

CMDP WEB SERVICES SAMPLING XML SCHEMA DEFINITIONS

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Prepared for: DERIC TEASLEY

Product Owner U.S. EPA

OFFICE OF WATER

PREPARED BY: ATTAIN, LLC

Modification History

Version Number	Date of Revision	Description of Changes	Revision Entered By
1.11.0	03/07/2018	 Increase size for numeric fields in Chem/Rad, Micro, Crypto, and Composite screens (as applicable): Sample Result, Sample Field Result and Measure, Reporting Limit Correct XML name for <samplereceiveddate> to <samplereceiveddt></samplereceiveddt></samplereceiveddate> Remove unnecessary DB columns from tables Update XML tags Added APPENDIX A - XML CHANGES RELATED TO RELEASE 1.11 (MARCH 2018) 	Attain, LLC
1.12.0	9/05/2019	 Updated microbial and crypto results to accept decimal values Made corrections to composite sample fields 	Attain, LLC
1.13.0	02/03/2020	Retain trailing decimal zeros for a Chem/Rad result	Attain LCC

TABLE OF CONTENTS

Introduction	1
About This Document	
Supported Sample Categories	
Source Entities	
Sample Data Xml File Structure	
A.1.1 Sample Result Data XML Structure and data elements	
Operational Data Xml File Structure	
A.1.2 Operational Data XML Structure and data elements	
Composite Data Xml File Structure	
A.1.3 Composite XML Structure and data elements	. 64
APPENDIX A - XML CHANGES RELATED TO RELEASE 1.11 (MARCH	
2018)	
2 010)	. •
Required Changes for POST (Sample Data into CMDP)	70
Optional Changes for POST (Sample Data into CMDP)	
LIST OF TABLES	
Table 1 – Sample Data: Valid childNodes based on Sample Type	4
Table 2 – Operational Data XML Structure and data elements	
Table 3 – Operational Data: Valid childNodes based on Sample Type	
Table 4 – Operational Data XML Structure and data elements	
Table 5 – Composite XML Structure and data elements	
Tuole 5 Composite 11112 Structure and data elements	
LIST OF FIGURES	
LIST OF FIGURES	
Figure 1 – Overview of XML Structure for Sample Result Data	3
Figure 2 – Overview of XML Structure for Operational Data	
6 r r	

INTRODUCTION

ABOUT THIS DOCUMENT

This document contains supplemental information related to the file structure of Sample results data for the CMDP-State Database Interface Control Document (ICD) and CMDP-LIMS ICD. .

Sampling information submitted to CMDP will be delivered in the XML format.

SUPPORTED SAMPLE CATEGORIES

Type	Description					
Sample Result	Chemical, radiological or <i>Cryptosporidium</i> sample results.					
Operational Data	Water treatment operational data related to filtration and					
	disinfection performance, such as turbidity measurements					
	summaries, and chlorine residual measurement summaries.					
Composite Data	Water samples from consecutive monitoring periods combined for					
	purposes of a single analysis, most commonly for radionuclides					
	sample analysis for small public water systems (PWS).					

SOURCE ENTITIES

Source entity is the entity that reports the samples to a primacy agency.

Source Entity Name	Source Entity Code (2 Chars)	Description
Laboratory	LB	

SAMPLE DATA XML FILE STRUCTURE

This section provides details for the Sample Data XML File Structure.

<u>Please Note</u>: Both Sample Result Data and Operational Data can be submitted in one XML file. For illustrative purposes, Sample Result and Operational Data are presented in separate figures, Figure 1 – Overview of XML Structure for Sample Result Data and Figure 2 – Overview of XML Structure for Operational Data.

SAMPLE RESULT DATA

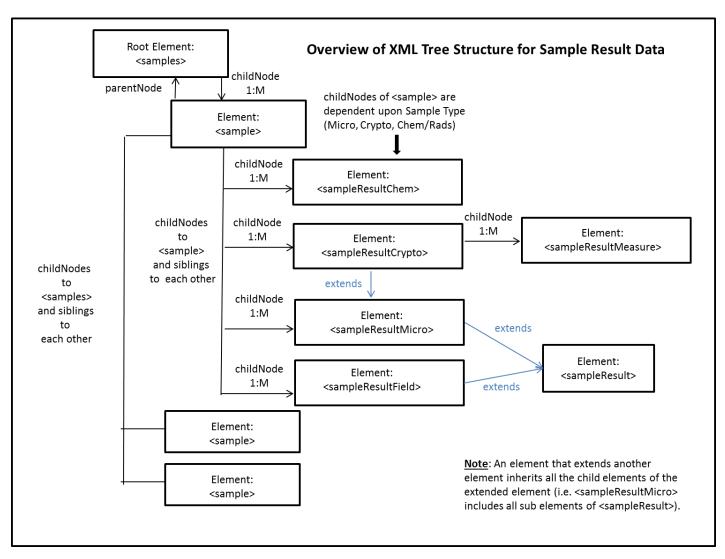


Figure 1 – Overview of XML Structure for Sample Result Data

The childNode(s) for sample data are dependent upon the Sample Type (Micro, Chem/Rads, Crypto). The table below details the valid childNodes based on Sample Type.

Table 1 – Sample Data: Valid childNodes based on Sample Type

Туре	childNode (Element)
Microbial	sampleResultMicro
	sampleResultField
Chem/Radionuclides	sampleResultChem
	sampleResultField
Cryptosporidum	sampleResultCrypto
	>sampleResultMeasure
	sampleResultField

A.1.1 Sample Result Data XML Structure and data elements

The section below details fields and format related to Sample Data (Microbial, Chemical\Rads and Cryptosporidium). Sample Data must be generated in the XML format using the definitions detailed in the section below before pushing it to CMDP.

Table 2 – Operational Data XML Structure and data elements

If you are currently submitting XML Sample data to CMDP, please see <u>APPENDIX A - XML CHANGES RELATED TO RELEASE 1.11 (MARCH 2018)</u> for a summary of the changes to the XML structure and data elements for CMDP Release 1.11.

XML		Data	Required (R), Optional (O), Conditional (C)		Additional
Element	XML Element Name	Type	Format/Valid Values	Description	Designations
		XML			
		Root			
samples	samples	Element			

			Required (R), Optional (O), Conditional (C)			
XML Element	XML Element Name	Data Type	C O	Format/Valid Values	Description	Additional Designations
>sample	sample					
	wsId	string	R	9 chars – first 2 chars for state code and next 7 chars for water system ID	Expected value is Federal ID assigned to the water system	
	facilityName	string	N/A	Accepted for will eventually be no longer supported. Use stateAssignedFacId.	GET contains Facility Name	
	stateAssignedFacId	string	R	Alphanumeric - 40 chars	State Assigned Facility Identifier / Code State Assigned	
	samplingPointId	string	R	Alphanumeric - 40 chars	Sampling Point Identification Code	
	samplingLocation	string	O	Alphanumeric - 250 chars	Sampling Point Location	
	sampleCd	string	R	Alphanumeric - 80 chars	Laboratory assigned Sample ID	
					Enter in Sample Received Date in YYYY- MM-DD or MM/DD/YYYY format.	
	sampleReceivedDt	string	0	Date format: YYYY-MM-DD or MM/DD/YYYY	GET contains YYYY-MM-DD 00:00 format.	Federally required
	collectionDate	string	R	Date format: YYYY-MM-DD or MM/DD/YYYY	Enter Collection Date in YYYY-MM-DD or MM/DD/YYYY format	Federally required
	collectionTime	string	0	Time format: 00:00	Enter Collection Time in 00:00 format	Federally required

XML		Data	Required (R), Optional (O), Conditional (C)			Additional
Element	XML Element Name	Туре		Format/Valid Values	Description	Designations
	legalEntityName	string	N/A	Accepted for POST but will eventually be no longer supported. Use laboratoryId.	GET contains Reporting Laboratory Name	
	laboratoryId	string	R		Expected value is 'Reporting Laboratory ID'. Used as a lookup field for Lab ID	
	,	8		Accepted for POST but will eventually be no longer supported. Use sampleTypeCd.	GET contains Sample	
	sampleTypeName	string	N/A	ST - Split Blanks	Type	Federally required
				Submit Code (i.e. RT) [Code] - [Description]: (Microbial /ChemsRads) RT - Routine RP - Repeat TG - Triggered CO - Confirmation SP - Special BB - Batch Blanks FB - Field Blanks PE - Performance Evaluation SB - Shipping Blanks ST - Split Blanks MR - Maximum Residence Time MS - Matrix Spike		
	sampleTypeCd	string	R	[<u>Code] - [Description]</u> : (Cryptosporidium)	Expected value is the Sample Type code	Federally required

XML		Data	Required (R), Optional (O), Conditional (C)			Additional
Element	XML Element Name	Type		Format/Valid Values	Description	Designations
				RT - Field (i.e., Routine)		
				MS - Matrix Spike SP - Special		
				PE - Performance		
				Evaluation		
				BB - Batch Blanks		
				FB - Field Blanks		
				SB - Shipping Blanks ST - Split Blanks		
				Precision 9, Scale 2		Federally required (Micobial,
	sampleVolume	decimal	О	[0000000.00]	Sample Volume	Crypto)
	comments	string	O	Alphanumeric - 250 chars	Comments	
	collectorName	String	O	Alphanumeric - 250 chars	Comments	
	www.cetl.co.cetic.wNc.co.c	-4.·i	C	Original Site Downstream Upstream Source Alternative (RTCR)	Req'd if is Sample Type is Repeat Enter one of the Repeat	
	repeatLocationName	string	С	Other (TCR)	Location options Req'd if is Sample Type	
					is	
					Repeat/Triggered/Confi	
					rmation	
					Enter Original	
	originalLabSampleCd	string	С	Alphanumeric - 80 chars	Laboratory assigned Sample ID	
	original Laboratispic Cd	5011115		Inplianamente of entits	campie in	
	originalLegalEntityName	string	N/A	Alphanumeric - 40 chars	GET contains Original Reporting Laboratory Name	

XML		Data	Required (R), Optional (O), Conditional (C)			Additional
Element	XML Element Name	Type		Format/Valid Values	Description	Designations
					When Sample Type is Repeat/Triggered/Confirmation, Optional if Reporting Lab ID is the same as Original Lab ID, Required if Reporting Lab Id is different from Original lab ID. Enter Original Legal	
	originalLaboratoryId	string	C	Alphanumeric - 40 chars	Entity Code (Lab ID)	
	originalCollectionDate	string	O	Date format: YYYY-MM-DD or MM/DD/YYYY	Enter Original Collection Date in YYYY-MM-DD or MM/DD/YYYY format	
	sampleCategoryName	string	R	Microbial Chem/Radionuclides Cryptosporidium	Enter one of the Sample Category Name options	
sampleRe sult	[none]				Element that is extended by other elements.	
	analyteName	string	N/A	Accepted for POST but will eventually be no longer supported. Use analyteCd.	GET contains Analyte Name	
	analyteCd	string	R	NOTE: Valid values cannot be listed due to the large size of possible values (which is also dependent upon user primacyAgency)	Expected value is the Analyte Code	Federally required

