RECOMMENDATION TO GISB EXECUTIVE COMMITTEE

Requester: Columbia Gas **Request No.: R98013**

1. Recommended Action:

___Accept as requested
_X_Accept as modified below
___Decline

Effect of EC Vote to Accept Recommended Action:

_X_Change to Existing Practice
___Status Quo

2. TYPE OF MAINTENANCE

Per Request:

___Initiation
_X_Modification
___Interpretation
___Withdrawal

___Principle (x.1.z)
___Definition (x.2.z)
___Business Practice Standard (x.3.z)
___Document (x.4.z)
___Data Element (x.4.z)
_X_Code Value (x.4.z)
_X_X12 Implementation Guide
___Business Process Documentation

Per Recommendation:

___Initiation
_X_Modification
___Interpretation
___Withdrawal

___Principle (x.1.z)
___Definition (x.2.z)
___Business Practice Standard (x.3.z)
___Document (x.4.z)
_X_Data Element (x.4.z)
_X_Code Value (x.4.z)
_X_X12 Implementation Guide
_X_Business Process Documentation

3. RECOMMENDATION

SUMMARY: * Add the data element 'Unit of Measure' to the Measured Volume Audit Statement.
* Delete the data element 'Static Pressure Indicator.'
* Add a table in the Code Values Dictionary for the data element Unit of Measure.
* Change the Sample Paper transaction to reflect the changes above.

RECOMMENDATION TO GISB EXECUTIVE COMMITTEE

Requester: Columbia Gas **Request No.: R98013**

DATA DICTIONARY (for new documents and addition, modification or deletion of data elements)

Document Name and No.: Measured Volume Audit Statement, 2.4.6

Business Name (Abbreviation)	**Definition**	**EDI / FF Usage**	**Condition**
Unit of Measure (U/Meas)	*Specifies the unit or basis for measurement for the corresponding measurement value.*	*C*	*Must be sent **in conjunction with each** of the following data elements:* • *Minimum Static Pressure Range* • *Maximum Static Pressure Range* • *Static Pressure* • *Maximum Differential Pressure* • *Differential Pressure* • *Reporting Pressure Base* • *Temperature Range Minimum* • *Temperature Range Maximum* • *Atmospheric Pressure* • *Tube Inside Diameter* • *Orifice Diameter* • *Chart Revolution Time* • *Component Percentage* • *Heating Factor* • *Specific Gravity* • *Temperature* • *Flow Period* • *Volume* • *Reporting Temperature* • *Measured Quantity*
~~Static Pressure Indicator (Static Press Ind)~~	~~Indicates the starting point for measuring static pressure. Gauge starts at zero and absolute starts at 14.73 PSI at sea level.~~	~~M~~	~~Default is PSIA.~~

RECOMMENDATION TO GISB EXECUTIVE COMMITTEE

Requester: Columbia Gas **Request No.: R98013**

CODE VALUES LOG (for addition, modification or deletion of code values)

Document Name and No.: Measured Volume Audit Statement, 2.4.6
Data Element: Unit of Measure

Code Value Description	Code Value Definition	Code Value
Centigrade, Celsius	*[no definition necessary]*	
Days	*[no definition necessary]*	
Fahrenheit	*[no definition necessary]*	
Gigacalories	*[no definition necessary]*	
Gigajoules	*[no definition necessary]*	
Hours	*[no definition necessary]*	
Inches of Water	*[no definition necessary]*	
Inches, Decimal – Actual	*[no definition necessary]*	
Kilopascal	*[no definition necessary]*	
Megajoule/Cubic Meter	*[no definition necessary]*	
Millimeter – Actual	*[no definition necessary]*	
Million BTUs	*[no definition necessary]*	
Million BTUs per 1000 Cubic Feet	*[no definition necessary]*	
Percent	*[no definition necessary]*	
PSI	*Pounds per square inch*	
PSIA	*Pounds per square inch absolute*	
PSIG	*Pounds per square inch guage*	
Thousand Cubic Feet	*[no definition necessary]*	

BUSINESS PROCESS DOCUMENTATION (for addition, modification or deletion of business process documentation language)

Standards Book: Flowing Gas Related Standards, Measured Volume Audit Statement, 2.4.6

Change the Sample Paper Transaction as follows:
Under Physical Device Information for the data element Maximum Differential Pressure, change the qualifier from PSIA to PSI.
Under Flowing Gas Information, delete the data element Static Pressure Indicator, and for the data element Differential Pressure change the qualifier from PSIA to PSI.

