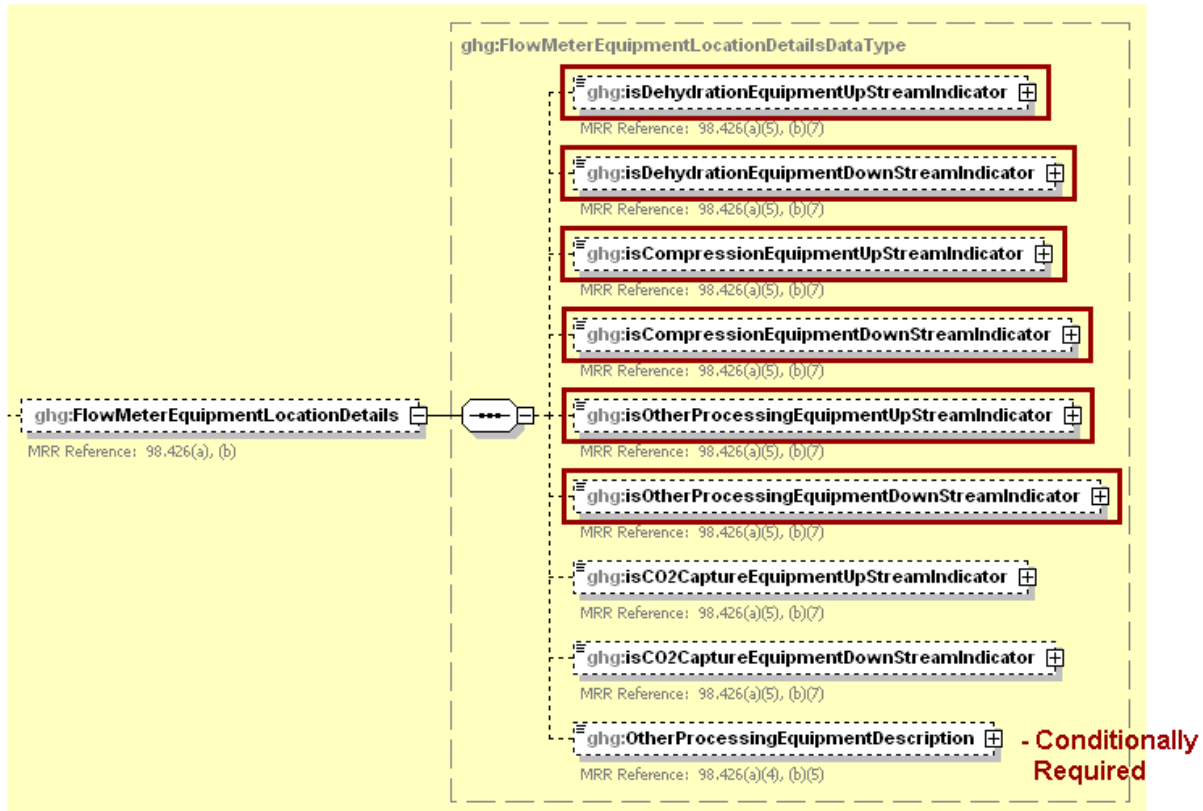
<ghg:MeterDetails>
  <ghg:UnitIdentification>
    <ghg:UnitName>002</ghg:UnitName>
    <ghg:UnitDescription>export flow meter</ghg:UnitDescription>
    <ghg:UnitType>CO2 Flow Meter</ghg:UnitType>
  </ghg:UnitIdentification>
  <ghg:MassorVolume>Volumetric - concentration in weight percentage</ghg:MassorVolume>
  <ghg:AnnualMassofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>2270.9</ghg:MeasureValue>
  </ghg:AnnualMassofCO2>
  <ghg:MeterImportExport>Export</ghg:MeterImportExport>

```

Note: The code excerpt above is presented here to demonstrate the concept of reporting greenhouse gas quantity data.

Conditionally Required: Flow meter equipment location details must be reported if a flow meter was used. This section does not apply to CO₂ streams supplied in containers.

Figure 13
Flow Meter Equipment Location Details Schema Diagram



Note: Data elements boxed in red are required. Please see page 4 of this document for more information on conditionally required elements.

For the flow meter specified, indicate the location of the flow meter in relation to the following:

- Dehydration equipment.
- Compression equipment.
- Other processing equipment.

Note: Do not report the location of CO₂ capture equipment.

For each flow meter in which the facility/supplier indicates that “other processing equipment” is located upstream and/or downstream of the meter, describe any other processing equipment present. If you have more than one type of other processing equipment, describe each type, including whether it is upstream or downstream of the flow meter.

Table 9
Flow Meter Equipment Location Details Data Element Definitions

Data Element Name	Description
FlowMeterEquipmentLocationDetails	Parent Element (Conditionally Required): A collection of data elements to report about the location of the specified flow meter in relation to processing equipment. This section does not apply to CO ₂ streams supplied in containers.
isDehydrationEquipmentUpStreamIndicator	An indication (Y/N) if any dehydration equipment is located upstream of the flow meter.
isDehydrationEquipmentDownStreamIndicator	An indication (Y/N) if any dehydration equipment is located downstream of the flow meter.
isCompressionEquipmentUpStreamIndicator	An indication (Y/N) if any compression equipment is located upstream of the flow meter.
isCompressionEquipmentDownStreamIndicator	An indication (Y/N) if any compression equipment is located downstream of the flow meter.
isOtherProcessingEquipmentUpStreamIndicator	An indication (Y/N) if any other processing equipment is located upstream of the flow meter.
isOtherProcessingEquipmentDownStreamIndicator	An indication (Y/N) if any other processing equipment is located downstream of the flow meter.
OtherProcessingEquipmentDescription	Conditionally Required: Describe what other processing equipment is present, if applicable. If there is more than one type, indicate for each type if it is upstream or downstream from the flow meter.

XML Excerpt 6
Example for Flow Meter Equipment Location Details

```

<ghg:FlowMeterEquipmentLocationDetails>
  <ghg:isDehydrationEquipmentUpStreamIndicator>N</ghg:isDehydrationEquipmentUpStreamIndicator>
  <ghg:isDehydrationEquipmentDownStreamIndicator>Y</ghg:isDehydrationEquipmentDownStreamIndicator>
  <ghg:isCompressionEquipmentUpStreamIndicator>N</ghg:isCompressionEquipmentUpStreamIndicator>
  <ghg:isCompressionEquipmentDownStreamIndicator>Y</ghg:isCompressionEquipmentDownStreamIndicator>
  <ghg:isOtherProcessingEquipmentUpStreamIndicator>N</ghg:isOtherProcessingEquipmentUpStreamIndicator>
  <ghg:isOtherProcessingEquipmentDownStreamIndicator>Y</ghg:isOtherProcessingEquipmentDownStreamIndicator>
  <ghg:OtherProcessingEquipmentDescription>Processing equipment description
</ghg:OtherProcessingEquipmentDescription>
</ghg:FlowMeterEquipmentLocationDetails>

```

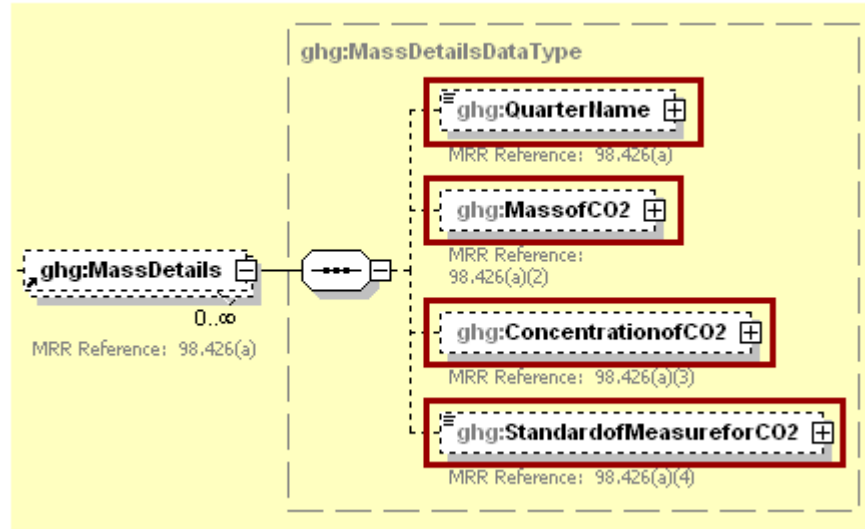
Note: The code excerpt above is presented here to demonstrate the concept of reporting greenhouse gas quantity data.



Which equation was used to calculate the annual mass of CO₂?

- ↳ If Equation PP-1 was used, see [Mass Details Schema Diagram](#) and instructions on how to report.
- ↳ If Equation PP-2 was used, see [Volume Details Schema Diagram](#) and instructions on how to report.

**Figure 14
Mass Details Schema Diagram**



Note: Data elements boxed in red are required.

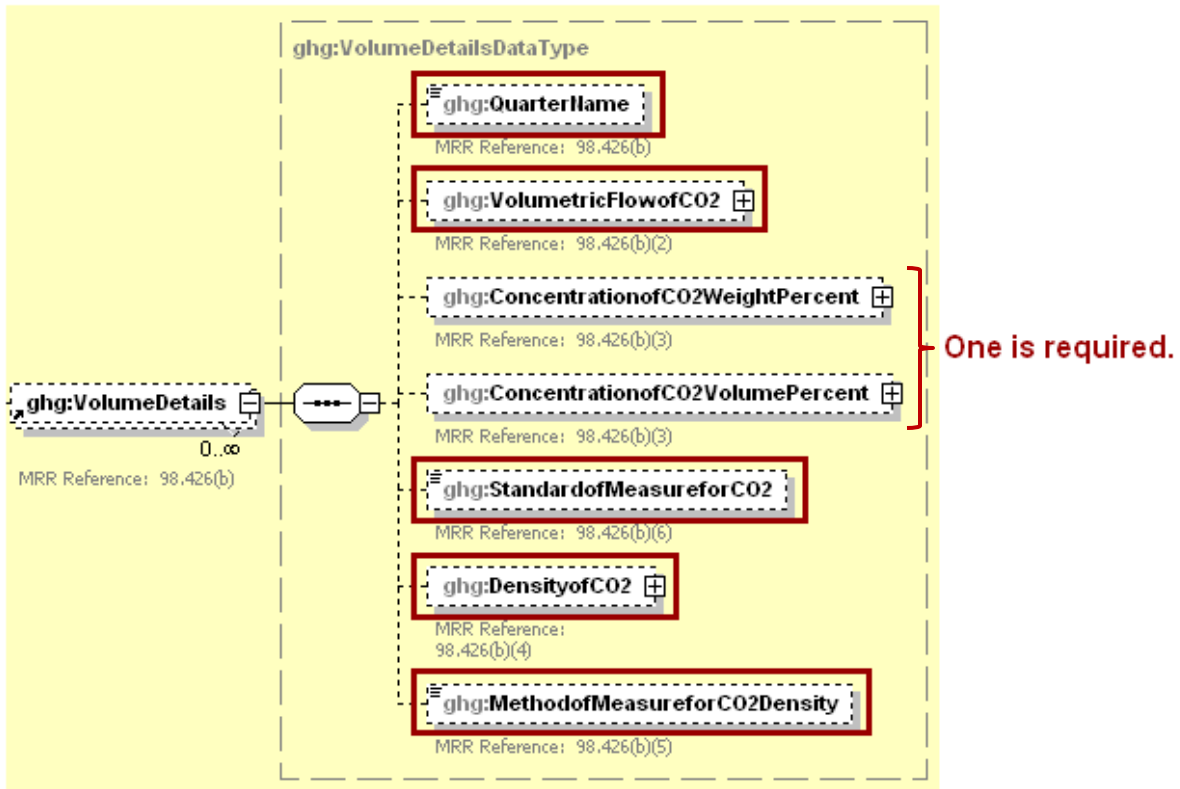
Conditionally Required: Mass details must be reported for each flow meter or CO₂ stream supplied in containers for which “Mass” was reported for measurement type. Use Equation PP-1 for mass-based measurements. For each quarter, report the following information:

- The mass of CO₂ stream in metric tons.
- The concentration of CO₂ stream in weight percent CO₂.
- The name of the standard used to measure CO₂ concentration.

**Table 10
Mass Details Data Element Definitions**

Data Element Name	Description
MassDetails	Parent Element (Conditionally Required): A collection of data elements to report if the measurement type of the specified flow meter or CO ₂ stream supplied in containers is mass basis.
QuarterName	Quarter name. See list of allowable values: First Quarter Second Quarter Third Quarter Fourth Quarter

Figure 15
Volume Details Schema Diagram



Note: Data elements boxed in red are required. Please see page 4 of this document for more information on conditionally required elements.

Conditionally Required: Volume details must be reported for each flow meter or CO₂ stream supplied in containers for which “Volumetric - concentration in weight percentage” or “Volumetric - concentration in volume percentage” was reported for the data element “MassorVolume”. Use Equation PP-2 for volume-based measurements. For each quarter, report the following information:

- The volume of CO₂ stream in standard cubic meters.
- The concentration of CO₂ stream in weight percent CO₂ or volume percent CO₂.
- The name of the standard used to measure CO₂ concentration.
- The density. If reporting concentration in volume percentage, report the density of CO₂ that is required in the rule: 0.001868 metric tons per standard cubic meter. If reporting concentration in weight percentage, report the density of the CO₂ stream as measured.
- The method used to measure density. If reporting concentration in volume percentage, report “rule required density” as the standard.

Table 11
Volume Details Data Element Definitions

Data Element Name	Description
VolumeDetails	Parent Element (Conditionally Required): A collection of data elements to report if the measurement type of the specified flow meter or CO ₂ stream supplied in containers is volumetric basis (concentration in either weight or volume percentage).
QuarterName	Quarter name. See list of allowable values: First Quarter Second Quarter Third Quarter Fourth Quarter
VolumetricFlowofCO2	A collection of data elements containing information on the volume of the CO ₂ stream in the specified quarter. Report the value in the child data element MeasureValue . Set the units of measure to “Standard Cubic Meters” in the attribute volUOM .
ConcentrationofCO2WeightPercent	Conditionally Required: A collection of data elements containing information on the concentration of the CO ₂ stream in weight percent. Report if the measurement type is “Volumetric - concentration in weight percentage”. Report the value in the child data element MeasureValue . Set the units of measure to “fraction (number between 0 and 1)” in the attribute fractionUOM .
ConcentrationofCO2VolumePercent	Conditionally Required: A collection of data elements containing information on the concentration of the CO ₂ stream in volume percent. Report if the measurement type is “Volumetric - concentration in volume percentage”. Report the value in the child data element MeasureValue . Set the units of measure to “fraction (number between 0 and 1)” in the attribute fractionUOM .
StandardofMeasureforCO2	The standard used to measure CO ₂ concentration for the quarter specified.
DensityofCO2	A collection of data elements containing information on the density of either CO ₂ or the CO ₂ stream for the quarter specified. If reporting concentration in volume percent, report the density of CO ₂ that is required in the rule: 0.001868 metric tons per standard cubic meter. If reporting concentration in weight percent, report the density of the CO ₂ stream. Report the value in the child data element MeasureValue . Set the units of measure to “mton/scm” in the attribute densityUOM .

Data Element Name	Description
MethodofMeasureforCO2Density	The method used to measure the density of CO ₂ or of the CO ₂ stream for the quarter specified. If reporting concentration in volume percent, report "rule required density".

XML Excerpt 8 Example for Volume Details

