Greenhouse Gas Reporting Program

XML Reporting Instructions for Subpart S – Lime Manufacturing

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.

Note: Subpart S requires affected facilities to report greenhouse gas (GHG) emissions from all lime kilns combined. If all lime kilns meet the conditions specified in §98.33(b)(4)(ii) or (b)(4)(iii), you must calculate and report under this subpart the combined process and combustion CO_2 emissions by operating and maintaining a Continuous Emissions Monitoring System (CEMS) to measure CO_2 emissions using the e-GGRT webforms and cannot report using the XML schema. The XML schema can only be used by facilities reporting emissions not calculated using CEMS.

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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

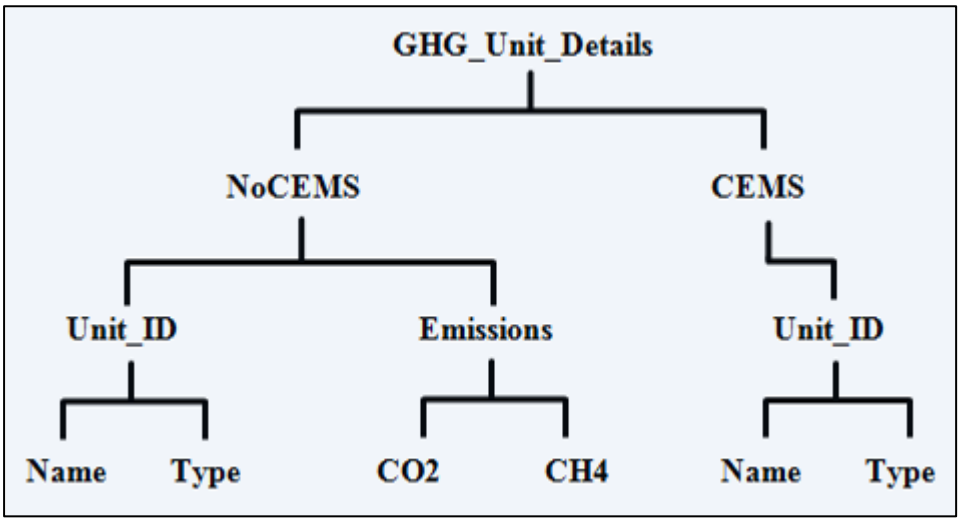
number: <FacilitySiteIdentifier>23222</FacilitySiteIdentifier>. The information shaded in blue represents the data element's value.

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.

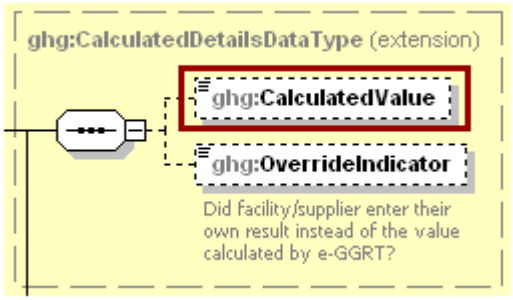
- **Commonly used data types are not depicted in the schema diagrams nor listed separately in the definition tables.** The schema diagrams display almost every data element in the schema except those that are associated with the three most commonly occurring data types:

    - 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

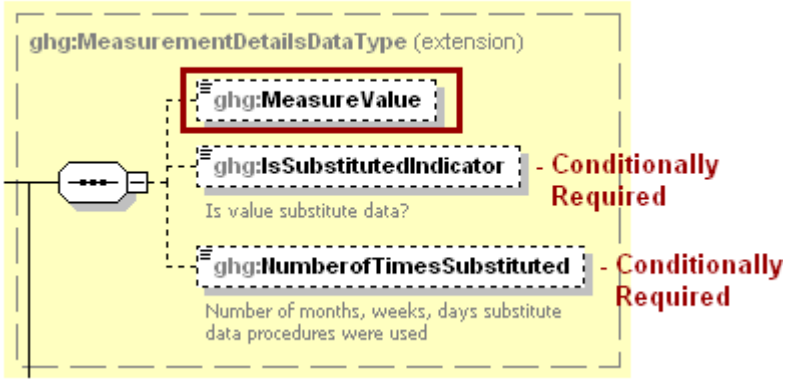


Note: Data elements boxed in red are required.

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

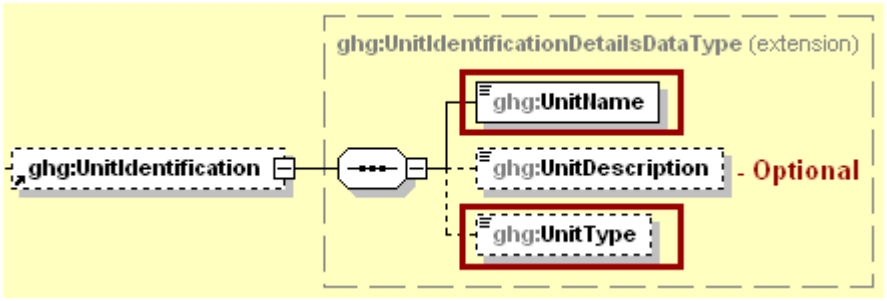


Note: Data elements boxed in red are required. Please see page 4 of this document for more information on conditionally required elements.

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



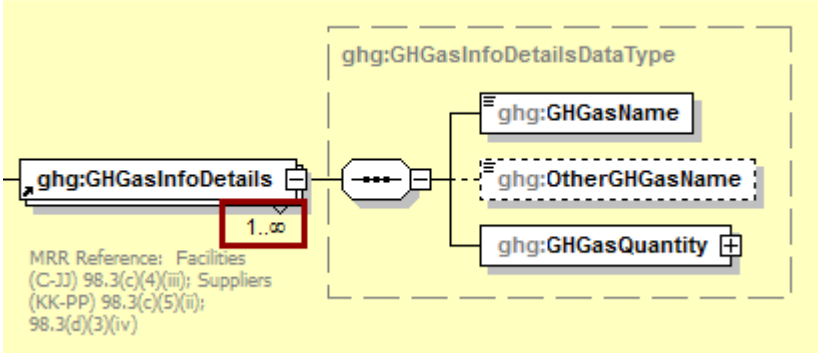
Note: Data elements boxed in red are required.

