Greenhouse Gas Reporting Program

XML Reporting Instructions for Subpart G - Ammonia Manufacturing

United States Environmental Protection Agency
Climate Change Division
Washington, DC

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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	• CO_2e and CO_2 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. • CH_4 emissions data expressed in metric tons should be rounded to two decimal places. • N_2O emissions data expressed in metric tons should be rounded to three decimal places. • Emissions data for all GHGs other than CO_2, N_2O and CH_4 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

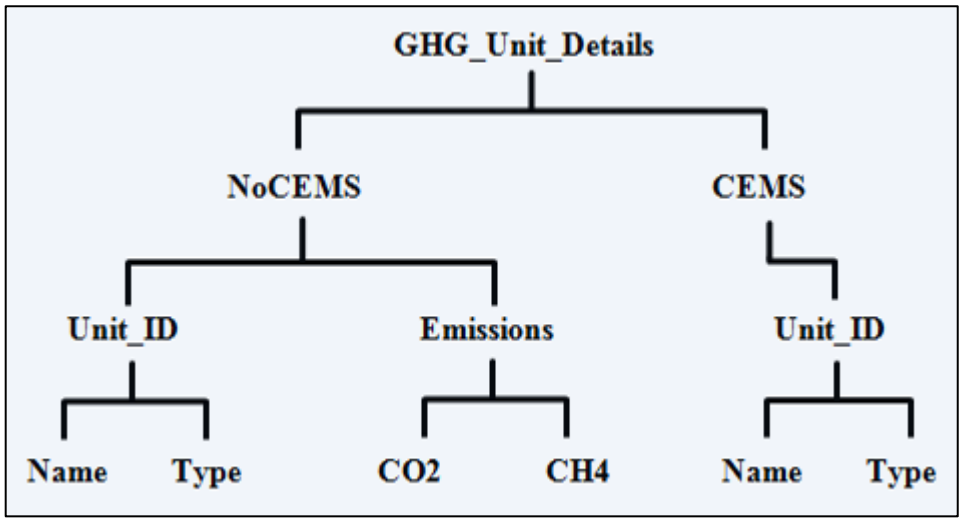
number: <FacilitySiteIdentifier>23222</FacilitySiteIdentifier>. The information shaded in blue represents the data element's value.

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 are 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.

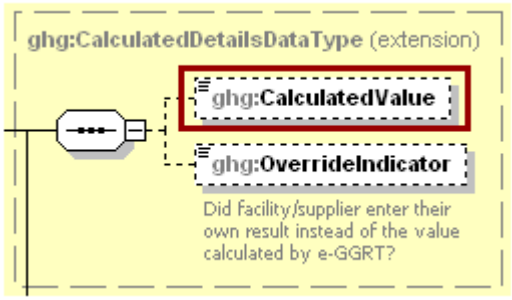
- **Commonly used data types are not depicted in the schema diagrams nor listed separately in the definition tables.** The schema diagrams display almost every data element in the schema except those that are associated with the three most commonly occurring data types:

    - 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 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

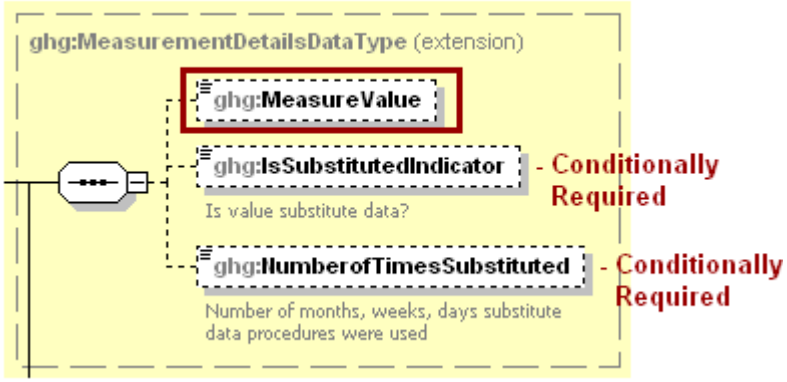


Note: Data elements boxed in red are required.

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

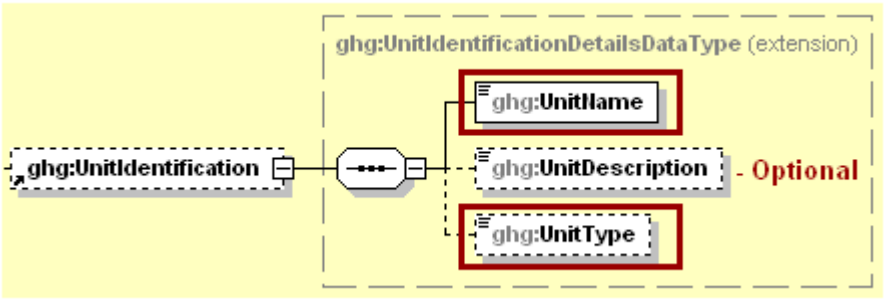


Note: Data elements boxed in red are required. Please see page 4 of this document for more information on conditionally required elements.

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



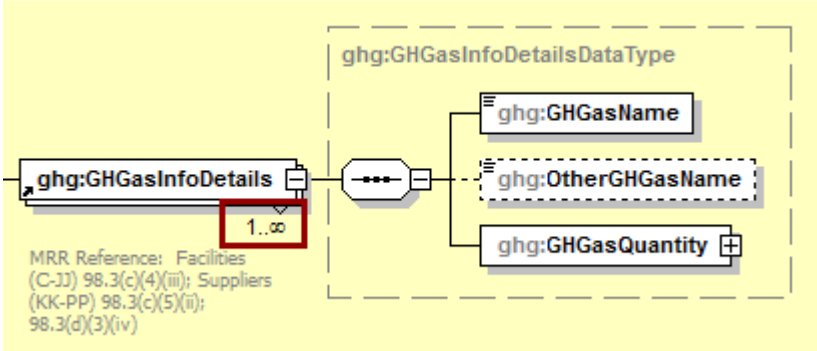
Note: Data elements boxed in red are required.

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

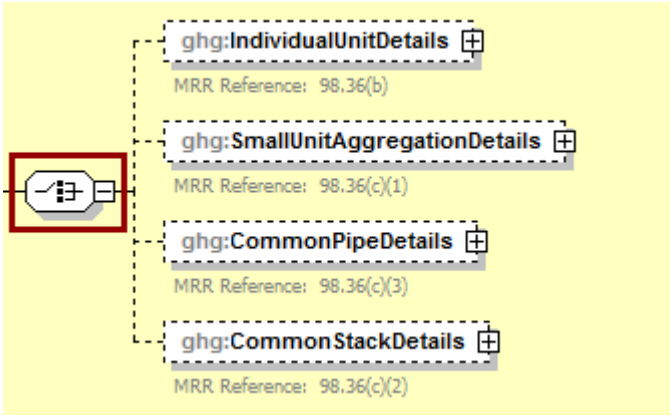


XML Excerpt 1
Example for "Unbounded" Parent Element

```
<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>
```

The XML symbol for a logical "Or" shown in Figure 6 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 previous version of the GHG XML schema in relation to Subpart G (GHG_SubPartG_v2.0.xsd) for reporting year 2011.

Table 5
Summary of Changes to the Schema for Subpart G

No.	Change Description
1	Removed the zero-to-many indicator ("0..∞" unbounded) for data element "**NoCEMSFeedStockDetails**". XPath = NoCemsAmmoniaDetails/NoCemsAmmoniaUnitDetails/MonthlyNoCEMSFeedStock Details/NoCEMSFeedStockDetails
2	Removed attributes "**massUOM**" and "**volUOM**" from data element " **Quantity**" XPath = NoCemsAmmoniaDetails/NoCemsAmmoniaUnitDetails/MonthlyNoCEMSFeedStock Details/NoCEMSFeedStockDetails/Quantity
3	Removed attribute "**carboncontentUOM**" from "**CarbonContent**". XPath = NoCemsAmmoniaDetails/NoCemsAmmoniaUnitDetails/MonthlyNoCEMSFeedStock Details/NoCEMSFeedStockDetails/CarbonContent
4	Removed attribute "**molewtUOM**" from data element "**MolecularWeight**" XPath = NoCemsAmmoniaDetails/NoCemsAmmoniaUnitDetails/MonthlyNoCEMSFeedStock Details/NoCEMSFeedStockDetails/GaseousFeedStockDetails/MolecularWeight