RECOMMENDATION TO GISB EXECUTIVE COMMITTEE

Requester: Columbia Gas **Request No.: R98013**

TECHNICAL CHANGE LOG (all instructions to accomplish the recommendation)

Document Name and No.: Measured Volume Audit Statement (2.4.6)

Description of Change:
G867MAUS - Measured Volume Audit Statement (2.4.6)
Data Element Xref to X12
Sub-detail MEA segment (first page, Detail PTD loop - Physical Meter Information): add the following entry after the line for Reporting Pressure Base: "M Unit of Measure" [without another MEA label]
Sub-detail MEA segment (first page, Detail PTD loop - Physical Meter Information): add the following entry after the line for Temperature Range Maximum: "C Unit of Measure" [without another MEA label]
Sub-detail MEA segment (first page, Detail PTD loop - Physical Meter Information): add the following entry after the line for Tube Inside Diameter: "C Unit of Measure" [without another MEA label]
Sub-detail MEA segment (first page, Detail PTD loop - Physical Meter Information): add the following entry after the line for Maximum Static Pressure Range: "M Unit of Measure" [without another MEA label]
Sub-detail MEA segment (first page, Detail PTD loop - Physical Meter Information): add the following entry after the line for Maximum Differential Pressure: "C Unit of Measure" [without another MEA label]
Sub-detail MEA segment (first page, Detail PTD loop - Physical Meter Information): add the following entry after the line for Orifice Diameter: "C Unit of Measure" [without another MEA label]
Sub-detail MEA segment (first page, Detail PTD loop - Physical Meter Information): add the following entry after the line for Chart Revolution Time: "C Unit of Measure" [without another MEA label]
Sub-detail QTY segment (second page, Detail PTD loop - Flowing Gas Information): add the following entry after the line for Measured Quantity: "M Unit of Measure" [without another QTY label]
Sub-detail MEA segment (second page, Detail PTD loop - Flowing Gas Information): add the following entry after the line for Component Percentage: "C Unit of Measure" [without another MEA label]
Sub-detail MEA segment (second page, Detail PTD loop - Flowing Gas Information): add the following entry after the line for Heating Factor: "C Unit of Measure" [without another MEA label]
Sub-detail MEA segment (second page, Detail PTD loop - Flowing Gas Information): add the following entry after the line for Specific Gravity: "M Unit of Measure" [without another MEA label]
Sub-detail MEA segment (second page, Detail PTD loop - Flowing Gas Information): add the following entry after the line for Temperature: "C Unit of Measure" [without another MEA label]
Sub-detail MEA segment (second page, Detail PTD loop - Flowing Gas Information): change data element "Static Pressure Indicator" to "Unit of Measure" and change usage from M to C
Sub-detail MEA segment (second page, Detail PTD loop - Flowing Gas Information): add the following entry after the line for Differential Pressure: "C Unit of Measure" [without another MEA label]
Sub-detail MEA segment (second page, Detail PTD loop - Flowing Gas Information): add the following entry after the line for Flow Period: "M Unit of Measure" [without another MEA label]
Sub-detail MEA segment (second page, Detail PTD loop - Flowing Gas Information): add the following entry after the line for Volume: "M Unit of Measure" [without another MEA label]
Sub-detail MEA segment (second page, Detail PTD loop - Flowing Gas Information): add the following entry after the line for Reporting Temperature: "C Unit of Measure" [without another MEA label]
Sample X12 Transaction
for line "MEA**M2*150*80", change "80" to "PS"
for line "MEA**AD*26.2*80", change "80" to "PS"
X12 Mapping