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

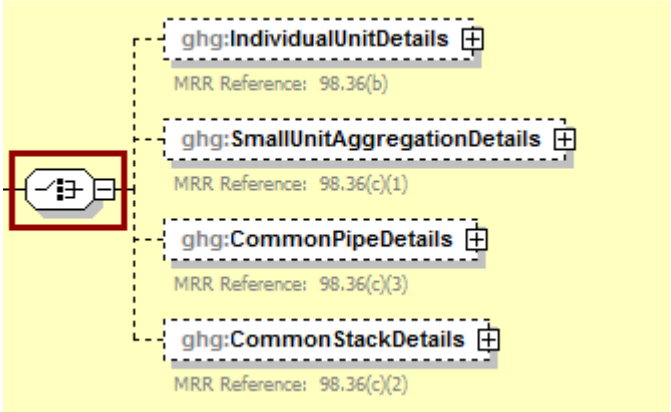


XML Excerpt 1
Example for "Unbounded" Parent Element

```
<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 S (GHG_SubPartS_v2.0.xsd) for reporting year 2011.

Table 5
Summary of Changes to the Schema for Subpart S

No.	Change Description
	LimeProductDataDetails
1	Added the following enumerations for data element "**MonthName**": *January, February, March, April, May, June, July, August, September, October, November* and *December*. XPath = SubPartS/NoCemsLimeUnitDetails/LimeProductDataDetails/MonthlyLimeProductDetails/MonthName
2	Removed attribute "**massUOM**" from data element "**MassProduced**". XPath = SubPartS/NoCemsLimeUnitDetails/LimeProductDataDetails/MonthlyLimeProductDetails/MassProduced
3	Added a new child data element, "**MassSoldAnalysis**", to data element "**MonthlyLimeProductDetails**". XPath = SubPartS/NoCemsLimeUnitDetails/LimeProductDataDetails/MonthlyLimeProductDetails/MassSoldAnalysis
	ByProductSoldDetails
4	Added the following enumerations for data element "**MonthName**": *January, February, March, April, May, June, July, August, September, October, November* and *December*. XPath = SubPartS/ NoCemsLimeUnitDetails/ByProductDataDetails/ByProductSoldDetails/MonthlyByProductDetails/MonthName
5	Removed attribute "**massUOM**" from data element "**AmountSold**". XPath = SubPartS/NoCemsLimeUnitDetails/ByProductDataDetails/ByProductSoldDetails/MonthlyByProductDetails/AmountSold
	ByProductNotSoldDetails
6	Removed attribute "**massUOM**" from data element "**ByProductQuantity**". XPath = SubPartS/NoCemsLimeUnitDetails/ByProductDataDetails/ByProductNotSoldDetails/ByProductQuantity

No.	Change Description
7	Removed attribute "**massUOM**" from data element "**AnnualCaOChemicalCompositionAnalysis**". XPath = SubPartS/NoCemsLimeUnitDetails/ByProductDataDetails/ByProductNotSoldDetails/ AnnualCaOChemicalCompositionAnalysis
8	Removed attribute "**massUOM**" from data element "**AnnualMgOChemicalCompositionAnalysis**" Xpath = SubPartS/NoCemsLimeUnitDetails/ByProductDataDetails/ByProductNotSoldDetails/ AnnualMgOChemicalCompositionAnalysis

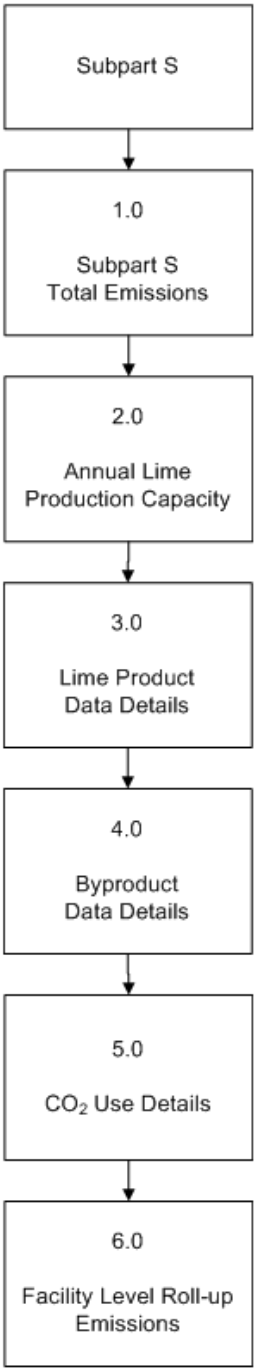
Document Changes:

3-15-2012 – Modified some of the emissions values within the XML excerpts to emphasize the rounding rules. Deleted “Part75BiogenicEmissionsIndicator” in sample XML document.

III. Subpart S Overview

This document provides a step-by-step description of how to report data for Subpart S Lime Manufacturing and overall total Subpart S greenhouse gas data for a facility using the XML schema.

Figure 7
Subpart S Reporting Diagram



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

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

2.0 Annual Lime Production Capacity: includes details for the annual lime production capacity for the entire facility

3.0 Lime Product Data Details: includes information on lime products produced.

4.0 Byproduct Data Details: includes information about the calcined lime byproducts/waste produced.

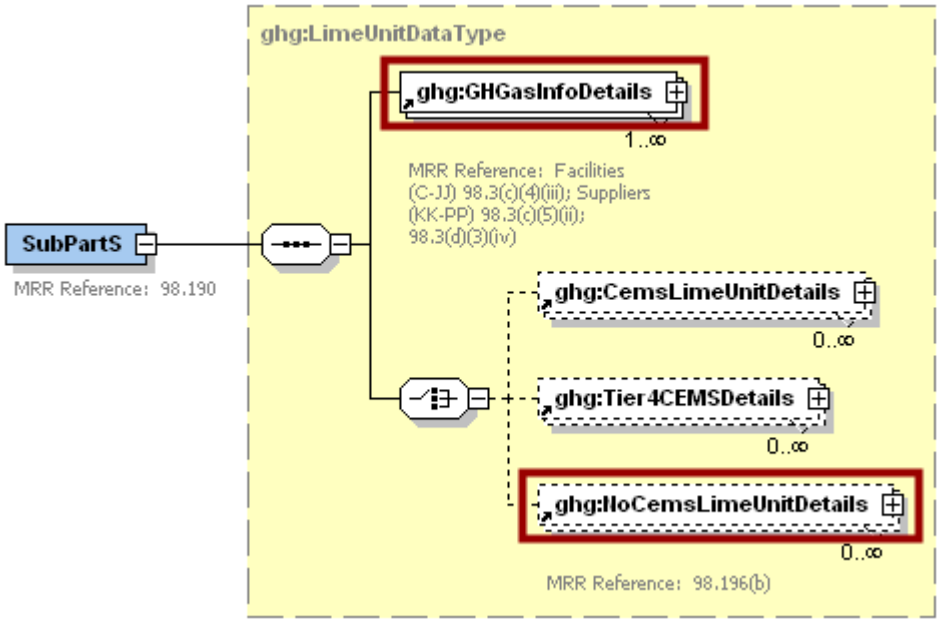
5.0 CO_2 Use Details: includes information for onsite CO_2 usage.

6.0 Facility Level Roll-up Emissions: includes information on how to report total emissions for CO_2e (excluding biogenic CO_2) from Subpart S at the facility level.

If your facility is subject to reporting under Subpart S (Lime Manufacturing), EPA recommends that you also consider Subpart C (General Stationary Fuel Combustion) in your facility applicability determination. This source category is only provided as a suggestion - additional subparts may be relevant for a given facility/supplier and the listed subpart may not be relevant for all facilities/suppliers.

Note: Subpart S requires affected facilities to report greenhouse gas (GHG) emissions from all lime kilns combined. If all lime kilns meet the conditions specified in §98.33(b)(4)(ii) or (b)(4)(iii), you must calculate and report under this subpart the combined process and combustion CO_2 emissions by operating and maintaining a Continuous Emissions Monitoring System (CEMS) to measure CO_2 emissions using the e-GGRT webforms and cannot report using the XML schema. The XML schema can only be used by facilities reporting emissions not calculated using CEMS.

Figure 8
Subpart S Schema Diagram

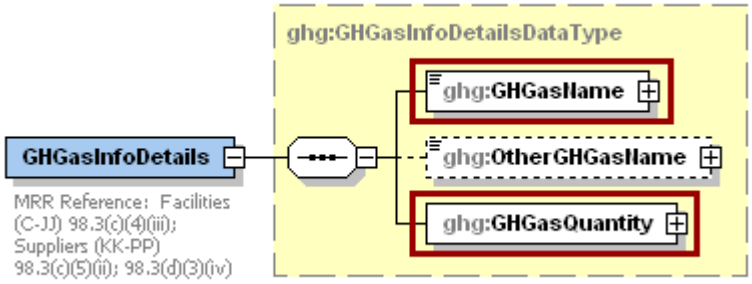


Note: Data elements boxed in red are required.

1.0 Subpart S 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 the Mandatory Reporting of GHG, Part 98 reported under Subpart S, expressed in metric tons.

Figure 9
Greenhouse Gas Information Details Schema Diagram



Note: Data elements boxed in red are required.