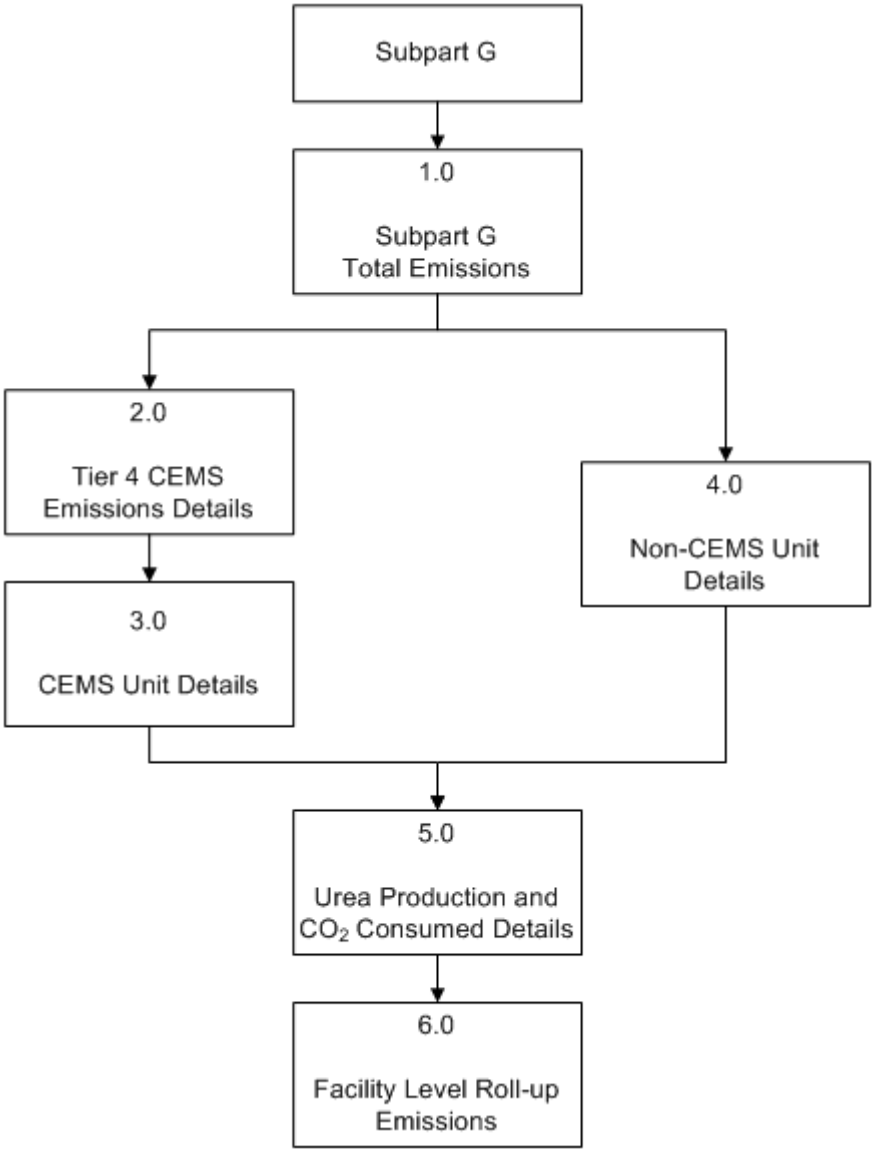
Document Changes:

3-15-2012 – Modified some of the emissions values within the XML excerpts to emphasize the rounding rules. Added a note to follow the rounding rules in Table 1. Added ParentCompanyDetails to sample XML document.

III. Subpart G Overview

This document provides a step-by-step description of how to report data for Subpart G Ammonia Manufacturing and overall total Subpart G emissions for a facility using the XML schema.

Figure 7
Subpart G Reporting Diagram



The XML schema includes the following areas for reporting for Subpart G, as displayed in the above reporting diagram:

1.0 Subpart G Total Emissions: includes the total (CO_2) emissions for greenhouse gases required to be reported.

2.0 Tier 4 CEMS Emissions Details: includes information on each continuous emission monitoring system (CEMS) monitoring location (CML) and emissions (CO_2, CH_4, N_2O and biogenic CO_2) details.

3.0 CEMS Unit Details: includes information on unit identification and feedstock details if using CEMS.

4.0 Non-CEMS Unit and Emissions Details: includes information on unit identification, emissions, monthly feedstock details and carbon content of feedstock if not using CEMS.

5.0 Urea Production and CO_2 Consumed Details: includes annual urea produced, CO_2 consumed and method details.

6.0 Facility Level Roll-up Emissions: includes information on how to report total emissions for CO_2e (excluding biogenic CO_2) and total biogenic CO_2.

The ammonia manufacturing source category pertains to any facility engaged in the manufacturing of ammonia using one of the following processes:

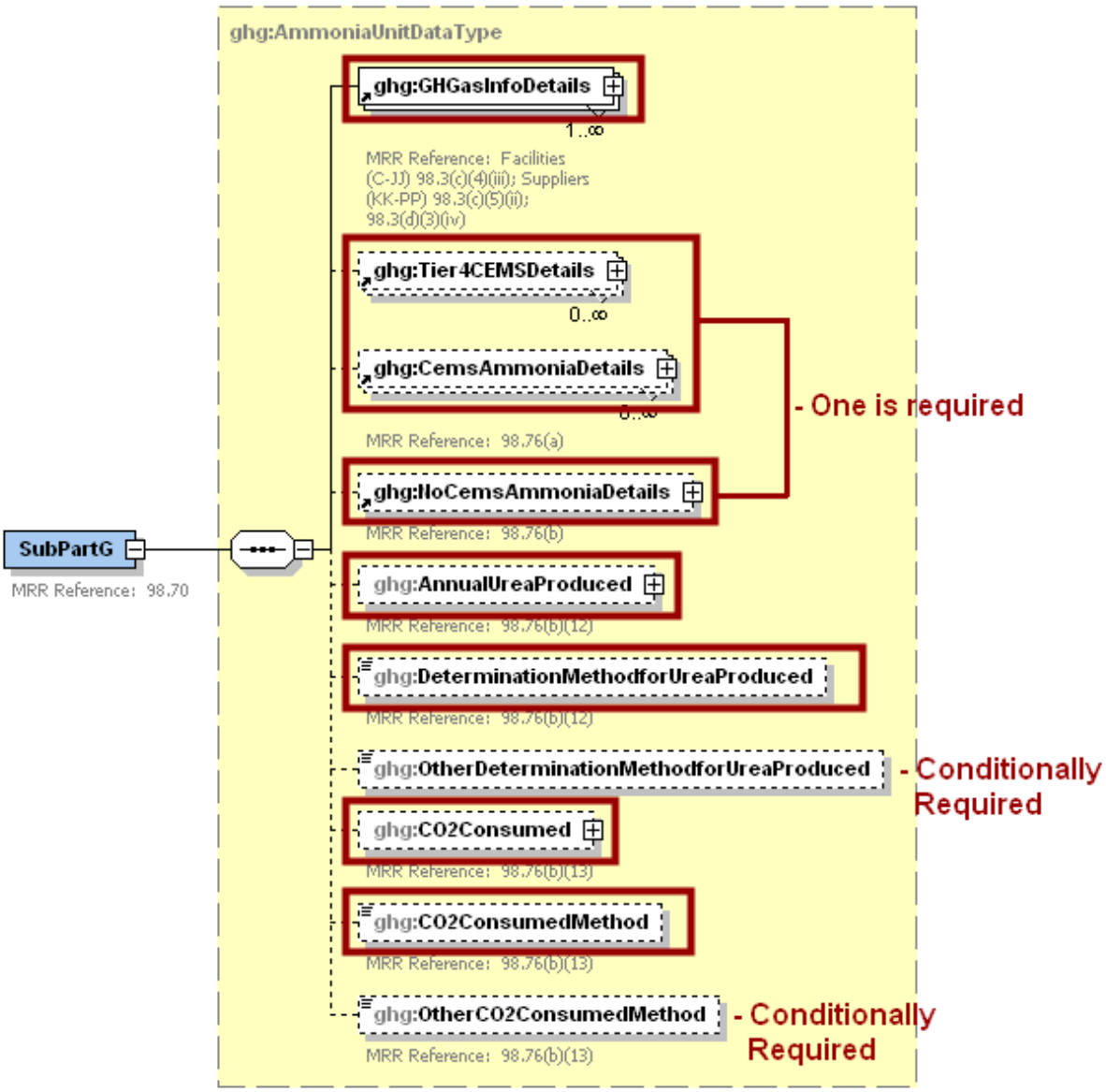
- Ammonia is manufactured from a fossil-based feedstock produced via steam reforming of a hydrocarbon.
- Ammonia is manufactured through the gasification of solid and liquid raw material.

If your facility is subject to reporting under Subpart G (Ammonia Manufacturing), EPA recommends that you also consider the following source categories in your facility applicability determination: Subpart C (General Stationary Fuel Combustion), Subpart P (Hydrogen Production), Subpart V (Nitric Acid Production), Subpart Y (Petroleum Refineries) and Subpart PP (Suppliers of CO2). 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.