```

<ghg:VolumeDetails>
  <ghg:QuarterName>First Quarter</ghg:QuarterName>
  <ghg:VolumetricFlowofCO2 volUOM="Standard Cubic Meters">
    <ghg:MeasureValue>1100.6234</ghg:MeasureValue>
  </ghg:VolumetricFlowofCO2>
  <ghg:ConcentrationofCO2VolumePercent fractionUOM="fraction (number between 0 and 1)">
    <ghg:MeasureValue>0.15</ghg:MeasureValue>
  </ghg:ConcentrationofCO2VolumePercent>
  <ghg:StandardofMeasureforCO2>Standard L</ghg:StandardofMeasureforCO2>
  <ghg:DensityofCO2 densityUOM="mton/scm">
    <ghg:MeasureValue>0.001868</ghg:MeasureValue>
  </ghg:DensityofCO2>
  <ghg:MethodofMeasureforCO2Density>rule required density</ghg:MethodofMeasureforCO2Density>
</ghg:VolumeDetails>
<ghg:VolumeDetails>
  <ghg:QuarterName>Second Quarter</ghg:QuarterName>
  <ghg:VolumetricFlowofCO2 volUOM="Standard Cubic Meters">
    <ghg:MeasureValue>1200.32345</ghg:MeasureValue>
  </ghg:VolumetricFlowofCO2>
  <ghg:ConcentrationofCO2VolumePercent fractionUOM="fraction (number between 0 and 1)">
    <ghg:MeasureValue>0.16</ghg:MeasureValue>
  </ghg:ConcentrationofCO2VolumePercent>
  <ghg:StandardofMeasureforCO2>Standard L</ghg:StandardofMeasureforCO2>
  <ghg:DensityofCO2 densityUOM="mton/scm">
    <ghg:MeasureValue>0.001868</ghg:MeasureValue>
  </ghg:DensityofCO2>
  <ghg:MethodofMeasureforCO2Density>rule required density</ghg:MethodofMeasureforCO2Density>
</ghg:VolumeDetails>
<ghg:VolumeDetails>
  <ghg:QuarterName>Third Quarter</ghg:QuarterName>
  <ghg:VolumetricFlowofCO2 volUOM="Standard Cubic Meters">
    <ghg:MeasureValue>1300.2322</ghg:MeasureValue>
  </ghg:VolumetricFlowofCO2>
  <ghg:ConcentrationofCO2VolumePercent fractionUOM="fraction (number between 0 and 1)">
    <ghg:MeasureValue>0.17</ghg:MeasureValue>
  </ghg:ConcentrationofCO2VolumePercent>
  <ghg:StandardofMeasureforCO2>Standard L</ghg:StandardofMeasureforCO2>
  <ghg:DensityofCO2 densityUOM="mton/scm">
    <ghg:MeasureValue>0.001868</ghg:MeasureValue>
  </ghg:DensityofCO2>
  <ghg:MethodofMeasureforCO2Density>rule required density</ghg:MethodofMeasureforCO2Density>
</ghg:VolumeDetails>
<ghg:VolumeDetails>
  <ghg:QuarterName>Fourth Quarter</ghg:QuarterName>
  <ghg:VolumetricFlowofCO2 volUOM="Standard Cubic Meters">
    <ghg:MeasureValue>1400.423442</ghg:MeasureValue>
  </ghg:VolumetricFlowofCO2>
  <ghg:ConcentrationofCO2VolumePercent fractionUOM="fraction (number between 0 and 1)">
    <ghg:MeasureValue>0.18</ghg:MeasureValue>
  </ghg:ConcentrationofCO2VolumePercent>
  <ghg:StandardofMeasureforCO2>Standard L</ghg:StandardofMeasureforCO2>
  <ghg:DensityofCO2 densityUOM="mton/scm">
    <ghg:MeasureValue>0.001868</ghg:MeasureValue>
  </ghg:DensityofCO2>
  <ghg:MethodofMeasureforCO2Density>rule required density</ghg:MethodofMeasureforCO2Density>
</ghg:VolumeDetails>
</ghg:MeterDetails>

```

Note: The code excerpt above is presented here to demonstrate the concept of reporting greenhouse gas quantity data.

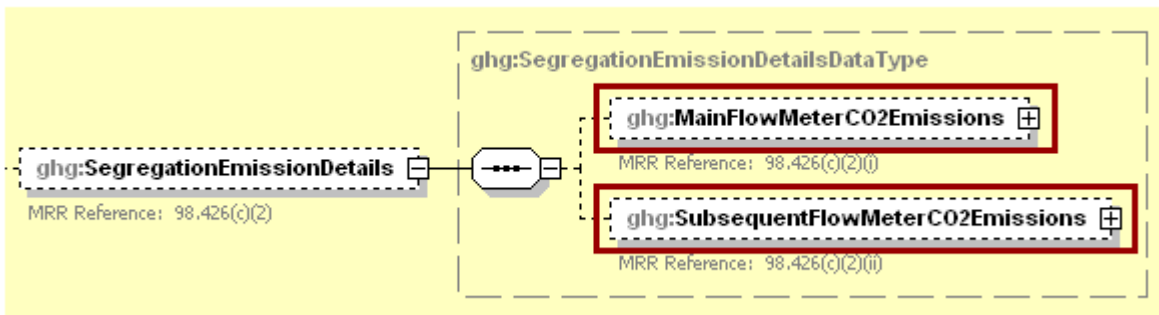
4.0 Segregation Emission Details

Conditionally Required: This section applies only to capture facilities that reported they used calculation methodology Flow Meters 2 and Equation PP-3b to calculate the aggregated annual mass of CO₂ supplied. Report the following:

- The total annual CO₂ mass through main flow meter(s) in metric tons [98.426(c)(2)(i)].
- The total annual CO₂ mass through subsequent flow meter(s) in metric tons [98.426(c)(2)(ii)].

Note: Facilities/suppliers that did not use Equation PP-3b should not include the following data elements in the XML file (extract facilities, importers, exporters and capture facilities that used Equation PP-3a).

Figure 16
Segregation Emission Details Schema Diagram



Note: Data elements boxed in red are required.

Table 12
Segregation Emission Details Data Element Definitions

Data Element Name	Description
SegregationEmissionDetails	Parent Element (Conditionally Required): A collection of data elements to report if Equation PP-3b is used by the facility.
MainFlowMeterCO2Emissions	A collection of data elements containing information on the total annual CO ₂ mass through main flow meter(s). Report the value in the child data element MeasureValue . Set the units of measure to “Metric Tons” in the attribute massUOM .
SubsequentFlowMeterCO2Emissions	A collection of data elements containing information on the total annual CO ₂ mass through subsequent flow meter(s). Report the value in the child data element MeasureValue . Set the units of measure to “Metric Tons” in the attribute massUOM .

XML Excerpt 9 Example for Segregation Emission Details

```
<ghg:SegregationEmissionDetails>  
  <ghg:MainFlowMeterCO2Emissions massUOM="Metric Tons">  
    <ghg:MeasureValue>400.1 </ghg:MeasureValue>  
  </ghg:MainFlowMeterCO2Emissions>  
  <ghg:SubsequentFlowMeterCO2Emissions massUOM="Metric Tons">  
    <ghg:MeasureValue>440.3 </ghg:MeasureValue>  
  </ghg:SubsequentFlowMeterCO2Emissions>  
</ghg:SegregationEmissionDetails>
```

Note: The code excerpt above is presented here to demonstrate the concept of reporting greenhouse gas quantity data.

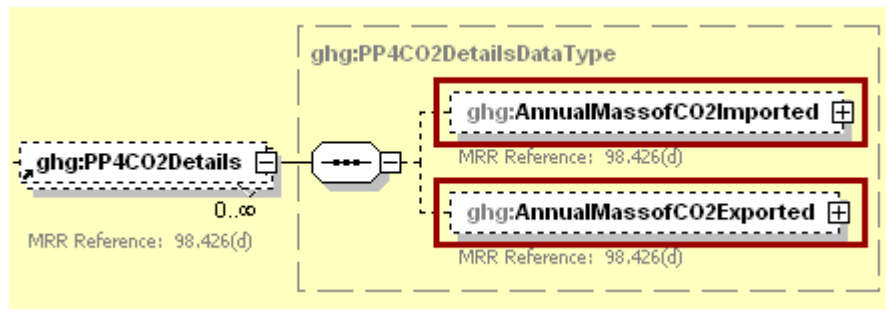
5.0 Equation PP-4 CO₂ Details

Conditionally Required: This section applies only to importers or exporters that imported or exported CO₂ in containers (and used Equation PP-4 to calculate the total mass of CO₂ - see 98.423(c)). Report the following information at the corporate level:

- Total annual mass of CO₂ in all containers imported according to Equation PP-4 in metric tons.
- Total annual mass of CO₂ in all containers exported according to Equation PP-4 in metric tons.

Note: Facilities/suppliers that did not import or export CO₂ in containers should not include the following data elements in the XML file (capture facilities, extract facilities and importers or exporters that used calculation methodology Flow Meters 3).

Figure 17
Equation PP-4 CO₂ Details Schema Diagram



Note: Data elements boxed in red are required.

Table 13
Equation PP-4 CO₂ Details Data Element Definitions

Data Element Name	Description
PP4CO2Details	Parent Element (Conditionally Required): A collection of data elements to report if CO ₂ was imported or exported using the Containers calculation methodology.
AnnualMassofCO2Imported	A collection of data elements containing information on the annual mass of CO ₂ in metric tons in all CO ₂ containers that were imported at the corporate level. Report the value in the child data element MeasureValue . Set the units of measure to “Metric Tons” in the attribute massUOM .
AnnualMassofCO2Exported	A collection of data elements containing information on the annual mass of CO ₂ in metric tons in all CO ₂ containers that were exported the corporate level. Report the value in the child data element MeasureValue . Set the units of measure to “Metric Tons” in the attribute massUOM .

XML Excerpt 10 Example for Equation PP-4 CO₂ Details

```
<ghg:PP4CO2Details>  
  <ghg:AnnualMassofCO2Imported massUOM="Metric Tons">  
    <ghg:CalculatedValue>1500.9</ghg:CalculatedValue>  
  </ghg:AnnualMassofCO2Imported>  
  <ghg:AnnualMassofCO2Exported massUOM="Metric Tons">  
    <ghg:CalculatedValue>15.2</ghg:CalculatedValue>  
  </ghg:AnnualMassofCO2Exported>  
</ghg:PP4CO2Details>
```

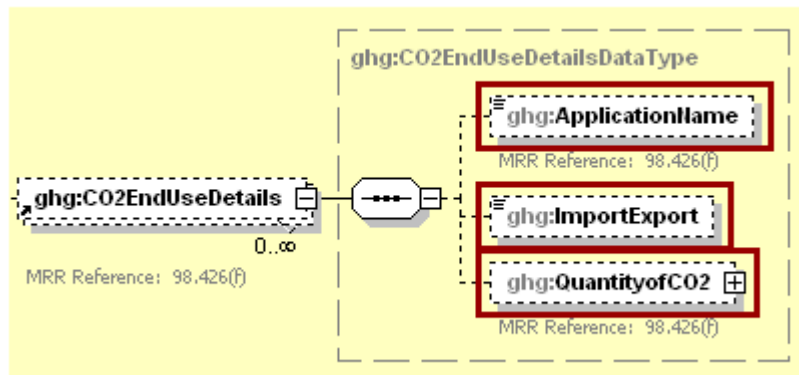
Note: The code excerpt above is presented here to demonstrate the concept of reporting greenhouse gas quantity data.

6.0 CO₂ End Use Details

Subpart PP requires all reporters to report the following information at the facility level; importers and exporters must report the information at the corporate level:

- The aggregated annual quantity of CO₂ transferred to each of the following end-use applications (if not known, use the “Other/unknown” category):
 - Food and beverage
 - Industrial and municipal water/wastewater treatment
 - Metal fabrication, including welding and cutting
 - Greenhouse uses for plant growth
 - Fumigants (e.g., grain storage) and herbicides
 - Pulp and paper
 - Cleaning and solvent use
 - Fire fighting
 - Transportation and storage of explosives
 - Enhanced oil and natural gas recovery
 - Long-term storage (sequestration)
 - Research and development
 - Other/unknown
- Whether the quantity of each end-use application was imported or exported. Report “All” if the facility is not an importer or exporter.

Figure 18
CO₂ End Use Details Schema Diagram



Note: Data elements boxed in red are required.

**Table 14
CO₂ End Use Details Data Element Definitions**

Data Element Name	Description
CO2EndUseDetails	Parent Element: A collection of data elements to report about the aggregated annual quantity of CO ₂ that is transferred to each end use application.
ApplicationName	<p>The name of the end use application. See list of allowable values (if not known, use the “Other/unknown” category):</p> <ul style="list-style-type: none"> Food and beverage Industrial and municipal water/wastewater treatment Metal fabrication, including welding and cutting Greenhouse uses for plant growth Fumigants (e.g., grain storage) and herbicides Pulp and paper Cleaning and solvent use Fire fighting Transportation and storage of explosives Enhanced oil and natural gas recovery Long-term storage (sequestration) Research and Development Other/unknown
ImportExport	<p>Indicate if the specified end use application was imported or exported. If the facility is not an importer or exporter, report "All". See list of allowable values:</p> <ul style="list-style-type: none"> Import Export All
QuantityofCO2	<p>A collection of data elements containing information on the aggregated annual quantity of CO₂ that is transferred to the specified end use application. Report the value in the child data element MeasureValue. Set the units of measure to “Metric Tons” in the attribute massUOM.</p>

XML Excerpt 11 Example for CO₂ End Use Details

```

<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Food and beverage</ghg:ApplicationName>
  <ghg:ImportExport>All</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>100.2245645</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Industrial and municipal water/wastewater treatment</ghg:ApplicationName>
  <ghg:ImportExport>All</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>200.48989</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Metal fabrication, including welding and cutting</ghg:ApplicationName>
  <ghg:ImportExport>All</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>300.823</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Greenhouse uses for plant growth</ghg:ApplicationName>
  <ghg:ImportExport>All</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>400.612323</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Fumigants (e.g., grain storage) and herbicides</ghg:ApplicationName>
  <ghg:ImportExport>All</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>500.31231</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Pulp and paper</ghg:ApplicationName>
  <ghg:ImportExport>All</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>600.1</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Cleaning and solvent use</ghg:ApplicationName>
  <ghg:ImportExport>All</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>700.5987</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Fire fighting</ghg:ApplicationName>
  <ghg:ImportExport>All</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>800.23453</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>

```

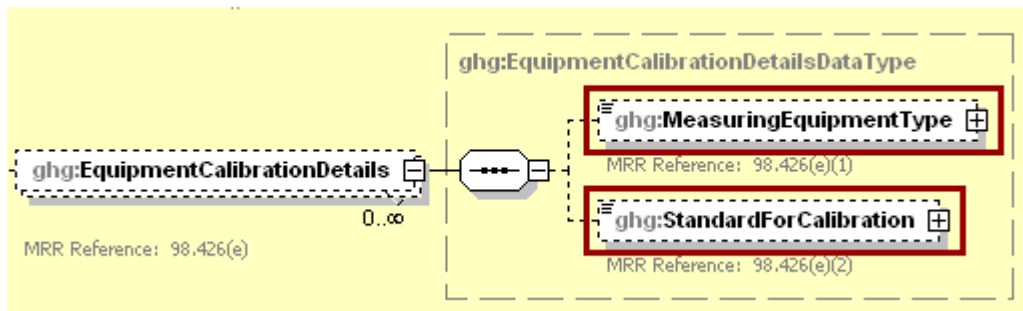
Note: The code excerpt above is presented here to demonstrate the concept of reporting greenhouse gas quantity data.

7.0 Equipment Calibration Details

Subpart PP requires all reporters to report the following information at the facility level; importers and exporters must report the information at the corporate level:

- Each type of equipment used to measure the total flow of the CO₂ stream.
- The standard used to operate and calibrate each type of equipment.

**Figure 19
Equipment Calibration Details Schema Diagram**



Note: Data elements boxed in red are required.

**Table 15
Equipment Calibration Details Data Element Definitions**

Data Element Name	Description
EquipmentCalibrationDetails	Parent Element: A collection of data elements to report about the type of equipment used to measure the total flow of the CO ₂ stream or the total mass or volume in CO ₂ containers and the standard used to operate and calibrate the equipment.
MeasuringEquipmentType	The type of equipment used to measure the total flow of the CO ₂ stream or the total mass or volume in CO ₂ containers. See list of allowable values: Mass flow meter Volumetric flow meter Scale Load cell Weigh bill Loaded container volume Other
StandardForCalibration	The standard used to operate and calibrate the specified equipment.

XML Excerpt 12 Example for Equipment Calibration Details

```
<ghg:EquipmentCalibrationDetails>  
  <ghg:MeasuringEquipmentType>Mass flow meter</ghg:MeasuringEquipmentType>  
  <ghg:StandardForCalibration>Standard A</ghg:StandardForCalibration>  
</ghg:EquipmentCalibrationDetails>
```

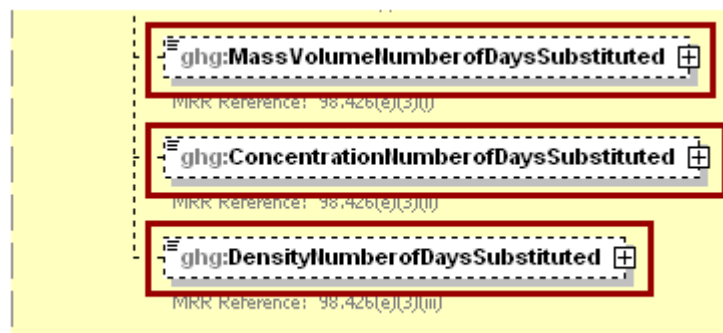
Note: The code excerpt above is presented here to demonstrate the concept of reporting greenhouse gas quantity data.

8.0 Substitute Data Details

Subpart PP requires all reporters to report the following information at the facility level; importers and exporters must report the information at the corporate level:

- The number of days in the reporting year for which substitute data procedures were used to measure CO₂ mass or volume.
- The number of days in the reporting year for which substitute data procedures were used to measure CO₂ concentration.
- The number of days in the reporting year for which substitute data procedures were used to measure CO₂ stream density.

Figure 20
Substitute Data Details Schema Diagram



Note: Data elements boxed in red are required.

Table 16
Substitute Data Details Data Element Definitions

Data Element Name	Description
MassVolumeNumberofDaysSubstituted	The number of days in the reporting year for which substitute data procedures were used to measure the mass or volume (integer).
ConcentrationNumberofDaysSubstituted	The number of days in the reporting year for which substitute data procedures were used to measure the concentration (integer).
DensityNumberofDaysSubstituted	The number of days in the reporting year for which substitute data procedures were used to measure the density (integer).

XML Excerpt 13
Example for Substitute Data Details