For Subpart S, report annual CO_2 process emissions from all kilns (the output of Equation S-4) in metric tons for the total emissions for carbon dioxide (excluding biogenic CO_2) [98.196(b)(1)]. For greenhouse gas quantity, report the calculated value and mass unit of measure (metric tons) only.

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

Table 6
Greenhouse Gas Information Details XML Data Elements

Data Element Name	Description
GHGasInfoDetails	A collection of data elements containing the total annual emissions of each greenhouse gas (GHG) listed in Table A-1 of the Mandatory Reporting of GHGs, Part 98 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 emissions from this facility category. Report the calculated value only using the guideline above.
GHGasQuantity.massUOM	Metric Tons

XML Excerpt 2
Sample XML Excerpt for Greenhouse Gas Information Details

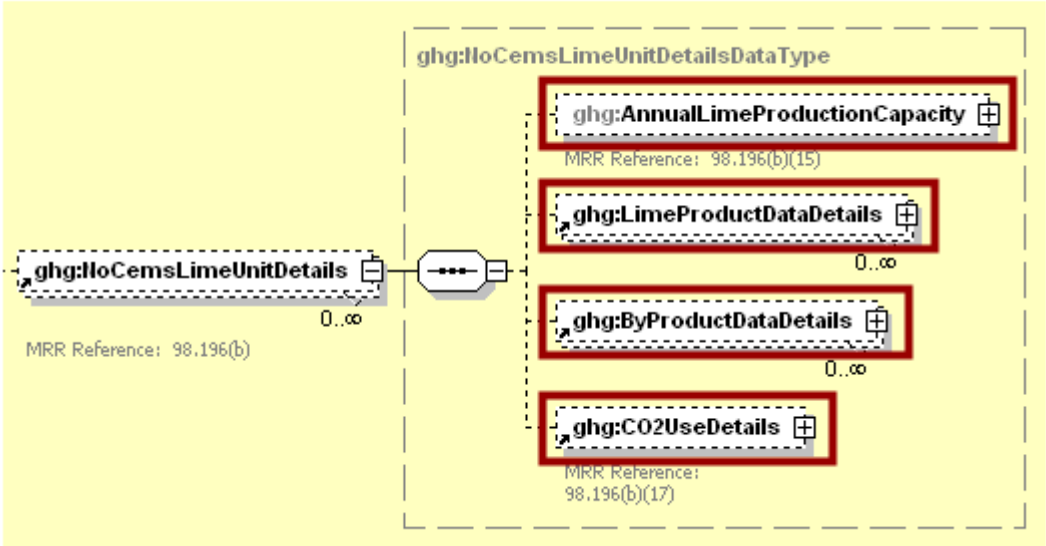
```
<ghg:SubPartS>
        <ghg:GHGasInfoDetails>
                <ghg:GHGasName>Carbon Dioxide</ghg:GHGasName>
                <ghg:GHGasQuantity massUOM="Metric Tons">
                        <ghg:CalculatedValue>11111.1</ghg:CalculatedValue>
                </ghg:GHGasQuantity>
        </ghg:GHGasInfoDetails>
```

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

2.0 Annual Lime Production Capacity

Subpart S requires that data for facilities reporting emissions not calculated using CEMS be reported at a facility level.

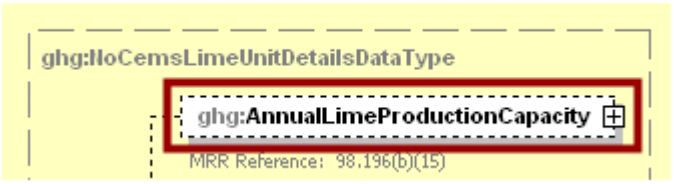
Figure 10
Lime Manufacturing Details Schema Diagram



Note: Data elements boxed in red are required.

Subpart S requires the facility to provide the annual lime production capacity for the entire facility in short tons [98.196(b)(15)].

Figure 11
Annual Lime Production Capacity Schema Diagram



Note: Data elements boxed in red are required.

Table 7
Annual Lime Production Capacity XML Data Elements

Data Element Name	Description
NoCemsLimeUnitDetails	A collection of data elements containing details about lime units in which emissions are not calculated using CEMS.
AnnualLimeProductionCapacity	A collection of data elements containing details about the annual lime production capacity for the entire facility. Report the measured value and the mass unit of measure only.
AnnualLimeProductionCapacity.massUOM	Short Tons

XML Excerpt 3
Sample XML Excerpt for Annual Lime Production Capacity

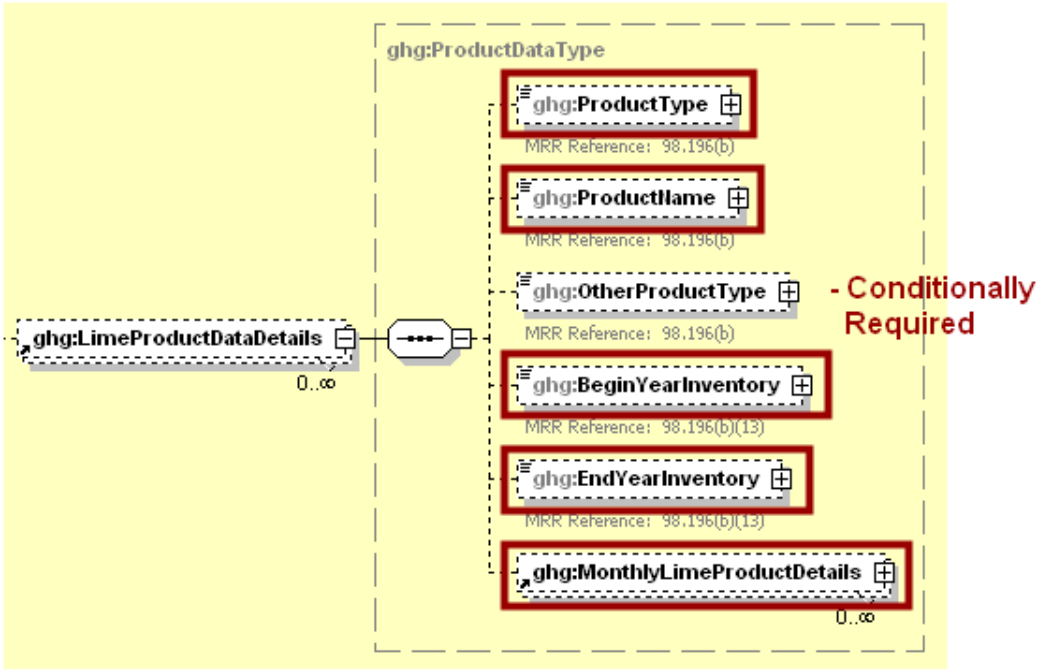
```
<ghg:NoCemsLimeUnitDetails>
        <ghg:AnnualLimeProductionCapacity massUOM="Short Tons">
                <ghg:MeasureValue>22222.5564</ghg:MeasureValue>
        </ghg:AnnualLimeProductionCapacity>
```

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

3.0 Lime Product Data Details

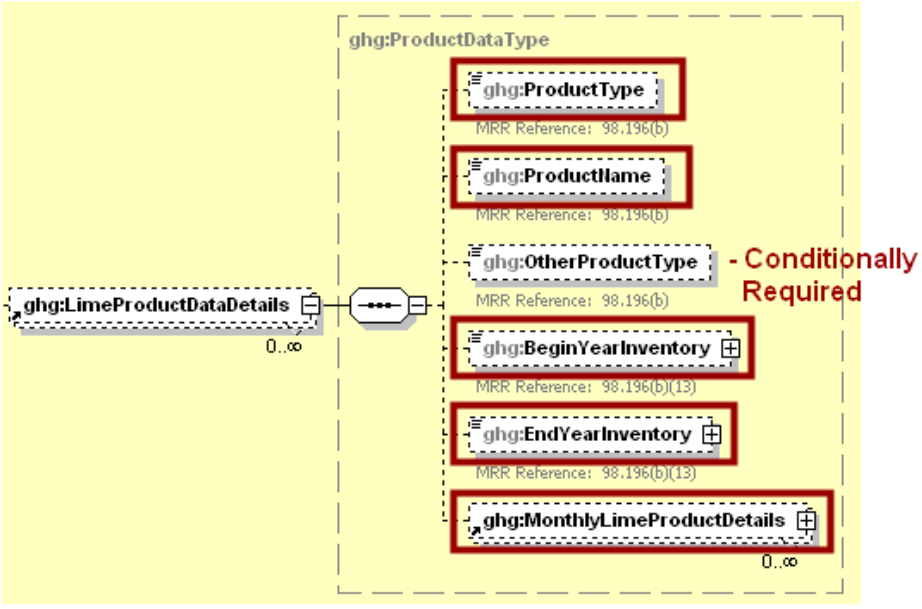
Subpart S requires a facility to uniquely identify each lime product produced during the reporting year and to provide inventory and monthly information for each product.

Figure 12
Lime Product Data 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.

Figure 13
Lime Product Identification and Inventory 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 each lime product produced during the reporting year, provide the following information:

- The type of lime product produced from the following list [98.196(b)]:
  - High calcium lime
  - Dolomitic lime
  - Magnesian lime
  - Hydraulic lime
  - Other
- Name of the lime product produced.
- Beginning of year inventory in short tons [98.196(a)(3)].
- End of year inventory in short tons [98.196(a)(3)].

Table 8
Lime Product Identification and Inventory Details XML Data Elements

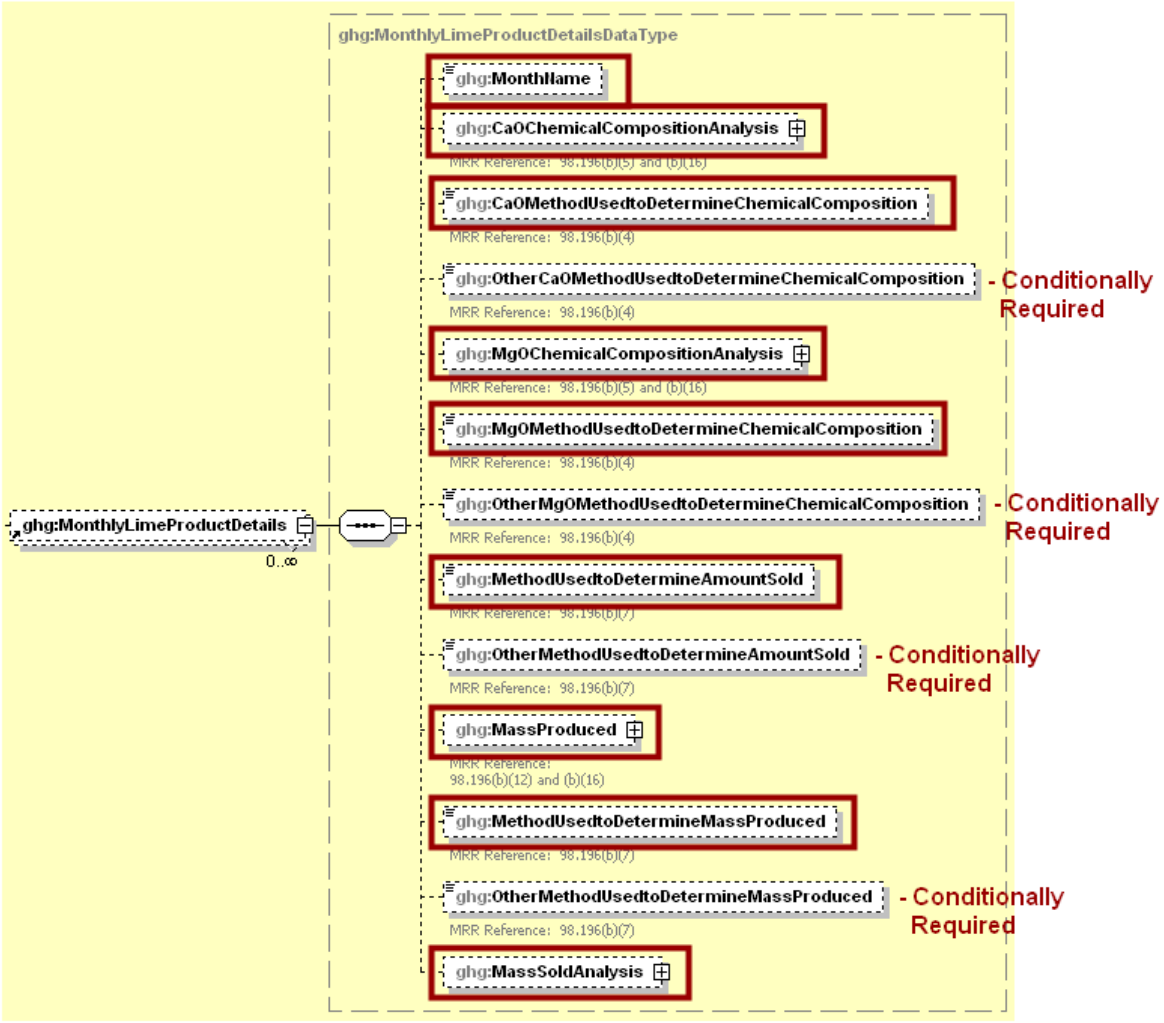
Data Element Name	Description
LimeProductDataDetails	A collection of data elements containing details about the lime products produced during the reporting year. Report each product separately.
ProductType	Type of lime product produced during the reporting year. See list of allowable values: High calcium lime Dolomitic lime Magnesian lime Hydraulic lime Other If the type of product you are reporting does not appear in the list, then report "Other" for this data element and provide a description of it using the "OtherProductType" data element.
ProductName	Name of the specified lime product produced.
OtherProductType	Type of lime product produced if "Other" is reported for ProductType.
BeginYearInventory	The beginning of year inventory for the specified lime product that was produced in short tons.
BeginYearInventory.massUOM	Short Tons
EndYearInventory	The end of year inventory for the specified lime product that was produced in short tons.
EndYearInventory.massUOM	Short Tons

XML Excerpt 4
Sample XML Excerpt for Lime Product Identification and Inventory Details