Subpart G requires you to report the following data about your facility (ammonia process unit as defined in §98.76 reporting requirements):

- The annual urea production (in metric tons) by the facility
- The method used to determine that annual production
- The quantity of CO_2 used to produce urea from the steam reforming of a hydrocarbon or the gasification of solid and liquid raw material (in metric tons) by the facility
- The method used to determine that CO_2 quantity

Figure 8
Subpart G Schema Diagram

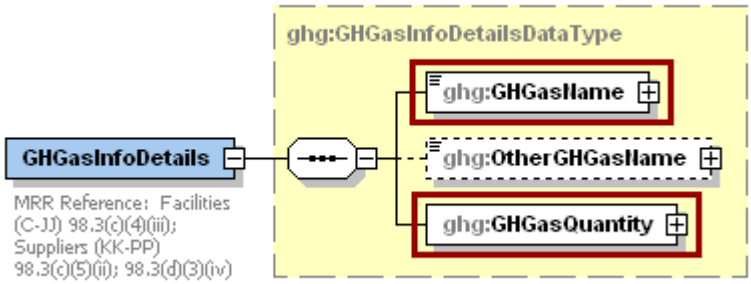


Note: Data elements boxed in red are required. Please see page 4 of this document for more information on conditionally required elements.

1.0 Subpart G Total Emissions

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

Figure 9
Greenhouse Gas Information Details Schema Diagram



Note: Data elements boxed in red are required.

For Subpart G, report total emissions for carbon dioxide (excluding biogenic CO_2), biogenic carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O). For greenhouse gas quantity, report the calculated value and mass unit of measure (metric tons) only according to the following guidelines:

- For carbon dioxide, report the sum of the following:
  - The total annual CO_2 emissions from gaseous, liquid and solid feedstock consumption in metric tons for each non-CEMS unit.
  - The total annual CO_2 mass emissions measured by the CEMS in metric tons minus the total annual biogenic CO_2 mass emissions in metric tons (the difference of the total CO_2 monitored by the CEMS and the total biogenic CO_2) for each CEMS monitoring location (CML).
- For biogenic carbon dioxide, report the sum of the total annual biogenic CO_2 mass emissions in metric tons for each CML.
- For methane, report the sum of the total CH_4 emissions in metric tons for each CML.
- For nitrous oxide, report the sum of the total N_2O emissions in metric tons for each CML.

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 emissions 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 greenhouse gas. See list of allowable values: Carbon Dioxide Biogenic Carbon dioxide Methane Nitrous Oxide
GHGasQuantity	A collection of data elements that quantify the annual emissions from this source 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:SubPartG>
        <ghg:GHGasInfoDetails>
                <ghg:GHGasName>Biogenic Carbon dioxide</ghg:GHGasName>
                <ghg:GHGasQuantity massUOM="Metric Tons">
                        <ghg:CalculatedValue>500.8</ghg:CalculatedValue>
                </ghg:GHGasQuantity>
        </ghg:GHGasInfoDetails>
        <ghg:GHGasInfoDetails>
                <ghg:GHGasName>Methane</ghg:GHGasName>
                <ghg:GHGasQuantity massUOM="Metric Tons">
                        <ghg:CalculatedValue>400.88</ghg:CalculatedValue>
                </ghg:GHGasQuantity>
        </ghg:GHGasInfoDetails>
        <ghg:GHGasInfoDetails>
                <ghg:GHGasName>Nitrous Oxide</ghg:GHGasName>
                <ghg:GHGasQuantity massUOM="Metric Tons">
                        <ghg:CalculatedValue>40.888</ghg:CalculatedValue>
                </ghg:GHGasQuantity>
        </ghg:GHGasInfoDetails>
        <ghg:GHGasInfoDetails>
                <ghg:GHGasName>Carbon Dioxide</ghg:GHGasName>
                <ghg:GHGasQuantity massUOM="Metric Tons">
                        <ghg:CalculatedValue>49867.5</ghg:CalculatedValue>
                </ghg:GHGasQuantity>
        </ghg:GHGasInfoDetails>
```

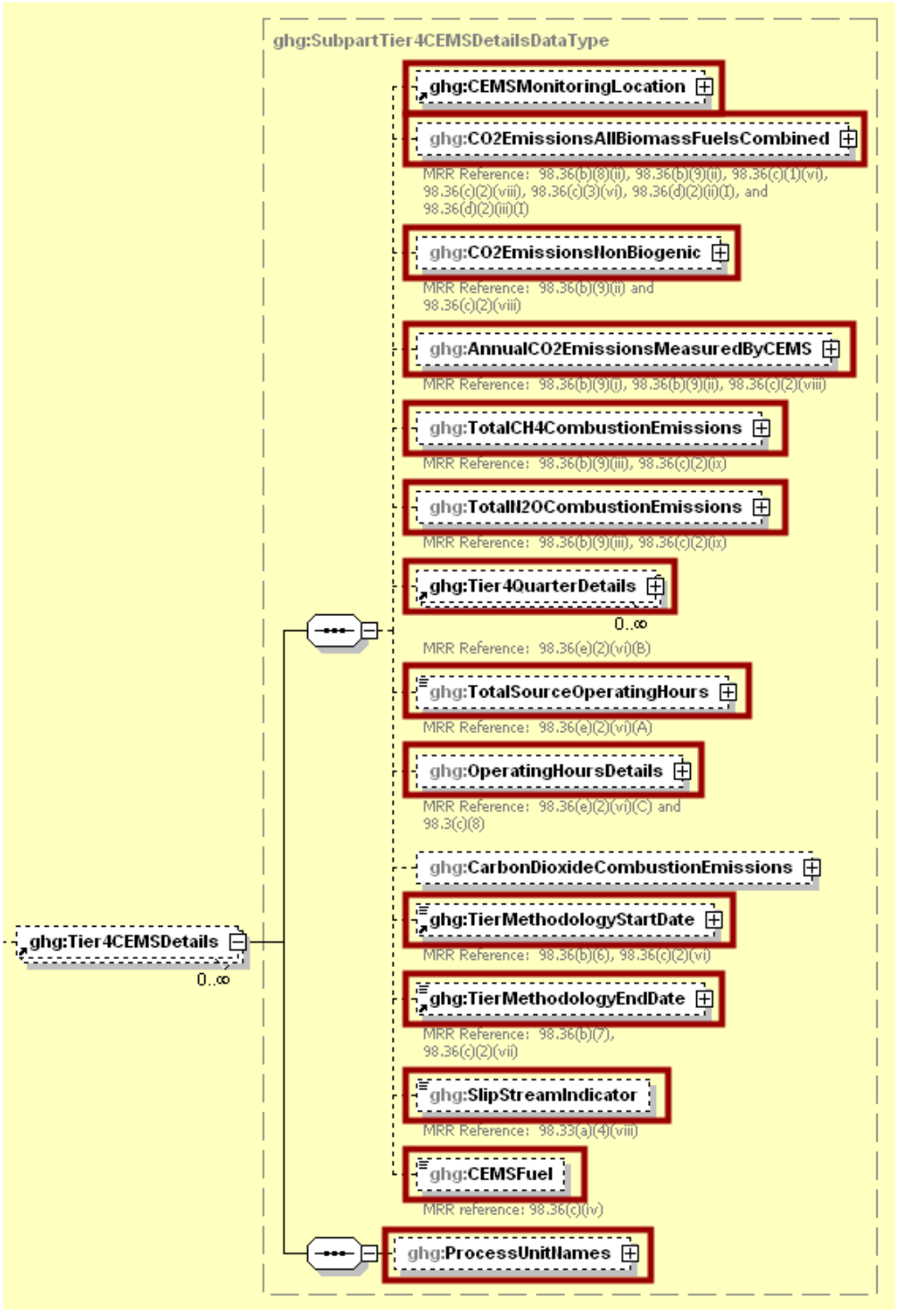
Note: The code excerpt above is presented here to demonstrate the concept of reporting greenhouse gas emissions data.

2.0 Tier 4 CEMS Emissions Details

Conditionally Required Unit-Level Data

This section describes the emissions information that must be reported if ammonia manufacturing process units were monitored by a continuous emissions monitoring system (CEMS) during the reporting year.

Figure 10
Tier 4 CEMS Details Schema Diagram



Note: Data elements boxed in red are required.

For Subpart G, information on each CEMS monitoring location (CML) is required including:

- A unique unit name or identifier for the CML.
- An optional description or label for the CML.
- The configuration of processes or process units that are monitored by the CML from the following list:

    - Single industrial process or process unit that exhausts to a dedicated stack.
    - Multiple industrial processes or process units which share a common stack.
    - Industrial process or process unit which shares a common stack with one or more stationary fuel combustion units.

For each CEMS monitoring location identified, the following emissions data must be reported:

- The total annual CO_2 emissions from the combustion of all biomass fuels combined if biomass fuels are combusted in the configuration [98.36(b)(8)(ii)].
- The total annual non-biogenic CO_2 emissions (i.e. CO_2 emissions from fossil fuels, sorbent use and process CO_2 emissions) [98.36(b)(9)(ii)].
- The total annual CO_2 emissions measured by the CEMS [98.36(b)(9)(i)-(ii)].
- The total annual CH_4 emissions associated with the combustion of all Table C-2 fuels combusted in all processes/process units monitored by the CEMS derived from application of Equation C-10 [98.36(b)(9)(iii), 98.36(c)(2)(ix)].
- The total annual N_2O emissions associated with the combustion of all Table C-2 fuels combusted in all processes/process units monitored by the CEMS derived from application of Equation C-10 [98.36(b)(9)(iii), 98.36(c)(2)(ix)].

Figure 11
Tier 4 CML and Emissions Details Schema Diagram

Note: Data elements boxed in red are required.

Table 7
Tier 4 CML and Emissions Details Data Element Definitions

Data Element Name	Description
Tier4CEMSDetails	**Parent Element (Conditionally Required):** A collection of data elements containing information on emissions from combustion sources monitored with Tier 4 CEMS methodology.
CEMSMonitoringLocation	A collection of data elements containing information on each CEMS monitoring location (CML). Report a unique CML name (ID) in the child data element **Name**, an optional brief description in the child data element **Description** and the type of configuration in the child data element **Type**. See the list of allowable configuration types: Single process/process unit exhausts to dedicated stack Multiple processes/process units share common stack Process/stationary combustion units share common stack
CO2EmissionsAllBiomassFuelsCombined	A collection of data elements containing information on the total annual biogenic CO_2 mass emissions for the CML. Report the value in the child data element **CalculatedValue**. Set the units of measure to "Metric Tons" in the attribute **massUOM**.
CO2EmissionsNonBiogenic	A collection of data elements containing information on the total annual non-biogenic CO_2 mass emissions for the CML. Report the value in the child data element **CalculatedValue**. Set the units of measure to "Metric Tons" in the attribute **massUOM**.
AnnualCO2EmissionsMeasuredByCEMS	A collection of data elements containing information on the total annual CO_2 mass emissions measured by the CEMS at the monitoring location. Report the value in the child data element **CalculatedValue**. Set the units of measure to "Metric Tons" in the attribute **massUOM**.
TotalCH4CombustionEmissions	A collection of data elements containing information on the annual CH_4 mass emissions for the specified fuel combusted in the CML configuration during the reporting year calculated using Equation C-10 expressed in mass of CH_4. Report the value in the child data element **CalculatedValue**. Set the units of measure to "Metric Tons" in the attribute **massUOM**.
TotalN2OCombustionEmissions	A collection of data elements containing information on the annual N_2O mass emissions for the specified fuel combusted in the CML configuration during the reporting year calculated using Equation C-10 expressed in mass of N_2O. Report the value in the child data element **CalculatedValue**. Set the units of measure to "Metric Tons" in the attribute **massUOM**.

XML Excerpt 3
Example for Tier 4 CML and Emissions Details