XML		Data	Required (R), Optional (O), Conditional (C)			Additional
Element	XML Element Name	Туре		Format/Valid Values	Description	Designations
Exement	Tente Exement I value			Analyte Codes for Sample Field only: 1013 - Free Chlorine Residual 1012 - Total Chlorine Residual 1996 - Temperature 0100 - Turbidity 1925 - pH 1006 - Chloramine 0999 - Chlorine 1905 - Color	Безсприон	Designations
	methodCd	string	0	NOTE: Valid values cannot be listed due to the large size of possible values (which is also dependent upon user primacyAgency). Valid values are also dependent upon Analyte/Parameter (sampleResult.analyteCd)	Method Code If value submitted, must submit Method Name. Used as lookup for Method.	Federally required
		Ü		NOTE: Valid values cannot be listed due to the large size of possible values (which is also dependent upon user primacyAgency). Valid values are also dependent upon Analyte/Parameter	Method Name If value submitted, must submit Method Code. Used as lookup for	
	methodName	string	O	(sampleResult.analyteCd)	Method.	Federally required
	analysisStartDt	string	0	Date format: YYYY-MM-DD or MM/DD/YYYY	Enter Analysis Start Date YYYY-MM-DD or MM/DD/YYYY format	Federally required

			Required (R), Optional (O), Conditional (C)			
			Req Op			
XML	VMI Flowert Name	Data	Ŭ	Farmat/Malid Malara	Dagarintian	Additional
Element	XML Element Name	Type		Format/Valid Values	Description Enter Analysis Start	Designations
	analysisStartTime	string	O	Time format: 00:00	Time in 00:00 format	Federally required
					Enter Analysis	- contract of the contract of
					Completed Date	
				Date format: YYYY-MM-	YYYY-MM-DD or	
	analysisComplDt	string	O	DD or MM/DD/YYYY	MM/DD/YYYY format	
					Enter Analysis Completed Time in	
	analysisComplTime	string	O	Time format: 00:00	00:00 format	
		- Sumg		Accepted for POST but will	00000 10111140	
				eventually be no longer	GET contains	
				supported. Use	Analyzing Laboratory	
	name	string	N/A	analyzingLabId.	Name	
	1	, ·	0	41.1 00.1	Analyzing Laboratory	
	analyzingLabId	string	0	Alphanumeric - 80 chars	ID / Code	
	comments	string	O	Alphanumeric - 250 chars	Comments	
					Volume Assayed –(Microbial and	
				D	ChemsRads)	
	rialisma A gaaria d	اممنسما	O	Precision 9, Scale 2 [0000000.00]	Per –	Endanally magnined (Misnahial)
>>sample	volumeAssayed	decimal	U	[0000000.00]	(Cryptosporidium)	Federally required (Microbial)
ResultCh						
em	sampleResultChem					
				Extends {sampleResult}		
	a (15 1)			therefore all elements of		
	See {sampleResult}			sampleResult included.		
					Enter response whether	
				true	analyte was Not	
	notDetected	boolean	R	false	Detected	Federally required

XML		Data	Required (R), Optional (O), Conditional (C)			Additional
Element	XML Element Name	Туре		Format/Valid Values	Description	Designations
					Result Value. Federally Conditionally Required when "notDetected" is false.	
					Retain zeros at the end	
				Precision 15, Scale 9	of the decimal if users	Federally Conditionally
	result	Decimal	O	[000000.00000000]	entered them	Required
				C LANG NTU		
				pH		
				umho/cm		
				TON		
				CU		
				mg/L		
				ug/L ng/L	Federally Conditionally	
				pCi/L	Required when	Federally Conditionally
	resultUomName	String	O	MFL	"notDetected" is false.	Required
		υ		Precision 9, Scale 2	Optional. Used only	Federally Conditionally
	standardDeviation	decimal	O	[0000000.00]	for Radiological results.	Required
				D :: 15 G 0	Reporting Limit. Federally Conditionally	Edwall Cod's all
	reportingLevel	decimal	O	Precision 15, Scale 9 [000000.0000000000]	Required when "notDetected" is false.	Federally Conditionally Required
	reportingLever	acciiiai	9	[000000.0000000000]	nondetected is faise.	requireu

XML	VARE DI LAN	Data	Required (R), Optional (O), Conditional (C)			Additional
Element	XML Element Name	Type		Format/Valid Values	Description	Designations
	reportingLevelUomName	string	Ο	C LANG NTU pH umho/cm TON CU mg/L ug/L ng/L pCi/L MFL	Federally Conditionally Required when "notDetected" is false.	Federally Conditionally Required
>>sample ResultMi cro						
	See {sampleResult}			Extends {sampleResult} therefore all elements of sampleResult included. Submit Code (i.e. A) [Code] - [Description]: A - Absent	Enter response code of whether analyte was	
	apName	string	R	P - Present Precision 15, Scale 5 [00000000000000]	detected Bacteria count in the sample. Refer to Crypto Rule for Federal Conditional Requirement. When "apName" is A, must be null or 0. When	Federally required Federally Conditionally required (Crypto)

XML		Data	Required (R), Optional (O), Conditional (C)			Additional
Element	XML Element Name	Type		Format/Valid Values	Description	Designations
					"apName" is P must be null or > 0 .	
					Retain zeros at the end of the decimal if users entered them	
				Accepted for POST but will eventually be no longer		
	typeName	string	N/A	supported. Use analyzingLabId.	GET contains Type Name	Federally Conditionally required (Crypto)
		8		Colonies Tubes	Expected value is the type of Units – Microbial Occysts – Cryptosporidium. Refer to Crypto Rule for Federal Conditional	Federally Conditionally
	typeCd	string	O	Most probable Number	Requirement.	required (Crypto)
	resultVolume	decimal	0	Precision 9, Scale 2 [0000000.00]	Volume. Refer to Crypto Rule for Federal Conditional Requirement.	Federally Conditionally required (Crypto)
				Accepted for POST but will eventually be no longer supported. Use	GET contains	
	interferenceName	string	N/A	interferenceCd.	Interference Name	
				CNFG - Confluent Growth TNTC - Too Numerous to Count		
	:	_4	0	TCNG - Turbid Culture - no	Expected value is the	
	interferenceCd	string	O	gas	Interference Name code	

XML		Data	Required (R), Optional (O), Conditional (C)			Additional
Element	XML Element Name	Type		Format/Valid Values	Description	Designations
	filteredVolExaminedName	String	0	Y – Yes N - No	Enter response code of whether 100% of filtered volume was examined (Cryptosporidium). Refer to Crypto Rule for Federal Conditional Requirement.	Federally Conditionally Required (Crypto)
	micreavoizzammearvame	String		Flowing stream	Requirement.	Required (Crypto)
	sourceTypeName	string	O	Lake Reservoir GWUDI	Enter one of the Source Type options	
>>sampleR esultCrypt o	sampleResultCrypto					
	See {sampleResultMicro}			Extends {sampleResult} therefore all elements of sampleResultMicro included.		
>>sample ResultFiel d	sampleResultField					
	See {sampleResult}			Extends {sampleResult} therefore all elements of sampleResult included.		
	result	decimal	R	Precision 15, Scale 9 [000000.0000000000]	Result	

XML		Data	Required (R), Optional (O), Conditional (C)			Additional
Element	XML Element Name	Type		Format/Valid Values	Description	Designations
				1013 - Free Chlorine Residual: mg/l mL L 1012 - Total Chlorine Residual: mg/l mL L 1996 - Temperature: F C 0100 - Turbidity: NTU 1925 - pH: ph 0999 - Chlorine: mg/L mL L 1006 - Chloramine: mg/L mL L 1905 - Color: CU	Expected value is the code for the Result Unit Of Measure NOTE; Valid value depends on Parameter Value (sampleResult.analyteC	
	uomName	string	R		d)	
>>>sampl		Č			SampleResultMeasur e is a child embedded inside	
eResultM					SampleResultMicro(C	
easure	sampleResultMeasure				ryptosporidium)	

			Required (R), Optional (O), Conditional (C)			
XML	3/3/1 DI / NI	Data	Cor		D	Additional
Element	XML Element Name	Type		Format/Valid Values	Description	Designations
	measureName	string	N/A	Accepted for POST but will eventually be no longer supported. Use measureCd. Submit Code (i.e. A)		
				Codel - Description : SAMPLE VOL FILTER - Sample Volume Filtered SAMPLE VOL SPIKE - Sample Volume Spiked #OOCYSTS SPIKE - Number of Oocysts Spiked #FILTER USE - Number of filters used PACK PELLET VOL - Packed Pellet Volume #OOCYSTS - Number of oocysts #OOCYSTS CLC - Calculated number of oocysts per volume VOL RESSP C - Volume of resuspended concentrate VOL RESSP CP - Volume of resuspended conc.	Expected value is the code for the Measure	
	measureCd	string	R	processed	Code Name	

XML		Data	Required (R), Optional (O), Conditional (C)			Additional
Element	XML Element Name	Туре		Format/Valid Values	Description	Designations
	result	decimal	R	Precision 9, Scale 2 [0000000.00] N SAMP VOL SLIDE Org/100mL Org/1 G L	Expected value is the type of Unit of Measure	
	uomName	string	R	mL		

OPERATIONAL DATA XML FILE STRUCTURE

This section provides details for the Operational Data XML File Structure. Figure 2 – Overview of XML Structure for Operational Data depicts the overall XML Tree structure of the Operational Data submission. As previously mentioned, please note that both Sample Result and Operational Data can be submitted in one XML file.

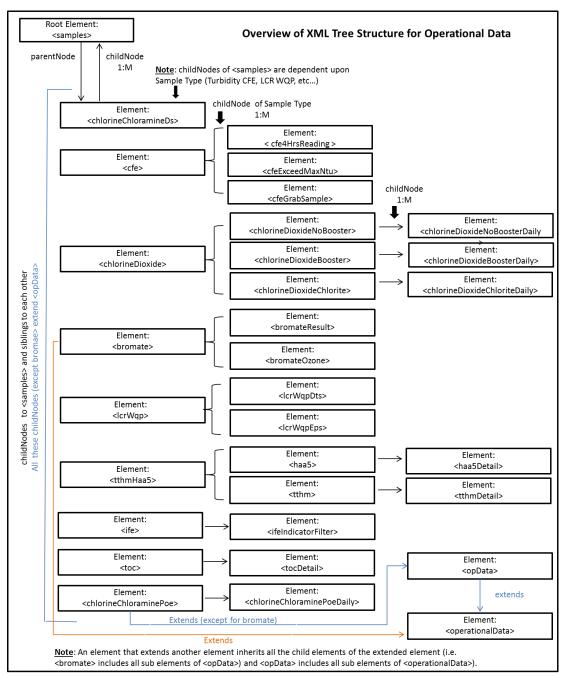


Figure 2 - Overview of XML Structure for Operational Data

The childNode(s) for Operational data are dependent upon the Sample Type (i.e. Turbidity CFE, Turbidity IFE, LCR WQP, etc...). Table 2 – Operational Data: Valid childNodes based on Sample Type details the valid childNodes based on Sample Type.

Table 3 – Operational Data: Valid childNodes based on Sample Type

Туре	childNode (Element)
Turbidity CFE	cfe cfe4HrsReading cfeExceedMaxNtu cfeGrabSample
Turbidity IFE	ife ifeIndicatorFilter
Chlorine Dioxide and Chlorite	chlorineDioxide chlorineDioxideNoBooster >chlorineDioxideNoBoosterDaily chlorineDioxideBooster >chlorineDioxideBoosterDaily chlorineDioxideChlorite >chlorineDioxideChlorite
Chlorine and Chloramines Entering DS	chlorineChloraminePoe >chlorineChloraminePoeDaily
Chlorine and Chloramines in DS	chlorineChloramineDs

Туре	childNode (Element)
LCR WQP	lcrWqp >lcrWqpDts >lcrWqpEps
Total Organic Carbon	toc >tocDetail
Ozone Treatment (Bromate)	bromate >bromateResult >bromateOzone
TTHM and HAA5	tthmHaa5 >haa5 >>haa5Detail >tthm >>tthm

A.1.2 Operational Data XML Structure and data elements

Table 4 – Operational Data XML Structure and data elements

Figure 2018 If you are currently submitting XML Sample data to CMDP, please see APPENDIX A - XML CHANGES RELATED TO RELEASE 1.11 (MARCH 2018) for a summary of the changes to the XML structure and data elements for CMDP Release 1.11.