RECOMMENDATION TO GISB EXECUTIVE COMMITTEE

Requester: Columbia Gas **Request No.: R98013**

Detail MEA segment (position 160) (within Detail PTD01 = 'PM' loop): MEA04 (data element 355): skip a blank line after existing note and add data element name "Unit of Measure"; MEA04 (data element C001): remove "Must Use" label (i.e. mark as used); MEA05: change data element "Minimum Static Pressure" to "Minimum Static Pressure Range"; MEA06: change data element "Maximum Static Pressure" to "Maximum Static Pressure Range"
Detail QTY segment (position 360) (within Detail PTD01 = 'FG' loop): QTY03 (data element 355): add data element name "Unit of Measure"; mark QTY03 as must use
Detail MEA segment (position 380) (within Detail PTD01 = 'FG' loop): MEA04 (data element 355): change "Static Pressure Indicator" to "Unit of Measure"
Transaction Set Tables
"MEA Segments (Sub-detail - PTD01 = 'PM')" table: in row where Element Name column begins with "Reporting Pressure Base", add data element name ", Unit of Measure" to end of list
"MEA Segments (Sub-detail - PTD01 = 'PM')" table: in row where Element Name column begins with "Temperature Range Minimum", replace "/" with ","; add data element name ", Unit of Measure" to end of list
"MEA Segments (Sub-detail - PTD01 = 'PM')" table: in row where Element Name column begins with "Atmospheric Pressure", add data element name ", Unit of Measure" to end of list
"MEA Segments (Sub-detail - PTD01 = 'PM')" table: in row where Element Name column begins with "Tube Inside Diameter", add data element name ", Unit of Measure" to end of list
"MEA Segments (Sub-detail - PTD01 = 'PM')" table: in row where Element Name column begins with "Minimum Static Pressure Range", replace "/" with ","; add data element name ", Unit of Measure" to end of list; MEA04 column: replace "PS" with "64"; reorder code values in MEA04 column to 64, 80, KQ
"MEA Segments (Sub-detail - PTD01 = 'PM')" table: in row where Element Name column is "Maximum Differential Pressure", add data element name ", Unit of Measure"; MEA04 column: replace "80" with "PS"; reorder code values in MEA04 column to IF, KQ, PS
"MEA Segments (Sub-detail - PTD01 = 'PM')" table: in row where Element Name column begins with "Orifice Diameter", add data element name ", Unit of Measure" to end of list
"MEA Segments (Sub-detail - PTD01 = 'PM')" table: in row where Element Name column begins with "Chart Revolution Time", add data element name ", Unit of Measure" to end of list
"MEA Segments (Sub-detail - PTD01 = 'PM')" table: In the Notes section under the table, for note n1, MEA04, add a row under code value 80 for "PS PSI"; add a row under code value KQ for "IF Inches of Water"
"MEA Segments (Sub-detail - PTD01 = 'FG')" table: in row where Element Name column begins with "Component", change "/" to ","; add data element name ", Unit of Measure"; change usage from "BC/SO" to "BC"
"MEA Segments (Sub-detail - PTD01 = 'FG')" table: in row where Element Name column begins with "Heating Factor", add data element name ", Unit of Measure"
"MEA Segments (Sub-detail - PTD01 = 'FG')" table: in row where Element Name column begins with "Specific Gravity", add data element name ", Unit of Measure"
"MEA Segments (Sub-detail - PTD01 = 'FG')" table: in row where Element Name column begins with "Temperature", add data element name ", Unit of Measure"
"MEA Segments (Sub-detail - PTD01 = 'FG')" table: in row where Element Name column begins with "Static Pressure", replace "/Static Pressure Indicator" with ", Unit of Measure" [note the slash is replaced with a comma]; Usage column, change from "C1/M1" to "C1"
"MEA Segments (Sub-detail - PTD01 = 'FG')" table: in row where Element Name column is "Differential Pressure", add data element name ", Unit of Measure"; MEA04 column: replace "80" with "IF", add code value "PS" to end; MEA04 Description Column: change "PSIA" to "Inches of Water"; add to end "PSI"
"MEA Segments (Sub-detail - PTD01 = 'FG')" table: in row where Element Name column begins with "Flow Period", add data element name ", Unit of Measure"
"MEA Segments (Sub-detail - PTD01 = 'FG')" table: in row where Element Name column begins with "Volume", add data element name ", Unit of Measure"

"MEA Segments (Sub-detail - PTD01 = 'FG')" table: in row where Element Name column begins with "Reporting Temperature", add data element name ", Unit of Measure"
"MEA Segments (Sub-detail - PTD01 = 'FG')" table: In the Usage section under the table, delete row for usage M1

4. SUPPORTING DOCUMENTATION

a. Description of Request:

In the Measured Volume Audit Statement, make the values allowed for Static Pressure Range consistent with those allowed for Static Pressure, and make the values allowed for Maximum Differential Pressure consistent with those allowed for Differential Pressure.

b. Description of Recommendation:

Information Requirements Subcommittee

MOTION:
As instructions to the Technical Subcommittee:

- Allow for the sending of Static Pressure, Maximum Static Pressure Range and Minimum Static Pressure Range in the following units:
  - Kilopascal
  - PSIA
  - PSIG
- Allow for the sending of Differential Pressure and Maximum Differential Pressure Range in the following units:
  - Kilopascal
  - PSI
  - Inches of Water

Sense of the Room: December 15, 1998 10 In Favor 0 Opposed

The issue was raised that IR is trying to manipulate code values that do not have a corresponding GISB data element. Therefore, IR recommends the following to the Business Practice subcommittee:

MOTION:
IR recommends the following revisions to the Measured Volume Audit Statement:

- Delete Static Pressure Indicator.
- Add Unit of Measure data element (see table below):

Business Name (Abbreviation)	Definition	EDI / FF Usage	Condition
Unit of Measure	Specifies the unit or basis for measurement for the corresponding measurement value.	M	

Sense of the Room: December 15, 1998 10 In Favor 0 Opposed

RECOMMENDATION TO GISB EXECUTIVE COMMITTEE

Requester: Columbia Gas **Request No.: R98013**

Business Practices Subcommittee (December 16, 1999)
MOTION:
As modifications to the Measured Volume Audit Statement:

- Delete Static Pressure Indicator data element
- Add Unit of Measure data element as described below:

Business Name: Unit of Measure
Definition: Specifies the unit or basis for measurement for the corresponding measurement value.
Usage: M

Segment Check (December 16, 1999)
In Favor: ___End-Users ___LDCs _9_Pipelines _1_Producers _4_Services
Opposed: ___End-Users ___LDCs ___Pipelines ___Producers ___Services

ACTION: Passed unanimously

Information Requirements Subcommittee

MOTION:
Delete the data element Static Pressure Indicator from the Measured Volume Audit Statement.

Add the following data element to the Measured Volume Audit Statement:

Business Name	Definition	EDI/FF Usage	Condition
Unit of Measure (U/Meas)	Specifies the unit or basis for measurement for the corresponding measurement value.	M	

Add the following code value descriptions for the data element Unit of Measure in the Measured Volume Audit Statement:

Code Value Description	Code Value Definition	Code Value	Applicable Data Elements
Inches of water	[no definition necessary]		4,5
Kilopascal	[no definition necessary]		1,2,3,4,5
PSI	[no definition necessary]		4,5
PSIA	[no definition necessary]		1,2,3
PSIG	[no definition necessary]		1,2,3

There are 5 data elements for which Unit of Measure code values are applicable:
(1) Minimum Static Pressure Range
(2) Maximum Static Pressure Range
(3) Static Pressure
(4) Maximum Differential Pressure
(5) Differential Pressure.

No modifications were necessary to the TIBP; however, some modifications were necessary to the Sample Paper Transaction. Under Physical Device Information for the data element Maximum Differential Pressure, change the qualifier from PSIA to PSI. Under Flowing Gas Information, delete the data element Static Pressure Indicator, and for the data element Differential Pressure change the qualifier from PSIA to PSI.

The Measured Volume Audit Statement has been previously determined to be unsuitable for presentation on an EBB. Therefore, EBB Usages, Data Groupings, and Data Ordering are not applicable.

Sense of the Room: March 29, 2000 8 In favor 0 Opposed

Technical Subcommittee
Send the following questions to BPS

1. The data element "Unit of Measure" was added as a Mandatory data element to the Measured Volume Audit Statement (2.4.6) at the December 16, 1999 BPS meeting. This data element is only used to qualify measurement information such as Static Pressure and Minimum Static Pressure Range. However, the data elements that need to be qualified are not all Mandatory. Therefore, the Technical Subcommittee believes that the usage on the Unit of Measure data element should be conditional, based on whether the other data elements are present. Please confirm Technical's approach in this matter.

2. The original request only addressed the data elements Minimum Static Pressure Range, Maximum Static Pressure Range, Static Pressure, Maximum Differential Pressure, and Differential Pressure. However, the code values currently being used in the X12 mapping where the Unit of Measure data element is being added are also in use for the following data elements: Reporting Pressure Base, Temperature Range Minimum, Temperature Range Maximum, Atmospheric Pressure, Tube Inside Diameter, Orifice Diameter, Chart Revolution Time, Component Percentage, Heating Factor, Specific Gravity, Temperature, Flow Period, Volume, and Reporting Temperature. The Technical Subcommittee believes the Unit of Measure data element should be added for all the data elements that need a qualifier for the measurement units, not only those mentioned in the request. The X12 syntactical rules require that the unit of measure be specified when sending a measurement value. Please confirm Technical's approach in this matter.

Sense of the Room: June 28, 2000 3 In Favor 0 Opposed

Business Practices Subcommittee
MOTION: The BPS instructs IR and Technical to review the implications of adding the Unit of Measure data element to be sent in conjunction with the below listed data elements when they are sent within the Measured Volume Audit Statement. If there are no negative implications to adding the data element with the "in conjunction conditionality", then IR and Technical are instructed add them. If there are, IR and Technical are requested to re-question BPS. The list of data elements within the Measured Volume Audit Statement is as follows:

> Minimum Static Pressure Range, Maximum Static Pressure Range, Static Pressure, Maximum Differential Pressure, Differential Pressure, Reporting Pressure Base, Temperature Range Minimum, Temperature Range Maximum, Atmospheric Pressure, Tube Inside Diameter, Orifice Diameter, Chart Revolution Time, Component Percentage, Heating Factor, Specific Gravity, Temperature, Flow Period, Volume, and Reporting Temperature.