```
<ghg:Tier4CEMSDetails>
        <ghg:CEMSMonitoringLocation>
                <ghg:Name>CML-A</ghg:Name>
                <ghg:Description>CEMS Monitoring Location A</ghg:Description>
                <ghg:Type>Process/stationary combustion units share common stack</ghg:Type>
        </ghg:CEMSMonitoringLocation>
        <ghg:CO2EmissionsAllBiomassFuelsCombined massUOM="Metric Tons">
                <ghg:CalculatedValue>500.5</ghg:CalculatedValue>
        </ghg:CO2EmissionsAllBiomassFuelsCombined>
        <ghg:CO2EmissionsNonBiogenic massUOM="Metric Tons">
                <ghg:CalculatedValue>10610.1</ghg:CalculatedValue>
        </ghg:CO2EmissionsNonBiogenic>
        <ghg:AnnualCO2EmissionsMeasuredByCEMS massUOM="Metric Tons">
                <ghg:CalculatedValue>11110.1</ghg:CalculatedValue>
        </ghg:AnnualCO2EmissionsMeasuredByCEMS>
        <ghg:TotalCH4CombustionEmissions massUOM="Metric Tons">
                <ghg:CalculatedValue>400.44</ghg:CalculatedValue>
        </ghg:TotalCH4CombustionEmissions>
        <ghg:TotalN2OCombustionEmissions massUOM="Metric Tons">
                <ghg:CalculatedValue>40.444</ghg:CalculatedValue>
        </ghg:TotalN2OCombustionEmissions>
```

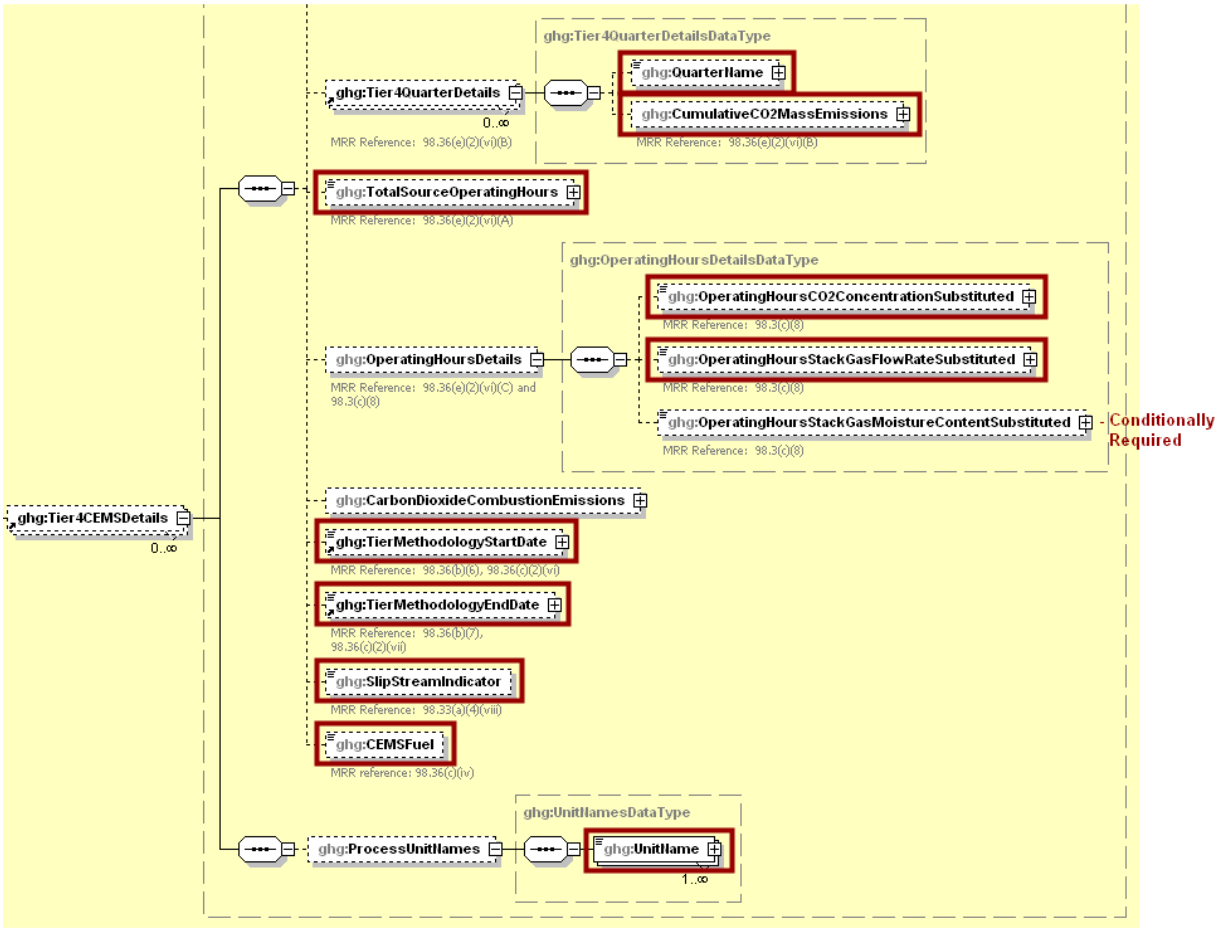
Note: The code excerpt above is presented here to demonstrate the concept of reporting greenhouse gas emissions data.

For each quarter of the reporting year, the facility must provide the cumulative CO_2 mass emissions for each CML [98.36(e)(2)(vi)(B)].

The facility must provide the following additional information for each CML:

- The total number of source operating hours in the reporting year [98.36(e)(2)(vi)(A)].
- The total operating hours in which a substitute data value was used in the emissions calculations for the CO_2 concentration parameter [98.36(e)(2)(vi)(C) and 98.3(c)(8)].
- The total operating hours in which a substitute data value was used in the emissions calculations for the stack gas flow rate parameter [98.36(e)(2)(vi)(C) and 98.3(c)(8)].
- **Conditionally Required:** If moisture correction is required and a continuous moisture monitor is used, the total operating hours in which a substitute data value was used in the emissions calculations for the stack gas moisture content parameter [98.36(e)(2)(vi)(C) and 98.3(c)(8)].
- The Tier 4 methodology start date [98.36(b)(6), 98.36(c)(2)(vi)].
- The Tier 4 methodology end date [98.36(b)(7), 98.36(c)(2)(vii)].
- Specify if emissions reported for the CEMS include emissions calculated according to 98.33(a)(4)(viii) for a slipstream that bypassed the CEMS [98.33(a)(4)(viii)].
- Each type of fuel combusted in the group of units during the reporting year [98.36(b)(4), 98.36(c)(2)(iv)].
- The name of each process unit sharing the stack. **Note:** Use the same identification for each unit as is used for the parent element “CemsAmmoniaDetails”.

Figure 12
Tier 4 CML Quarter and Additional 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.

Table 8
Tier 4 CML Quarter and Additional Details Data Element Definitions

Data Element Name	Description
Tier4QuarterDetails	**Parent Element:** A collection of data elements containing Tier 4 quarterly information.
QuarterName	The name of the quarter. See list of allowable values: First Quarter Second Quarter Third Quarter Fourth Quarter
CumulativeCO2MassEmissions	A collection of data elements containing information on the cumulative CO_2 mass emissions for the specified quarter of the reporting year. Report the value in the child data element **CalculatedValue**. Set the units of measure to "Metric Tons" in the attribute **massUOM**.

Data Element Name	Description
TotalSourceOperatingHours	The total number of source operating hours in the reporting year.
OperatingHoursDetails	**Parent Element:** A collection of data elements containing information on the number of operating hours in which substitute data values were used.
OperatingHoursCO2ConcentrationSubstituted	The total operating hours in which a substitute data value was used in the emissions calculations for the CO_2 concentration parameter.
OperatingHoursStackGasFlowRateSubstituted	The total operating hours in which a substitute data value was used in the emissions calculations for the stack gas flow rate parameter.
OperatingHoursStackGasMoistureContentSubstituted	**Conditionally Required:** If moisture correction is required and a continuous moisture monitor is used, the total operating hours in which a substitute data value was used in the emissions calculations for the stack gas moisture content parameter.
TierMethodologyStartDate	The tier methodology start date for the specified CEMS monitoring location (YYYY-MM-DD).
TierMethodologyEndDate	The tier methodology end date for the specified CEMS monitoring location (YYYY-MM-DD).
SlipStreamIndicator	An indication (Y/N) that the emissions reported for the CEMS include emissions calculated according to 98.33(a)(4)(viii) for a slipstream that bypassed the CEMS.
CEMSFuel	Each type of fuel combusted in the group of units during the reporting year.
ProcessUnitNames	**Parent Element:** A collection of data elements identifying each ammonia manufacturing process unit which was monitored at the specified CEMS monitoring location.
UnitName	The unit ID for each ammonia manufacturing process unit which was monitored at the specified CEMS monitoring location. **Note:** Use the same identification for each unit as is used for the parent element "CemsAmmoniaDetails".

XML Excerpt 4
Example for Tier 4 CML Quarter and Additional Details

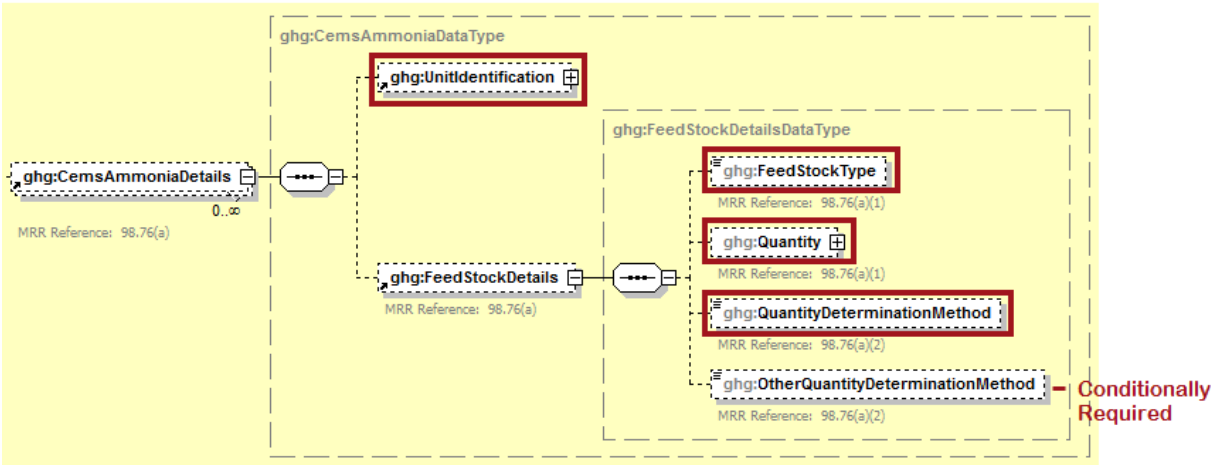
```
                    <ghg:Tier4QuarterDetails>
                        <ghg:QuarterName>First Quarter</ghg:QuarterName>
                        <ghg:CumulativeCO2MassEmissions massUOM="Metric Tons">
                            <ghg:CalculatedValue>1111.1</ghg:CalculatedValue>
                        </ghg:CumulativeCO2MassEmissions>
                    </ghg:Tier4QuarterDetails>
                    <ghg:Tier4QuarterDetails>
                        <ghg:QuarterName>Second Quarter</ghg:QuarterName>
                        <ghg:CumulativeCO2MassEmissions massUOM="Metric Tons">
                            <ghg:CalculatedValue>2222.2</ghg:CalculatedValue>
                        </ghg:CumulativeCO2MassEmissions>
                    </ghg:Tier4QuarterDetails>
                    <ghg:Tier4QuarterDetails>
                        <ghg:QuarterName>Third Quarter</ghg:QuarterName>
                        <ghg:CumulativeCO2MassEmissions massUOM="Metric Tons">
                            <ghg:CalculatedValue>3383.8</ghg:CalculatedValue>
                        </ghg:CumulativeCO2MassEmissions>
                    </ghg:Tier4QuarterDetails>
                    <ghg:Tier4QuarterDetails>
                        <ghg:QuarterName>Fourth Quarter</ghg:QuarterName>
                        <ghg:CumulativeCO2MassEmissions massUOM="Metric Tons">
                            <ghg:CalculatedValue>8844.2</ghg:CalculatedValue>
                        </ghg:CumulativeCO2MassEmissions>
                    </ghg:Tier4QuarterDetails>
                    <ghg:TotalSourceOperatingHours>7300</ghg:TotalSourceOperatingHours>
                    <ghg:OperatingHoursDetails>
                        <ghg:OperatingHoursCO2ConcentrationSubstituted>50</ghg:OperatingHoursCO2Co
                        ncentrationSubstituted>
                        <ghg:OperatingHoursStackGasFlowRateSubstituted>60</ghg:OperatingHoursStackG
                        asFlowRateSubstituted>
                        <ghg:OperatingHoursStackGasMoistureContentSubstituted>70</ghg:OperatingHours
                        StackGasMoistureContentSubstituted>
                    </ghg:OperatingHoursDetails>
                    <ghg:TierMethodologyStartDate>2011-01-01</ghg:TierMethodologyStartDate>
                    <ghg:TierMethodologyEndDate>2011-12-31</ghg:TierMethodologyEndDate>
                    <ghg:SlipStreamIndicator>Y</ghg:SlipStreamIndicator>
                    <ghg:CEMSFuel>coal, coke, natural gas</ghg:CEMSFuel>
                    <ghg:ProcessUnitNames>
                        <ghg:UnitName>004- CEMS</ghg:UnitName>
                        <ghg:UnitName>005- CEMS</ghg:UnitName>
                        <ghg:UnitName>006- CEMS</ghg:UnitName>
                    </ghg:ProcessUnitNames>
                </ghg:Tier4CEMSDetails>
```

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

3.0 CEMS Unit Details

Conditionally Required: This section describes unit information that must be reported for ammonia manufacturing process units if a continuous emissions monitoring system (CEMS) was in use during the reporting year.

Figure 13
CEMS Unit 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.

Subpart G requires the following identification information for each ammonia manufacturing process unit that had emissions monitored using a CEMS:

- A unique unit name or identifier (e.g., a unit ID number). **Note:** Use the same identification for each unit as was used for the parent element "ProcessUnitNames" (Tier4CEMSDetails).
- An optional unit description or label.
- The type of unit: "Ammonia Manufacturing Process Unit".

For each ammonia manufacturing process unit monitored by CEMS in your facility, Subpart G requires you to report the following information:

- The feedstock type used by the unit (gaseous, liquid, or solid).
- The quantity of feedstock consumed in the reporting year for the ammonia manufacturing unit [98.76(a)(1)].
- The method used for determining the quantity of feedstock consumed [98.76(a)(2)].

Table 9
CEMS Unit Details Data Element Definitions

Data Element Name	Description
CemsAmmoniaDetails	**Parent Element:** A collection of data elements containing information on ammonia manufacturing process units monitored using CEMS.
UnitIdentification	A collection of data elements that identify each ammonia manufacturing process unit that uses a CEMS to measure emissions. 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**. See list of allowable unit types: Ammonia Manufacturing Process Unit". **Note:** Use the same unit ID as was used for UnitName in ProcessUnitNames (Tier4CEMSDetails).
FeedStockDetails	**Parent Element:** A collection of data elements containing information on the type of feedstock used by the specified unit. **Note:** If the specified unit consumed more than one type of feedstock in the reporting year, then report the first type using the data elements described below. Report details regarding additional feedstock types consumed using data element “UnitDescription”. This is the only location where this information can be reported. Please specify each additional type of feedstock consumed, the quantity (and unit of measure) and the quantity determination method used.
FeedStockType	Type of ammonia manufacturing feedstock consumed by the specified unit. See list of allowable values: Gas Liquid Solid
Quantity	A collection of data elements containing information on the annual quantity of the specified feedstock consumed. Report the value in the child data element **MeasureValue**. If reporting for gaseous feedstock, set the units of measure to “scf” in the attribute **volUOM**. If reporting for liquid feedstock, set the units of measure to “Gallons” in the attribute **volUOM**. If reporting for solid feedstock, set the units of measure to “Kilograms” in the attribute **massUOM**.
QuantityDeterminationMethod	The method used for determining quantity of feedstock. See list of allowable values: Flow meter Other

Data Element Name	Description
OtherQuantityDeterminationMethod	The method used for determining quantity of feedstock if not on the list for QuantityDeterminationMethod.

XML Excerpt 5
Example for CEMS Unit Details

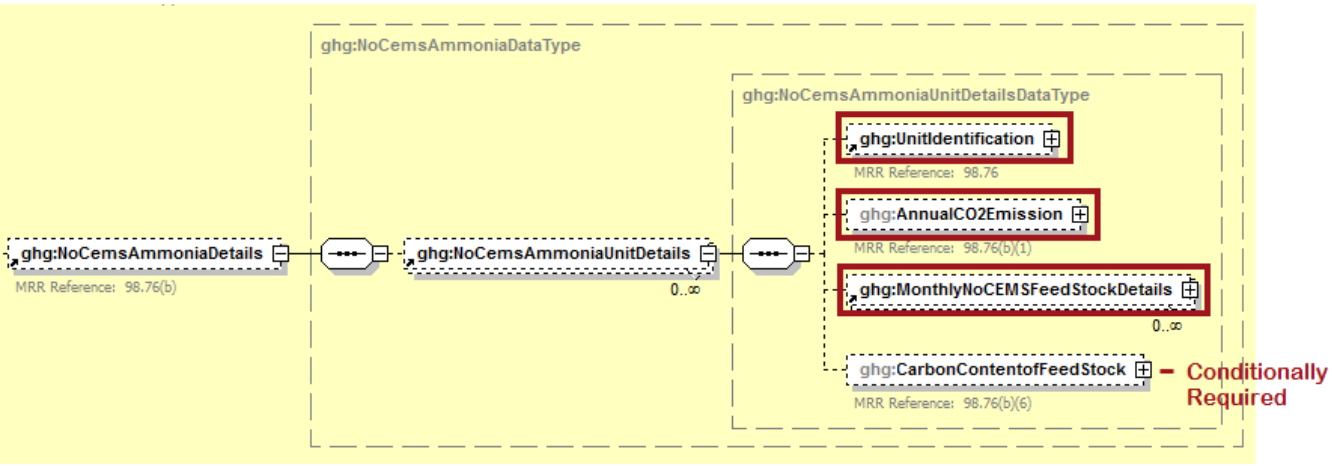
```
<ghg:CemsAmmoniaDetails>
        <ghg:UnitIdentification>
                <ghg:UnitName>006- CEMS</ghg:UnitName>
                <ghg:UnitDescription>Unit monitored by CEMS</ghg:UnitDescription>
                <ghg:UnitType>Ammonia Manufacturing Process Unit</ghg:UnitType>
        </ghg:UnitIdentification>
        <ghg:FeedStockDetails>
                <ghg:FeedStockType>Solid</ghg:FeedStockType>
                <ghg:Quantity massUOM="Kilograms">
                        <ghg:MeasureValue>33333.34257</ghg:MeasureValue>
                </ghg:Quantity>
                <ghg:QuantityDeterminationMethod>Other</ghg:QuantityDeterminationMethod>
                <ghg:OtherQuantityDeterminationMethod>mass determination method A
                </ghg:OtherQuantityDeterminationMethod>
        </ghg:FeedStockDetails>
</ghg:CemsAmmoniaDetails>
```

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

4.0 Non-CEMS Unit and Emissions Details

Conditionally Required: This section describes information that must be reported for units which were not monitored by CEMS during the reporting year to measure process CO_2 emissions. You must retain the records of all analyses and calculations conducted for reported data as listed in §98.76(b). You must also retain the monthly records of carbon content of feedstock from supplier and/or all analyses conducted of carbon content.

Figure 14
Non-CEMS Unit 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.

Subpart G requires the following identification information for each ammonia manufacturing process unit which was not monitored by CEMS [98.73(b)]:

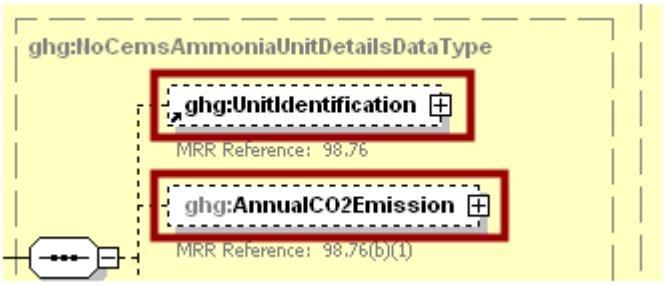
- A unique unit name or identifier (e.g., a unit ID number).
- An optional unit description or label.
- The type of unit: "Ammonia Manufacturing Process Unit".

Subpart G requires a facility to report annual CO_2 process emissions from each process unit used to produce ammonia. To calculate the annual CO_2 emissions from each process unit, use one of the following equations based on the type of unit feedstock:

- Equation G-1 for gaseous feedstock [98.73(b)(1)].
- Equation G-2 for liquid feedstock [98.73(b)(2)].
- Equation G-3 for solid feedstock [98.73(b)(3)].

Users may use different equations for different process units as required by the feedstock type for each unit and may use more than one equation for a process unit if the unit has more than one type of feedstock.

Figure 15
Non-CEMS Unit Identification and Emissions Schema Diagram



Note: Data elements boxed in red are required.

Table 10
Non-CEMS Unit Identification and Emissions Details Data Element Definitions

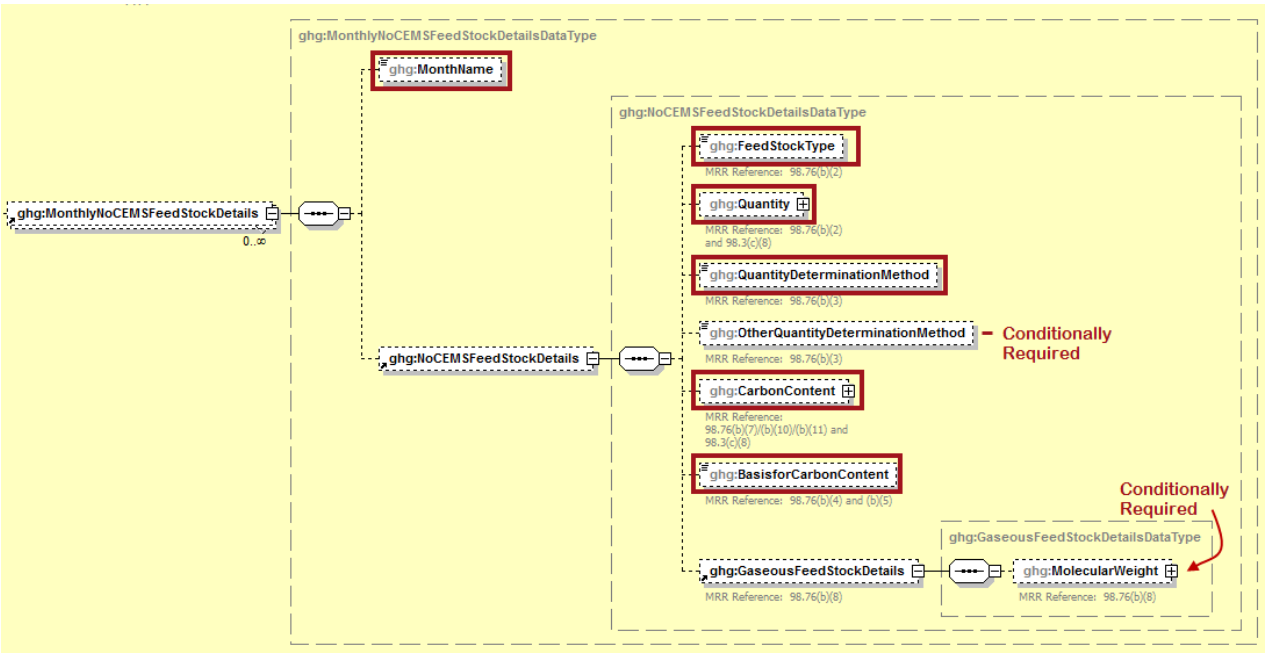
Data Element Name	Description
NoCemsAmmoniaDetails	**Parent Element:** A collection of data elements containing information on emissions from combustion sources that are not monitored with CEMS methodology.
NoCemsAmmoniaUnitDetails	**Parent Element:** A collection of data elements containing information on each ammonia manufacturing process unit that is not monitored using a CEMS.
UnitIdentification	A collection of data elements that identify each ammonia manufacturing process unit that is not monitored by a CEMS to measure CO_2. 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:** "Ammonia Manufacturing Process Unit".
AnnualCO2Emission	A collection of data elements containing information on annual CO_2 process emissions. Report the value in the child data element **CalculatedValue**. Set the units of measure to "Metric Tons" in the attribute **massUOM**.

XML Excerpt 6
Example for Non-CEMS Unit Identification and Emissions