XML Element	XML Element Name	Data Type	Required (R), Optional (O), Conditional (C), (C)	Description	Additional Designations
		XML			
		Root			
samples	samples	Element			

XML Element	XML Element Name	Data Type	Required (R), Optional (O), Conditional (C)	Format/Valid Values	Description This element is extended by other elements.	Additional Designations
	wsId facilityName	string	R N/A	9 chars – first 2 chars for state code and next 7 chars for water system ID Accepted for POST but will eventually be no longer supported. Use stateAssignedFacId.	Federal ID assigned to the water system GET contains Facility Name	
	stateAssignedFacId	string	R	Alphanumeric – 40 chars	State Assigned Facility Identifier / Code (Not valid for LCR samples)	
opData	sampleType [none]	string	R	Turbidity CFE Turbidity IFE Chlorine Dioxide and Chlorite Chlorine and Chloramines Entering DS Chlorine and Chloramines in DS LCR WQP Total Organic Carbon Generic Sample Type Ozone Treatment (Bromate) TTHM and HAA5	Enter one of the Sample Category options This element is extended by other elements.	
	See {operationalData}			Extends {operationalData} therefore all elements of opData included.		

VALUE EI		Data	Required (R), Optional (O), Conditional (C)			Additional
XML Element	XML Element Name	Type	<u> </u>	Format/Valid Values	Description	Designations
	samplingPointId	string	R	Alphanumeric - 40 chars	Enter Sampling Points ID within the Facility (Not valid for CFE, IFE, Chlorine Chlormine DS Samples)	Federally required (Except: CFE, IFE, Chlorine Chlormine DS Samples)
	mntrgPeriodMonth	int	R	Integer value representing month (i.e. 1=Jan, 2=Feb, 3=March, etc) quarter value (13 = Q1, 14 = Q2, 15 = Q3, 16 = Q4)	Integer values are expected for Monitoring Period Month (TOC and TTHM are Quarterly)	Federally required
	8			Format: YYYY	(,	
	mntrgPeriodYear	int	R	Valid Values 2011 through current Year	Enter Monitoring Period – Year in YYYY format	Federally required
>chlorineChloramin						
eDs	chlorineChloramineDs See {opData}			Extends {opData} therefore all elements of opData included.		
	quarterlyRunningAnnualAvg	decimal	O	Precision 5, Scale 3 [00.000]	Only applies when Reporting Period month is March, June, September, December	Federally required
	mrdlViolationName	string	O	Yes No	Enter response whether there is a MRDL Violation	Federally required
	numMeasurementsReq	Int	O	Precision 5, Scale 0 [00000]	Number of MRDL Measurements Required	
	numMeasurement	int	O	Precision 5, Scale 0 [00000]	Number of MRDL Measurements	Federally required
	monthlyAvg	decimal	O	Precision 5, Scale 3 [00.000]	Monthly Average	Federally required
	noOfMsrDetectedMtDSResi	int	O	Precision 5, Scale 0 [00000]	Number of Measurements Meeting Minimum DS Residual Requirement	Federally required

			Required (R), Optional (O), Conditional (C)			
VMI Flores	VMI DI N	Data		T 4/87-1*1 \$7-1	Donat de la constante de la co	Additional
XML Element	XML Element Name	Type	<u> </u>	Format/Valid Values Precision 3, Scale 3	Description % Meeting Minimum DS Residual	Designations
	pctMtDSResiReq	decimal	O	[000.000]	Requirement	Federally required
	pearitibaticative	decimai		[000.000]	Previous Month % Meeting	reactury required
				Precision 3, Scale 3	Minimum DS Residual	
	preMonthPctMtDSResiReq	decimal	O	[000.000]	Requirement	Federally required
	·			MRDL		
	residualReportingTypeName	string	R	MRDL and DS RDC	Residual Reporting Type	
				Precision 5, Scale 0	Number of Minimum RDC	
	rdcNumMeasurementsReq	Int	0	[00000]	Measurements Required	
				Precision 5, Scale 0	Number of Minimum RDC	
_	rdcNumMeasurement	int	O	[00000]	Measurements	Federally required
>cfe	cfe			F (1 (P)		
	See {opData}			Extends {opData} therefore all elements of opData included.		
				Precision 5, Scale 0		
	monthlyHrsOperation	int	O	[00000]	Monthly hours of operation	
				Precision 5, Scale 0	Total Number of CFE Turbidity	
	totalReq	int	0	[00000]	measurements required	
				D :: 5 C 1 O	Total number of CFE Turbidity	
	totalTaken	int	R	Precision 5, Scale 0 [00000]	measurements taken during the month*	Federally required
	totai i akcii	Ш	K	Precision 5, Scale 0	Total <= 0.3 NTU in	rederany required
	totalTakenLessThanIeswtr	int	R	[00000]	measurements taken	Federally required
					Enter response code whether any Turbidity CFE reading during the	,
	reading Exceed MaxN tuAllowe			Y - Yes	month exceed the maximum NTU	
	dName	string	R	N - No	allowed	
				O - Not Reporting for	Enter response code whether the	
	1Th015N/-05 (M. N.			LT2	CFE turbidity <= 0.15 NTU was in	Federally
	lessThan015Ntu95pctMsrNam	atnin ~	D	Y - Yes	at least 95% of the measurements	conditionally
	e	string	R	N - No	for the month	required

XML Element	XML Element Name	Data Type	Required (R), Optional (O), Conditional (C)	Format/Valid Values	Description	Additional Designations
THATE Element	THAT DAOMON I WINC	- 1 , ρν		Tormac values	Refer to CFE Rule for Federal Conditional Requirement.	Designations
>cfeExceedMax Ntu	cfeExceedMaxNtu					
				Date format: YYYY- MM-DD or MM/DD/YYYY Must be within Reporting/Monitoring	Enter Date in MM/DD/YYYY format Federally Conditionally required when "readingExceedMaxNtuAllowedN	Federally conditionally
	occurredDt	string	R	Period.	ame" is set to YES	required
	turbidity	decimal	R	Precision 5, Scale 3 [00.000]	Turbidity (NTU)*. Federally Conditionally required when "readingExceedMaxNtuAllowedName" is set to YES	Federally conditionally required
	occurredTime	string	O	Time format: HH:MM Default value: 00:00	Enter Time in 00:00 format	·
	duration	decimal	O	Precision 5, Scale 2 [000.00]	Duration (0.1 hour)	
>cfeGrabSampl	cfeGrabSample					
	day	int	R	Valid day based on month	Enter valid Day within month	
	totalHrsFiltering	decimal	R	Precision 5, Scale 2 [000.00]	Total Hours Filtering (in Operation)*	
	maxTurbidity	decimal	R	Precision 5, Scale 3 [00.000]	Maximum Turbidity*	
	minTurbidity	decimal	O	Precision 5, Scale 3 [00.000]	Minimum Turbidity	
	avgTurbidity	decimal	O	Precision 5, Scale 3 [00.000]	Average Turbidity	
	gsTotalNumResult	int	O	Precision 5, Scale 0 [00000]	Grab Sample Reports – Total Number of Results	

gsTotalRes cmTotalHr cmTotalHr cmTotalHr cmTotalHr cfe4HrsReadi day firstReadin secondRead thirdReadin fourthRead fifthReadin sixthReadin	ment Name Type sultExceed int rResultRecorded decir	gsTotalResultExceed int cmTotalHrResultRecorded decim cmTotalHrResultExceed decim sReadi cfe4HrsReading	O O Required (R), Optional (O), Conditional (C)	Format/Valid Values Precision 5, Scale 2 [000.00] Precision 5, Scale 2 [000.00] Precision 5, Scale 2 [000.00]	Description Grab Sample Reports - # of Results Exceeding Max NTU Continuous Monitoring Report - Total Hours Results Were Reported Continuous Monitoring: Total Hours Results Exceed Max NTU*	Additional Designations
gsTotalRes cmTotalHr cmTotalHr cmTotalHr cfe4HrsReadi day firstReadin secondRead thirdReadin fourthRead fifthReadin sixthReadin	sultExceed int rResultRecorded decir rResultExceed decir ading	gsTotalResultExceed int cmTotalHrResultRecorded decim cmTotalHrResultExceed decim sReadi cfe4HrsReading	0	Precision 5, Scale 2 [000.00] Precision 5, Scale 2 [000.00] Precision 5, Scale 2	Grab Sample Reports - # of Results Exceeding Max NTU Continuous Monitoring Report - Total Hours Results Were Reported Continuous Monitoring: Total	Designations
cmTotalHr cmTotalHr cmTotalHr cmTotalHr cmTotalHr cfe4HrsReadi day firstReadin secondRead thirdReadin fourthRead fifthReadin sixthReadin	ResultRecorded deciner ResultExceed decineration	cmTotalHrResultRecorded decim cmTotalHrResultExceed decim sReadi cfe4HrsReading	O	[000.00] Precision 5, Scale 2 [000.00] Precision 5, Scale 2	Results Exceeding Max NTU Continuous Monitoring Report – Total Hours Results Were Reported Continuous Monitoring: Total	
cmTotalHr cfe4HrsReadi ng cfe4HrsReadi day firstReadin secondRead thirdReadin fourthRead fifthReadin sixthReadin	rResultExceed decir	cmTotalHrResultExceed decimsReadi		[000.00] Precision 5, Scale 2	Total Hours Results Were Reported Continuous Monitoring: Total	
cmTotalHr cfe4HrsReadi ng cfe4HrsReadi day firstReadin secondRead thirdReadin fourthRead fifthReadin sixthReadin	rResultExceed decir	cmTotalHrResultExceed decimsReadi		Precision 5, Scale 2	Continuous Monitoring: Total	
>cfe4HrsReadi ng cfe4HrsRea day firstReadin secondRead thirdReadin fourthRead fifthReadin sixthReadin	ading	sReadi cfe4HrsReading	0	-		
ng cfe4HrsRea day firstReading secondRead thirdReading fourthRead fifthReading		cfe4HrsReading				
firstReading secondRead thirdReading fourthRead fifthReading sixthReading sixthReading sixthReading firstReading firstReading sixthReading firstReading firstReading sixthReading firstReading firstRead	int	day int				
secondRead thirdReadir fourthRead fifthReadin			R	Valid day based on month	Enter valid Day within month	
thirdReadir fourthRead fifthReadin sixthReadir	ng deci	firstReading decim	O	Precision 5, Scale 3 [00.000]	12:00 AM or 1st Reading*	
fourthRead fifthReadin sixthReadin	iding deci	secondReading decim	O	Precision 5, Scale 3 [00.000]	4:00 AM or 2nd Reading*	
fifthReadin sixthReadin	ng deci	thirdReading decin	O	Precision 5, Scale 3 [00.000]	8:00 AM or 3rd Reading*	
sixthReadin	decing deci	fourthReading decim	O	Precision 5, Scale 3 [00.000]	12:00 PM or 4th Reading*	
	ng deci	fifthReading decin	О	Precision 5, Scale 3 [00.000]	4:00 PM or 5th Reading*	
rawTurbidi	ng deci	sixthReading decim	O	Precision 5, Scale 3 [00.000]	8:00 PM or 6th Reading*	
	ity deci	rawTurbidity decin	О	Precision 5, Scale 3 [00.000]	Raw Turbidity (once per day)*	
		hrsOperation decin	O	Precision 5, Scale 2 [000.00]	Hours of Operations	
>chlorineDioxide chlorineDio	oxide	xide chlorineDioxide				
See {opDat		See {opData}		Extends {opData} therefore all elements of opData included.		
sampleCd	ıta}		R	Alphanumeric – 25 chars	Enter Sample Id Code	