Segment Check (June 29, 2000)
In Favor: 2 End-Users ___ LDCs 12 Pipelines 1 Producers 4 Services

Opposed Services : ___End-Users ___LDCs ___Pipelines ___Producers

ACTION: Passed unanimously

Information Requirements Subcommittee
MOTION:

- Make the following changes to the Data Dictionary for the "Measured Volume Audit Statement":

DATA DICTIONARY

Standard 2.4.6

Business Name (Abbreviation)	Definition	EDI / FF Usage	Condition
Unit Of Measure (U/Meas)	Specifies the unit or basis for measurement for the corresponding measurement value	C	Must be sent **in conjunction with each** of the following data elements: • Minimum Static Pressure Range • Maximum Static Pressure Range • Static Pressure • Maximum Differential Pressure • Differential Pressure • Reporting Pressure Base • Temperature Range Minimum • Temperature Range Maximum • Atmospheric Pressure • Tube Inside Diameter • Orifice Diameter • Chart Revolution Time • Component Percentage • Heating Factor • Specific Gravity • Temperature • Flow Period • Volume • Reporting Temperature • Measured Quantity

- Add the following Code Values Dictionary to the "Measured Volume Audit Statement":

CODE VALUES DICTIONARY

Unit of Measure

Code Value Description	Code Value Definition	Code Value

Code Value Description	Code Value Definition	Code Value
PSIG		
PSIA		
Kilopascal		
Centigrade, Celsius		
Fahrenheit		
Inches, Decimal		
Millimeter		
Days		
Hours		
Percent		
Megajoule/Cubic Meter		
Million BTUs per 1000 Cubic Feet		
Inches of Water		
Pounds per Square Inch		
Thousand Cubic Feet		
Million BTUs		
Gigacalories		
Gigajoules		

- No changes required to the Technical Implementation of Business Process for the "Measured Volume Audit Statement"
- No changes required to the Sample Paper Transaction for the "Measured Volume Audit Statement"

Sense of the Room: November 15, 2000 4 In Favor 0 Opposed

Technical Subcommittee
Sense of the Room: November 21, 2000 3 In Favor 0 Opposed

Information Requirements Subcommittee

CODE VALUES DICTIONARY

Unit of Measure

Code Value Description	Code Value Definition	Code Value
Centigrade, Celsius	[no definition necessary]	

Code Value Description	Code Value Definition	Code Value
Days	[no definition necessary]	
Fahrenheit	[no definition necessary]	
Gigacalories	[no definition necessary]	
Gigajoules	[no definition necessary]	
Hours	[no definition necessary]	
Inches of Water	[no definition necessary]	
Inches, Decimal – Actual	[no definition necessary]	
Kilopascal	[no definition necessary]	
Megajoule/Cubic Meter	[no definition necessary]	
Millimeter – Actual	[no definition necessary]	
Million BTUs	[no definition necessary]	
Million BTUs per 1000 Cubic Feet	[no definition necessary]	
Percent	[no definition necessary]	
PSI	Pounds per square inch	
PSIA	Pounds per square inch absolute	
PSIG	Pounds per square inch guage	
Thousand Cubic Feet	[no definition necessary]	

MOTION: Adopt the above definitions.

Sense of the Room: December 12, 2000 4 In Favor 0 Opposed

Technical Subcommittee
No additional Technical modifications needed for this recommendation form. See Technical Minutes for November 21, 2000 for previous modifications made.

Sense of the Room: January 22, 2001, 2000 3 In Favor 0 Opposed

c. Business Purpose:

Per the request: The proposed changes would provide consistent measurement basis codes for corresponding measurement values, and eliminate measurement basis codes that are not logical.

d. Commentary/Rationale of Subcommittee(s)/Task Force(s):

Although there were a total of 19 data elements that the Technical Subcommittee noted in its question to BPS on June 28, and that the BPS cited in its response to IR and Technical on June 29, IR found one additional data element in the dataset which required a Unit of Measure. That data element is the Measured

Quantity. Thus, there are a total of 20 data elements in the condition language for the Unit of Measure that appear in the recommendation that is being presented to the Executive Committee.