```
<ghg:NoCemsAmmoniaDetails>
        <ghg:NoCemsAmmoniaUnitDetails>
                <ghg:UnitIdentification>
                        <ghg:UnitName>001- Non-CEMS</ghg:UnitName>
                        <ghg:UnitDescription>Unit not monitored by CEMS</ghg:UnitDescription>
                        <ghg:UnitType>Ammonia Manufacturing Process Unit</ghg:UnitType>
                </ghg:UnitIdentification>
                <ghg:AnnualCO2Emission massUOM="Metric Tons">
                        <ghg:CalculatedValue>12345.1</ghg:CalculatedValue>
                </ghg:AnnualCO2Emission>
```

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

Figure 16
Non-CEMS Monthly Feedstock 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.

Subpart G requires that the following information be reported for each calendar month and each ammonia manufacturing process unit:

- The feedstock type used by the unit (gaseous, liquid, or solid).
- Indicate if a substitute value was used for that month to determine the volume or mass of feedstock if monitoring and quality assurance procedures could not be followed [98.3(c)(8)].
- The method used for determining the monthly quantity of feedstock used [98.76(b)(3)].
- Indicate if a substitute value was used for that month to determine the carbon content [98.3(c)(8)].
- The basis for determining the carbon content: supplier reports or carbon content analysis [98.76(b)(5)].
- If the feedstock is gaseous, an indication if molecular weight of the gaseous feedstock is a substitute data value [98.3(c)(8)].

Table 11
Non-CEMS Monthly Feedstock Details Data Element Definitions

Data Element Name	Description
MonthlyNoCEMSFeedStockDetails	**Parent Element:** A collection of data elements containing details of each type of feedstock consumed at the specified unit.
MonthName	Month name. See list of allowable values: January February March April May June July August September October November December
NoCEMSFeedStockDetails	**Parent Element:** A collection of data elements containing detailed data for each type of feedstock reported for the month.
FeedStockType	Type of feedstock used for the month specified. See list of allowable values: Gas Liquid Solid
Quantity	An indication (Y/N) that the quantity of feedstock reported contains a substituted value.
QuantityDeterminationMethod	Method used to determine feedstock quantity for the month specified. Report one of the following allowable values for gaseous or liquid feedstock: Flow meter Other Report one of the following allowable values for solid feedstock: Company records Other
OtherQuantityDeterminationMethod	Method used to determine feedstock quantity for the month specified if "Other" was specified.
CarbonContent	An indication (Y/N) that the carbon content of feedstock reported for the month specified contains a substituted value.

Data Element Name	Description
BasisforCarbonContent	Indicate the basis for the carbon content value reported. See list of allowable values: Supplier records ASTM D1945-03 ASTM D1946-90 (Reapproved 2006) ASTM D2502-04 (Reapproved 2002) ASTM D2503-92 (Reapproved 2007) ASTM D3238-95 (Reapproved 2005) ASTM D5291-02 (Reapproved 2007) ASTM D3176-89 (Reapproved 2002) ASTM D5373-08
GaseousFeedStockDetails	**Parent Element:** A collection of data elements to report only if the specified feedstock is gaseous.
MolecularWeight	An indication (Y/N) if the molecular weight of the feedstock, if gaseous, for the month specified is a substitute data value.

XML Excerpt 7
Example for Non-CEMS Monthly Feedstock Details