```

<ghg:MassVolumeNumberofDaysSubstituted>1</ghg:MassVolumeNumberofDaysSubstituted>
<ghg:ConcentrationNumberofDaysSubstituted>2</ghg:ConcentrationNumberofDaysSubstituted>
<ghg:DensityNumberofDaysSubstituted>3</ghg:DensityNumberofDaysSubstituted>
</ghg:SubPartPP>
    
```

Note: The code excerpt above is presented here to demonstrate the concept of reporting greenhouse gas quantity data.

9.0 Facility/Supplier Level Roll-up GHG Quantity

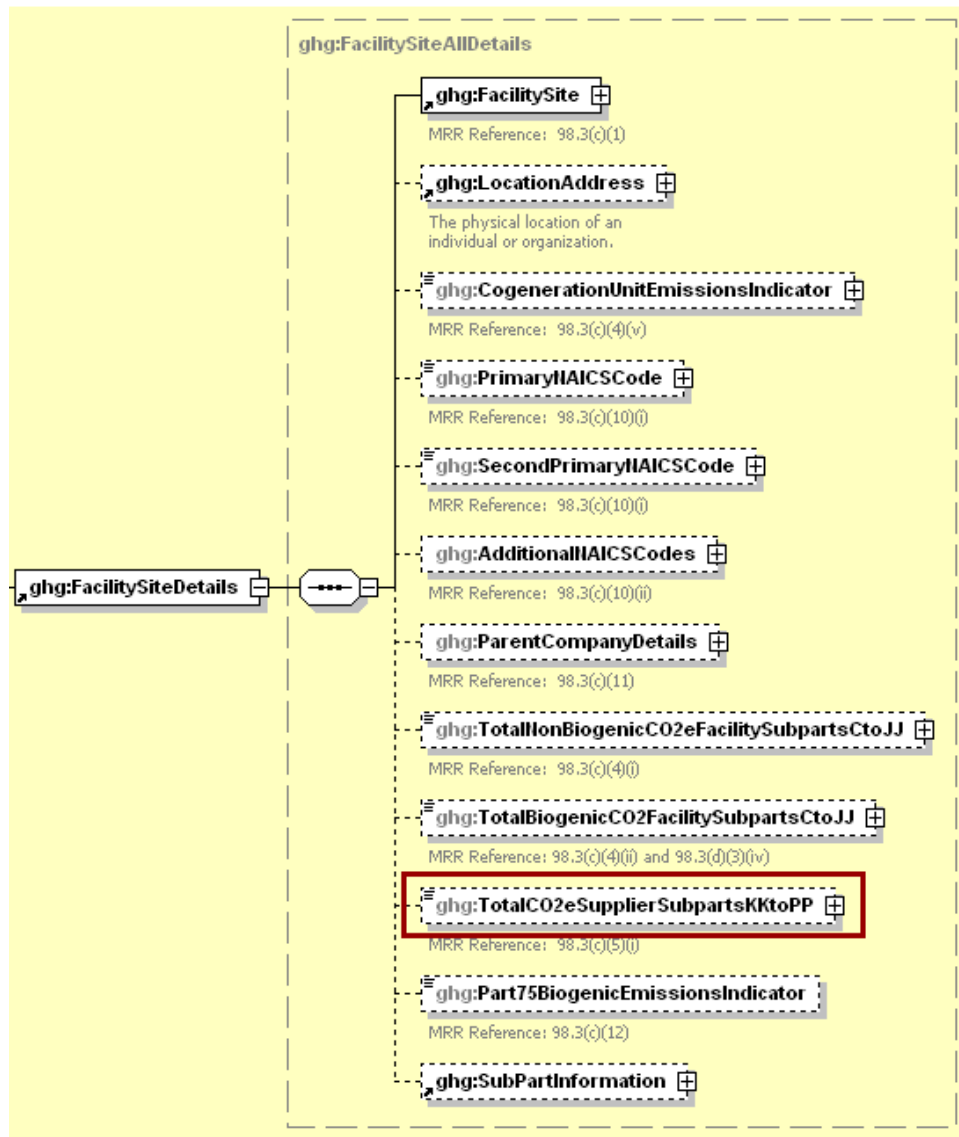
Each facility must report the following facility-level emission totals:

- Total CO₂e (CO₂e) emissions (excluding biogenic CO₂) aggregated across all direct emitter source categories (Subparts C-HH) associated with the facility.
- Total biogenic CO₂ emissions aggregated across all direct emitter source categories (Subparts C-HH) associated with the facility.

Each supplier must report the following supplier totals:

- Total CO₂e associated with products supplied aggregated across Subparts NN, OO and PP (as applicable). **Note:** Do not include Subpart LL and MM totals in this data element as these values are not being collected in e-GGRT.

Figure 21
Facility/Supplier Level Roll-up GHG Quantity Schema Diagram



Note: Data elements boxed in red are required.

For Subpart PP, add the total quantity of carbon dioxide (CO₂) to the total CO₂ equivalent (CO₂e) quantity aggregated across all supplier category Subparts associated with the facility/supplier using the following guidelines:

- Capture: Add the annual mass of CO₂ across all flow meters/streams (result of Equation PP-3a or Equation PP-3b) in metric tons.
- Extract - Streams: Add the annual mass of CO₂ across all streams (result of Equation PP-3a) in metric tons.
- Extract- Flow Meter with No Aggregation: Add the total annual mass of CO₂ extracted (result of Equation PP-1 or PP-2 summed for all flow meters) in metric tons.
- Import/Export – Container Method: Add the annual mass of CO₂ in all containers imported in metric tons minus the annual mass of CO₂ in all containers exported (result of Equation PP-4) in metric tons.
- Import/Export – Flow Meter with No Aggregation: Add the annual mass of CO₂ imported total (result of Equation PP-1 or PP-2 summed for all import flow meters) in metric tons minus the annual mass of CO₂ exported total (result of Equation PP-1 or PP-2 summed for all export flow meters) in metric tons.

Note: You must follow the rounding rules found in [Table 1](#).

**Table 17
Facility Level Roll-up GHG Quantity Data Element Definitions**

Data Element Name	Description
TotalCO2eSupplierSubpartsKKtoPP	Add the total CO ₂ e value for Subpart PP in metric tons to the total CO ₂ e quantity aggregated across all supplier category Subparts associated with the supplier according to the guidelines above. Set the units of measure to “Metric Tons” in the attribute massUOM .

**XML Excerpt 14
Example for Facility Level Roll-up GHG Quantity**

```
<ghg:TotalCO2eSupplierSubpartsKKtoPP massUOM="Metric Tons">6753.4</ghg:TotalCO2eSupplierSubpartsKKtoPP>
```

Note: The code excerpt above is presented here to demonstrate the concept of reporting greenhouse gas quantity data.

IV. Appendix A Sample XML Documents for Subpart PP

1.0 Capture Facility – Flow Meters 1

[98.423(a)(3)(i)]

(Note: Data values do not reflect an actual facility's emissions. Additional sample XML files for Subpart PP are posted on the e-GGRT help site.)

```
<ghg:GHG xmlns="http://www.ccdsupport.com/schema/ghg" >
  <ghg:FacilitySiteInformation >
    <ghg:CertificationStatement >The designated representative or alternate designated representative must sign (i.e., agree to) this certification statement. If you are an agent and you click on "SUBMIT", you are not agreeing to the certification statement, but are submitting the certification statement on behalf of the designated representative or alternate designated representative who is agreeing to the certification statement. An agent is only authorized to make the electronic submission on behalf of the designated representative, not to sign (i.e., agree to) the certification statement.</ghg:CertificationStatement >
    <ghg:ReportingYear >2011</ghg:ReportingYear >
    <ghg:FacilitySiteDetails >
      <ghg:FacilitySite >
        <ghg:FacilitySiteIdentifier >524117</ghg:FacilitySiteIdentifier >
        <ghg:FacilitySiteName >Capture- Flow Meters 1 TEST Facility</ghg:FacilitySiteName >
      </ghg:FacilitySite >
      <ghg:LocationAddress >
        <ghg:LocationAddressText >12600 S. ANY STREET</ghg:LocationAddressText >
        <ghg:LocalityName >CHICAGO</ghg:LocalityName >
        <ghg:StateIdentity >
          <ghg:StateCode >IL</ghg:StateCode >
        </ghg:StateIdentity >
        <ghg:AddressPostalCode >60633</ghg:AddressPostalCode >
      </ghg:LocationAddress >
      <ghg:CogenerationUnitEmissionsIndicator >N</ghg:CogenerationUnitEmissionsIndicator >
      <ghg:PrimaryNAICSCode >325120</ghg:PrimaryNAICSCode >
      <ghg:ParentCompanyDetails >
        <ghg:ParentCompany >
          <ghg:ParentCompanyLegalName >Soda Ash Corporation</ghg:ParentCompanyLegalName >
          <ghg:StreetAddress >108 Hillcrest Street</ghg:StreetAddress >
          <ghg:City >Sandpoint</ghg:City >
          <ghg:State >ID</ghg:State >
          <ghg:Zip >83864</ghg:Zip >
          <ghg:PercentOwnershipInterest >100.0</ghg:PercentOwnershipInterest >
        </ghg:ParentCompany >
      </ghg:ParentCompanyDetails >
      <ghg>TotalNonBiogenicCO2eFacilitySubpartsCtoJJ massUOM="Metric Tons">0</ghg>TotalNonBiogenicCO2eFacilitySubpartsCtoJJ >
      <ghg>TotalBiogenicCO2FacilitySubpartsCtoJJ massUOM="Metric Tons">0</ghg>TotalBiogenicCO2FacilitySubpartsCtoJJ >
      <ghg>TotalCO2eSupplierSubpartsKKtoPP massUOM="Metric Tons">3122.4</ghg>TotalCO2eSupplierSubpartsKKtoPP >
    </ghg:SubPartInformation >
    <ghg:SubPartPP >
      <ghg:GHGasInfoDetails >
        <ghg:GHGasName >Carbon Dioxide</ghg:GHGasName >
        <ghg:GHGasQuantity massUOM="Metric Tons" >
          <ghg:CalculatedValue >3122.4</ghg:CalculatedValue >
        </ghg:GHGasQuantity >
      </ghg:GHGasInfoDetails >
    </ghg:SubPartPP >
  </ghg:FacilitySiteInformation >
</ghg:GHG >
```

```

<ghg:FacilityClassification>capture 98.420(a)(1)</ghg:FacilityClassification>
<ghg:CalculationMethodology>Flow Meters 1</ghg:CalculationMethodology>
<ghg:MeterDetails>
  <ghg:UnitIdentification>
    <ghg:UnitName>003- Vol FM</ghg:UnitName>
    <ghg:UnitDescription>Volumetric basis (concentration in volume percentage) flow meter</ghg:UnitDescription>
    <ghg:UnitType>CO2 Flow Meter</ghg:UnitType>
  </ghg:UnitIdentification>
  <ghg:MassorVolume>Volumetric - concentration in volume percentage</ghg:MassorVolume>
  <ghg:AnnualMassofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>1868.3</ghg:MeasureValue>
  </ghg:AnnualMassofCO2>
  <ghg:BiogenicStreamPercent>
    <ghg:MeasureValue>30.36</ghg:MeasureValue>
  </ghg:BiogenicStreamPercent>
  <ghg:FlowMeterEquipmentLocationDetails>
    <ghg:isDehydrationEquipmentUpStreamIndicator>N</ghg:isDehydrationEquipmentUpStreamIndicator>
    <ghg:isDehydrationEquipmentDownStreamIndicator>Y</ghg:isDehydrationEquipmentDownStreamIndicator>
    <ghg:isCompressionEquipmentUpStreamIndicator>N</ghg:isCompressionEquipmentUpStreamIndicator>
    <ghg:isCompressionEquipmentDownStreamIndicator>Y</ghg:isCompressionEquipmentDownStreamIndicator>
    <ghg:isOtherProcessingEquipmentUpStreamIndicator>N</ghg:isOtherProcessingEquipmentUpStreamIndicator>
    <ghg:isOtherProcessingEquipmentDownStreamIndicator>Y</ghg:isOtherProcessingEquipmentDownStreamIndicator>
    <ghg:OtherProcessingEquipmentDescription>Processing equipment description K</ghg:OtherProcessingEquipmentDescription>
  </ghg:FlowMeterEquipmentLocationDetails>
  <ghg:VolumeDetails>
    <ghg:QuarterName>First Quarter</ghg:QuarterName>
    <ghg:VolumetricFlowofCO2 volUOM="Standard Cubic Meters">
      <ghg:MeasureValue>1111100.3435</ghg:MeasureValue>
    </ghg:VolumetricFlowofCO2>
    <ghg:ConcentrationofCO2VolumePercent fractionUOM="fraction (number between 0 and 1)">
      <ghg:MeasureValue>0.209</ghg:MeasureValue>
    </ghg:ConcentrationofCO2VolumePercent>
    <ghg:StandardofMeasureforCO2>Standard L</ghg:StandardofMeasureforCO2>
    <ghg:DensityofCO2 densityUOM="mton/scm">
      <ghg:MeasureValue>0.001868</ghg:MeasureValue>
    </ghg:DensityofCO2>
    <ghg:MethodofMeasureforCO2Density>rule required density</ghg:MethodofMeasureforCO2Density>
  </ghg:VolumeDetails>
  <ghg:VolumeDetails>
    <ghg:QuarterName>Second Quarter</ghg:QuarterName>
    <ghg:VolumetricFlowofCO2 volUOM="Standard Cubic Meters">
      <ghg:MeasureValue>1111200.8234</ghg:MeasureValue>
    </ghg:VolumetricFlowofCO2>
    <ghg:ConcentrationofCO2VolumePercent fractionUOM="fraction (number between 0 and 1)">
      <ghg:MeasureValue>0.206</ghg:MeasureValue>
    </ghg:ConcentrationofCO2VolumePercent>
    <ghg:StandardofMeasureforCO2>Standard L</ghg:StandardofMeasureforCO2>
    <ghg:DensityofCO2 densityUOM="mton/scm">
      <ghg:MeasureValue>0.001868</ghg:MeasureValue>
    </ghg:DensityofCO2>
    <ghg:MethodofMeasureforCO2Density>rule required density</ghg:MethodofMeasureforCO2Density>
  </ghg:VolumeDetails>
  <ghg:VolumeDetails>
    <ghg:QuarterName>Third Quarter</ghg:QuarterName>
    <ghg:VolumetricFlowofCO2 volUOM="Standard Cubic Meters">

```

```

        <ghg:MeasureValue>1111300.234</ghg:MeasureValue>
    </ghg:VolumetricFlowofCO2>
    <ghg:ConcentrationofCO2VolumePercent fractionUOM="fraction (number between 0 and 1)">
        <ghg:MeasureValue>0.204</ghg:MeasureValue>
    </ghg:ConcentrationofCO2VolumePercent>
    <ghg:StandardofMeasureforCO2>Standard L</ghg:StandardofMeasureforCO2>
    <ghg:DensityofCO2 densityUOM="mton/scm">
        <ghg:MeasureValue>0.001868</ghg:MeasureValue>
    </ghg:DensityofCO2>
    <ghg:MethodofMeasureforCO2Density>rule required density</ghg:MethodofMeasureforCO2Density>
</ghg:VolumeDetails>
<ghg:VolumeDetails>
    <ghg:QuarterName>Fourth Quarter</ghg:QuarterName>
    <ghg:VolumetricFlowofCO2 volUOM="Standard Cubic Meters">
        <ghg:MeasureValue>1111400.323</ghg:MeasureValue>
    </ghg:VolumetricFlowofCO2>
    <ghg:ConcentrationofCO2VolumePercent fractionUOM="fraction (number between 0 and 1)">
        <ghg:MeasureValue>0.306</ghg:MeasureValue>
    </ghg:ConcentrationofCO2VolumePercent>
    <ghg:StandardofMeasureforCO2>Standard L</ghg:StandardofMeasureforCO2>
    <ghg:DensityofCO2 densityUOM="mton/scm">
        <ghg:MeasureValue>0.001868</ghg:MeasureValue>
    </ghg:DensityofCO2>
    <ghg:MethodofMeasureforCO2Density>rule required density</ghg:MethodofMeasureforCO2Density>
</ghg:VolumeDetails>
</ghg:MeterDetails>
<ghg:MeterDetails>
    <ghg:UnitIdentification>
        <ghg:UnitName>001- Mass FM</ghg:UnitName>
        <ghg:UnitDescription>Mass basis flow meter</ghg:UnitDescription>
        <ghg:UnitType>CO2 Flow Meter</ghg:UnitType>
    </ghg:UnitIdentification>
    <ghg:MassorVolume>Mass</ghg:MassorVolume>
    <ghg:AnnualMassofCO2 massUOM="Metric Tons">
        <ghg:MeasureValue>701.4</ghg:MeasureValue>
    </ghg:AnnualMassofCO2>
    <ghg:BiogenicStreamPercent>
        <ghg:MeasureValue>10</ghg:MeasureValue>
    </ghg:BiogenicStreamPercent>
    <ghg:FlowMeterEquipmentLocationDetails>
        <ghg:isDehydrationEquipmentUpStreamIndicator>Y</ghg:isDehydrationEquipmentUpStreamIndicator>
        <ghg:isDehydrationEquipmentDownStreamIndicator>Y</ghg:isDehydrationEquipmentDownStreamIndicator>
        <ghg:isCompressionEquipmentUpStreamIndicator>Y</ghg:isCompressionEquipmentUpStreamIndicator>
        <ghg:isCompressionEquipmentDownStreamIndicator>Y</ghg:isCompressionEquipmentDownStreamIndicator>
        <ghg:isOtherProcessingEquipmentUpStreamIndicator>Y</ghg:isOtherProcessingEquipmentUpStreamIndicator>
        <ghg:isOtherProcessingEquipmentDownStreamIndicator>Y</ghg:isOtherProcessingEquipmentDownStreamIndicator>
        <ghg:OtherProcessingEquipmentDescription>Processing equipment description</ghg:OtherProcessingEquipmentDescription>
    </ghg:FlowMeterEquipmentLocationDetails>
    <ghg:MassDetails>
        <ghg:QuarterName>First Quarter</ghg:QuarterName>
        <ghg:MassofCO2 massUOM="Metric Tons">
            <ghg:MeasureValue>100.923</ghg:MeasureValue>
        </ghg:MassofCO2>
        <ghg:ConcentrationofCO2 fractionUOM="fraction (number between 0 and 1)">
            <ghg:MeasureValue>0.545</ghg:MeasureValue>
        </ghg:ConcentrationofCO2>
    </ghg:MassDetails>

```