XML Element	XML Element Name	Data Type	Required (R), Optional (O), Conditional (C)	Format/Valid Values	Description	Additional Designations
ANIL Element	ANTE Element Name	Туре		Accepted for POST but	Description	Designations
	name	string	N/A	will eventually be no longer supported. Use analyzingLabId.	GET contains Reporting Lab Name	
				NOTE: Valid values cannot be listed due to possible values being	· · ·	
	laboratoryId	string	R	dependent upon user	Enter Reporting Lab Id	
	reportingCTValueName	string	O	Y - Yes N - No	Enter response code whether also Reporting for CT Values for LT2ESWTR (Toolbox reporting requirements)	
>chlorineDioxi	reportinge i valuervame	sumg	0	11 - 110	requirements)	
deNoBooster	chlorineDioxideNoBooster					
	daysUseClDioxide	int	O	Precision 5, Scale 0 [00000]	Number of Days where Chlorine Dioxide was used	
>>chlorineDi oxideNoBoosterDail y	chlorineDioxideNoBoosterDai ly					
	day	int	R	Valid day based on month	Enter valid Day within month	
	L/D	1 1 1	D	Precision 5, Scale 3	D 14 4 DOE (/L)	Edwall
	resultPoe	decimal	R	[00.000]	Result at POE (mg/L) Enter response code whether the	Federally required
				Y - Yes	Routine exceeds the MRDL (0.8	
	exceedMrdlName	string	R	N - No	mg/L)*	Federally required
			C Federa lly conditi onally require	Y - Yes	Enter response code whether Exceeded MRDL were two consecutive daily samples exceeded Federally Conditionally Required if "exceedMrdlName" is set to	Federally conditionally
	exceed2ConsecDailyName	string	d	N - No	YES.	required

XML Element	XML Element Name	Data Type	Required (R), Optional (O), Conditional (C)	Format/Valid Values	Description	Additional Designations
	firstSample	decimal	C Federa lly conditi onally require d	Precision 5, Scale 3 [00.000]	1st Sample @First Customer (mg/L). Federally Conditionally Required if "exceedMrdlName" is set to YES.	Federally conditionally required
	secondSample	decimal	C Federa lly conditi onally require d	Precision 5, Scale 3 [00.000]	2 nd Sample @1 st Customer (mg/L) + 6 hours. Federally Conditionally Required if "exceedMrdlName" is set to YES.	Federally conditionally required
	thirdSample	decimal	C Federa lly conditi onally require d	Precision 5, Scale 3 [00.000]	3 rd Sample @1 st Customer (mg/L) + 12 hours. Federally Conditionally Required if "exceedMrdlName" is set to YES.	Federally conditionally required
	violationTypeName	string	C Federa lly conditi onally require d	Acute Non Acute No Violation	Enter one of the Violation Type choices Federally Conditionally Required if "exceedMrdlName" is set to YES.	Federally conditionally required
	notifyStateName	string	O	Y - Yes N - No	Enter response code whether to Notify State	
	notifyPublicName	string	O	Y - Yes N - No	Enter response code whether to Notify Public	

XML Element	XML Element Name	Data Type	Required (R), Optional (O), Conditional (C)	Format/Valid Values	Description	Additional Designations
	lt2Temperature	decimal	C Federa Ily conditi onally require d	Precision 3, Scale 1 [0.00]	LT 2Temperature. Federally Conditionally Required if "reportingCTValueName" is set to YES.	Federally conditionally required
	It2Concentration	decimal	C Federa Ily conditi onally require d	Precision 5, Scale 3 [00.000]	LT 2Concentration. Federally Conditionally Required if "reportingCTValueName" is set to YES.	Federally conditionally required
	lt2ContactTime	decimal	C Federa Ily conditi onally require d	Precision 5, Scale 3 [00.000]	Contact Time. Federally Conditionally Required if "reportingCTValueName" is set to YES.	Federally conditionally required
	lt2CtValue	decimal	C Federa Ily conditi onally require d	Precision 5, Scale 3 [00.000]	LT2 CT Value. Federally Conditionally Required if "reportingCTValueName" is set to YES.	Federally conditionally required
	lt2RatioAchieved	decimal	C Federa lly conditi onally	Precision 6, Scale 3 [000.000]	LT2 Ratio Achieved. Conditionally Required if "reportingCTValueName" is set to YES.	Conditionally required

XML Element	XML Element Name	Data Type	P Required (R), Optional (O), Conditional (C)	Format/Valid Values	Description	Additional Designations
	lt2TTReqMetToolboxCrd	string	C Federa lly conditi onally require d	Y - Yes N - No	Enter response code whether the LT2 Was a TT requirement met for toolbox credit Conditionally Required if "reportingCTValueName" is set to YES.	Conditionally required
>chlorineDioxi deBooster	chlorineDioxideBooster					
	daysUseClDioxide	int	0	Precision 5, Scale 0 [00000]	Number of Days where Chlorine Dioxide was used	
>>chlorineDi oxideBoosterDaily	chlorineDioxideBoosterDaily					
	day	int	R	Valid day based on month	Enter valid Day within month	
	resultPoe	decimal	R		Enter Routine ClO2 Daily Result at POE (mg/L)*	Federally required
	exceedMrdlName	string	R C Federa lly	Y - Yes N - No	Enter response code whether the Routine exceeds the MRDL (0.8 mg/L)?* Enter response code whether Exceeded MRDL were two consecutive daily samples	Federally required
	exceed2ConsecDailyName	string	conditi onally require d	Y - Yes N - No	exceeded Federally Conditionally Required if "exceedMrdlName" is set to YES.	Federally conditionally required

XML Element	XML Element Name	Data Type	Required (R), Optional (O), Conditional (C)	Format/Valid Values	Description	Additional Designations
	firstSample	decimal	C Federa lly conditi onally require d	Precision 5, scale 3 [00.000]	1st Sample @ First Customer (mg/L)* Federally Conditionally Required if "exceedMrdlName" is set to YES.	Federally conditionally required
	secondSample	decimal	C Federa Ily conditi onally require d	Precision 5, scale 3 [00.000]	2nd Sample @ Average Residence Time Location (mg/l)* Federally Conditionally Required if "exceedMrdlName" is set to YES.	Federally conditionally required
	thirdSample	decimal	C Federa lly conditi onally require d	Precision 5, scale 3 [00.000]	3rd Sample @ Maximum Residence Time Location (mg/l)* Federally Conditionally Required if "exceedMrdlName" is set to YES.	Federally conditionally required
	violationTypeName	string	C Federa lly conditi onally require d	Acute Non Acute No Violation	Enter one of the Violation Type choices Federally Conditionally Required if "exceedMrdlName" is set to YES.	Federally conditionally required
	notifyStateName	string	O	Y - Yes N - No	Enter response code whether to Notify State	
	notifyPublicName	string	O	Y - Yes N - No	Enter response code whether to Notify Public	

XML Element	XML Element Name	Data Type	Required (R), Optional (O), Conditional (C)	Format/Valid Values	Description	Additional Designations
	lt2Temperature	decimal	0	Precision 3, scale 1 [00.0]	LT2 Temperature. Federally Conditionally Required if "reportingCTValueName" is set to YES.	Federally conditionally required
	lt2Concentration	decimal	C Federa lly conditi onally require d	Precision 5, scale 3 [00.000]	LT2 Concentration. Federally Conditionally Required if "reportingCTValueName" is set to YES.	Federally conditionally required
	lt2ContactTime	decimal	C Federa lly conditi onally require d	Precision 5, scale 3 [00.000]	LT2 Contact Time. Federally Conditionally Required if "reportingCTValueName" is set to YES.	Federally conditionally required
	lt2CtValue	decimal	C Federa lly conditi onally require d	Precision 5, scale 3 [00.000]	LT2 CT Value. Federally Conditionally Required if "reportingCTValueName" is set to YES.	Federally conditionally required
	lt2RatioAchieved	decimal	C Federa Ily conditi onally require d	Precision 6, Scale 3 [000.000]	LT2 Ratio Achieved. Conditionally Required if "reportingCTValueName" is set to YES.	Conditionally required

XML Element	XML Element Name	Data Type	Required (R), Optional (O), Conditional (C)	Format/Valid Values	Description	Additional Designations
	lt2TTReqMetToolboxCrd	string	C Federa lly conditi onally require d	Y - Yes N - No	Enter response code whether LT2 TT requirement was met for toolbox credit Conditionally Required if "reportingCTValueName" is set to YES.	Conditionally required
>chlorineDioxi deChlorite	chlorineDioxideChlorite					
uechiorne	CHIOTHEDIOXIDECTIONE			Precision 5, Scale 0	Total number of samples taken in	
	totalNumSample	int	R	[00000]	the last 3 months	Federally Required
	numMclViolation	int	R	Precision 5, Scale 0 [00000]	Number of MCL Violations for the Month	Federally Required
				Precision 5, Scale 3	Monthly Arithmetic Average (DS	
	name analyzingLabId	string string	R ON/A	[00.000] Accepted for POST but will eventually be no longer supported. Use analyzingLabId.Alphanu meric - 80 chars	3-sample sets) GET contains Analyzing Lab NameEnter Analyzing Lab ID (if not reporting lab) Enter Analyzing Lab ID (if not reporting lab)	Federally Required
>>chlorineDi	, ,	2			<u> </u>	
oxideChloriteDaily	chlorineDioxideChloriteDaily					
	day	int	R	Valid day based on month	ch	
	resultPoe	decimal	R	Precision 5, scale 3 [00.000]	Routine ClO2 Daily Result at POE (mg/L)*	Federally Required
	rexceedMrdlName	string	R	Y - Yes N - No	Enter response code whether the Routine exceeds the MRDL (0.1 mg/L)?*	Federally Required
	firstSample	decimal	O	Precision 5, scale 3 [00.000]	1st Sample @ First Customer (mg/L)*	Federally Required