```
<ghg:MonthlyNoCEMSFeedStockDetails>
        <ghg:MonthName>January</ghg:MonthName>
        <ghg:NoCEMSFeedStockDetails>
                <ghg:FeedStockType>Gas</ghg:FeedStockType>
                <ghg:Quantity>
                        <ghg:IsSubstitutedIndicator>Y</ghg:IsSubstitutedIndicator>
                </ghg:Quantity>
                <ghg:QuantityDeterminationMethod>Flow meter</ghg:QuantityDeterminationMethod>
                <ghg:CarbonContent >
                        <ghg:IsSubstitutedIndicator>Y</ghg:IsSubstitutedIndicator>
                </ghg:CarbonContent>
                <ghg:BasisforCarbonContent>Supplier records</ghg:BasisforCarbonContent>
                <ghg:GaseousFeedStockDetails>
                        <ghg:MolecularWeight>
                                <ghg:IsSubstitutedIndicator>Y</ghg:IsSubstitutedIndicator>
                        </ghg:MolecularWeight>
                </ghg:GaseousFeedStockDetails>
        </ghg:NoCEMSFeedStockDetails>
</ghg:MonthlyNoCEMSFeedStockDetails>
```

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

Figure 17
Carbon Content of Feedstock 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 quality assurance and quality control of the supplier data, you must measure the carbon contents of a representative sample of the feedstock consumed. If any of the carbon content data is based on supplier records (see "BasisforCarbonContent" above), you must report an annual value determined from this analysis [98.76(b)(6)].

Table 12
Carbon Content of Feedstock Data Element Definitions

Data Element Name	Description
CarbonContentofFeedStock	A collection of data elements containing information on the measured carbon content of feedstock (from sample analysis). Required if any carbon content data is based on supplier records. Report the value in the child data element **MeasureValue**. If reporting for liquid feedstock, set the units of measure to "kgC/gallon" in the attribute **carboncontentUOM**. If reporting for solid or gaseous feedstock, set the units of measure to "kgC/kg" in the attribute **carboncontentUOM**

XML Excerpt 8
Example for Carbon Content of Feedstock