```

        </ghg:ConcentrationofCO2>
        <ghg:StandardofMeasureforCO2>Standard H</ghg:StandardofMeasureforCO2>
    </ghg:MassDetails>
    <ghg:MassDetails>
        <ghg:QuarterName>Second Quarter</ghg:QuarterName>
        <ghg:MassofCO2 massUOM="Metric Tons">
            <ghg:MeasureValue>200.824</ghg:MeasureValue>
        </ghg:MassofCO2>
        <ghg:ConcentrationofCO2 fractionUOM="fraction (number between 0 and 1)">
            <ghg:MeasureValue>0.6</ghg:MeasureValue>
        </ghg:ConcentrationofCO2>
        <ghg:StandardofMeasureforCO2>Standard H</ghg:StandardofMeasureforCO2>
    </ghg:MassDetails>
    <ghg:MassDetails>
        <ghg:QuarterName>Third Quarter</ghg:QuarterName>
        <ghg:MassofCO2 massUOM="Metric Tons">
            <ghg:MeasureValue>300.365</ghg:MeasureValue>
        </ghg:MassofCO2>
        <ghg:ConcentrationofCO2 fractionUOM="fraction (number between 0 and 1)">
            <ghg:MeasureValue>0.798</ghg:MeasureValue>
        </ghg:ConcentrationofCO2>
        <ghg:StandardofMeasureforCO2>Standard H</ghg:StandardofMeasureforCO2>
    </ghg:MassDetails>
    <ghg:MassDetails>
        <ghg:QuarterName>Fourth Quarter</ghg:QuarterName>
        <ghg:MassofCO2 massUOM="Metric Tons">
            <ghg:MeasureValue>400.2261</ghg:MeasureValue>
        </ghg:MassofCO2>
        <ghg:ConcentrationofCO2 fractionUOM="fraction (number between 0 and 1)">
            <ghg:MeasureValue>0.847</ghg:MeasureValue>
        </ghg:ConcentrationofCO2>
        <ghg:StandardofMeasureforCO2>Standard H</ghg:StandardofMeasureforCO2>
    </ghg:MassDetails>
</ghg:MeterDetails>
<ghg:MeterDetails>
    <ghg:UnitIdentification>
        <ghg:UnitName>002- Vol Wt FM</ghg:UnitName>
        <ghg:UnitDescription>Volumetric basis (concentration in weight percentage) flow meter</ghg:UnitDescription>
        <ghg:UnitType>CO2 Flow Meter</ghg:UnitType>
    </ghg:UnitIdentification>
    <ghg:MassorVolume>Volumetric - concentration in weight percentage</ghg:MassorVolume>
    <ghg:AnnualMassofCO2 massUOM="Metric Tons">
        <ghg:MeasureValue>28.8</ghg:MeasureValue>
    </ghg:AnnualMassofCO2>
    <ghg:BiogenicStreamPercent>
        <ghg:MeasureValue>20.254</ghg:MeasureValue>
    </ghg:BiogenicStreamPercent>
    <ghg:FlowMeterEquipmentLocationDetails>
        <ghg:isDehydrationEquipmentUpStreamIndicator>N</ghg:isDehydrationEquipmentUpStreamIndicator>
        <ghg:isDehydrationEquipmentDownStreamIndicator>N</ghg:isDehydrationEquipmentDownStreamIndicator>
        <ghg:isCompressionEquipmentUpStreamIndicator>N</ghg:isCompressionEquipmentUpStreamIndicator>
        <ghg:isCompressionEquipmentDownStreamIndicator>N</ghg:isCompressionEquipmentDownStreamIndicator>
        <ghg:isOtherProcessingEquipmentUpStreamIndicator>N</ghg:isOtherProcessingEquipmentUpStreamIndicator>
        <ghg:isOtherProcessingEquipmentDownStreamIndicator>N</ghg:isOtherProcessingEquipmentDownStreamIndicator>
    </ghg:FlowMeterEquipmentLocationDetails>

```



```

    <ghg:OtherProcessingEquipmentDescription>Processing equipment description I</ghg:OtherProcessingEquipmentDescription>
  </ghg:FlowMeterEquipmentLocationDetails>
  <ghg:VolumeDetails>
    <ghg:QuarterName>First Quarter</ghg:QuarterName>
    <ghg:VolumetricFlowofCO2 volUOM="Standard Cubic Meters">
      <ghg:MeasureValue>10.7234</ghg:MeasureValue>
    </ghg:VolumetricFlowofCO2>
    <ghg:ConcentrationofCO2WeightPercent fractionUOM="fraction (number between 0 and 1)">
      <ghg:MeasureValue>0.117</ghg:MeasureValue>
    </ghg:ConcentrationofCO2WeightPercent>
    <ghg:StandardofMeasureforCO2>Standard K</ghg:StandardofMeasureforCO2>
    <ghg:DensityofCO2 densityUOM="mton/scm">
      <ghg:MeasureValue>0.50252</ghg:MeasureValue>
    </ghg:DensityofCO2>
    <ghg:MethodofMeasureforCO2Density>Standard J</ghg:MethodofMeasureforCO2Density>
  </ghg:VolumeDetails>
  <ghg:VolumeDetails>
    <ghg:QuarterName>Second Quarter</ghg:QuarterName>
    <ghg:VolumetricFlowofCO2 volUOM="Standard Cubic Meters">
      <ghg:MeasureValue>20.8</ghg:MeasureValue>
    </ghg:VolumetricFlowofCO2>
    <ghg:ConcentrationofCO2WeightPercent fractionUOM="fraction (number between 0 and 1)">
      <ghg:MeasureValue>0.22</ghg:MeasureValue>
    </ghg:ConcentrationofCO2WeightPercent>
    <ghg:StandardofMeasureforCO2>Standard K</ghg:StandardofMeasureforCO2>
    <ghg:DensityofCO2 densityUOM="mton/scm">
      <ghg:MeasureValue>0.6034</ghg:MeasureValue>
    </ghg:DensityofCO2>
    <ghg:MethodofMeasureforCO2Density>Standard J</ghg:MethodofMeasureforCO2Density>
  </ghg:VolumeDetails>
  <ghg:VolumeDetails>
    <ghg:QuarterName>Third Quarter</ghg:QuarterName>
    <ghg:VolumetricFlowofCO2 volUOM="Standard Cubic Meters">
      <ghg:MeasureValue>30.6112</ghg:MeasureValue>
    </ghg:VolumetricFlowofCO2>
    <ghg:ConcentrationofCO2WeightPercent fractionUOM="fraction (number between 0 and 1)">
      <ghg:MeasureValue>0.331</ghg:MeasureValue>
    </ghg:ConcentrationofCO2WeightPercent>
    <ghg:StandardofMeasureforCO2>Standard K</ghg:StandardofMeasureforCO2>
    <ghg:DensityofCO2 densityUOM="mton/scm">
      <ghg:MeasureValue>0.7025</ghg:MeasureValue>
    </ghg:DensityofCO2>
    <ghg:MethodofMeasureforCO2Density>Standard J</ghg:MethodofMeasureforCO2Density>
  </ghg:VolumeDetails>
  <ghg:VolumeDetails>
    <ghg:QuarterName>Fourth Quarter</ghg:QuarterName>
    <ghg:VolumetricFlowofCO2 volUOM="Standard Cubic Meters">
      <ghg:MeasureValue>40.5789</ghg:MeasureValue>
    </ghg:VolumetricFlowofCO2>
    <ghg:ConcentrationofCO2WeightPercent fractionUOM="fraction (number between 0 and 1)">
      <ghg:MeasureValue>0.445</ghg:MeasureValue>
    </ghg:ConcentrationofCO2WeightPercent>
    <ghg:StandardofMeasureforCO2>Standard K</ghg:StandardofMeasureforCO2>
    <ghg:DensityofCO2 densityUOM="mton/scm">
      <ghg:MeasureValue>0.8091</ghg:MeasureValue>
  </ghg:VolumeDetails>

```

```

                </ghg:DensityofCO2>
                <ghg:MethodofMeasureforCO2Density>Standard J</ghg:MethodofMeasureforCO2Density>
            </ghg:VolumeDetails>
        </ghg:MeterDetails>
    <ghg:CO2EndUseDetails>
        <ghg:ApplicationName>Food and beverage</ghg:ApplicationName>
        <ghg:ImportExport>All</ghg:ImportExport>
        <ghg:QuantityofCO2 massUOM="Metric Tons">
            <ghg:MeasureValue>100.1234</ghg:MeasureValue>
        </ghg:QuantityofCO2>
    </ghg:CO2EndUseDetails>
    <ghg:CO2EndUseDetails>
        <ghg:ApplicationName>Industrial and municipal water/wastewater treatment</ghg:ApplicationName>
        <ghg:ImportExport>All</ghg:ImportExport>
        <ghg:QuantityofCO2 massUOM="Metric Tons">
            <ghg:MeasureValue>200.2347</ghg:MeasureValue>
        </ghg:QuantityofCO2>
    </ghg:CO2EndUseDetails>
    <ghg:CO2EndUseDetails>
        <ghg:ApplicationName>Metal fabrication, including welding and cutting</ghg:ApplicationName>
        <ghg:ImportExport>All</ghg:ImportExport>
        <ghg:QuantityofCO2 massUOM="Metric Tons">
            <ghg:MeasureValue>300.523657</ghg:MeasureValue>
        </ghg:QuantityofCO2>
    </ghg:CO2EndUseDetails>
    <ghg:CO2EndUseDetails>
        <ghg:ApplicationName>Greenhouse uses for plant growth</ghg:ApplicationName>
        <ghg:ImportExport>All</ghg:ImportExport>
        <ghg:QuantityofCO2 massUOM="Metric Tons">
            <ghg:MeasureValue>400.8314</ghg:MeasureValue>
        </ghg:QuantityofCO2>
    </ghg:CO2EndUseDetails>
    <ghg:CO2EndUseDetails>
        <ghg:ApplicationName>Fumigants (e.g., grain storage) and herbicides</ghg:ApplicationName>
        <ghg:ImportExport>All</ghg:ImportExport>
        <ghg:QuantityofCO2 massUOM="Metric Tons">
            <ghg:MeasureValue>500.59878</ghg:MeasureValue>
        </ghg:QuantityofCO2>
    </ghg:CO2EndUseDetails>
    <ghg:CO2EndUseDetails>
        <ghg:ApplicationName>Pulp and paper</ghg:ApplicationName>
        <ghg:ImportExport>All</ghg:ImportExport>
        <ghg:QuantityofCO2 massUOM="Metric Tons">
            <ghg:MeasureValue>600.83434</ghg:MeasureValue>
        </ghg:QuantityofCO2>
    </ghg:CO2EndUseDetails>
    <ghg:CO2EndUseDetails>
        <ghg:ApplicationName>Cleaning and solvent use</ghg:ApplicationName>
        <ghg:ImportExport>All</ghg:ImportExport>
        <ghg:QuantityofCO2 massUOM="Metric Tons">
            <ghg:MeasureValue>700.62</ghg:MeasureValue>
        </ghg:QuantityofCO2>
    </ghg:CO2EndUseDetails>
    <ghg:CO2EndUseDetails>
        <ghg:ApplicationName>Fire fighting</ghg:ApplicationName>
    </ghg:CO2EndUseDetails>

```

```

    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>80.3</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Transportation and storage of explosives</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>900.236</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Enhanced oil and natural gas recovery</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>1000.2233</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Long-term storage (sequestration)</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>1100.3123</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Research and Development</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>1200.3987</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Other/unknown</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>1300.3</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:EquipmentCalibrationDetails>
    <ghg:MeasuringEquipmentType>Mass flow meter</ghg:MeasuringEquipmentType>
    <ghg:StandardForCalibration>Standard A</ghg:StandardForCalibration>
  </ghg:EquipmentCalibrationDetails>
  <ghg:EquipmentCalibrationDetails>
    <ghg:MeasuringEquipmentType>Volumetric flow meter</ghg:MeasuringEquipmentType>
    <ghg:StandardForCalibration>Standard B</ghg:StandardForCalibration>
  </ghg:EquipmentCalibrationDetails>
  <ghg:EquipmentCalibrationDetails>
    <ghg:MeasuringEquipmentType>Scale</ghg:MeasuringEquipmentType>
    <ghg:StandardForCalibration>Standard C</ghg:StandardForCalibration>
  </ghg:EquipmentCalibrationDetails>
  <ghg:EquipmentCalibrationDetails>
    <ghg:MeasuringEquipmentType>Load cell</ghg:MeasuringEquipmentType>
    <ghg:StandardForCalibration>Standard D</ghg:StandardForCalibration>
  </ghg:EquipmentCalibrationDetails>

```

```
</ghg:EquipmentCalibrationDetails>
<ghg:EquipmentCalibrationDetails>
  <ghg:MeasuringEquipmentType>Weigh bill</ghg:MeasuringEquipmentType>
  <ghg:StandardForCalibration>Standard E</ghg:StandardForCalibration>
</ghg:EquipmentCalibrationDetails>
<ghg:EquipmentCalibrationDetails>
  <ghg:MeasuringEquipmentType>Loaded container volume</ghg:MeasuringEquipmentType>
  <ghg:StandardForCalibration>Standard F</ghg:StandardForCalibration>
</ghg:EquipmentCalibrationDetails>
<ghg:EquipmentCalibrationDetails>
  <ghg:MeasuringEquipmentType>Other</ghg:MeasuringEquipmentType>
  <ghg:StandardForCalibration>Standard G</ghg:StandardForCalibration>
</ghg:EquipmentCalibrationDetails>
<ghg:MassVolumeNumberofDaysSubstituted>1</ghg:MassVolumeNumberofDaysSubstituted>
<ghg:ConcentrationNumberofDaysSubstituted>2</ghg:ConcentrationNumberofDaysSubstituted>
<ghg:DensityNumberofDaysSubstituted>3</ghg:DensityNumberofDaysSubstituted>
</ghg:SubPartPP>
</ghg:SubPartInformation>
</ghg:FacilitySiteDetails>
<ghg:CalculationMethodologyChangesDescription>None</ghg:CalculationMethodologyChangesDescription>
<ghg:BestAvailableMonitoringMethodsUsed>N/A</ghg:BestAvailableMonitoringMethodsUsed>
<ghg:StartDate>2011-01-01</ghg:StartDate>
<ghg:EndDate>2011-12-31</ghg:EndDate>
<ghg:DateTimeReportGenerated>2012-02-29T10:16:31</ghg:DateTimeReportGenerated>
</ghg:FacilitySiteInformation>
</ghg:GHG>
```

2.0 Capture Facility – Flow Meters 2

[98.423(a)(3)(ii)]

(Note: Data values do not reflect an actual facility's emissions. Additional sample XML files for Subpart PP are posted on the e-GGRT help site.)