	WALL DI LAN	Data	Required (R), Optional (O), Conditional (C)			Additional
XML Element	XML Element Name	Type		Format/Valid Values	Description	Designations
	secondSample	decimal	О	Precision 5, scale 3 [00.000]	2nd Sample @ Avg. Residence Time Location(mg/L)*	Federally Required
	thirdSample	decimal	O	Precision 5, scale 3 [00.000]	3rd Sample @ @ Avg. Residence Time Location(mg/L)*	Federally Required
	avgSampleSet	decimal	O	Precision 5, scale 3 [00.000]	Average of 3 Sample Set*	Federally Required
	avgSampleSetExceedMclNam e	string	O	Y - Yes N - No	Enter response code whether 3- Sample Average Exceed Chlorite MCL (1.0 mg/L)	Federally Required
	notifyStateName	string	O	Y - Yes N - No	Enter response code whether to Notify State	
	notifyPublicName	string	O	Y - Yes N - No	Enter response code whether to Notify Public	
>bromate	bromate					
	See {opData} reportingLabName	string	N/AO	Extends {opData} therefore all elements of opData included. Accepted for POST but will eventually be no longer supported. Use analyzingLabId.Alphanu meric - 80 chars	GET contains Reporting Lab NameEnter Reporting Lab ID	
	laboratoryId	string	0	Alphanumeric - 80 chars	Enter Reporting Lab ID	
	quarterlyBromateRaa totalNumSampleTaken	decimal	0	Precision 5, Scale 3 [00.000] Precision 5, Scale 0	Quarterly Bromate RAA Applies only to March, June, September, Decem Total number of samples taken Applies only to March, June, September, Decem	Federally Required Federally Required
	reportingCtValueName	string	0	Y - Yes N - No	Enter response code whether also Reporting for CT Values for	reactany requireu

		Data	Required (R), Optional (O), Conditional (C)			Additional
XML Element	XML Element Name	Type		Format/Valid Values	Description (T) II	Designations
					LT2ESWTR (Toolbox reporting requirements?	
>>bromateResult	bromateResult					
	resultDt	string	R	Date format: YYYY- MM-DDformat: YYYY- MM-DD or MM/DD/YYYY	Date should be within the Reporting Period and in YYYY- MM-DD formatYYYY-MM-DD or MM/DD/YYYY format	Federally Required
	name	string	N/AO	Accepted for POST but will eventually be no longer supported. Use analyzingLabId.Alphanu meric - 80 chars	GET contains Analyzing Lab NameEnter Laboratory ID Name of lab that performed the analysis	
	analyzingLabId	string	О	Alphanumeric - 80 chars	Enter Analyzing Lab ID (if not reporting lab)	
	sampleCd	string	R	Alphanumeric - 20 chars	Enter Lab Sample ID	
	notDetected	boolean	R	True False	Enter response whether result was Not Detected	Federally Required
	result	decimal	C Federa lly conditi onally require d	Precision 5, scale 3 [00.000]	Result Federally Conditionally Required if "notDetected" is false.	Federally Conditionally Required

XML Element	XML Element Name	Data Type	Required (R), Optional (O), Conditional (C)	Format/Valid Values	Description	Additional Designations
	resultUomName	string	C Federa lly conditi onally require d C Federa	mg/L ug/L C LANG MFL ng/L NTU pH umho/cm pCi/L TON CU	Federally Conditionally Required if "notDetected" is false.	Federally Conditionally Required
	reportingLimit	decimal	lly conditi onally require d	Precision 5, scale 3 [00.000]	Reporting Limit. Federally Conditionally Required if "notDetected" is false.	Federally Conditionally Required
	reportingLimitUomName	string	C Federa lly conditi onally require d	mg/L ug/L C LANG MFL ng/L NTU pH umho/cm pCi/L TON CU	Expected value is the type of Reporting Limit UOM. Federally Conditionally Required if "notDetected" is false.	Federally Conditionally Required

XML Element	VMI Elawart Nama	Data	Required (R), Optional (O), Conditional (C)	Format/Valid Values	Dogavintion	Additional
XML Element	XML Element Name	Type		List of Methods used by selected Laboratory. NOTE: Valid values cannot be listed due to the large size of possible	Description Expected vaalue is Method Code. If value submitted, must submit Method Name. Analysis Method Name Code and Analysis Method Name is used as lookup for Method. Code	Designations
	methodCdName	string	0	Values List of Methods used by selected Laboratory. NOTE: Valid values cannot be listed due to the large size of possible	Expected value is Method Name. If value is submitted, must submit Method Code. Analysis Method Code and Analysis Method Name is used as lookup for Method.	Federally Required
	methodName analysisStartDt	string	0	Date format: YYYY- MM-DDformat: YYYY- MM-DD or MM/DD/YYYY	Enter Analysis Start Date in YYYY-MM-DD formatYYYY-MM-DD or MM/DD/YYYY format. GET contains analysisStartDt and analysisStartTime in YYYY-MM-DD 00:00 format.	Federally Required Federally Required
	analysisStartTime	string	O	Time format: HH:MM Default value: 00:00 Date format: YYYY- MM-DDformat: YYYY-	Enter Analysis Start Time in 00:00 format Enter Analysis Complete Date in YYYY-MM-DD. GET contains analysisComplDt	Federally Required
	analysisComplDt analysisComplTime	string	0	MM-DD or MM/DD/YYYY Time format: HH:MM Default value: 00:00	and analysisComplTime in YYYY-MM-DD 00:00 format. Enter Analysis Complete Time in 00:00 format	
>>bromateOzone	bromateOzone day	int	R	Valid day based on month	Enter valid Day within month	

			Required (R), Optional (O), Conditional (C)			
XML Element	XML Element Name	Data Type	Con Con	Format/Valid Values	Description	Additional Designations
ANTE Element	temperature	decimal	0	Precision 3, scale 1 [00.0]	Temperature. Refer to Bromate rule for Federal Conditional Requirement.	Federally Conditionally Required
	concentration	decimal	O	Precision 5, scale 3 [00.000]	Concentration. Refer to Bromate rule for Federal Conditional Requirement.	Federally Conditionally Required
	contactTime	decimal	0	Precision 5, scale 3 [00.000]	Contact Time. Refer to Bromate rule for Federal Conditional Requirement.	Federally Conditionally Required
	ctValue	decimal	0	Precision 5, scale 3 [00.000]	CT Value. Refer to Bromate rule for Federal Conditional Requirement.	Federally Conditionally Required
>lcrWqp	lcrWqp					
	See {opData}			Extends {opData} therefore all elements of opData included.		
>>lcrWqpDts	lcrWqpDts collectionDate	string	R	Date format: YYYY- MM-DDformat: YYYY- MM-DD or MM/DD/YYYY Must be within Reporting Period.	Enter Collection Date in YYYY- MM-DD formatYYYY-MM-DD or MM/DD/YYYY format *	Federally Required
	collectionTime	string	0	Time format: HH:MM Default value: 00:00	Enter Collection Time in 00:00 format	Federally Required
	facilityName	string	N/AO	Accepted for POST but will eventually be no longer supported. Use stateAssignedFacId.	GET contains Facility Name: Name given to the water system facility	Federally Required
			0		State Assigned Facility Identifier / Code	
	stateAssignedFacId	string	0	Alphanumeric – 40 chars	(Not valid for LCR samples)	Federally Required
	samplingPointId	string	O	Alphanumeric - 40 chars	Sampling Points within the Facility	Federally Required

XML Element	XML Element Name	Data Type	Required (R), Optional (O), Conditional (C)	Format/Valid Values	Description	Additional Designations
	analyteName		N/A	Accepted for POST but will eventually be no longer supported. Use analyteCd.	GET contains Analyte Name	
	analyteCd	string	R	Submit Code Code - [Name]: 1925 - pH 1064 - Conductivity 1996 - Temperature 1927 - Alkanality Total 1044 - Orthophosphate 1049 - Silica 1019 - Calcium 1919 - Calcium	Expected value is Analyte/Parameter Code*	Federally Required
	measureValue	decimal	R	Precision 5, scale 3 [00.000]	Result	Federally Required
	measureUomName	string	R	uG/L pH C MG/L umho/cm Accepted for POST but	Expected value is the type of Unit of Measure*	Federally Required
	name analyzingLabId	string	N/AO O	will eventually be no longer supported. Use analyzingLabId.Alphanu meric - 80 chars	GET contains Analyzing Lab NameAnalyzing Lab Id (if not reporting lab) Enter Analyzing Lab ID (if not reporting lab)	
	sampleCd	string	R	Alphanumeric - 100 chars	Lab Sample ID	

			Required (R), Optional (O), Conditional (C)			
		Data				Additional
XML Element	XML Element Name	Type		Format/Valid Values	Description	Designations
	analysisDate	string	O	Date format: YYYY- MM-DDformat: YYYY- MM-DD or MM/DD/YYYY	Enter Analysis Date in YYYY- MM-DD formatYYYY-MM-DD or MM/DD/YYYY format	Federally Required
	methodCdmethodName	stringstrin g	00	List of Methods used by selected Laboratory. NOTE: Valid values cannot be listed due to the large size of possible valuesList of Methods used by selected Laboratory. NOTE: Valid values cannot be listed due to the large size of possible values List of Methods used by selected Laboratory. NOTE: Valid values cannot be listed due to the large size of possible values	Expected value is Method Code. If value submitted, must submit Method Name. Analysis Method Code and Analysis Method Name is used as lookup for Method.Analysis Method Name Used as lookup for Method Code Expected value is Method Name. If value is submitted, must submit Method Code. Analysis Method Code and Analysis Method Name is used as lookup for Method.	Federally Required
	methodName	string	O	values	is used as lookup for Method.	Federally Required
	collectedBy	string	O	Alphanumeric - 50 chars	Collected By	•
	comments	string	O	Alphanumeric - 250 chars	Comments	
>>lcrWqpEps	lcrWqpEps					
	collectionDate	string	R	Date format: MM/DD/YYYYDate format: YYYY-MM-DD or MM/DD/YYYY Must be within Reporting Period.	Enter Collection Date in MM/DD/YYYY formatin YYYY-MM-DD or MM/DD/YYYY format*	Federally Required
	11 4' T'	, .	0	Time format: HH:MM	Enter Collection Time in 00:00	E. J II. D
	collectionTime	string	O	Default value: 00:00	format	Federally Required

		Data	Required (R), Optional (O), Conditional (C)			Additional
XML Element	XML Element Name	Type		Format/Valid Values	Description	Designations
	facilityName	string	N/AO	Accepted for POST but will eventually be no longer supported. Use stateAssignedFacId.	GET contains Facility Name: Name given to the water system facility	Federally Required
					State Assigned Facility Identifier / Code	
	stateAssignedFacId	string	O	Alphanumeric - 40 chars	(Not valid for LCR samples)	Federally Required
	samplingPointId	string	0	Alphanumeric - 40 chars	Sampling Points within the Facility	Federally Required
				Accepted for POST but will eventually be no longer supported. Use		
	analyteName		N/A	analyteCd.	GET contains Analyte Name	
	analyteCd	string	R	Submit Code Code] - [Name]: 1925 - pH 1064 - Conductivity 1996 - Temperature 1927 - Alkanality Total 1044 - Orthophosphate 1049 - Silica 1019 - Calcium 1919 - Calcium	Expected value is Analyte/Parameter Code*	Federally Required
	¥7.1	1 . 1	D	Precision 5, scale 3	n t	
	measureValue	decimal	R	[00.000] uG/L pH Unit C MG/L	Expected value is the type of Unit	Federally Required
	measureUomName	string	R	uMHO/cm Accepted for POST but	of Measure* GET contains Analyzing Lab	Federally Required
	name	string	0	will eventually be no longer supported. Use	NameAnalyzing Lab ID Name (if not reporting lab)	

XML Element	XML Element Name	Data Type	Required (R), Optional (O), Conditional (C)	Format/Valid Values	Description	Additional Designations
ANTE Element	AML Element Name	туре		analyzingLabId.Alphanu meric - 80 chars	Description	Designations
				meric - 80 chars	Enter Analyzing Lab ID (if not	
	analyzingLabId	string	O	Alphanumeric - 80 chars	reporting lab)	
	sampleCd	string	R	Alphanumeric - 100 chars	Lab Sample ID, Assigned ID	
	analysisDate	string	0	Date format: MM/DD/YYYYDate format: YYYY-MM-DD or MM/DD/YYYY	Enter Analysis Date in MM/DD/YYYY formatin YYYY- MM-DD or MM/DD/YYYY format	Federally Required
	methodCdmethodName	stringstrin g	00	List of Methods used by selected Laboratory. NOTE: Valid values cannot be listed due to the large size of possible valuesList of Methods used by selected Laboratory. NOTE: Valid values cannot be listed due to the large size of possible values List of Methods used by selected Laboratory. NOTE: Valid values cannot be listed due to the large size of possible values	Expected value is Method Code. If value submitted, must submit Method Name. Analysis Method Code and Analysis Method Name is used as lookup for Method. Analysis Method Name Used as lookup for Method Code Expected value is Method Name. If value is submitted, must submit Method Code. Analysis Method Code and Analysis Method Name is used as lookup for Method.	Federally Required
	methodName	string	0	values	~ !! . ! 5	Federally Required
	collectedBy	string	0	Alphanumeric - 50 chars	Collected By	
	comments	string	O	Alphanumeric - 250 chars	Comments	
>tthmHaa5	tthmHaa5 See {opData}			Extends {opData} therefore all elements of opData included.		