```
<ghg:LimeProductDataDetails>
        <ghg:ProductType>High calcium lime</ghg:ProductType>
        <ghg:ProductName>High Calcium Lime 1</ghg:ProductName>
        <ghg:BeginYearInventory massUOM="Short Tons">555.4451</ghg:BeginYearInventory>
        <ghg:EndYearInventory massUOM="Short Tons">2222.678</ghg:EndYearInventory>
```

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

Figure 14
Monthly Lime Product 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 each lime product produced during the reporting year, and for each month, the facility is required to provide the following information:

- Month name.
- An indication if a missing data procedure contained in §98.195(b) was followed to determine the monthly calcium oxide content [98.196(b)(16)and 98.3(c)(8)].
- The standard method (ASTM or NLA testing method) used to determine the calcium oxide content [98.196(b)(4)].
- An indication if a missing data procedure contained in §98.195(b) was followed to determine the monthly magnesium oxide content [98.196(b)(16)and 98.3(c)(8)].
- The standard method (ASTM or NLA testing method) used to determine the magnesium oxide content [98.196(b)(4)].
- The method used to determine the quantity of lime product sold [98.196(b)(7)].
- An indication if the monthly quantity of lime product produced is based on one or more substitute data values calculated per the procedures described in §98.195(a). [98.196(b)(16)and 98.3(c)(8)].
- The method used to determine the quantity of lime product produced [98.196(b)(7)].
- An indication if the monthly quantity of lime product sold is based on one or more substitute data values calculated per the procedures described in §98.195(a). [98.196(b)(16)and 98.3(c)(8)].

Table 9
Monthly Lime Product Details XML Data Elements

Data Element Name	Description
MonthlyLimeProductDetails	A collection of data elements containing details about monthly quantities of lime products produced.
MonthName	Month name. See list of allowable values: January February March April May June July August September October November December

Data Element Name	Description
CaOChemicalCompositionAnalysis	Indicate (Y/N) if the monthly quantity of calcium oxide produced is based on one or more substitute data values calculated per the procedures described in §98.195(a).
CaOMethodUsedtoDetermineChemicalComposition	The standard method (ASTM or NLA testing method) used to determine the calcium oxide content. See list of allowable values: ASTM C25-06 NLA Protocol method Did not operate Other If "NLA Protocol method" is reported, further specification is required in "OtherCaOMethodUsedtoDetermineChemicalComposition". "Other" should only be used if BAMM procedures were applied.
OtherCaOMethodUsedtoDetermineChemicalComposition	If "NLA Protocol method" is reported for "CaOMethodUsedtoDetermineChemicalComposition", specify the method. "BAMM" can be noted here, but should be specified further in Subpart A.
MgOChemicalCompositionAnalysis	Indicate (Y/N) if the monthly quantity of magnesium oxide produced is based on one or more substitute data values calculated per the procedures described in §98.195(a).
MgOMethodUsedtoDetermineChemicalComposition	The standard method (ASTM or NLA testing method) used to determine the magnesium oxide content. See list of allowable values: ASTM C25-06 NLA Protocol method Did not operate Other If "NLA Protocol method" is reported, further specification is required in "OtherMgOMethodUsedtoDetermineChemicalComposition". "Other" should only be used if BAMM procedures were applied.
OtherMgOMethodUsedtoDetermineChemicalComposition	If "NLA Protocol method" is reported for "MgOMethodUsedtoDetermineChemicalComposition", specify the method. "BAMM" can be noted here, but should be specified further in Subpart A.

Data Element Name	Description
MethodUsedtoDetermineAmountSold	The method used to determine the quantity (mass) of lime that is sold. See list of allowable values: Weigh feeders Rail scales Truck scales Barge measurements Did not operate Other If the method used does not appear in the list, then report "Other" for this data element and provide a description of it using "OtherMethodUsedtoDetermineAmountSold".
OtherMethodUsedtoDetermineAmountSold	The method used to determine the quantity (mass) of lime that is sold if "Other" is reported for "MethodUsedtoDetermineAmountSold".
MassProduced	Indicate (Y/N) if the annual quantity of lime product produced is based on one or more substitute data values calculated per the procedures described in §98.195(a).
MethodUsedtoDetermineMassProduced	The method used to determine the quantity (mass) of lime that is produced. See list of allowable values: Weigh feeders Rail scales Truck scales Barge measurements Did not operate Other If the method used does not appear in the list, then report "Other" for this data element and provide a description of it using "OtherMethodUsedtoDetermineMassProduced".
OtherMethodUsedtoDetermineMassProduced	Method used to determine the quantity (mass) of lime that is produced if "Other" is reported for "MethodUsedtoDetermineMassProduced".
MassSoldAnalysis	Indicate (Y/N) if the annual quantity of lime product sold is based on one or more substitute data values calculated per the procedures described in §98.195(a).

XML Excerpt 5
Sample XML Excerpt for Monthly Lime Product Details

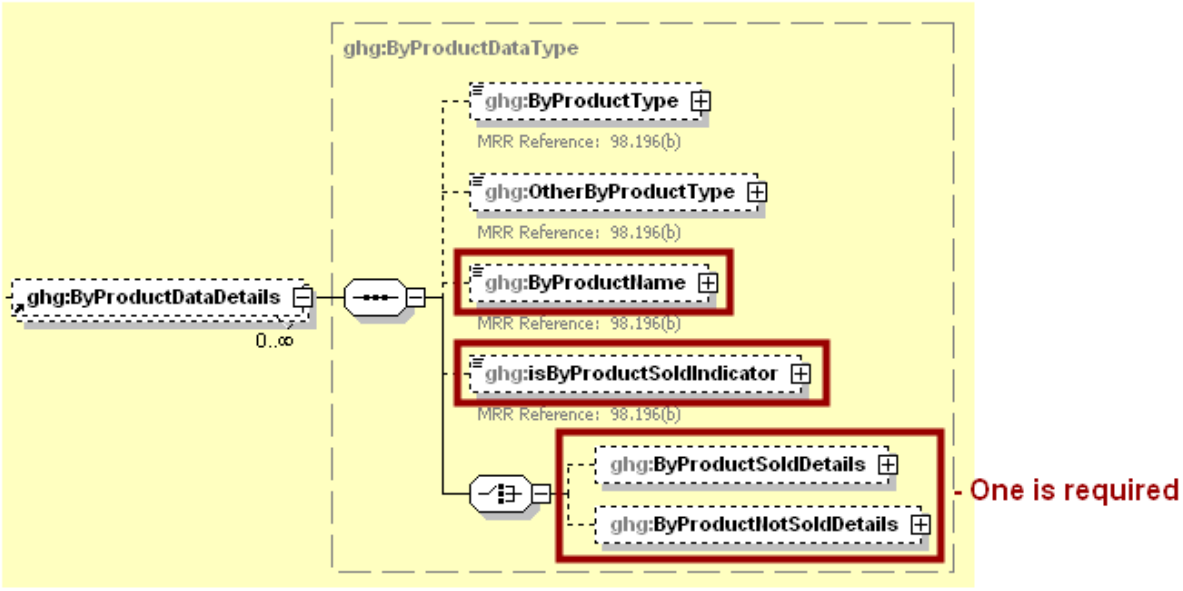
```
<ghg:MonthlyLimeProductDetails>
        <ghg:MonthName>January</ghg:MonthName>
        <ghg:CaOChemicalCompositionAnalysis>
                <ghg:IsSubstitutedIndicator>Y</ghg:IsSubstitutedIndicator>
        </ghg:CaOChemicalCompositionAnalysis>
        <ghg:CaOMethodUsedtoDetermineChemicalComposition>ASTM C25-
        06</ghg:CaOMethodUsedtoDetermineChemicalComposition>
        <ghg:MgOChemicalCompositionAnalysis>
                <ghg:IsSubstitutedIndicator>Y</ghg:IsSubstitutedIndicator>
        </ghg:MgOChemicalCompositionAnalysis>
        <ghg:MgOMethodUsedtoDetermineChemicalComposition>NLA Protocol
        method</ghg:MgOMethodUsedtoDetermineChemicalComposition>
        <ghg:OtherMgOMethodUsedtoDetermineChemicalComposition>Method
        B</ghg:OtherMgOMethodUsedtoDetermineChemicalComposition>
        <ghg:MethodUsedtoDetermineAmountSold>Rail scales</ghg:MethodUsedtoDetermineAmountSold>
        <ghg:MassProduced>
                <ghg:IsSubstitutedIndicator>Y</ghg:IsSubstitutedIndicator>
        </ghg:MassProduced>
        <ghg:MethodUsedtoDetermineMassProduced>Weigh feeders</ghg:MethodUsedtoDetermineMassProduced>
        <ghg:MassSoldAnalysis>
                <ghg:IsSubstitutedIndicator>Y</ghg:IsSubstitutedIndicator>
        </ghg:MassSoldAnalysis>
</ghg:MonthlyLimeProductDetails>
<ghg:MonthlyLimeProductDetails>
        <ghg:MonthName>February</ghg:MonthName>
        <ghg:CaOChemicalCompositionAnalysis>
                <ghg:IsSubstitutedIndicator>N</ghg:IsSubstitutedIndicator>
        </ghg:CaOChemicalCompositionAnalysis>
        <ghg:CaOMethodUsedtoDetermineChemicalComposition>ASTM C25-
        06</ghg:CaOMethodUsedtoDetermineChemicalComposition>
        <ghg:MgOChemicalCompositionAnalysis>
                <ghg:IsSubstitutedIndicator>N</ghg:IsSubstitutedIndicator>
        </ghg:MgOChemicalCompositionAnalysis>
        <ghg:MgOMethodUsedtoDetermineChemicalComposition>NLA Protocol
        method</ghg:MgOMethodUsedtoDetermineChemicalComposition>
        <ghg:OtherMgOMethodUsedtoDetermineChemicalComposition>Method
        B</ghg:OtherMgOMethodUsedtoDetermineChemicalComposition>
        <ghg:MethodUsedtoDetermineAmountSold>Rail scales</ghg:MethodUsedtoDetermineAmountSold>
        <ghg:MassProduced>
                <ghg:IsSubstitutedIndicator>N</ghg:IsSubstitutedIndicator>
        </ghg:MassProduced>
        <ghg:MethodUsedtoDetermineMassProduced>Weigh feeders</ghg:MethodUsedtoDetermineMassProduced>
        <ghg:MassSoldAnalysis>
                <ghg:IsSubstitutedIndicator>Y</ghg:IsSubstitutedIndicator>
        </ghg:MassSoldAnalysis>
</ghg:MonthlyLimeProductDetails>
<ghg:MonthlyLimeProductDetails>
        <ghg:MonthName>March</ghg:MonthName>
        <ghg:CaOChemicalCompositionAnalysis>
                <ghg:IsSubstitutedIndicator>N</ghg:IsSubstitutedIndicator>
        </ghg:CaOChemicalCompositionAnalysis>
        <ghg:CaOMethodUsedtoDetermineChemicalComposition>ASTM C25-
        06</ghg:CaOMethodUsedtoDetermineChemicalComposition>
        <ghg:MgOChemicalCompositionAnalysis>
                <ghg:IsSubstitutedIndicator>N</ghg:IsSubstitutedIndicator>
        </ghg:MgOChemicalCompositionAnalysis>
        <ghg:MgOMethodUsedtoDetermineChemicalComposition>NLA Protocol
        method</ghg:MgOMethodUsedtoDetermineChemicalComposition>
        <ghg:OtherMgOMethodUsedtoDetermineChemicalComposition>Method
        B</ghg:OtherMgOMethodUsedtoDetermineChemicalComposition>
        <ghg:MethodUsedtoDetermineAmountSold>Rail scales</ghg:MethodUsedtoDetermineAmountSold>
        <ghg:MassProduced>
                <ghg:IsSubstitutedIndicator>N</ghg:IsSubstitutedIndicator>
        </ghg:MassProduced>
        <ghg:MethodUsedtoDetermineMassProduced>Weigh feeders</ghg:MethodUsedtoDetermineMassProduced>
        <ghg:MassSoldAnalysis>
                <ghg:IsSubstitutedIndicator>Y</ghg:IsSubstitutedIndicator>
        </ghg:MassSoldAnalysis>
</ghg:MonthlyLimeProductDetails>
```

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

4.0 Byproduct Data Details

Subpart S requires a facility to uniquely identify each type of calcined lime byproduct or calcined lime waste generated during the reporting year and to provide further information for each byproduct sold and each byproduct not sold.

Figure 15
Byproduct or Waste Data Details Schema Diagram



Note: Data elements boxed in red are required.

The facility is required to provide each type of calcined lime byproduct or calcined lime waste generated during the reporting year [98.196(b)] and whether the byproduct or waste was sold.

Table 10
Byproduct or Waste Identification Details XML Data Elements

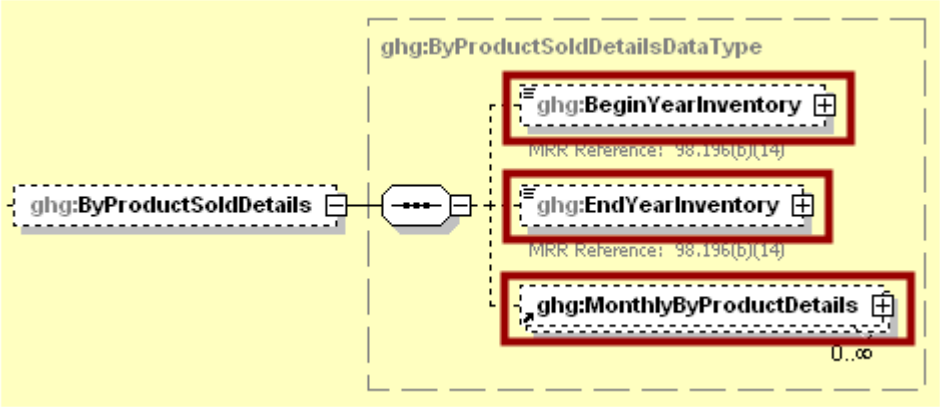
Data Element Name	Description
ByProductDataDetails	A collection of data elements containing details about the calcined lime byproducts/waste produced by the facility. Report each byproduct and waste separately.
ByProductName	Name of each calcined lime byproduct or calcined lime waste generated.
isByProductSoldIndicator	Indicate (Y/N) if the specified calcined lime byproduct or calcined lime waste is sold.

XML Excerpt 6
Sample XML Excerpt for Byproduct or Waste Identification Details