```
<ghg:GHG xmlns="http://www.ccdsupport.com/schema/ghg" >
  <ghg:FacilitySiteInformation >
    <ghg:CertificationStatement>The designated representative or alternate designated representative must sign (i.e., agree to) this certification statement. If you are an agent and you click on "SUBMIT", you are not agreeing to the certification statement, but are submitting the certification statement on behalf of the designated representative or alternate designated representative who is agreeing to the certification statement. An agent is only authorized to make the electronic submission on behalf of the designated representative, not to sign (i.e., agree to) the certification statement.</ghg:CertificationStatement >
    <ghg:ReportingYear>2011</ghg:ReportingYear >
    <ghg:FacilitySiteDetails >
      <ghg:FacilitySite >
        <ghg:FacilitySiteIdentifier >524117</ghg:FacilitySiteIdentifier >
        <ghg:FacilitySiteName >Capture- Flow Meters 2 TEST Facility</ghg:FacilitySiteName >
      </ghg:FacilitySite >
      <ghg:LocationAddress >
        <ghg:LocationAddressText >12600 S. ANY STREET</ghg:LocationAddressText >
        <ghg:LocalityName >CHICAGO</ghg:LocalityName >
        <ghg:StateIdentity >
          <ghg:StateCode >IL</ghg:StateCode >
        </ghg:StateIdentity >
        <ghg:AddressPostalCode >60633</ghg:AddressPostalCode >
      </ghg:LocationAddress >
      <ghg:CogenerationUnitEmissionsIndicator >N</ghg:CogenerationUnitEmissionsIndicator >
      <ghg:PrimaryNAICSCode >325120</ghg:PrimaryNAICSCode >
      <ghg:ParentCompanyDetails >
        <ghg:ParentCompany >
          <ghg:ParentCompanyLegalName >Soda Ash Corporation</ghg:ParentCompanyLegalName >
          <ghg:StreetAddress >108 Hillcrest Street</ghg:StreetAddress >
          <ghg:City >Sandpoint</ghg:City >
          <ghg:State >ID</ghg:State >
          <ghg:Zip >83864</ghg:Zip >
          <ghg:PercentOwnershipInterest >100.0</ghg:PercentOwnershipInterest >
        </ghg:ParentCompany >
      </ghg:ParentCompanyDetails >
      <ghg>TotalNonBiogenicCO2eFacilitySubpartsCtoJJ massUOM="Metric Tons">0</ghg>TotalNonBiogenicCO2eFacilitySubpartsCtoJJ >
      <ghg>TotalBiogenicCO2FacilitySubpartsCtoJJ massUOM="Metric Tons">0</ghg>TotalBiogenicCO2FacilitySubpartsCtoJJ >
      <ghg>TotalCO2eSupplierSubpartsKKtoPP massUOM="Metric Tons">700.5</ghg>TotalCO2eSupplierSubpartsKKtoPP >
    </ghg:SubPartInformation >
    <ghg:SubPartPP >
      <ghg:GHGasInfoDetails >
        <ghg:GHGasName >Carbon Dioxide</ghg:GHGasName >
        <ghg:GHGasQuantity massUOM="Metric Tons" >
          <ghg:CalculatedValue >700.5</ghg:CalculatedValue >
        </ghg:GHGasQuantity >
      </ghg:GHGasInfoDetails >
      <ghg:FacilityClassification >capture 98.420(a)(1)</ghg:FacilityClassification >
      <ghg:CalculationMethodology >Flow Meters 2</ghg:CalculationMethodology >
    </ghg:SubPartPP >
  </ghg:FacilitySiteInformation >
</ghg:GHG >
```

```

<ghg:MeterDetails>
  <ghg:UnitIdentification>
    <ghg:UnitName>001- Mass FM</ghg:UnitName>
    <ghg:UnitDescription>Mass basis flow meter</ghg:UnitDescription>
    <ghg:UnitType>CO2 Flow Meter</ghg:UnitType>
  </ghg:UnitIdentification>
  <ghg:MassorVolume>Mass</ghg:MassorVolume>
  <ghg:AnnualMassofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>700.3</ghg:MeasureValue>
  </ghg:AnnualMassofCO2>
  <ghg:MeterSegregationLocation>UpStream</ghg:MeterSegregationLocation>
  <ghg:BiogenicStreamPercent>
    <ghg:MeasureValue>10.865</ghg:MeasureValue>
  </ghg:BiogenicStreamPercent>
  <ghg:FlowMeterEquipmentLocationDetails>
    <ghg:isDehydrationEquipmentUpStreamIndicator>Y</ghg:isDehydrationEquipmentUpStreamIndicator>
    <ghg:isDehydrationEquipmentDownStreamIndicator>Y</ghg:isDehydrationEquipmentDownStreamIndicator>
    <ghg:isCompressionEquipmentUpStreamIndicator>Y</ghg:isCompressionEquipmentUpStreamIndicator>
    <ghg:isCompressionEquipmentDownStreamIndicator>Y</ghg:isCompressionEquipmentDownStreamIndicator>
    <ghg:isOtherProcessingEquipmentUpStreamIndicator>Y</ghg:isOtherProcessingEquipmentUpStreamIndicator>
    <ghg:isOtherProcessingEquipmentDownStreamIndicator>Y</ghg:isOtherProcessingEquipmentDownStreamIndicator>
    <ghg:OtherProcessingEquipmentDescription>Processing equipment description</ghg:OtherProcessingEquipmentDescription>
  </ghg:FlowMeterEquipmentLocationDetails>
  <ghg:MassDetails>
    <ghg:QuarterName>First Quarter</ghg:QuarterName>
    <ghg:MassofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>100.254</ghg:MeasureValue>
    </ghg:MassofCO2>
    <ghg:ConcentrationofCO2 fractionUOM="fraction (number between 0 and 1)">
      <ghg:MeasureValue>0.584</ghg:MeasureValue>
    </ghg:ConcentrationofCO2>
    <ghg:StandardofMeasureforCO2>Standard H</ghg:StandardofMeasureforCO2>
  </ghg:MassDetails>
  <ghg:MassDetails>
    <ghg:QuarterName>Second Quarter</ghg:QuarterName>
    <ghg:MassofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>200.456</ghg:MeasureValue>
    </ghg:MassofCO2>
    <ghg:ConcentrationofCO2 fractionUOM="fraction (number between 0 and 1)">
      <ghg:MeasureValue>0.665</ghg:MeasureValue>
    </ghg:ConcentrationofCO2>
    <ghg:StandardofMeasureforCO2>Standard H</ghg:StandardofMeasureforCO2>
  </ghg:MassDetails>
  <ghg:MassDetails>
    <ghg:QuarterName>Third Quarter</ghg:QuarterName>
    <ghg:MassofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>300.3423</ghg:MeasureValue>
    </ghg:MassofCO2>
    <ghg:ConcentrationofCO2 fractionUOM="fraction (number between 0 and 1)">
      <ghg:MeasureValue>0.787</ghg:MeasureValue>
    </ghg:ConcentrationofCO2>
    <ghg:StandardofMeasureforCO2>Standard H</ghg:StandardofMeasureforCO2>
  </ghg:MassDetails>
  <ghg:MassDetails>
    <ghg:QuarterName>Fourth Quarter</ghg:QuarterName>
  </ghg:MassDetails>

```

```

                <ghg:MassofCO2 massUOM="Metric Tons">
                    <ghg:MeasureValue>400.3567</ghg:MeasureValue>
                </ghg:MassofCO2>
                <ghg:ConcentrationofCO2 fractionUOM="fraction (number between 0 and 1)">
                    <ghg:MeasureValue>0.885</ghg:MeasureValue>
                </ghg:ConcentrationofCO2>
                <ghg:StandardofMeasureforCO2>Standard H</ghg:StandardofMeasureforCO2>
            </ghg:MassDetails>
        </ghg:MeterDetails>
    <ghg:SegregationEmissionDetails>
        <ghg:MainFlowMeterCO2Emissions massUOM="Metric Tons">
            <ghg:MeasureValue>400.2</ghg:MeasureValue>
        </ghg:MainFlowMeterCO2Emissions>
        <ghg:SubsequentFlowMeterCO2Emissions massUOM="Metric Tons">
            <ghg:MeasureValue>400.4</ghg:MeasureValue>
        </ghg:SubsequentFlowMeterCO2Emissions>
    </ghg:SegregationEmissionDetails>
    <ghg:CO2EndUseDetails>
        <ghg:ApplicationName>Food and beverage</ghg:ApplicationName>
        <ghg:ImportExport>All</ghg:ImportExport>
        <ghg:QuantityofCO2 massUOM="Metric Tons">
            <ghg:MeasureValue>100.11211</ghg:MeasureValue>
        </ghg:QuantityofCO2>
    </ghg:CO2EndUseDetails>
    <ghg:CO2EndUseDetails>
        <ghg:ApplicationName>Industrial and municipal water/wastewater treatment</ghg:ApplicationName>
        <ghg:ImportExport>All</ghg:ImportExport>
        <ghg:QuantityofCO2 massUOM="Metric Tons">
            <ghg:MeasureValue>200.11111</ghg:MeasureValue>
        </ghg:QuantityofCO2>
    </ghg:CO2EndUseDetails>
    <ghg:CO2EndUseDetails>
        <ghg:ApplicationName>Metal fabrication, including welding and cutting</ghg:ApplicationName>
        <ghg:ImportExport>All</ghg:ImportExport>
        <ghg:QuantityofCO2 massUOM="Metric Tons">
            <ghg:MeasureValue>300.11131</ghg:MeasureValue>
        </ghg:QuantityofCO2>
    </ghg:CO2EndUseDetails>
    <ghg:CO2EndUseDetails>
        <ghg:ApplicationName>Greenhouse uses for plant growth</ghg:ApplicationName>
        <ghg:ImportExport>All</ghg:ImportExport>
        <ghg:QuantityofCO2 massUOM="Metric Tons">
            <ghg:MeasureValue>400.11111</ghg:MeasureValue>
        </ghg:QuantityofCO2>
    </ghg:CO2EndUseDetails>
    <ghg:CO2EndUseDetails>
        <ghg:ApplicationName>Fumigants (e.g., grain storage) and herbicides</ghg:ApplicationName>
        <ghg:ImportExport>All</ghg:ImportExport>
        <ghg:QuantityofCO2 massUOM="Metric Tons">
            <ghg:MeasureValue>500.11111</ghg:MeasureValue>
        </ghg:QuantityofCO2>
    </ghg:CO2EndUseDetails>
    <ghg:CO2EndUseDetails>
        <ghg:ApplicationName>Pulp and paper</ghg:ApplicationName>
        <ghg:ImportExport>All</ghg:ImportExport>
    </ghg:CO2EndUseDetails>

```

```

    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>600.11111</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Cleaning and solvent use</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>700.11111</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Fire fighting</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>800.11111</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Transportation and storage of explosives</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>900.11111</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Enhanced oil and natural gas recovery</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>1000.11111</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Long-term storage (sequestration)</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>1100.11111</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Research and Development</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>1200.11111</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Other/unknown</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>1300.11111</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:EquipmentCalibrationDetails>
    <ghg:MeasuringEquipmentType>Mass flow meter</ghg:MeasuringEquipmentType>
  </ghg:EquipmentCalibrationDetails>

```



```
        <ghg:StandardForCalibration>Standard A</ghg:StandardForCalibration >
      </ghg:EquipmentCalibrationDetails>
    <ghg:MassVolumeNumberofDaysSubstituted>1</ghg:MassVolumeNumberofDaysSubstituted >
    <ghg:ConcentrationNumberofDaysSubstituted>2</ghg:ConcentrationNumberofDaysSubstituted >
    <ghg:DensityNumberofDaysSubstituted>3</ghg:DensityNumberofDaysSubstituted >
  </ghg:SubPartPP>
</ghg:SubPartInformation>
</ghg:FacilitySiteDetails>
<ghg:CalculationMethodologyChangesDescription/>
<ghg:BestAvailableMonitoringMethodsUsed/>
<ghg:StartDate>2011-01-01</ghg:StartDate>
<ghg:EndDate>2011-12-31</ghg:EndDate>
<ghg:DateTimeReportGenerated>2012-02-29T10:16:31</ghg:DateTimeReportGenerated >
</ghg:FacilitySiteInformation>
</ghg:GHG>
```

3.0 Capture Facility – Streams

[98.423(b)]

(Note: Data values do not reflect an actual facility's emissions. Additional sample XML files for Subpart PP are posted on the e-GGRT help site.)

```

<ghg:GHG xmlns="http://www.ccdsupport.com/schema/ghg">
  <ghg:FacilitySiteInformation>
    <ghg:CertificationStatement>The designated representative or alternate designated representative must sign (i.e., agree to) this certification statement. If you are an agent and you click on "SUBMIT", you are not agreeing to the certification statement, but are submitting the certification statement on behalf of the designated representative or alternate designated representative who is agreeing to the certification statement. An agent is only authorized to make the electronic submission on behalf of the designated representative, not to sign (i.e., agree to) the certification statement.</ghg:CertificationStatement>
    <ghg:ReportingYear>2011</ghg:ReportingYear>
    <ghg:FacilitySiteDetails>
      <ghg:FacilitySite>
        <ghg:FacilitySiteIdentifier>524117</ghg:FacilitySiteIdentifier>
        <ghg:FacilitySiteName>Capture- Streams TEST Facility</ghg:FacilitySiteName>
      </ghg:FacilitySite>
      <ghg:LocationAddress>
        <ghg:LocationAddressText>12600 S. ANY STREET</ghg:LocationAddressText>
        <ghg:LocalityName>CHICAGO</ghg:LocalityName>
        <ghg:StateIdentity>
          <ghg:StateCode>IL</ghg:StateCode>
        </ghg:StateIdentity>
        <ghg:AddressPostalCode>60633</ghg:AddressPostalCode>
      </ghg:LocationAddress>
      <ghg:CogenerationUnitEmissionsIndicator>N</ghg:CogenerationUnitEmissionsIndicator>
      <ghg:PrimaryNAICSCode>325120</ghg:PrimaryNAICSCode>
      <ghg:ParentCompanyDetails>
        <ghg:ParentCompany>
          <ghg:ParentCompanyLegalName>Soda Ash Corporation</ghg:ParentCompanyLegalName>
          <ghg:StreetAddress>108 Hillcrest Street</ghg:StreetAddress>
          <ghg:City>Sandpoint</ghg:City>
          <ghg:State>ID</ghg:State>
          <ghg:Zip>83864</ghg:Zip>
          <ghg:PercentOwnershipInterest>100.0</ghg:PercentOwnershipInterest>
        </ghg:ParentCompany>
      </ghg:ParentCompanyDetails>
      <ghg>TotalNonBiogenicCO2eFacilitySubpartsCtoJJ massUOM="Metric Tons">0</ghg>TotalNonBiogenicCO2eFacilitySubpartsCtoJJ>
      <ghg>TotalBiogenicCO2FacilitySubpartsCtoJJ massUOM="Metric Tons">0</ghg>TotalBiogenicCO2FacilitySubpartsCtoJJ>
      <ghg>TotalCO2eSupplierSubpartsKKtoPP massUOM="Metric Tons">2200000.3</ghg>TotalCO2eSupplierSubpartsKKtoPP>
    </ghg:SubPartInformation>
    <ghg:SubPartPP>
      <ghg:GHGasInfoDetails>
        <ghg:GHGasName>Carbon Dioxide</ghg:GHGasName>
        <ghg:GHGasQuantity massUOM="Metric Tons">
          <ghg:CalculatedValue>2200000.3</ghg:CalculatedValue>
        </ghg:GHGasQuantity>
      </ghg:GHGasInfoDetails>
      <ghg:FacilityClassification>capture 98.420(a)(1)</ghg:FacilityClassification>
      <ghg:CalculationMethodology>Streams</ghg:CalculationMethodology>
      <ghg:MeterDetails>

```

```

<ghg:UnitIdentification>
  <ghg:UnitName>001- CO2 Stream</ghg:UnitName>
  <ghg:UnitDescription>CO2 stream #1</ghg:UnitDescription>
  <ghg:UnitType>CO2 Stream</ghg:UnitType>
</ghg:UnitIdentification>
<ghg:MassorVolume>Volumetric - concentration in weight percentage</ghg:MassorVolume>
<ghg:AnnualMassofCO2 massUOM="Metric Tons">
  <ghg:MeasureValue>2200000.3</ghg:MeasureValue>
</ghg:AnnualMassofCO2>