		Data	Required (R), Optional (O), Conditional (C)			Additional
XML Element	XML Element Name	Type		Format/Valid Values	Description	Designations
	reportingLabName	string	N/AO	Accepted for POST but will eventually be no longer supported. Use laboratoryId.	GET contains Reporting Lab NameReporting Laboratory ID Name	
	laboratoryId	string	O	Alphanumeric - 80 chars	Enter Reporting Lab ID	
>tthm	tthm					
	numSampleTaken	int	О	Precision 5, Scale 0 [00000]	Number of TTHM samples taken	Federally Required
>>tthmDetail	tthmDetail					
	tthmDt	string	R	Date format: MM/DD/YYYYDate format: YYYY-MM-DD or MM/DD/YYYY	Date should be within the Reporting Period, and in MM/DD/YYYY formatin YYYY- MM-DD or MM/DD/YYYY format	Federally Required
	sampleReceivedDtSampleRec eivedDate	string	O	Date format: MM/DD/YYYYDate format: YYYY-MM-DD or MM/DD/YYYY	Enter Sample Received Date < Analysis State Date, and in YYYY-MM-DD or MM/DD/YYYY format. GET contains YYYY-MM-DD 00:00 format.	Federally required
	name	string	N/AO	Accepted for POST but will eventually be no longer supported. Use analyzingLabId.Alphanu meric - 80 chars	GET contains Analyzing Lab NameAnalyzing Lab ID name (if not reporting lab)	
			_		Analyzing Lab ID (if not reporting	
	analyzingLabId	string	0	Alphanumeric - 80 chars	lab)	
	sampleCd	string	R	Alphanumeric - 20 chars	Sample ID code, Assigned ID code	
	notDetected	boolean	R	True False	Enter response whether the Analyte was Not Detected	Federally Required

			Required (R), Optional (O), Conditional (C)			
XML Element	XML Element Name	Data Type		Format/Valid Values	Description	Additional Designations
ANIE Element	AVID EXEMENT NAME	Турс			Result.	Federally
	result	decimal	O	Precision 5, scale 3 [00.000]	Federally Conditionally Required if "notDetected" value is false.	Conditionally Required
	resultUomName	string	C Federa lly conditi onally require d	MG/L UG/L NG/L	Expected value is the type of Result UOM. Federally Conditionally Required if "notDetected" value is false.	Federally Conditionally Required
	reportingLimit	decimal	C Federa lly conditi onally require d	Precision 5, Scale 3 [00.000]	Reporting Limit. Federally Conditionally Required if "notDetected" value is false.	Federally Conditionally Required
	reportingLimitUomName	string	C Federa Ily conditi onally require d	MG/L UG/L NG/L	Expected value is the type of Reporting Limit UOM. Federally Conditionally Required if "notDetected" value is false.	Federally Conditionally Required
	methodCdmethodName	stringstrin g	00	List of Methods used by selected Laboratory. NOTE: Valid values cannot be listed due to the large size of possible valuesList of Methods used by selected Laboratory. NOTE: Valid values cannot be listed due to the	Expected value is Method Code. If value submitted, must submit Method Name. Analysis Method Code and Analysis Method Name is used as lookup for Method. Analysis Method Name Used as lookup for Method Code	Federally RequiredFederally Required

XML Element	XML Element Name	Data Type	Required (R), Optional (O), Conditional (C)	Format/Valid Values	Description	Additional Designations
XIVIE Element	AND Element Name	Турс		large size of possible values	Description	Designations
	methodName	string	0	List of Methods used by selected Laboratory. NOTE: Valid values cannot be listed due to the large size of possible values	Expected value is Method Name. If value is submitted, must submit Method Code. Analysis Method Code and Analysis Method Name is used as lookup for Method.	Federally Required
	menodrame	sumg	Ü	Date format: MM/DD/YYYYDate	Enter Analysis Start Date in MM/DD/YYYY formatin YYYY-MM-DD or MM/DD/YYYY format. GET contains analysisStartDt and	rederany required
	analysisStartDt	string	O	format: YYYY-MM-DD or MM/DD/YYYY	analysisStartTime in YYYY-MM-DD 00:00 format.	Federally Required
	analysisStartTime	string	O	Time format: HH:MM Default value: 00:00	Enter Analysis Start Time in 00:00 format	Federally Required
	analysisComplDt	string	0	Date format: MM/DD/YYYYDate format: YYYY-MM-DD or MM/DD/YYYY	Enter Analysis Complete Date in MM/DD/YYYY formatin YYYY-MM-DD or MM/DD/YYYY format. GET contains analysisComplDt and analysisComplTime in YYYY-MM-DD 00:00 format.	
	analysisComplTime	string	O	Time format: HH:MM Default value: 00:00	Enter Analysis Complete Time in 00:00 format	

SamplingPointId String R Alphanumeric - 40 chars Sampling Points within the Facility Federally I			Data	Required (R), Optional (O), Conditional (C)			Additional
quarterlyLocationalRaa decimal O [00.000] TTHM Locational RAA Federally I Expected value is the type of Locational RAA UOM. Rederally Required if GuarterlyLocational RAA UOM. Federally I UG/L GuarterlyLocational RAA UOM. Federally Required if GuarterlyLocational RAA UoM. Federally Required if GuarterlyLocational RAA UoM. Federally Required if GuarterlyLocational RAA Uom. Federally I GuarterlyLocational Raa University of GuarterlyLocational Raa Uom. Federally I GuarterlyLocational	XML Element	XML Element Name		్రి	Format/Valid Values	Description	Designations
quarterlyLocationalRaa decimal O [00.000] TTHM Locational RAA Federally I Expected value is the type of Locational RAA UOM. Rederally Required if GuarterlyLocational RAA UOM. Federally I UG/L GuarterlyLocational RAA UOM. Federally Required if GuarterlyLocational RAA UoM. Federally Required if GuarterlyLocational RAA UoM. Federally Required if GuarterlyLocational RAA Uom. Federally I GuarterlyLocational Raa University of GuarterlyLocational Raa Uom. Federally I GuarterlyLocational				_			
quarterlyLocationalRaa decimal O [00.000] TTHM Locational RAA Federally I Expected value is the type of Locational RAA UOM. Federally Required if "quarterlyLocationalRaa" value is entered. Federally I UG/L "quarterlyLocationalRaa" value is entered. Federally I raaMclViolated string O N-No LRAA MCL was violated? Federally I raaMclViolated string O N-No LRAA MCL was violated? Federally I volumeAssayed decimal O [0000000.00] ML UOM Federally I collectorName String O Alphanumeric - 250 chars Sample Collector Name		samplingPointId	string	R	•	Sampling Points within the Facility	Federally required
String O NG/L Federally Required if "quarterlyLocationalRaa" value is entered. Gud/L Federally Required if "quarterlyLocationalRaa" value is entered. Federally I		quarterlyLocationalRaa	decimal	О			Federally Required
Precision 9, Scale 2 Volume Assayed decimal O Precision 9, Scale 2 Volume Assayed decimal O Precision 9, Scale 2 Volume Assayed defaulted to ML UOM Federally I		locationalUomName	String	O	UG/L	Federally Required if "quarterlyLocationalRaa" value is	Federally Required
volumeAssayed decimal O [000000.00] ML UOM Federally I collectorName String O Alphanumeric - 250 chars Sample Collector Name >>haa5 numSampleTaken int O [00000] Number of HAA5 samples taken Federally I >>haa5Detail Date format: MM/DD/YYYYDate format: YYYY-MM-DD or MM/DD/YYYY Federally I Sample Received Date < Analysis State Date, and in MM/DD/YYYY formatEnter Sample Received Date in YYYY-MM-DD or MM/DD/YYYY format. MM/DD/YYYY format: MM/DD/YYYY format. MM/DD/YYYY format.		lraaMclViolated			Y - Yes		Federally Required
Precision 5, Scale 0 Number of HAA5 samples taken Federally		volumeAssayed	_	O		•	Federally required
numSampleTaken int O [00000] Number of HAA5 samples taken Federally I >>haa5Detail Date format:			String	О	Alphanumeric - 250 chars	Sample Collector Name	
numSampleTaken int O [00000] Number of HAA5 samples taken Federally I >>haa5Detail Date format:	>>haa5	haa5			D :: 5 G 1 0		
Date format: MM/DD/YYYYDate format: YYYY-MM-DD haa5Dt String R MM/DD/YYYY MM/DD/YYYY MM/DD/YYYY Federally Sample Received Date < Analysis State Date, and in MM/DD/YYYY formatEnter Sample Received Date in YYYY-MM-DD or Date format: MM/DD/YYYYDate		numSampleTaken	int	О		Number of HAA5 samples taken	Federally Required
MM/DD/YYYYDate format: YYYY-MM-DD Reporting Period, and in haa5Dt string R or MM/DD/YYYY MM/DD/YYYY Federally I Sample Received Date < Analysis State Date, and in MM/DD/YYYY formatEnter Sample Received Date in YYYY-MM-DD or Date format: MM/DD/YYYY format. MM/DD/YYYYDate	>>haa5Detail	haa5Detail					
State Date, and in MM/DD/YYYY formatEnter Sample Received Date in YYYY-MM-DD or Date format: MM/DD/YYYY format. MM/DD/YYYYDate		haa5Dt	string	R	MM/DD/YYYYDate format: YYYY-MM-DD	Reporting Period, and in	Federally Required
		sampleReceivedDtSampleRec	, .	0	MM/DD/YYYYDate format: YYYY-MM-DD	State Date, and in MM/DD/YYYY formatEnter Sample Received Date in YYYY-MM-DD or MM/DD/YYYY format. GET contains YYYY-MM-DD	Federally required