```
<ghg:ByProductDataDetails>
        <ghg:ByProductName>Waste 1</ghg:ByProductName>
        <ghg:isByProductSoldIndicator>Y</ghg:isByProductSoldIndicator>
```

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

Figure 16
Byproduct or Waste Sold Details Schema Diagram



Note: Data elements boxed in red are required.

For each calcined lime byproduct or calcined lime waste sold during the reporting year, provide the following information:

- The beginning of year inventory in short tons [98.196(b)(14)].
- The end of year inventory in short tons [98.196(b)(14)].

Table 11
Byproduct or Waste Sold Details XML Data Elements

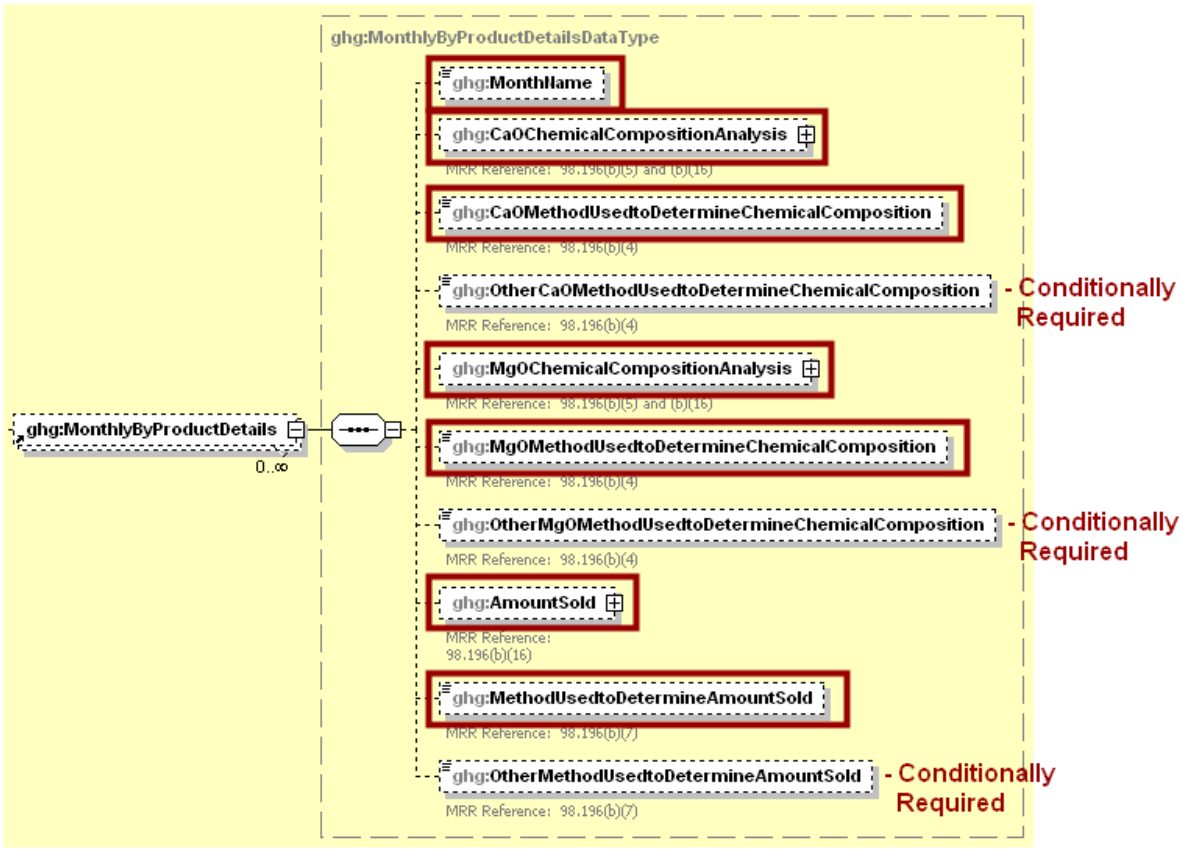
Data Element Name	Description
ByProductSoldDetails	A collection of data elements containing details about calcined lime byproducts/waste that were sold.
BeginYearInventory	The beginning of year inventory for the specified calcined lime byproduct/waste that was generated.
BeginYearInventory.massUOM	Short Tons
EndYearInventory	The end of year inventory for the specified calcined lime byproduct/waste that was generated.
EndYearInventory.massUOM	Short Tons

XML Excerpt 7
Sample XML Excerpt for Byproduct or Waste Sold Details