<ghg:VolumeDetails>
  <ghg:QuarterName>First Quarter</ghg:QuarterName>
  <ghg:VolumetricFlowofCO2 volUOM="Standard Cubic Meters">
    <ghg:MeasureValue>10000.34535</ghg:MeasureValue>
  </ghg:VolumetricFlowofCO2>
  <ghg:ConcentrationofCO2WeightPercent fractionUOM="fraction (number between 0 and 1)">
    <ghg:MeasureValue>0.5</ghg:MeasureValue>
  </ghg:ConcentrationofCO2WeightPercent>
  <ghg:StandardofMeasureforCO2>Standard K</ghg:StandardofMeasureforCO2>
  <ghg:DensityofCO2 densityUOM="mton/scm">
    <ghg:MeasureValue>10.325</ghg:MeasureValue>
  </ghg:DensityofCO2>
  <ghg:MethodofMeasureforCO2Density>Standard J</ghg:MethodofMeasureforCO2Density>
</ghg:VolumeDetails>
<ghg:VolumeDetails>
  <ghg:QuarterName>Second Quarter</ghg:QuarterName>
  <ghg:VolumetricFlowofCO2 volUOM="Standard Cubic Meters">
    <ghg:MeasureValue>20000.1</ghg:MeasureValue>
  </ghg:VolumetricFlowofCO2>
  <ghg:ConcentrationofCO2WeightPercent fractionUOM="fraction (number between 0 and 1)">
    <ghg:MeasureValue>0.647</ghg:MeasureValue>
  </ghg:ConcentrationofCO2WeightPercent>
  <ghg:StandardofMeasureforCO2>Standard K</ghg:StandardofMeasureforCO2>
  <ghg:DensityofCO2 densityUOM="mton/scm">
    <ghg:MeasureValue>20.25</ghg:MeasureValue>
  </ghg:DensityofCO2>
  <ghg:MethodofMeasureforCO2Density>Standard J</ghg:MethodofMeasureforCO2Density>
</ghg:VolumeDetails>
<ghg:VolumeDetails>
  <ghg:QuarterName>Third Quarter</ghg:QuarterName>
  <ghg:VolumetricFlowofCO2 volUOM="Standard Cubic Meters">
    <ghg:MeasureValue>30000.23</ghg:MeasureValue>
  </ghg:VolumetricFlowofCO2>
  <ghg:ConcentrationofCO2WeightPercent fractionUOM="fraction (number between 0 and 1)">
    <ghg:MeasureValue>0.714</ghg:MeasureValue>
  </ghg:ConcentrationofCO2WeightPercent>
  <ghg:StandardofMeasureforCO2>Standard K</ghg:StandardofMeasureforCO2>
  <ghg:DensityofCO2 densityUOM="mton/scm">
    <ghg:MeasureValue>30.24</ghg:MeasureValue>
  </ghg:DensityofCO2>
  <ghg:MethodofMeasureforCO2Density>Standard J</ghg:MethodofMeasureforCO2Density>
</ghg:VolumeDetails>
<ghg:VolumeDetails>
  <ghg:QuarterName>Fourth Quarter</ghg:QuarterName>
  <ghg:VolumetricFlowofCO2 volUOM="Standard Cubic Meters">

```

```

        <ghg:MeasureValue>40000.146</ghg:MeasureValue>
      </ghg:VolumetricFlowofCO2>
    <ghg:ConcentrationofCO2WeightPercent fractionUOM="fraction (number between 0 and 1)">
      <ghg:MeasureValue>0.814</ghg:MeasureValue>
    </ghg:ConcentrationofCO2WeightPercent>
    <ghg:StandardofMeasureforCO2>Standard K</ghg:StandardofMeasureforCO2>
    <ghg:DensityofCO2 densityUOM="mton/scm">
      <ghg:MeasureValue>40.25</ghg:MeasureValue>
    </ghg:DensityofCO2>
    <ghg:MethodofMeasureforCO2Density>Standard J</ghg:MethodofMeasureforCO2Density>
  </ghg:VolumeDetails>
</ghg:MeterDetails>
<ghg:CO2EndUseDetails>
<ghg:ApplicationName>Food and beverage</ghg:ApplicationName>
  <ghg:ImportExport>All</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>100.14</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Industrial and municipal water/wastewater treatment</ghg:ApplicationName>
  <ghg:ImportExport>All</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>200.25</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Metal fabrication, including welding and cutting</ghg:ApplicationName>
  <ghg:ImportExport>All</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>300.36</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Greenhouse uses for plant growth</ghg:ApplicationName>
  <ghg:ImportExport>All</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>400.78</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Fumigants (e.g., grain storage) and herbicides</ghg:ApplicationName>
  <ghg:ImportExport>All</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>500.56</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Pulp and paper</ghg:ApplicationName>
  <ghg:ImportExport>All</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>600.345</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>

```

```

<ghg:ApplicationName>Cleaning and solvent use</ghg:ApplicationName>
  <ghg:ImportExport>All</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>700.58</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Fire fighting</ghg:ApplicationName>
  <ghg:ImportExport>All</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>800.4345</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Transportation and storage of explosives</ghg:ApplicationName>
  <ghg:ImportExport>All</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>900.45</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Enhanced oil and natural gas recovery</ghg:ApplicationName>
  <ghg:ImportExport>All</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>1000.76</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Long-term storage (sequestration)</ghg:ApplicationName>
  <ghg:ImportExport>All</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>1100.56</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Research and Development</ghg:ApplicationName>
  <ghg:ImportExport>All</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>1200.1111</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Other/unknown</ghg:ApplicationName>
  <ghg:ImportExport>All</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>1300.45</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:EquipmentCalibrationDetails>
  <ghg:MeasuringEquipmentType>Loaded container volume</ghg:MeasuringEquipmentType>
  <ghg:StandardForCalibration>Standard A</ghg:StandardForCalibration>
</ghg:EquipmentCalibrationDetails>
<ghg:MassVolumeNumberofDaysSubstituted>1</ghg:MassVolumeNumberofDaysSubstituted>
<ghg:ConcentrationNumberofDaysSubstituted>2</ghg:ConcentrationNumberofDaysSubstituted>
<ghg:DensityNumberofDaysSubstituted>3</ghg:DensityNumberofDaysSubstituted>

```

```
</ghg:SubPartPP>  
</ghg:SubPartInformation>  
</ghg:FacilitySiteDetails>  
<ghg:CalculationMethodologyChangesDescription/>  
<ghg:BestAvailableMonitoringMethodsUsed/>  
<ghg:StartDate>2011-01-01</ghg:StartDate>  
<ghg:EndDate>2011-12-31</ghg:EndDate>  
<ghg:DateTimeReportGenerated>2012-02-29T10:16:31</ghg:DateTimeReportGenerated>  
</ghg:FacilitySiteInformation>  
</ghg:GHG>
```

4.0 Extract Facility – Flow Meters 3

(Note: Data values do not reflect an actual facility's emissions. Additional sample XML files for Subpart PP are posted on the e-GGRT help site.)

```

<ghg:GHG xmlns="http://www.ccdsupport.com/schema/ghg" >
  <ghg:FacilitySiteInformation >
    <ghg:CertificationStatement>The designated representative or alternate designated representative must sign (i.e., agree to) this certification statement. If you are an agent and you click on "SUBMIT", you are not agreeing to the certification statement, but are submitting the certification statement on behalf of the designated representative or alternate designated representative who is agreeing to the certification statement. An agent is only authorized to make the electronic submission on behalf of the designated representative, not to sign (i.e., agree to) the certification statement.</ghg:CertificationStatement >
    <ghg:ReportingYear>2011</ghg:ReportingYear >
    <ghg:FacilitySiteDetails >
      <ghg:FacilitySite >
        <ghg:FacilitySiteIdentifier>524117</ghg:FacilitySiteIdentifier >
        <ghg:FacilitySiteName>Extract- Flow Meters 3 TEST Facility</ghg:FacilitySiteName >
      </ghg:FacilitySite >
      <ghg:LocationAddress >
        <ghg:LocationAddressText>12600 S. ANY STREET</ghg:LocationAddressText >
        <ghg:LocalityName>CHICAGO</ghg:LocalityName >
        <ghg:StateIdentity >
          <ghg:StateCode>IL</ghg:StateCode >
        </ghg:StateIdentity >
        <ghg:AddressPostalCode>60633</ghg:AddressPostalCode >
      </ghg:LocationAddress >
      <ghg:CogenerationUnitEmissionsIndicator>N</ghg:CogenerationUnitEmissionsIndicator >
      <ghg:PrimaryNAICSCode>325120</ghg:PrimaryNAICSCode >
      <ghg:ParentCompanyDetails >
        <ghg:ParentCompany >
          <ghg:ParentCompanyLegalName >Soda Ash Corporation</ghg:ParentCompanyLegalName >
          <ghg:StreetAddress>108 Hillcrest Street</ghg:StreetAddress >
          <ghg:City>Sandpoint</ghg:City >
          <ghg:State>ID</ghg:State >
          <ghg:Zip>83864</ghg:Zip >
          <ghg:PercentOwnershipInterest >100.0</ghg:PercentOwnershipInterest >
        </ghg:ParentCompany >
      </ghg:ParentCompanyDetails >
      <ghg:TotalNonBiogenicCO2eFacilitySubpartsCtoJJ massUOM="Metric Tons">0</ghg:TotalNonBiogenicCO2eFacilitySubpartsCtoJJ >
      <ghg:TotalBiogenicCO2FacilitySubpartsCtoJJ massUOM="Metric Tons">0</ghg:TotalBiogenicCO2FacilitySubpartsCtoJJ >
      <ghg:TotalCO2eSupplierSubpartsKKtoPP massUOM="Metric Tons">700.1</ghg:TotalCO2eSupplierSubpartsKKtoPP >
      <ghg:SubPartInformation >
        <ghg:SubPartPP >
          <ghg:GHGasInfoDetails >
            <ghg:GHGasName>Carbon Dioxide</ghg:GHGasName >
            <ghg:GHGasQuantity massUOM="Metric Tons" >
              <ghg:CalculatedValue>700.1</ghg:CalculatedValue >
            </ghg:GHGasQuantity >
          </ghg:GHGasInfoDetails >
          <ghg:FacilityClassification >extract 98.420(a)(2)</ghg:FacilityClassification >
          <ghg:CalculationMethodology >Flow Meters 3</ghg:CalculationMethodology >
          <ghg:MeterDetails >
            <ghg:UnitIdentification >
              <ghg:UnitName >001- Mass FM</ghg:UnitName >
            </ghg:UnitIdentification >
          </ghg:MeterDetails >
        </ghg:SubPartPP >
      </ghg:SubPartInformation >
    </ghg:FacilitySiteDetails >
  </ghg:FacilitySiteInformation >

```

```

    <ghg:UnitDescription>Mass basis flow meter</ghg:UnitDescription>
    <ghg:UnitType>CO2 Flow Meter</ghg:UnitType>
  </ghg:UnitIdentification>
  <ghg:MassorVolume>Mass</ghg:MassorVolume>
  <ghg:AnnualMassofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>700.1</ghg:MeasureValue>
  </ghg:AnnualMassofCO2>
  <ghg:FlowMeterEquipmentLocationDetails>
    <ghg:isDehydrationEquipmentUpStreamIndicator>Y</ghg:isDehydrationEquipmentUpStreamIndicator>
    <ghg:isDehydrationEquipmentDownStreamIndicator>Y</ghg:isDehydrationEquipmentDownStreamIndicator>
    <ghg:isCompressionEquipmentUpStreamIndicator>Y</ghg:isCompressionEquipmentUpStreamIndicator>
    <ghg:isCompressionEquipmentDownStreamIndicator>Y</ghg:isCompressionEquipmentDownStreamIndicator>
    <ghg:isOtherProcessingEquipmentUpStreamIndicator>Y</ghg:isOtherProcessingEquipmentUpStreamIndicator>
    <ghg:isOtherProcessingEquipmentDownStreamIndicator>Y</ghg:isOtherProcessingEquipmentDownStreamIndicator>
    <ghg:OtherProcessingEquipmentDescription>Processing equipment description</ghg:OtherProcessingEquipmentDescription>
  </ghg:FlowMeterEquipmentLocationDetails>
  <ghg:MassDetails>
    <ghg:QuarterName>First Quarter</ghg:QuarterName>
    <ghg:MassofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>100.234</ghg:MeasureValue>
    </ghg:MassofCO2>
    <ghg:ConcentrationofCO2 fractionUOM="fraction (number between 0 and 1)">
      <ghg:MeasureValue>0.554</ghg:MeasureValue>
    </ghg:ConcentrationofCO2>
    <ghg:StandardofMeasureforCO2>Standard H</ghg:StandardofMeasureforCO2>
  </ghg:MassDetails>
  <ghg:MassDetails>
    <ghg:QuarterName>Second Quarter</ghg:QuarterName>
    <ghg:MassofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>200.1</ghg:MeasureValue>
    </ghg:MassofCO2>
    <ghg:ConcentrationofCO2 fractionUOM="fraction (number between 0 and 1)">
      <ghg:MeasureValue>0.678</ghg:MeasureValue>
    </ghg:ConcentrationofCO2>
    <ghg:StandardofMeasureforCO2>Standard H</ghg:StandardofMeasureforCO2>
  </ghg:MassDetails>
  <ghg:MassDetails>
    <ghg:QuarterName>Third Quarter</ghg:QuarterName>
    <ghg:MassofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>300.9897</ghg:MeasureValue>
    </ghg:MassofCO2>
    <ghg:ConcentrationofCO2 fractionUOM="fraction (number between 0 and 1)">
      <ghg:MeasureValue>0.778</ghg:MeasureValue>
    </ghg:ConcentrationofCO2>
    <ghg:StandardofMeasureforCO2>Standard H</ghg:StandardofMeasureforCO2>
  </ghg:MassDetails>
  <ghg:MassDetails>
    <ghg:QuarterName>Fourth Quarter</ghg:QuarterName>
    <ghg:MassofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>400.234</ghg:MeasureValue>
    </ghg:MassofCO2>
    <ghg:ConcentrationofCO2 fractionUOM="fraction (number between 0 and 1)">
      <ghg:MeasureValue>0.878</ghg:MeasureValue>
    </ghg:ConcentrationofCO2>
    <ghg:StandardofMeasureforCO2>Standard H</ghg:StandardofMeasureforCO2>
  </ghg:MassDetails>

```



```

    </ghg:MassDetails>
  </ghg:MeterDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Food and beverage</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>100.478</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Industrial and municipal water/wastewater treatment</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>200.278</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Metal fabrication, including welding and cutting</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>300.232</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Greenhouse uses for plant growth</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>400.78</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Fumigants (e.g., grain storage) and herbicides</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>500.234</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Pulp and paper</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>600.78</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Cleaning and solvent use</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>700.78</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Fire fighting</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">

```

```

        <ghg:MeasureValue>800.3698</ghg:MeasureValue>
      </ghg:QuantityofCO2>
    </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Transportation and storage of explosives</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>900.123</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Enhanced oil and natural gas recovery</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>1000.8979</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Long-term storage (sequestration)</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>1100.278</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Research and Development</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>1200.45</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Other/unknown</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>1300.33</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:EquipmentCalibrationDetails>
    <ghg:MeasuringEquipmentType>Mass flow meter</ghg:MeasuringEquipmentType>
    <ghg:StandardForCalibration>Standard A</ghg:StandardForCalibration>
  </ghg:EquipmentCalibrationDetails>
  <ghg:MassVolumeNumberofDaysSubstituted>1</ghg:MassVolumeNumberofDaysSubstituted>
  <ghg:ConcentrationNumberofDaysSubstituted>2</ghg:ConcentrationNumberofDaysSubstituted>
  <ghg:DensityNumberofDaysSubstituted>3</ghg:DensityNumberofDaysSubstituted>
</ghg:SubPartPP>
</ghg:SubPartInformation>
</ghg:FacilitySiteDetails>
<ghg:CalculationMethodologyChangesDescription/>
<ghg:BestAvailableMonitoringMethodsUsed/>
<ghg:StartDate>2011-01-01</ghg:StartDate>
<ghg:EndDate>2011-12-31</ghg:EndDate>
<ghg:DateTimeReportGenerated>2012-02-29T10:16:31</ghg:DateTimeReportGenerated>
</ghg:FacilitySiteInformation>
</ghg:GHG>

```

5.0 Extract Facility – Streams

[98.423(b)]

(Note: Data values do not reflect an actual facility's emissions. Additional sample XML files for Subpart PP are posted on the e-GGRT help site.)