```
        <ghg:CarbonContentofFeedStock carboncontentUOM="kgC/kg">
                <ghg:MeasureValue>0.25</ghg:MeasureValue>
        </ghg:CarbonContentofFeedStock>
</ghg:NoCemsAmmoniaUnitDetails>
```

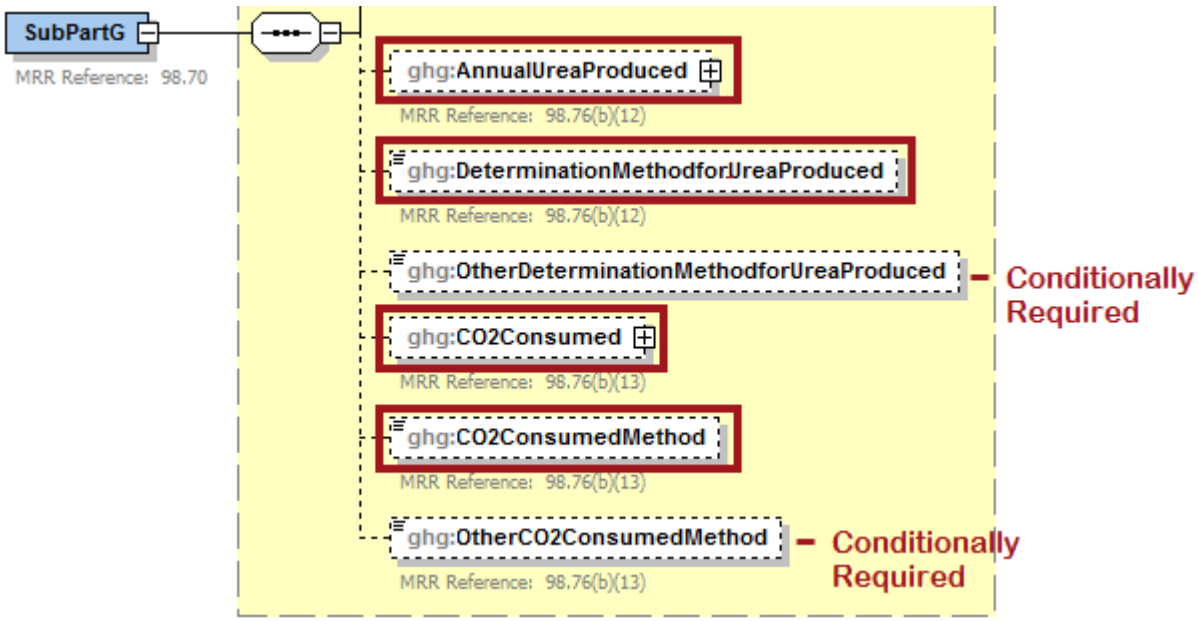
Note: The code excerpt above is presented here to demonstrate the concept of reporting greenhouse gas emissions data.

5.0 Urea Production and CO_2 Consumed Details

Subpart G requires that the following data be reported:

- The annual urea production by the facility in metric tons [98.76(b)(12)].
- The method used to determine that annual production [98.76(b)(12)].
- The quantity of CO_2 consumed in urea production (from the steam reforming of a hydrocarbon or the gasification of solid and liquid raw material at the ammonia manufacturing process unit used to produce urea) by the facility in metric tons [98.76(b)(13)].
- The method used to determine the annual quantity of CO_2 consumed in urea production [98.76(b)(13)].

Figure 18
Urea Production and CO_2 Consumed 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.

Table 13
Urea Production and CO_2 Consumed Details Data Element Definitions

Data Element Name	Description
AnnualUreaProduced	A collection of data elements containing information on the annual quantity of urea produced. Report the value in the child data element **MeasureValue**. Set the units of measure to "Metric Tons" in the attribute **massUOM**.
DeterminationMethodforUreaProduced	Method used to determine urea production. See list of allowable values: Direct weight measurement Company records Other

Data Element Name	Description
OtherDeterminationMethodforUreaProduced	Method used to determine urea production if "Other" was specified.
CO2Consumed	A collection of data elements containing information on the annual quantity of CO_2 consumed in urea production from the steam reforming of a hydrocarbon or the gasification of solid and liquid raw material at the ammonia manufacturing process unit used to produce urea. Report the value in the child data element **MeasureValue**. Set the units of measure to "Metric Tons" in the attribute **massUOM**.
CO2ConsumedMethod	The method used to determine the annual quantity of CO_2 consumed in urea production. See list of allowable values: Continuous measurement of concentration and flow Company records Other
OtherCO2ConsumedMethod	The method used to determine the CO_2 consumed in urea production if "Other" was specified.

XML Excerpt 9
Example for Urea Production and CO_2 Consumed Details