```
<ghg:ByProductSoldDetails>
        <ghg:BeginYearInventory massUOM="Short Tons">500.345</ghg:BeginYearInventory>
        <ghg:EndYearInventory massUOM="Short Tons">50000.25</ghg:EndYearInventory>
```

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

Figure 17
Monthly Byproduct or Waste Sold 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 each calcined lime byproduct or calcined lime waste generated during the reporting year that was sold during the reporting year, and for each month, the following information is required:

- Month name.
- An indication if a missing data procedure contained in §98.195(b) was followed to determine the monthly calcium oxide content [98.196(b)(16)and 98.3(c)(8)].
- The standard method (ASTM or NLA testing method) used to determine the calcium oxide content [98.196(b)(4)].
- An indication if a missing data procedure contained in §98.195(b) was followed to determine the monthly magnesium oxide content [98.196(b)(16)and 98.3(c)(8)].
- The standard method (ASTM or NLA testing method) used to determine the magnesium oxide content [98.196(b)(4)].
- An indication if a missing data procedure contained in §98.195(b) was followed to determine the monthly amount sold [98.3(c)(8)].
- The method used to determine the quantity sold [98.196(b)(7)].

Table 12
Monthly Byproduct or Waste Sold Details XML Data Elements

Data Element Name	Description
MonthlyByProductDetails	A collection of data elements containing details about monthly quantities of calcined lime byproducts/waste produced.
MonthName	Month name. See list of allowable values: January February March April May June July August September October November December
CaOChemicalCompositionAnalysis	Indicate (Y/N) if a missing data procedure contained in §98.195(b) was followed to determine the monthly calcium oxide content.

Data Element Name	Description
CaOMethodUsedtoDetermineChemicalComposition	The standard method (ASTM or NLA testing method) used to determine the calcium oxide content. See list of allowable values: ASTM C25-06 NLA Protocol method Did not operate Other If "NLA Protocol method" is reported, further specification is required in OtherCaOMethodUsedtoDetermineChemicalComposition. "Other" should only be used if BAMM procedures were applied.
OtherCaOMethodUsedtoDetermineChemicalComposition	If "NLA Protocol method" is reported for CaOMethodUsedtoDetermineChemicalComposition, specify the method. "BAMM" can be noted here, but should be specified further in Subpart A.
MgOChemicalCompositionAnalysis	Indicate (Y/N) if a missing data procedure contained in §98.195(b) was followed to determine the monthly magnesium oxide content.
MgOMethodUsedtoDetermineChemicalComposition	The standard method (ASTM or NLA testing method) used to determine the magnesium oxide content. See list of allowable values: ASTM C25-06 NLA Protocol method Did not operate Other If "NLA Protocol method" is reported, further specification is required in OtherMgOMethodUsedtoDetermineChemicalComposition. "Other" should only be used if BAMM procedures were applied.
OtherMgOMethodUsedtoDetermineChemicalComposition	If "NLA Protocol method" is reported for MgOMethodUsedtoDetermineChemicalComposition, specify the method. "BAMM" can be noted here, but should be specified further in Subpart A.
AmountSold	Indicate (Y/N) if the monthly quantity of calcined lime byproduct/waste sold is based on one or more substitute data values calculated per the procedures described in §98.195(a).

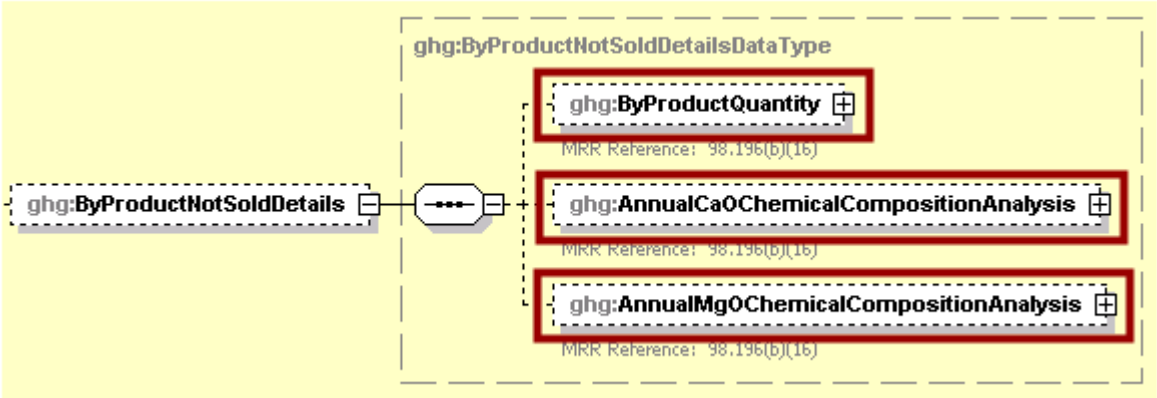
Data Element Name	Description
MethodUsedtoDetermineAmountSold	The method used to determine the monthly quantity (mass) of calcined lime byproduct/waste that is sold. See list of allowable values: Weigh feeders Rail scales Truck scales Barge measurements Did not operate Other If the method used does not appear in the list, then report "Other" for this data element and provide a description of it using the "OtherMethodUsedtoDetermineAmountSold" data element.
OtherMethodUsedtoDetermineAmountSold	The method used to determine the monthly quantity (mass) of calcined lime byproduct/waste that is sold if "Other" is reported for MethodUsedtoDetermineAmountSold.

XML Excerpt 8
Sample XML Excerpt for Monthly Byproduct or Waste Sold Details