XML Element	XML Element Name	Data Type	Required (R), Optional (O), Conditional (C)	Format/Valid Values	Description	Additional Designations
AME Element	name	string	N/AO	Accepted for POST but will eventually be no longer supported. Use analyzingLabId.Alphanu meric - 80 chars	GET contains Analyzing Lab NameAnalyzing Lab ID name (if not reporting lab)	Designations
	analyzingLabId	string	О	Alphanumeric - 80 chars	Analyzing Lab ID (if not reporting lab)	
	sampleCd	string	R	Alphanumeric - 20 chars	Sample Code	
	notDetected	boolean	R	True False	Enter response whether the Analyte was Not Detected	Federally Required
	result	decimal	O	Precision 5, scale 3 [00.000]	Result. Federally Conditionally Required if "notDetected" value is false.	Federally Conditionally Required
	resultUomName	string	O	MG/L UG/L NG/L	Expected value is the Result UOM. Federally Conditionally Required if "notDetected" value is false.	Federally Conditionally Required
	reportingLimit	decimal	O	Precision 5, scale 3 [00.000]	Reporting Limit. Federally Conditionally Required if "notDetected" value is false.	Federally Conditionally Required
	reportingLimitUomName	string	0		Reporting Limit UOM. Federally Conditionally Required if "notDetected" value is false.	Federally Conditionally Required
	methodCdmethodName	stringstrin g	OO	List of Methods used by selected Laboratory. NOTE: Valid values cannot be listed due to the large size of possible valuesList of Methods used by selected Laboratory. NOTE: Valid values cannot be listed due to the	Expected value is Method Code. If value submitted, must submit Method Name. Analysis Method Code and Analysis Method Name is used as lookup for Method. Analysis Method Name Used as lookup for Method Code	Federally RequiredFederally Required

VIII D	VALUE DI LAN	Data	Required (R), Optional (O), Conditional (C)			Additional
XML Element	XML Element Name	Туре		Format/Valid Values large size of possible values	Description	Designations
	methodName	string	0	List of Methods used by selected Laboratory. NOTE: Valid values cannot be listed due to the large size of possible values	Expected value is Method Name. If value is submitted, must submit Method Code. Analysis Method Code and Analysis Method Name is used as lookup for Method.	Federally Required
	inconour (unic	Swing	Ü	Date format: MM/DD/YYYYDate format: YYYY-MM-DD	Enter Analysis Start Date in MM/DD/YYYY formatin YYYY-MM-DD or MM/DD/YYYY format. GET contains analysisStartDt and analysisStartTime in YYYY-MM-	Teacrum, Teaquirea
	analysisStartDt analysisStartTime	string string	0	or MM/DD/YYYY Time format: HH:MM Default value: 00:00	DD 00:00 format. Enter Analysis Start Time in 00:00 format	Federally Required Federally Required
	analysisComplDt	string	0	Date format: MM/DD/YYYYDate format: YYYY-MM-DD or MM/DD/YYYY	Enter Analysis Complete Date in MM/DD/YYYY formatin YYYY-MM-DD or MM/DD/YYYY format. GET contains analysisComplDt and analysisComplTime in YYYY-MM-DD 00:00 format.	_ swim, wegan ou
	analysisComplTime	string	O	Time format: HH:MM Default value: 00:00	Enter Analysis Complete Time Time in 00:00 format	

			Required (R), Optional (O), Conditional (C)			
XML Element	XML Element Name	Data Type	Rec Op Cond	Format/Valid Values	Description	Additional Designations
	samplingPointId	string	R	Alphanumeric - 40 chars	Sampling Points within the Facility	Federally required
	quarterlyLocationalRaa	decimal	0	Precision 5, Scale 3 [00.000]	HAA5 Locational LRAA	Federally Required
	locationalUomName	String	O	MG/L UG/L NG/L	Expected value is the Locational RAA UOM. Federally Required if "quarterlyLocationalRaa" value is entered.	Federally Required
	lraaMclViolated	string	0	Y - Yes N - No	Enter response code whether LRAA MCL violated	Federally Required
	volumeAssayed	decimal	O	Precision 9, Scale 2 [0000000.00]	Volume Assayed – defaulted to ML UOM	Federally required
	collectorName	String	O	Alphanumeric - 250 chars	Sample Collector Name	
>ife	ife			Extends {opData}		
	See {opData}			therefore all elements of opData included.		
				Submit Code [Code] - [Name]: lessthan10k - Less than 10,000 morethan10k - Greater		
	combinedPopServedName	string	R	or Equal to 10,000	Combined Population Served	
	indFilterEffluent	string	R	Y - Yes N - No	Enter response code to Q1: Did you monitor each individual filter effluent continuously and record measurements at least every 15 minutes (or combined filter effluent for systems with two filters)?	Federally required
		25				- carring required

VMI Flores	VMI El N	Data	Required (R), Optional (O), Conditional (C)			Additional
XML Element	XML Element Name	Type		Format/Valid Values	Description If combinedPopServedName	Designations
			C Federa Ily conditi onally require	Y - Yes N - No	lessthan10k: Enter response code to Q2: If IFE continuous monitoring was interrupted, was continuous monitoring restored in 14 days or fewer (Y/N)? If No, please contact your State or Primacy Agency for required additional data. Conditionally Required if	Conditionally
	contMntrgRestored14Days	string	d	O - NA	"indFilterEffluent" is set to NO.	Required
	contMntrgRestored5Days	string	C Federa Ily conditi onally require d	Y - Yes N - No	If combinedPopServedName morethan10k: Enter response code to Q2: If IFE continuous monitoring was interrupted, was continuous monitoring restored in 5 working days or fewer? If No, please contact your State or Primacy Agency for required additional data. Conditionally Required if "indFilterEffluent" is set to NO.	Conditionally Required
	g · ,	8			Enter response code to Q3: Did your system conduct grab sampling or manual recording every 4 hours while continuous monitoring	
	contMntrgRecEquipOffline	string	R	Y - Yes N - No	equipment was offline? Conditionally Required if "indFilterEffluent" is set to NO.	Conditionally Required
		8		- · -		. 4

		Data	Required (R), Optional (O), Conditional (C)			Additional
XML Element	XML Element Name	Type		Format/Valid Values	Description	Designations
					If combinedPopServedName lessthan10k: Enter response code to Q4: Did any individual filter exceed 1.0 NTU in two consecutive measurements taken 15 minutes apart? If yes complete the table and indicate required follow-up action status (report cause if known). [IFE Event Type 'A']	
					If combinedPopServedName	
					morethan10k:	
					Enter response code to Q4: Did	
					any individual filter exceed 1.0 NTU in two consecutive	
					measurements taken 15 minutes	
					apart? If yes, complete the table	
					and indicate required follow-up	
	1137. 20			Y - Yes	action status (i.e. filter profile).	
	exceed1Ntu2Consec	string	R	N - No	[IFE Event Type 'A']	Federally required
					Enter response code to Q5: Did any individual filter exceed 1.0	
					NTU in two consecutive	
					measurements taken 15 minutes	
					apart at any time in each of three	
					consecutive months? If yes	
					complete the table and indicate required follow-up action status	
					(i.e. Individual Filter Self-	
				Y - Yes	Assessment - IFSA). [IFE Event	
	exceed1Ntu2Consec3Mth	string	R	N - No	Type 'B']	

		Data	Required (R), Optional (O), Conditional (C)			Additional
XML Element	XML Element Name	Туре		Format/Valid Values	If combinedPopServedName lessthan10k: Enter response code to Q6: Did any individual filter exceed 2.0 NTU in two consecutive measurements taken15 minutes apart at any time in each of two consecutive months? If yes complete the table and indicate required follow-up action status (i.e. Comprehensive Performance Evaluation - CPE). [IFE Event Type 'C'] If combinedPopServedName	Designations
	exceed2Ntu	string	R	Y - Yes N - No	morethan10k: Enter response code to Q6: Did any individual filter exceed 1.0 NTU in two consecutive measurements taken 15 minutes apart at any time in each of three consecutive months? If yes, complete the table and indicate required follow-up action status (i.e. Individual Filter Self-Assessment - IFSA). [IFE Event Type 'C']	

		Data	Required (R), Optional (O), Conditional (C)			Additional
XML Element	XML Element Name	Type	C Federa lly conditi onally require d	Y - Yes N - No	If combined Pop Served Name morethan 10k: Enter response code to Q5: Did any individual filter exceed 0.5 NTU in two consecutive measurements taken 15 minutes apart at the end of the first four hours of continuous operation after the filter has been backwashed, or otherwise taken offline? If yes, complete the table and indicate required follow-up action status (i.e. filter profile). [IFE Event Type 'B']	Designations
	creditUsingToolboxOption	string	0	Y - Yes N - No	Enter response code to whether user is seeking credit for using toolbox option for IFE performance	
	greatThan03Ntu2ConsecName	string	C Federa Ily conditi onally require d	Y - Yes N - No	Enter response code to whether IFE turbidity >0.3 NTU in two consecutive readings are 15 minutes apart during the month at any filter Federally Conditionally Required if "creditUsingToolboxOption" is set YES.	Federally Conditionally Required
	lessThan015Ntu95pctMsrNam	string	C	Y - Yes N - No	Enter response code to whether IFE turbidity <= 0.15 NTU is in at least 95% of the measurements for the month at each filter Federally Conditionally Required if "creditUsingToolboxOption" is set YES.	Federally Conditionally Required

XML Element >>ifeIndicatorFilt	XML Element Name	Data Type	Required (R), Optional (O), Conditional (C)	Format/Valid Values	Description	Additional Designations
er	ifeIndicatorFilter					
	filterNum	string	R	Alphanumeric	Filter Number. Federally Conditionally Required if Q4, Q5, Q6 are set to YES.	Federally Conditionally Required
	indFilterEventName	string	R	A B C D (If combinedPopServedNam e is greater or equal to 10,000)	Expected value is response code for Individual Filter Event*	
	exceedingTriggerDate	string	R	Date format: MM/DD/YYYYDate format: YYYY-MM-DD or MM/DD/YYYY	Federally Conditionally Required if Q4, Q5, Q6 are set to YES Enter in MM/DD/YYYY format in YYYY-MM-DD or MM/DD/YYYY format	Federally Conditionally Required
	exceedingTriggerTime	string	O	Time format: HH:MM Default value: 00:00	Federally Conditionally Required if Q4, Q5, Q6 are set to YES. Enter in 00:00 format	•
	turbidity	decimal	R	Precision 5, Scale 3 [00.000]	Turbidity (NTU)* Federally Conditionally Required if Q4, Q5, Q6 are set to YES.	Federally Conditionally Required
>>chlorineChlorami nePoe	chlorineChloraminePoe					
ner ve	See {opData}			Extends {opData} therefore all elements of opData included.		
	samplingLocation	string	O		Sampling Location	
	waterSourceDisplay	string	N/AR	Accepted for POST but will eventually be no longer supported. Use waterSourceCd.FSW -	GET contains Water SourceEnter one of the Filtering/Water Source code options	

XML Element	XML Element Name	Data Tempo	Required (R), Optional (O), Conditional (C)	Format/Valid Values	Description	Additional Designations
ANIL Element	AVIL Element Name	Type		Filtered Surface Water	Description	Designations
				USW - Unfiltered Surface		
				Water		
				GW - Groundwater		
				FSW - Filtered Surface		
				Water		
				USW - Unfiltered Surface Water	Enter one of the Filtering/Water	
	waterSourceCd	string	R	GW - Groundwater	Source code options	
		- Sumg		Precision 5, Scale 3	Minimum Disinfectant Residual	
	minDisinfectResidualReq	decimal		[00.000]	Req. at Sampling Location	
		.		D :: 0 0 1 0 5003	Number of Measurements	
	numMeasurementsReq	Int	R	Precision 2, Scale 0 [00]	Required	
	numMeasurementsTaken	Int	R	Precision 2, Scale 0 [00]	Number of Measurements Taken	
	numMeasureBelowMinimum	int		Precision 5, Scale 0 [00000]	Number of Measurements Below Minimum	
	numweasureBelowimmum	IIIt	C	[00000]	William	
			Federa			
			lly		Enter response code of whether	
			conditi		Using Chlorine.	
			onally		Conditionally Required if	
	usingChloring	atrina	require d	Y - Yes N - No	<"waterSourceCdDisplay>" is set to Unfiltered Surface Water.	Conditionally
>>chlorineChlorami	usingChlorine	string	u	IN - INO	to Offittered Surface water.	Required
nePoeDaily	chlorineChloraminePoeDaily					
	day	int	R	Valid day based on month	Enter valid Day within month	
	·			On	·	
	operationStatusName	string	R	Off	Enter response on Operation Status	