```
        <ghg:AnnualUreaProduced massUOM="Metric Tons">
                <ghg:MeasureValue>11111.4561</ghg:MeasureValue>
        </ghg:AnnualUreaProduced>
        <ghg:DeterminationMethodforUreaProduced>Direct weight
        measurement</ghg:DeterminationMethodforUreaProduced>
        <ghg:CO2Consumed massUOM="Metric Tons">
                <ghg:MeasureValue>2222.2</ghg:MeasureValue>
        </ghg:CO2Consumed>
        <ghg:CO2ConsumedMethod>Company records</ghg:CO2ConsumedMethod>
</ghg:SubPartG>
```

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

6.0 Facility-Level Roll-up Emissions

Required Subpart-Level Summary Data

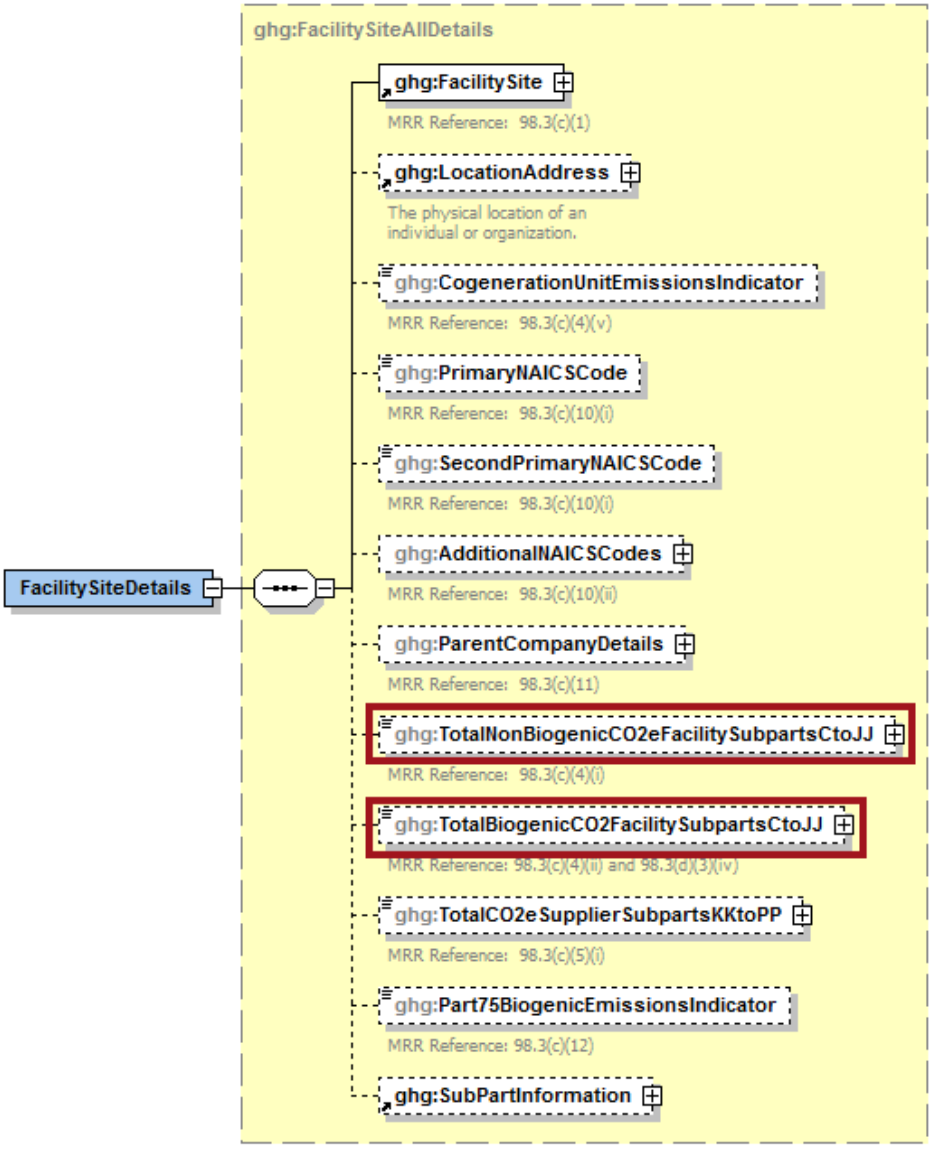
Each facility must report the following facility-level emission totals:

- Total CO_2 equivalent (CO_2e) emissions (excluding biogenic CO_2) aggregated across all direct emitter source categories (Subparts C-HH) associated with the facility.
- Total biogenic CO_2 emissions aggregated across all direct emitter source categories (Subparts C-HH) associated with the facility.

Each supplier must report the following supplier totals:

- Total CO_2e 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 19
Facility-Level Roll-up Emissions Schema Diagram



Note: Data elements boxed in red are required.

1) Add the total CO_2e value for Subpart G in metric tons to the total CO_2e emissions (excluding biogenic CO_2) aggregated across all source category subparts associated with the facility according to the following guidelines:

   - Add the total annual CO_2 emissions from gaseous, liquid and solid feedstock consumption in metric tons for each non-CEMS unit.
   - Add the total annual CO_2 mass emissions measured by the CEMS in metric tons minus the total annual biogenic CO_2 mass emissions for the CML in metric tons (the difference of the total CO_2 monitored by the CEMS and the total biogenic CO_2) for each CML.
   - Multiply the total CH_4 emissions in metric tons by the Global Warming Potential for CH_4 (21) for each CML and add the resulting value.
   - Multiply the total N_2O emissions in metric tons by the Global Warming Potential for N_2O (310) for each CML and add the resulting value.

2) Add the total annual biogenic CO_2 mass emissions in metric tons for each CML to the total biogenic CO_2 aggregated across all source category subparts associated with the facility.

Note: You must follow the rounding rules found in Table 1.

Table 14
Facility Level Roll-up Emissions Data Element Definitions

Data Element Name	Description
TotalNonBiogenicCO2eFacilitySubpartsCtoJJ	Add the total CO_2e value for Subpart G in metric tons to the total CO_2e emissions (excluding biogenic CO_2) aggregated across all source category Subparts associated with the facility according to the guidelines above. Set the units of measure to "Metric Tons" in the attribute **massUOM**.
TotalBiogenicCO2FacilitySubpartsCtoJJ	Add the total annual biogenic CO_2 value for Subpart G in metric tons to the total biogenic CO_2 emissions aggregated across all source category Subparts associated with the facility according to the guideline above. Set the units of measure to "Metric Tons" in the attribute **massUOM**.

XML Excerpt 10
Example for Facility Level Roll-up Emissions

```
<ghg:TotalNonBiogenicCO2eFacilitySubpartsCtoJJ massUOM="Metric Tons">1437.9</ghg:TotalNonBiogenicCO2eFacilitySubpartsCtoJJ>
<ghg:TotalBiogenicCO2FacilitySubpartsCtoJJ massUOM="Metric Tons">568.2</ghg:TotalBiogenicCO2FacilitySubpartsCtoJJ>
```

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

IV. Appendix A: Sample XML Document for Subpart G

(Note: Data values do not reflect an actual facility's emissions. Additional sample XML files for Subpart G 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>523997</ghg:FacilitySiteIdentifier>
        <ghg:FacilitySiteName>Test Facility G</ghg:FacilitySiteName>
      </ghg:FacilitySite>
      <ghg:LocationAddress>
        <ghg:LocationAddressText>1 Main St.</ghg:LocationAddressText>
        <ghg:LocalityName>Charlottesville</ghg:LocalityName>
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