```
<ghg:GHG xmlns="http://www.ccdsupport.com/schema/ghg" >
  <ghg:FacilitySiteInformation >
    <ghg:CertificationStatement >The designated representative or alternate designated representative must sign (i.e., agree to) this certification statement. If you are an agent and you click on "SUBMIT", you are not agreeing to the certification statement, but are submitting the certification statement on behalf of the designated representative or alternate designated representative who is agreeing to the certification statement. An agent is only authorized to make the electronic submission on behalf of the designated representative, not to sign (i.e., agree to) the certification statement.</ghg:CertificationStatement >
    <ghg:ReportingYear >2011</ghg:ReportingYear >
    <ghg:FacilitySiteDetails >
      <ghg:FacilitySite >
        <ghg:FacilitySiteIdentifier >524117</ghg:FacilitySiteIdentifier >
        <ghg:FacilitySiteName >Extract- Streams TEST Facility</ghg:FacilitySiteName >
      </ghg:FacilitySite >
      <ghg:LocationAddress >
        <ghg:LocationAddressText >12600 S. ANY STREET</ghg:LocationAddressText >
        <ghg:LocalityName >CHICAGO</ghg:LocalityName >
        <ghg:StateIdentity >
          <ghg:StateCode >IL</ghg:StateCode >
        </ghg:StateIdentity >
        <ghg:AddressPostalCode >60633</ghg:AddressPostalCode >
      </ghg:LocationAddress >
      <ghg:CogenerationUnitEmissionsIndicator >N</ghg:CogenerationUnitEmissionsIndicator >
      <ghg:PrimaryNAICSCode >325120</ghg:PrimaryNAICSCode >
      <ghg:ParentCompanyDetails >
        <ghg:ParentCompany >
          <ghg:ParentCompanyLegalName >Soda Ash Corporation</ghg:ParentCompanyLegalName >
          <ghg:StreetAddress >108 Hillcrest Street</ghg:StreetAddress >
          <ghg:City >Sandpoint</ghg:City >
          <ghg:State >ID</ghg:State >
          <ghg:Zip >83864</ghg:Zip >
          <ghg:PercentOwnershipInterest >100.0</ghg:PercentOwnershipInterest >
        </ghg:ParentCompany >
      </ghg:ParentCompanyDetails >
      <ghg:TotalNonBiogenicCO2eFacilitySubpartsCtoJJ massUOM="Metric Tons">0</ghg:TotalNonBiogenicCO2eFacilitySubpartsCtoJJ >
      <ghg:TotalBiogenicCO2FacilitySubpartsCtoJJ massUOM="Metric Tons">0</ghg:TotalBiogenicCO2FacilitySubpartsCtoJJ >
      <ghg:TotalCO2eSupplierSubpartsKKtoPP massUOM="Metric Tons">131.2</ghg:TotalCO2eSupplierSubpartsKKtoPP >
    </ghg:SubPartInformation >
    <ghg:SubPartPP >
      <ghg:GHGasInfoDetails >
        <ghg:GHGasName >Carbon Dioxide</ghg:GHGasName >
        <ghg:GHGasQuantity massUOM="Metric Tons" >
          <ghg:CalculatedValue >131.2</ghg:CalculatedValue >
        </ghg:GHGasQuantity >
      </ghg:GHGasInfoDetails >
      <ghg:FacilityClassification >extract 98.420(a)(2)</ghg:FacilityClassification >
      <ghg:CalculationMethodology >Streams</ghg:CalculationMethodology >
      <ghg:MeterDetails >
```

```

<ghg:UnitIdentification>
  <ghg:UnitName>001- CO2 Stream</ghg:UnitName>
  <ghg:UnitDescription>CO2 stream #1</ghg:UnitDescription>
  <ghg:UnitType>CO2 Stream</ghg:UnitType>
</ghg:UnitIdentification>
<ghg:MassorVolume>Volumetric - concentration in volume percentage</ghg:MassorVolume>
<ghg:AnnualMassofCO2 massUOM="Metric Tons">
  <ghg:MeasureValue>131.2</ghg:MeasureValue>
</ghg:AnnualMassofCO2>

<ghg:VolumeDetails>
  <ghg:QuarterName>First Quarter</ghg:QuarterName>
  <ghg:VolumetricFlowofCO2 volUOM="Standard Cubic Meters">
    <ghg:MeasureValue>10000.1</ghg:MeasureValue>
  </ghg:VolumetricFlowofCO2>
  <ghg:ConcentrationofCO2VolumePercent fractionUOM="fraction (number between 0 and 1)">
    <ghg:MeasureValue>0.545</ghg:MeasureValue>
  </ghg:ConcentrationofCO2VolumePercent>
  <ghg:StandardofMeasureforCO2>Standard F</ghg:StandardofMeasureforCO2>
  <ghg:DensityofCO2 densityUOM="mton/scm">
    <ghg:MeasureValue>0.001868</ghg:MeasureValue>
  </ghg:DensityofCO2>
  <ghg:MethodofMeasureforCO2Density>rule required density</ghg:MethodofMeasureforCO2Density>
</ghg:VolumeDetails>
<ghg:VolumeDetails>
  <ghg:QuarterName>Second Quarter</ghg:QuarterName>
  <ghg:VolumetricFlowofCO2 volUOM="Standard Cubic Meters">
    <ghg:MeasureValue>20000.2</ghg:MeasureValue>
  </ghg:VolumetricFlowofCO2>
  <ghg:ConcentrationofCO2VolumePercent fractionUOM="fraction (number between 0 and 1)">
    <ghg:MeasureValue>0.645</ghg:MeasureValue>
  </ghg:ConcentrationofCO2VolumePercent>
  <ghg:StandardofMeasureforCO2>Standard F</ghg:StandardofMeasureforCO2>
  <ghg:DensityofCO2 densityUOM="mton/scm">
    <ghg:MeasureValue>0.001868</ghg:MeasureValue>
  </ghg:DensityofCO2>
  <ghg:MethodofMeasureforCO2Density>rule required density</ghg:MethodofMeasureforCO2Density>
</ghg:VolumeDetails>
<ghg:VolumeDetails>
  <ghg:QuarterName>Third Quarter</ghg:QuarterName>
  <ghg:VolumetricFlowofCO2 volUOM="Standard Cubic Meters">
    <ghg:MeasureValue>30000.456</ghg:MeasureValue>
  </ghg:VolumetricFlowofCO2>
  <ghg:ConcentrationofCO2VolumePercent fractionUOM="fraction (number between 0 and 1)">
    <ghg:MeasureValue>0.7</ghg:MeasureValue>
  </ghg:ConcentrationofCO2VolumePercent>
  <ghg:StandardofMeasureforCO2>Standard F</ghg:StandardofMeasureforCO2>
  <ghg:DensityofCO2 densityUOM="mton/scm">
    <ghg:MeasureValue>0.001868</ghg:MeasureValue>
  </ghg:DensityofCO2>
  <ghg:MethodofMeasureforCO2Density>rule required density</ghg:MethodofMeasureforCO2Density>
</ghg:VolumeDetails>
<ghg:VolumeDetails>
  <ghg:QuarterName>Fourth Quarter</ghg:QuarterName>
  <ghg:VolumetricFlowofCO2 volUOM="Standard Cubic Meters">

```

```

        <ghg:MeasureValue>40000.789</ghg:MeasureValue >
    </ghg:VolumetricFlowofCO2 >
    <ghg:ConcentrationofCO2VolumePercent fractionUOM="fraction (number between 0 and 1)" >
        <ghg:MeasureValue>0.8</ghg:MeasureValue >
    </ghg:ConcentrationofCO2VolumePercent >
    <ghg:StandardofMeasureforCO2>Standard F</ghg:StandardofMeasureforCO2 >
    <ghg:DensityofCO2 densityUOM="mton/scm">
        <ghg:MeasureValue>0.001868</ghg:MeasureValue >
    </ghg:DensityofCO2 >
    <ghg:MethodofMeasureforCO2Density>rule required density</ghg:MethodofMeasureforCO2Density >
    </ghg:VolumeDetails >
</ghg:MeterDetails >
<ghg:CO2EndUseDetails >
    <ghg:ApplicationName>Food and beverage</ghg:ApplicationName >
    <ghg:ImportExport >All</ghg:ImportExport >
    <ghg:QuantityofCO2 massUOM="Metric Tons">
        <ghg:MeasureValue>100.123</ghg:MeasureValue >
    </ghg:QuantityofCO2 >
</ghg:CO2EndUseDetails >
<ghg:CO2EndUseDetails >
    <ghg:ApplicationName>Industrial and municipal water/wastewater treatment</ghg:ApplicationName >
    <ghg:ImportExport >All</ghg:ImportExport >
    <ghg:QuantityofCO2 massUOM="Metric Tons">
        <ghg:MeasureValue>200.45</ghg:MeasureValue >
    </ghg:QuantityofCO2 >
</ghg:CO2EndUseDetails >
<ghg:CO2EndUseDetails >
    <ghg:ApplicationName>Metal fabrication, including welding and cutting</ghg:ApplicationName >
    <ghg:ImportExport >All</ghg:ImportExport >
    <ghg:QuantityofCO2 massUOM="Metric Tons">
        <ghg:MeasureValue>300.3453455</ghg:MeasureValue >
    </ghg:QuantityofCO2 >
</ghg:CO2EndUseDetails >
<ghg:CO2EndUseDetails >
    <ghg:ApplicationName>Greenhouse uses for plant growth</ghg:ApplicationName >
    <ghg:ImportExport >All</ghg:ImportExport >
    <ghg:QuantityofCO2 massUOM="Metric Tons">
        <ghg:MeasureValue>400.145</ghg:MeasureValue >
    </ghg:QuantityofCO2 >
</ghg:CO2EndUseDetails >
<ghg:CO2EndUseDetails >
    <ghg:ApplicationName>Fumigants (e.g., grain storage) and herbicides</ghg:ApplicationName >
    <ghg:ImportExport >All</ghg:ImportExport >
    <ghg:QuantityofCO2 massUOM="Metric Tons">
        <ghg:MeasureValue>500.345</ghg:MeasureValue >
    </ghg:QuantityofCO2 >
</ghg:CO2EndUseDetails >
<ghg:CO2EndUseDetails >
    <ghg:ApplicationName>Pulp and paper</ghg:ApplicationName >
    <ghg:ImportExport >All</ghg:ImportExport >
    <ghg:QuantityofCO2 massUOM="Metric Tons">
        <ghg:MeasureValue>600.445</ghg:MeasureValue >
    </ghg:QuantityofCO2 >
</ghg:CO2EndUseDetails >
<ghg:CO2EndUseDetails >

```

```

    <ghg:ApplicationName>Cleaning and solvent use</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>700.45</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Fire fighting</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>800.45</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Transportation and storage of explosives</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>900.45</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Enhanced oil and natural gas recovery</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>1000.5678</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Long-term storage (sequestration)</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>1100.45</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Research and Development</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>1200.7896</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Other/unknown</ghg:ApplicationName>
    <ghg:ImportExport>All</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>1300.45</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:EquipmentCalibrationDetails>
    <ghg:MeasuringEquipmentType>Mass flow meter</ghg:MeasuringEquipmentType>
    <ghg:StandardForCalibration>Standard A</ghg:StandardForCalibration>
  </ghg:EquipmentCalibrationDetails>
  <ghg:MassVolumeNumberofDaysSubstituted>1</ghg:MassVolumeNumberofDaysSubstituted>
  <ghg:ConcentrationNumberofDaysSubstituted>2</ghg:ConcentrationNumberofDaysSubstituted>
  <ghg:DensityNumberofDaysSubstituted>3</ghg:DensityNumberofDaysSubstituted>

```

```
</ghg:SubPartPP>  
</ghg:SubPartInformation>  
</ghg:FacilitySiteDetails>  
<ghg:CalculationMethodologyChangesDescription/>  
<ghg:BestAvailableMonitoringMethodsUsed/>  
<ghg:StartDate>2011-01-01</ghg:StartDate>  
<ghg:EndDate>2011-12-31</ghg:EndDate>  
<ghg:DateTimeReportGenerated>2012-02-29T10:16:31</ghg:DateTimeReportGenerated>  
</ghg:FacilitySiteInformation>  
</ghg:GHG>
```

6.0 Import/Export – Flow Meters 3

(Note: Data values do not reflect an actual facility's emissions. Additional sample XML files for Subpart PP are posted on the e-GGRT help site.)

```
<ghg:GHG xmlns="http://www.ccdsupport.com/schema/ghg">
  <ghg:FacilitySiteInformation>
    <ghg:CertificationStatement>The designated representative or alternate designated representative must sign (i.e., agree to) this certification statement. If you are an agent and you click on "SUBMIT", you are not agreeing to the certification statement, but are submitting the certification statement on behalf of the designated representative or alternate designated representative who is agreeing to the certification statement. An agent is only authorized to make the electronic submission on behalf of the designated representative, not to sign (i.e., agree to) the certification statement.</ghg:CertificationStatement>
    <ghg:ReportingYear>2011</ghg:ReportingYear>
    <ghg:FacilitySiteDetails>
      <ghg:FacilitySite>
        <ghg:FacilitySiteIdentifier>524117</ghg:FacilitySiteIdentifier>
        <ghg:FacilitySiteName>Import/Export- Flow Meters 3 TEST Facility</ghg:FacilitySiteName>
      </ghg:FacilitySite>
      <ghg:LocationAddress>
        <ghg:LocationAddressText>12600 S. ANY STREET</ghg:LocationAddressText>
        <ghg:LocalityName>CHICAGO</ghg:LocalityName>
        <ghg:StateIdentity>
          <ghg:StateCode>IL</ghg:StateCode>
        </ghg:StateIdentity>
        <ghg:AddressPostalCode>60633</ghg:AddressPostalCode>
      </ghg:LocationAddress>
      <ghg:CogenerationUnitEmissionsIndicator>N</ghg:CogenerationUnitEmissionsIndicator>
      <ghg:PrimaryNAICSCode>325120</ghg:PrimaryNAICSCode>
      <ghg:ParentCompanyDetails>
        <ghg:ParentCompany>
          <ghg:ParentCompanyLegalName>Soda Ash Corporation</ghg:ParentCompanyLegalName>
          <ghg:StreetAddress>108 Hillcrest Street</ghg:StreetAddress>
          <ghg:City>Sandpoint</ghg:City>
          <ghg:State>ID</ghg:State>
          <ghg:Zip>83864</ghg:Zip>
          <ghg:PercentOwnershipInterest>100.0</ghg:PercentOwnershipInterest>
        </ghg:ParentCompany>
      </ghg:ParentCompanyDetails>
      <ghg:TotalNonBiogenicCO2eFacilitySubpartsCtoJJ massUOM="Metric Tons">0</ghg:TotalNonBiogenicCO2eFacilitySubpartsCtoJJ>
      <ghg:TotalBiogenicCO2FacilitySubpartsCtoJJ massUOM="Metric Tons">0</ghg:TotalBiogenicCO2FacilitySubpartsCtoJJ>
      <ghg:TotalCO2eSupplierSubpartsKktoPP massUOM="Metric Tons">2365.9</ghg:TotalCO2eSupplierSubpartsKktoPP>
    </ghg:SubPartInformation>
    <ghg:SubPartPP>
      <ghg:GHGasInfoDetails>
        <ghg:GHGasName>Carbon Dioxide</ghg:GHGasName>
        <ghg:GHGasQuantity massUOM="Metric Tons">
          <ghg:CalculatedValue>2365.9</ghg:CalculatedValue>
        </ghg:GHGasQuantity>
      </ghg:GHGasInfoDetails>
      <ghg:FacilityClassification>import/export 98.420(a)(3)</ghg:FacilityClassification>
      <ghg:CalculationMethodology>Flow Meters 3</ghg:CalculationMethodology>
      <ghg:MeterDetails>
        <ghg:UnitIdentification>
          <ghg:UnitName>001- IFM</ghg:UnitName>
        </ghg:UnitIdentification>
      </ghg:MeterDetails>
    </ghg:SubPartPP>
  </ghg:FacilitySiteInformation>
</ghg:GHG>
```



```

        <ghg:UnitDescription>import flow meter</ghg:UnitDescription>
        <ghg:UnitType>CO2 Flow Meter</ghg:UnitType>
    </ghg:UnitIdentification>
    <ghg:MassorVolume>Volumetric - concentration in volume percentage</ghg:MassorVolume>
    <ghg:AnnualMassofCO2 massUOM="Metric Tons">
        <ghg:MeasureValue>95.5</ghg:MeasureValue>
    </ghg:AnnualMassofCO2>
    <ghg:MeterImportExport>Import</ghg:MeterImportExport>
    <ghg:FlowMeterEquipmentLocationDetails>
        <ghg:isDehydrationEquipmentUpStreamIndicator>N</ghg:isDehydrationEquipmentUpStreamIndicator>
        <ghg:isDehydrationEquipmentDownStreamIndicator>Y</ghg:isDehydrationEquipmentDownStreamIndicator>
        <ghg:isCompressionEquipmentUpStreamIndicator>N</ghg:isCompressionEquipmentUpStreamIndicator>
        <ghg:isCompressionEquipmentDownStreamIndicator>Y</ghg:isCompressionEquipmentDownStreamIndicator>
        <ghg:isOtherProcessingEquipmentUpStreamIndicator>N</ghg:isOtherProcessingEquipmentUpStreamIndicator>
        <ghg:isOtherProcessingEquipmentDownStreamIndicator>Y</ghg:isOtherProcessingEquipmentDownStreamIndicator>
        <ghg:OtherProcessingEquipmentDescription>Processing equipment description</ghg:OtherProcessingEquipmentDescription>
    </ghg:FlowMeterEquipmentLocationDetails>
    <ghg:VolumeDetails>
        <ghg:QuarterName>First Quarter</ghg:QuarterName>
        <ghg:VolumetricFlowofCO2 volUOM="Standard Cubic Meters">
            <ghg:MeasureValue>10000.345</ghg:MeasureValue>
        </ghg:VolumetricFlowofCO2>
        <ghg:ConcentrationofCO2VolumePercent fractionUOM="fraction (number between 0 and 1)">
            <ghg:MeasureValue>0.5</ghg:MeasureValue>
        </ghg:ConcentrationofCO2VolumePercent>
        <ghg:StandardofMeasureforCO2>Standard L</ghg:StandardofMeasureforCO2>
        <ghg:DensityofCO2 densityUOM="mton/scm">
            <ghg:MeasureValue>0.001868</ghg:MeasureValue>
        </ghg:DensityofCO2>
        <ghg:MethodofMeasureforCO2Density>rule required density</ghg:MethodofMeasureforCO2Density>
    </ghg:VolumeDetails>
    <ghg:VolumeDetails>
        <ghg:QuarterName>Second Quarter</ghg:QuarterName>
        <ghg:VolumetricFlowofCO2 volUOM="Standard Cubic Meters">
            <ghg:MeasureValue>20000.45</ghg:MeasureValue>
        </ghg:VolumetricFlowofCO2>
        <ghg:ConcentrationofCO2VolumePercent fractionUOM="fraction (number between 0 and 1)">
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        </ghg:ConcentrationofCO2VolumePercent>
        <ghg:StandardofMeasureforCO2>Standard L</ghg:StandardofMeasureforCO2>
        <ghg:DensityofCO2 densityUOM="mton/scm">
            <ghg:MeasureValue>0.001868</ghg:MeasureValue>
        </ghg:DensityofCO2>
        <ghg:MethodofMeasureforCO2Density>rule required density</ghg:MethodofMeasureforCO2Density>
    </ghg:VolumeDetails>
    <ghg:VolumeDetails>
        <ghg:QuarterName>Third Quarter</ghg:QuarterName>
        <ghg:VolumetricFlowofCO2 volUOM="Standard Cubic Meters">
            <ghg:MeasureValue>3000.1230</ghg:MeasureValue>
        </ghg:VolumetricFlowofCO2>
        <ghg:ConcentrationofCO2VolumePercent fractionUOM="fraction (number between 0 and 1)">
            <ghg:MeasureValue>0.7</ghg:MeasureValue>
        </ghg:ConcentrationofCO2VolumePercent>
        <ghg:StandardofMeasureforCO2>Standard L</ghg:StandardofMeasureforCO2>
        <ghg:DensityofCO2 densityUOM="mton/scm">
    