```
<ghg:MonthlyByProductDetails>
        <ghg:MonthName>January</ghg:MonthName>
        <ghg:CaOChemicalCompositionAnalysis>
                <ghg:IsSubstitutedIndicator>Y</ghg:IsSubstitutedIndicator>
        </ghg:CaOChemicalCompositionAnalysis>
        <ghg:CaOMethodUsedtoDetermineChemicalComposition>ASTM C25-
        06</ghg:CaOMethodUsedtoDetermineChemicalComposition>
        <ghg:MgOChemicalCompositionAnalysis>
                <ghg:IsSubstitutedIndicator>Y</ghg:IsSubstitutedIndicator>
        </ghg:MgOChemicalCompositionAnalysis>
        <ghg:MgOMethodUsedtoDetermineChemicalComposition>ASTM C25-
        06</ghg:MgOMethodUsedtoDetermineChemicalComposition>
        <ghg:AmountSold>
                <ghg:IsSubstitutedIndicator>Y</ghg:IsSubstitutedIndicator>
        </ghg:AmountSold>
        <ghg:MethodUsedtoDetermineAmountSold>Truck scales</ghg:MethodUsedtoDetermineAmountSold>
</ghg:MonthlyByProductDetails>
<ghg:MonthlyByProductDetails>
        <ghg:MonthName>February</ghg:MonthName>
        <ghg:CaOChemicalCompositionAnalysis>
                <ghg:IsSubstitutedIndicator>N</ghg:IsSubstitutedIndicator>
        </ghg:CaOChemicalCompositionAnalysis>
        <ghg:CaOMethodUsedtoDetermineChemicalComposition>ASTM C25-
        06</ghg:CaOMethodUsedtoDetermineChemicalComposition>
        <ghg:MgOChemicalCompositionAnalysis>
                <ghg:IsSubstitutedIndicator>N</ghg:IsSubstitutedIndicator>
        </ghg:MgOChemicalCompositionAnalysis>
        <ghg:MgOMethodUsedtoDetermineChemicalComposition>ASTM C25-
        06</ghg:MgOMethodUsedtoDetermineChemicalComposition>
        <ghg:AmountSold>
                <ghg:IsSubstitutedIndicator>N</ghg:IsSubstitutedIndicator>
        </ghg:AmountSold>
        <ghg:MethodUsedtoDetermineAmountSold>Truck scales</ghg:MethodUsedtoDetermineAmountSold>
</ghg:MonthlyByProductDetails>
<ghg:MonthlyByProductDetails>
        <ghg:MonthName>March</ghg:MonthName>
        <ghg:CaOChemicalCompositionAnalysis>
                <ghg:IsSubstitutedIndicator>N</ghg:IsSubstitutedIndicator>
        </ghg:CaOChemicalCompositionAnalysis>
        <ghg:CaOMethodUsedtoDetermineChemicalComposition>ASTM C25-
        06</ghg:CaOMethodUsedtoDetermineChemicalComposition>
        <ghg:MgOChemicalCompositionAnalysis>
                <ghg:IsSubstitutedIndicator>N</ghg:IsSubstitutedIndicator>
        </ghg:MgOChemicalCompositionAnalysis>
        <ghg:MgOMethodUsedtoDetermineChemicalComposition>ASTM C25-
        06</ghg:MgOMethodUsedtoDetermineChemicalComposition>
        <ghg:AmountSold>
                <ghg:IsSubstitutedIndicator>N</ghg:IsSubstitutedIndicator>
        </ghg:AmountSold>
        <ghg:MethodUsedtoDetermineAmountSold>Truck scales</ghg:MethodUsedtoDetermineAmountSold>
</ghg:MonthlyByProductDetails>
```

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

Figure 18
Byproduct or Waste Not Sold Details Schema Diagram



Note: Data elements boxed in red are required.

For each calcined lime byproduct or calcined lime waste generated during the reporting year that was not sold during the reporting year, the following information is required:

- An indication if the annual quantity of calcined lime byproduct or calcined lime waste not sold is based on one or more substitute data values calculated per the procedures described in §98.195(a) [98.196(b)(16) and 98.3(c)(8)].
- An indication if a missing data procedure contained in §98.195(b) was followed to determine the annual calcium oxide content [98.196(b)(16) and 98.3(c)(8)].
- An indication if a missing data procedure contained in §98.195(b) was followed to determine the annual magnesium oxide content [98.196(b)(16) and 98.3(c)(8)].

Table 13
Byproduct or Waste Not Sold Details XML Data Elements

Data Element Name	Description
ByProductNotSoldDetails	A collection of data elements containing details about calcined lime byproducts/waste that were not sold.
ByProductQuantity	Indicate (Y/N) if the annual quantity of calcined lime byproduct or calcined lime waste not sold is based on one or more substitute data values calculated per the procedures described in §98.195(a).
AnnualCaOChemicalCompositionAnalysis	Indicate (Y/N) if a missing data procedure contained in §98.195(b) was followed to determine the annual calcium oxide content.
AnnualMgOChemicalCompositionAnalysis	Indicate (Y/N) if a missing data procedure contained in §98.195(b) was followed to determine the annual magnesium oxide content.

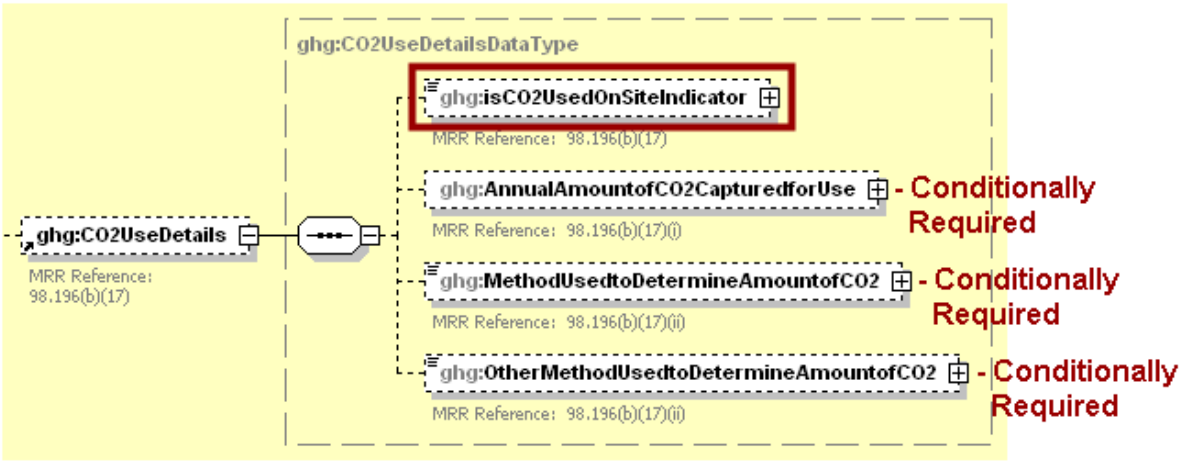
XML Excerpt 9
Sample XML Excerpt for Byproduct or Waste Not Sold Details