```

```

        <ghg:MeasureValue>0.001868</ghg:MeasureValue>
      </ghg:DensityofCO2>
      <ghg:MethodofMeasureforCO2Density>rule required density</ghg:MethodofMeasureforCO2Density>
    </ghg:VolumeDetails>
  <ghg:VolumeDetails>
    <ghg:QuarterName>Fourth Quarter</ghg:QuarterName>
    <ghg:VolumetricFlowofCO2 volUOM="Standard Cubic Meters">
      <ghg:MeasureValue>40000.907</ghg:MeasureValue>
    </ghg:VolumetricFlowofCO2>
    <ghg:ConcentrationofCO2VolumePercent fractionUOM="fraction (number between 0 and 1)">
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    </ghg:ConcentrationofCO2VolumePercent>
    <ghg:StandardofMeasureforCO2>Standard L</ghg:StandardofMeasureforCO2>
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    </ghg:DensityofCO2>
    <ghg:MethodofMeasureforCO2Density>rule required density</ghg:MethodofMeasureforCO2Density>
  </ghg:VolumeDetails>
</ghg:MeterDetails>
<ghg:MeterDetails>
  <ghg:UnitIdentification>
    <ghg:UnitName>002- EFM</ghg:UnitName>
    <ghg:UnitDescription>export flow meter</ghg:UnitDescription>
    <ghg:UnitType>CO2 Flow Meter</ghg:UnitType>
  </ghg:UnitIdentification>
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    <ghg:MeasureValue>2270.4</ghg:MeasureValue>
  </ghg:AnnualMassofCO2>
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  <ghg:FlowMeterEquipmentLocationDetails>
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    <ghg:isDehydrationEquipmentDownStreamIndicator>Y</ghg:isDehydrationEquipmentDownStreamIndicator>
    <ghg:isCompressionEquipmentUpStreamIndicator>N</ghg:isCompressionEquipmentUpStreamIndicator>
    <ghg:isCompressionEquipmentDownStreamIndicator>Y</ghg:isCompressionEquipmentDownStreamIndicator>
    <ghg:isOtherProcessingEquipmentUpStreamIndicator>N</ghg:isOtherProcessingEquipmentUpStreamIndicator>
    <ghg:isOtherProcessingEquipmentDownStreamIndicator>Y</ghg:isOtherProcessingEquipmentDownStreamIndicator>
    <ghg:OtherProcessingEquipmentDescription>Processing equipment description</ghg:OtherProcessingEquipmentDescription>
  </ghg:FlowMeterEquipmentLocationDetails>
  <ghg:VolumeDetails>
    <ghg:QuarterName>First Quarter</ghg:QuarterName>
    <ghg:VolumetricFlowofCO2 volUOM="Standard Cubic Meters">
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    </ghg:VolumetricFlowofCO2>
    <ghg:ConcentrationofCO2WeightPercent fractionUOM="fraction (number between 0 and 1)">
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    </ghg:ConcentrationofCO2WeightPercent>
    <ghg:StandardofMeasureforCO2>Standard N</ghg:StandardofMeasureforCO2>
    <ghg:DensityofCO2 densityUOM="mton/scm">
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    </ghg:DensityofCO2>
    <ghg:MethodofMeasureforCO2Density>Standard M</ghg:MethodofMeasureforCO2Density>
  </ghg:VolumeDetails>
</ghg:VolumeDetails>
  <ghg:QuarterName>Second Quarter</ghg:QuarterName>

```

```

    <ghg:VolumetricFlowofCO2 volUOM="Standard Cubic Meters">
      <ghg:MeasureValue>2100.67</ghg:MeasureValue>
    </ghg:VolumetricFlowofCO2>
    <ghg:ConcentrationofCO2WeightPercent fractionUOM="fraction (number between 0 and 1)">
      <ghg:MeasureValue>0.678</ghg:MeasureValue>
    </ghg:ConcentrationofCO2WeightPercent>
    <ghg:StandardofMeasureforCO2>Standard N</ghg:StandardofMeasureforCO2>
    <ghg:DensityofCO2 densityUOM="mton/scm">
      <ghg:MeasureValue>0.278</ghg:MeasureValue>
    </ghg:DensityofCO2>
    <ghg:MethodofMeasureforCO2Density>Standard M</ghg:MethodofMeasureforCO2Density>
  </ghg:VolumeDetails>
<ghg:VolumeDetails>
<ghg:QuarterName>Third Quarter</ghg:QuarterName>
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  </ghg:VolumetricFlowofCO2>
  <ghg:ConcentrationofCO2WeightPercent fractionUOM="fraction (number between 0 and 1)">
    <ghg:MeasureValue>0.778</ghg:MeasureValue>
  </ghg:ConcentrationofCO2WeightPercent>
  <ghg:StandardofMeasureforCO2>Standard N</ghg:StandardofMeasureforCO2>
  <ghg:DensityofCO2 densityUOM="mton/scm">
    <ghg:MeasureValue>0.378</ghg:MeasureValue>
  </ghg:DensityofCO2>
  <ghg:MethodofMeasureforCO2Density>Standard M</ghg:MethodofMeasureforCO2Density>
</ghg:VolumeDetails>
<ghg:VolumeDetails>
  <ghg:QuarterName>Fourth Quarter</ghg:QuarterName>
  <ghg:VolumetricFlowofCO2 volUOM="Standard Cubic Meters">
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  </ghg:VolumetricFlowofCO2>
  <ghg:ConcentrationofCO2WeightPercent fractionUOM="fraction (number between 0 and 1)">
    <ghg:MeasureValue>0.878</ghg:MeasureValue>
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  <ghg:StandardofMeasureforCO2>Standard N</ghg:StandardofMeasureforCO2>
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  </ghg:DensityofCO2>
  <ghg:MethodofMeasureforCO2Density>Standard M</ghg:MethodofMeasureforCO2Density>
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</ghg:MeterDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Food and beverage</ghg:ApplicationName>
  <ghg:ImportExport>Import</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>100.2524567</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Industrial and municipal water/wastewater treatment</ghg:ApplicationName>
  <ghg:ImportExport>Import</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>200.5654656</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>

```

```

<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Metal fabrication, including welding and cutting</ghg:ApplicationName>
  <ghg:ImportExport>Import</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>300.333879</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Greenhouse uses for plant growth</ghg:ApplicationName>
  <ghg:ImportExport>Import</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>400.35368</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Fumigants (e.g., grain storage) and herbicides</ghg:ApplicationName>
  <ghg:ImportExport>Import</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>500.208977</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Pulp and paper</ghg:ApplicationName>
  <ghg:ImportExport>Import</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>600.23426</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Cleaning and solvent use</ghg:ApplicationName>
  <ghg:ImportExport>Import</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>700.22246</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Fire fighting</ghg:ApplicationName>
  <ghg:ImportExport>Import</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>800.9793223</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Transportation and storage of explosives</ghg:ApplicationName>
  <ghg:ImportExport>Import</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>9890.323442346</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Enhanced oil and natural gas recovery</ghg:ApplicationName>
  <ghg:ImportExport>Import</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>10100.45623</ghg:MeasureValue>
  </ghg:QuantityofCO2>

```

```

</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Long-term storage (sequestration)</ghg:ApplicationName>
  <ghg:ImportExport>Import</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>1100.32342</ghg:MeasureValue>
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<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Research and Development</ghg:ApplicationName>
  <ghg:ImportExport>Import</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>1200.248723</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Other/unknown</ghg:ApplicationName>
  <ghg:ImportExport>Import</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>1300.23898</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Food and beverage</ghg:ApplicationName>
  <ghg:ImportExport>Export</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>1.234924</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Industrial and municipal water/wastewater treatment</ghg:ApplicationName>
  <ghg:ImportExport>Export</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>2.23473</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Metal fabrication, including welding and cutting</ghg:ApplicationName>
  <ghg:ImportExport>Export</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>3.234235</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Greenhouse uses for plant growth</ghg:ApplicationName>
  <ghg:ImportExport>Export</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>4.234213</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Fumigants (e.g., grain storage) and herbicides</ghg:ApplicationName>
  <ghg:ImportExport>Export</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>5.234283</ghg:MeasureValue>

```

```
</ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Pulp and paper</ghg:ApplicationName>
  <ghg:ImportExport>Export</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>6.234239</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Cleaning and solvent use</ghg:ApplicationName>
  <ghg:ImportExport>Export</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
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  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Fire fighting</ghg:ApplicationName>
  <ghg:ImportExport>Export</ghg:ImportExport>
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    <ghg:MeasureValue>8.2323</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Transportation and storage of explosives</ghg:ApplicationName>
  <ghg:ImportExport>Export</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>9.234</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Enhanced oil and natural gas recovery</ghg:ApplicationName>
  <ghg:ImportExport>Export</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>10.234</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Long-term storage (sequestration)</ghg:ApplicationName>
  <ghg:ImportExport>Export</ghg:ImportExport>
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    <ghg:MeasureValue>11.377</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Research and Development</ghg:ApplicationName>
  <ghg:ImportExport>Export</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>12.23434</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Other/unknown</ghg:ApplicationName>
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  <ghg:QuantityofCO2 massUOM="Metric Tons">
```

```
        <ghg:MeasureValue>13.12634</ghg:MeasureValue>
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    <ghg:StandardForCalibration>Standard B</ghg:StandardForCalibration>
  </ghg:EquipmentCalibrationDetails>
  <ghg:MassVolumeNumberofDaysSubstituted>1</ghg:MassVolumeNumberofDaysSubstituted>
  <ghg:ConcentrationNumberofDaysSubstituted>2</ghg:ConcentrationNumberofDaysSubstituted>
  <ghg:DensityNumberofDaysSubstituted>3</ghg:DensityNumberofDaysSubstituted>
</ghg:SubPartPP>
</ghg:SubPartInformation>
</ghg:FacilitySiteDetails>
<ghg:CalculationMethodologyChangesDescription/>
<ghg:BestAvailableMonitoringMethodsUsed/>
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<ghg:EndDate>2011-12-31</ghg:EndDate>
<ghg:DateTimeReportGenerated>2012-02-29T10:16:31</ghg:DateTimeReportGenerated>
</ghg:FacilitySiteInformation>
</ghg:GHG>
```

7.0 Import/Export – Containers

[98.423(c)]

(Note: Data values do not reflect an actual facility's emissions. Additional sample XML files for Subpart PP are posted on the e-GGRT help site.)

```

<ghg:GHG xmlns="http://www.ccdsupport.com/schema/ghg">
  <ghg:FacilitySiteInformation>
    <ghg:CertificationStatement>The designated representative or alternate designated representative must sign (i.e., agree to) this certification statement. If you are an agent and you click on "SUBMIT", you are not agreeing to the certification statement, but are submitting the certification statement on behalf of the designated representative or alternate designated representative who is agreeing to the certification statement. An agent is only authorized to make the electronic submission on behalf of the designated representative, not to sign (i.e., agree to) the certification statement.</ghg:CertificationStatement>
    <ghg:ReportingYear>2011</ghg:ReportingYear>
    <ghg:FacilitySiteDetails>
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        <ghg:FacilitySiteIdentifier>524117</ghg:FacilitySiteIdentifier>
        <ghg:FacilitySiteName>Import/Export- Containers TEST Facility</ghg:FacilitySiteName>
      </ghg:FacilitySite>
      <ghg:LocationAddress>
        <ghg:LocationAddressText>12600 S. ANY STREET</ghg:LocationAddressText>
        <ghg:LocalityName>CHICAGO</ghg:LocalityName>
        <ghg:StateIdentity>
          <ghg:StateCode>IL</ghg:StateCode>
        </ghg:StateIdentity>
        <ghg:AddressPostalCode>60633</ghg:AddressPostalCode>
      </ghg:LocationAddress>
      <ghg:CogenerationUnitEmissionsIndicator>N</ghg:CogenerationUnitEmissionsIndicator>
      <ghg:PrimaryNAICSCode>325120</ghg:PrimaryNAICSCode>
      <ghg:ParentCompanyDetails>
        <ghg:ParentCompany>
          <ghg:ParentCompanyLegalName>Soda Ash Corporation</ghg:ParentCompanyLegalName>
          <ghg:StreetAddress>108 Hillcrest Street</ghg:StreetAddress>
          <ghg:City>Sandpoint</ghg:City>
          <ghg:State>ID</ghg:State>
          <ghg:Zip>83864</ghg:Zip>
          <ghg:PercentOwnershipInterest>100.0</ghg:PercentOwnershipInterest>
        </ghg:ParentCompany>
      </ghg:ParentCompanyDetails>
      <ghg>TotalNonBiogenicCO2eFacilitySubpartsCtoJJ massUOM="Metric Tons">0</ghg>TotalNonBiogenicCO2eFacilitySubpartsCtoJJ>
      <ghg>TotalBiogenicCO2FacilitySubpartsCtoJJ massUOM="Metric Tons">0</ghg>TotalBiogenicCO2FacilitySubpartsCtoJJ>
      <ghg>TotalCO2eSupplierSubpartsKKtoPP massUOM="Metric Tons">1350.2</ghg>TotalCO2eSupplierSubpartsKKtoPP>
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    <ghg:SubPartPP>
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        </ghg:GHGasQuantity>
      </ghg:GHGasInfoDetails>
      <ghg:FacilityClassification>import/export 98.420(a)(3)</ghg:FacilityClassification>
      <ghg:CalculationMethodology>Containers</ghg:CalculationMethodology>
      <ghg:PP4CO2Details>
        <ghg:AnnualMassofCO2Imported massUOM="Metric Tons">
          <ghg:CalculatedValue>1500.6</ghg:CalculatedValue>
        </ghg:AnnualMassofCO2Imported>
      </ghg:PP4CO2Details>
    </ghg:SubPartPP>
  </ghg:FacilitySiteInformation>
</ghg:GHG>

```



```

    </ghg:AnnualMassofCO2Imported>
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  <ghg:CO2EndUseDetails>
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    <ghg:ImportExport>Import</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>100.89</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Industrial and municipal water/wastewater treatment</ghg:ApplicationName>
    <ghg:ImportExport>Import</ghg:ImportExport>
    <ghg:QuantityofCO2 massUOM="Metric Tons">
      <ghg:MeasureValue>200.189</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Metal fabrication, including welding and cutting</ghg:ApplicationName>
    <ghg:ImportExport>Import</ghg:ImportExport>
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      <ghg:MeasureValue>300.234</ghg:MeasureValue>
    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Greenhouse uses for plant growth</ghg:ApplicationName>
    <ghg:ImportExport>Import</ghg:ImportExport>
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    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
  <ghg:CO2EndUseDetails>
    <ghg:ApplicationName>Fumigants (e.g., grain storage) and herbicides</ghg:ApplicationName>
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  <ghg:CO2EndUseDetails>
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    <ghg:ImportExport>Import</ghg:ImportExport>
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  <ghg:CO2EndUseDetails>

```

```

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    </ghg:QuantityofCO2>
  </ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Transportation and storage of explosives</ghg:ApplicationName>
  <ghg:ImportExport>Import</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
    <ghg:MeasureValue>900.89</ghg:MeasureValue>
  </ghg:QuantityofCO2>
</ghg:CO2EndUseDetails>
<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Enhanced oil and natural gas recovery</ghg:ApplicationName>
  <ghg:ImportExport>Import</ghg:ImportExport>
  <ghg:QuantityofCO2 massUOM="Metric Tons">
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  <ghg:QuantityofCO2 massUOM="Metric Tons">
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  <ghg:ApplicationName>Greenhouse uses for plant growth</ghg:ApplicationName>
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<ghg:CO2EndUseDetails>
  <ghg:ApplicationName>Pulp and paper</ghg:ApplicationName>
  <ghg:ImportExport>Export</ghg:ImportExport>
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  <ghg:ApplicationName>Enhanced oil and natural gas recovery</ghg:ApplicationName>
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```

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