```
        <ghg:ByProductNotSoldDetails>
                <ghg:ByProductQuantity>
                        <ghg:IsSubstitutedIndicator>Y</ghg:IsSubstitutedIndicator>
                </ghg:ByProductQuantity>
                <ghg:AnnualCaOChemicalCompositionAnalysis>
                        <ghg:IsSubstitutedIndicator>Y</ghg:IsSubstitutedIndicator>
                </ghg:AnnualCaOChemicalCompositionAnalysis>
                <ghg:AnnualMgOChemicalCompositionAnalysis>
                        <ghg:IsSubstitutedIndicator>Y</ghg:IsSubstitutedIndicator>
                </ghg:AnnualMgOChemicalCompositionAnalysis>
        </ghg:ByProductNotSoldDetails>
</ghg:ByProductDataDetails>
```

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

5.0 CO_2 Use Details

Figure 19
CO_2 Use 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 facility is required to provide an indication of whether CO_2 was used on-site during the reporting year [98.196(b)(17)].

If CO_2 was used on-site during the reporting year, the following information must also be provided:

- The annual quantity of CO_2 captured for use on-site in metric tons [98.196(b)(17)(i)].
- The method used to determine the amount of CO_2 used on-site [98.196(b)(17)(ii)].

Table 14
CO_2 Use Details XML Data Elements

Data Element Name	Description
CO2UseDetails	A collection of data elements containing details about CO_2 usage.
isCO2UsedOnSiteIndicator	An indication (Y/N) of whether CO_2 was used on-site.
AnnualAmountofCO2CapturedforUse	A collection of data elements containing information on the annual quantity of CO_2 captured for use on-site. Required if CO_2 was used on-site. Report the measured value and mass unit of measure only.
AnnualAmountofCO2CapturedforUse.massUOM	Metric Tons

Data Element Name	Description
MethodUsedtoDetermineAmountofCO2	The method used to determine the amount of CO_2 used on-site. Required if CO_2 was used on-site. See list of allowable values: Sales record Other method If the method you are reporting does not appear in the list, then report "Other method" for this data element and provide a description of it using the "OtherMethodUsedtoDetermineAmountofCO2" data element.
OtherMethodUsedtoDetermineAmountofCO2	Method used to determine the amount of CO_2 used on-site if "Other method" is reported for "MethodUsedtoDetermineAmountofCO2".

XML Excerpt 10
Sample XML Excerpt for CO_2 Use Details

```
                <ghg:CO2UseDetails>
                        <ghg:isCO2UsedOnSiteIndicator>Y</ghg:isCO2UsedOnSiteIndicator>
                        <ghg:AnnualAmountofCO2CapturedforUse massUOM="Metric Tons">
                                <ghg:MeasureValue>333.5</ghg:MeasureValue>
                        </ghg:AnnualAmountofCO2CapturedforUse>
                        <ghg:MethodUsedtoDetermineAmountofCO2>Other
                        method</ghg:MethodUsedtoDetermineAmountofCO2>
                        <ghg:OtherMethodUsedtoDetermineAmountofCO2>Method
                        A</ghg:OtherMethodUsedtoDetermineAmountofCO2>
                </ghg:CO2UseDetails>
        </ghg:NoCemsLimeUnitDetails>
</ghg:SubPartS>
```

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

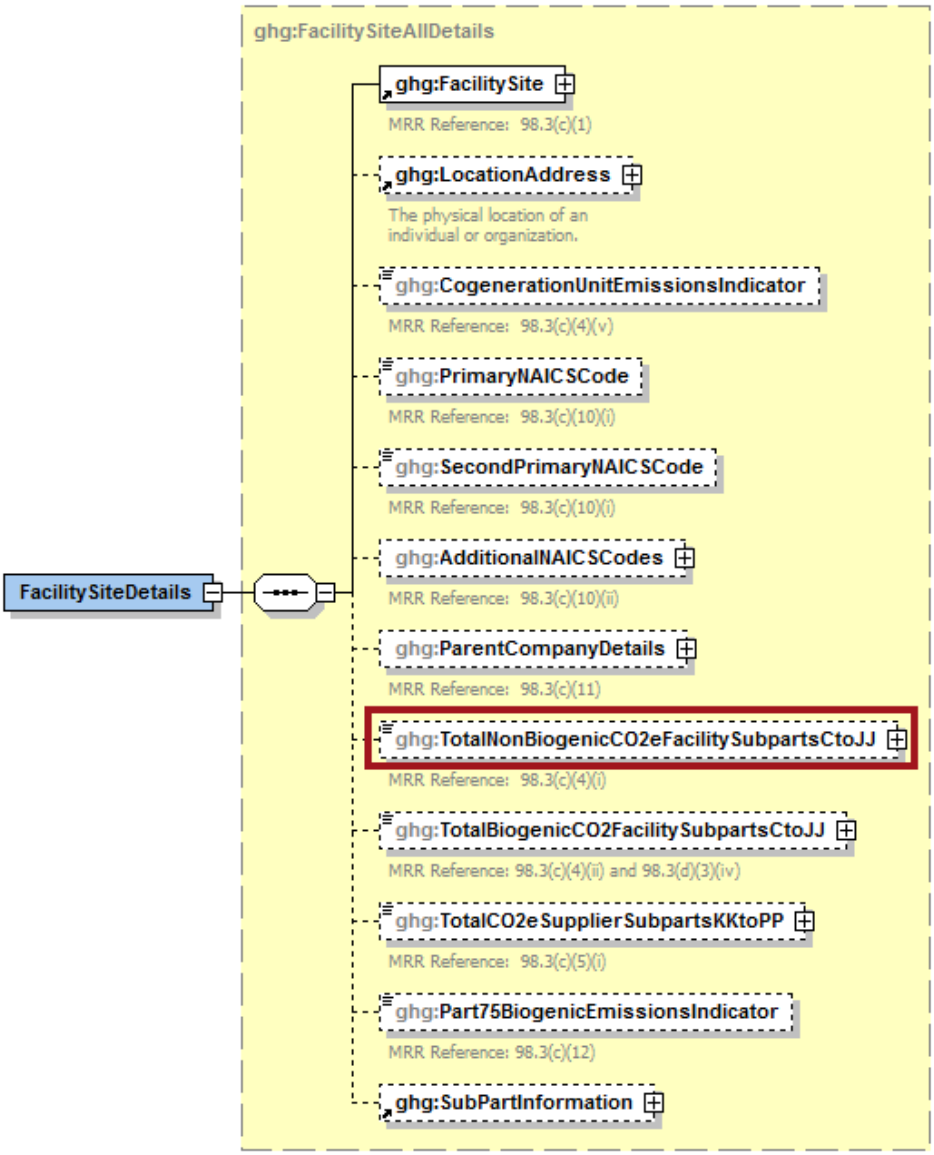
Each facility must report the following facility-level emission totals:

- 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 20
Facility Level Roll-up Emissions Schema Diagram



Note: Data elements boxed in red are required.

For Subpart S, add the annual CO_2 process emissions from all kilns (the output of Equation S-4) in metric tons to the total emissions for CO_2e (excluding biogenic CO_2).

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

Table 15
Facility Level Roll-up Emissions XML Data Elements

Data Element Name	Description
TotalNonBiogenicCO2eFacilitySubpartsCtoJJ	Add the total CO_2e value for Subpart S 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 guideline above.
TotalNonBiogenicCO2eFacilitySubpartsCtoJJ.massUOM	Metric Tons

XML Excerpt 11
Sample XML Excerpt for Facility Level Roll-up Emissions

```
<ghg:TotalNonBiogenicCO2eFacilitySubpartsCtoJJ massUOM="Metric Tons">11111.3</ghg:TotalNonBiogenicCO2eFacilitySubpartsCtoJJ>
```

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 S

(Note: Data values do not reflect an actual facility's emissions.)

```
<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>523060</ghg:FacilitySiteIdentifier>
                  <ghg:FacilitySiteName>Test Facility S</ghg:FacilitySiteName>
         </ghg:FacilitySite>
         <ghg:LocationAddress>
                  <ghg:LocationAddressText>1 Main St.</ghg:LocationAddressText>
                           <ghg:LocalityName>Charlottesville</ghg:LocalityName>
                           <ghg:StateIdentity>
                                    <ghg:StateCode>VA</ghg:StateCode>
                           </ghg:StateIdentity>
                  <ghg:AddressPostalCode>22911</ghg:AddressPostalCode>
         </ghg:LocationAddress>
         <ghg:CogenerationUnitEmissionsIndicator>N</ghg:CogenerationUnitEmissionsIndicator>
         <ghg:PrimaryNAICSCode>327410</ghg:PrimaryNAICSCode>
         <ghg:ParentCompanyDetails>
                  <ghg:ParentCompany>
                           <ghg:ParentCompanyLegalName>Test</ghg:ParentCompanyLegalName>
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