C Requir ed if Minim um Residu al < Minim um Requir Precision 5, Scale 3 ed [00.000] Minimum Residual Measured Federally Requir Free Total Enter one of the Type of Residual	XML Element	XML Element Name	Data Type	Required (R), Optional (O), Conditional (C)	Format/Valid Values	Description	Additional Designations
Free Total Enter one of the Type of Residual Measured options* C Requir ed if Minim um Residual (hours)+. Minim (hours)+. Federally Requir Precision 5, scale 2 if "minResidual" is less than Conditionally Required ed if (minDisinfectResidualReq". Required Ed if (minDisinfectResidualReq". Required (minDisinfectResidualReq").				Requir ed if Minim um Residu al < Minim um Requir	Precision 5, Scale 3	·	Federally Required
residualMeasuredName string R Combined Measured options* Federally Required if Required if Minim um Residu al < Duration < Minimum Residual (hours)+. Federally Conditionally Required Required Precision 5, scale 2 if "minResidual" is less than Conditionally duration decimal ed [000.00] "minDisinfectResidualReq". Required Required if Minim						E-4	
Requir ed if Minim um Residu al < Duration < Minimum Residual (hours)+. um Federally Conditionally Required Requir Precision 5, scale 2 if "minResidual" is less than Conditionally duration decimal ed [000.00] "minDisinfectResidualReq". Required C Requir ed if Minim		residualMeasuredName	string	R			Federally Required
C Requir ed if Minim		duration	decimal	Requir ed if Minim um Residu al < Minim um Requir		(hours)+. Federally Conditionally Required if "minResidual" is less than	Federally Conditionally
Residu MM/DD/YYYYDate Federally Conditionally Required al < format: YYYY-MM-DD if "minResidual" is less than Conditionally stateNotifyDt string Minim or MM/DD/YYYY "minDisinfectResidualReq". Required				C Requir ed if Minim um Residu al <	Date Format: MM/DD/YYYYDate format: YYYY-MM-DD	Date State Notified+ Federally Conditionally Required if "minResidual" is less than	Federally Conditionally

XML Element	XML Element Name	Data Type	mn Required (R), Optional (O), Conditional (C)	Format/Valid Values	Description	Additional Designations
	ph	decimal	R C Requir ed if Minim um Residu al at Entry Point is less than Fed Min Requir	Precision 4, scale 1 [000.0] Precision 3, scale 1	pH* Federally Conditionally Required if "usingChlorine" is set to YES Temperature (C) * (Unfiltered	Federally Conditionally Required
	temperature disinfectConcentration	decimal decimal	ed C Federa lly conditi onally require d	[00.0] Precision 5, scale 3 [00.000]	Surface Water) Disinfectant Concentration (C) in mg/l* (Unfiltered Surface Water)	Federally Required Federally Required

XML Element	XML Element Name	Data Type	Required (R), Optional (O), Conditional (C)	Format/Valid Values	Description	Additional Designations
			C Requir ed if Minim um Residu al at Entry Point is less than Fed Min Requir	Precision 5, scale 3	Effective Disinfectant Contact Time (T)* (Unfiltered Surface	
	effDisinfectContactTime	decimal	ed C Requir ed if Minim um Residu al at Entry Point is less than Fed Min	[00.000]	Water)	Federally Required
	requiredCt	decimal	Requir ed	Precision 5, scale 3 [00.000]	Required CT (min x mg/L) (Unfiltered Surface Water)	

XML Element	XML Element Name	Data Type	Required (R), Optional (O), Conditional (C)	Format/Valid Values	Description	Additional Designations
AVI DECINENT		Турс	C Requir ed if Minim um Residu al at Entry Point is less than Fed Min Requir	Precision 5, scale 3	CT Achieved (CT calc)	Designations
	minActualCt	decimal	ed	[00.000]	(Unfiltered Surface Water)	Federally Required
	ct999	decimal	C Federa lly conditi onally require d	Precision 5, scale 3 [00.000]	CT99.9 (Unfiltered Surface Water)	Federally Required
	sumAll	decimal	C Requir ed if Minim um Residu al at Entry Point is less than Fed	Precision 5, scale 3 [00.000]	Sum of all CTcalc/CT99.9 at the first customer* (Unfiltered Surface Water)	Federally Required

comments string O Alphanumeric - 250 chars Comments >toc Extends {opData} therefore all elements of opData included. sampleCd string R Alphanumeric - 25 chars Sample ID code	XML Element	XML Element Name		min Required (R), Optional (O), Conditional (C)	Format/Valid Values	Description	Additional Designations
>toc Extends {opData} therefore all elements of opData included. sampleCd string R Alphanumeric – 25 chars Sample ID code		achieved In activation Name	string	Requir ed if Minim um Residu al at Entry Point is less than Fed Min Requir ed	No	Inactivation (Unfiltered Surface Water)	Federally Required
Extends {opData} therefore all elements of opData included. sampleCd string R Alphanumeric – 25 chars Sample ID code		comments	string	O	Alphanumeric - 250 chars	Comments	
	>toc				therefore all elements of		
Accepted for POST but GET contains Reporting Lab will eventually be no NameAnalyzing Lab ID name (if name string N/AR longer supported. Use not reporting lab)					Accepted for POST but will eventually be no	GET contains Reporting Lab NameAnalyzing Lab ID name (if	

XML Element	XML Element Name	Data Type	Required (R), Optional (O), Conditional (C)	Format/Valid Values analyzingLabId.Alphanu meric - 80 chars	Description	Additional Designations
	analyzingLabId raaComputedQuarterly	string	R C Enable d only for March, June, Septe mber and Decem ber	Alphanumeric - 80 chars Precision 5, Scale 3 [00.000]	Reporting Lab ID RAA of Monthly TOC Removal Ratios. Refer to TOC rule for Federal Conditional Requirement.	Federally Conditionally Required
	raaAlternativeComplCriteria	decimal	C Federa lly conditi onally require d	Precision 5, Scale 3 [00.000]	RAA for Alternative Compliance Criteria Refer to TOC rule for Federal Conditional Requirement.	Federally Conditionally Required
	numPairedSamples	int	C Enable d only for March, June, Septe mber and Decem ber		# of Paired Samples/Quarter*	Federally Required

XML Element	XML Element Name	Data Type	Required (R), Optional (O), Conditional (C)	Format/Valid Values	Description	Additional Designations
	stateCalculateRaa	string	R	Y - Yes N - No	Enter response code whether State Calculates RAAs are for DBP Precursors	o congravious
	complianceName	string	R	Y - Yes N - No	Enter response code whether the system is in compliance with the enhanced coagulation or enhanced softening percent removal requirements in 40 CFR 141.135(b)?	Federally Required
	month1ArithmeticAvgPct	decimal	O	Precision 5, Scale 2 [000.00]	Month 1 Arthmetic Average % Reduction of TOC	·
	month2ArithmeticAvgPct	decimal	O	Precision 5, Scale 2 [000.00]	Month 2 Arthmetic Average % Reduction of TOC	
	month3ArithmeticAvgPct	decimal	O	Precision 5, Scale 2 [000.00]	Month 3 Arthmetic Average % Reduction of TOC	
>>tocDetail	tocDetail					
	tocDt	string	R	Date format: MM/DD/YYYYDate format: YYYY-MM-DD or MM/DD/YYYY Cannot be a future date	Enter Date in MM/DD/YYYY formatin YYYY-MM-DD or MM/DD/YYYY format*	Federally required
	rawWaterToc	decimal	R	Precision 5, Scale 2 [000.00]	Raw Water TOC*	Federally required
	checkRawLessThan2Name	string	R	Yes No	Check Raw <=2.0*	
	rawWaterAlkalinity	decimal	R	Precision 5, Scale 2 [000.00]	Raw Water Alkalinity*	Federally required
	finishedWaterToc	decimal	R	Precision 5, Scale 2 [000.00]	Finished Water TOC	Federally required

XML Element	XML Element Name	Data Type	Required (R), Optional (O), Conditional (C)	Format/Valid Values	Description	Additional Designations
	step1ReqTocRemovalPct	decimal	C Federa lly conditi onally require d	Precision 5, Scale 2 [000.00] Must be between 0 and 100	Step 1 Req. TOC Removal % Refer to TOC rule for Federal Conditional Requirement.	Federally Conditionally Required
	step1ActualTocRemovalPct	decimal	C Federa Ily conditi onally require d	Precision 5, Scale 2 [000.00] Must be between 0 and 100	Step 1Actual TOC Removal % Refer to TOC rule for Federal Conditional Requirement.	Federally Conditionally Required
	step1Ratio	decimal	C Federa lly conditi onally require d	Precision 4, Scale 2	Step 1 RemovalRatio. Calculated: step1ReqTocRemovalPct/ step1ActualTocRemovalPct Refer to TOC rule for Federal Conditional Requirement.	Federally Conditionally Required
	altComp	int	0	Precision 3	RAA for Alternative Compliance Criteria Refer to TOC rule for Federal Conditional Requirement.	Federally Conditionally Required
	altRatioAssigned	decimal	C Federa lly conditi onally require d	Precision 5, Scale 2 [000.00]	Alt. Ratio Assigned Refer to TOC rule for Federal Conditional Requirement.	Federally Conditionally Required

		Data	Required (R), Optional (O), Conditional (C)			Additional
XML Element	XML Element Name	Туре	<u> </u>	Format/Valid Values	Description	Designations
	step2ReqTocRemovalPct	decimal	O	Precision 5, Scale 2 [000.00] Must be between 0 and 100	Step 2 Req. TOC Removal % Refer to TOC rule for Federal Conditional Requirement.	Federally Conditionally Required
	step2ActualTocRemovalPct	decimal	0	Precision 5, Scale 2 [000.00] Must be between 0 and 100	Step 2 Actual TOC Removal % Refer to TOC rule for Federal Conditional Requirement.	Federally Conditionally Required
	step2Ratio	decimal	O	Precision 4, Scale 2 [00.00]	Step 2 RemovalRatio Calculated: step2ReqTocRemovalPct/ step2ActualTocRemovalPct Refer to TOC rule for Federal Conditional Requirement.	Federally Conditionally Required
	atan 2D amayal A aki aya 2N	atuin a	0	Yes	Enter response whether Removal was Achieved Refer to TOC rule for Federal	Federally Conditionally
	step2RemovalAchievedName comments	string	0	No Alphanumeric - 250 chars	Conditional Requirement. Comments	Required
	Comments	string	U	Aiphanumenc - 250 chars	Comments	

COMPOSITE DATA XML FILE STRUCTURE

A.1.3 Composite XML Structure and data elements

Table 5 – Composite XML Structure and data elements

If you are currently submitting XML Sample data to CMDP, please see <u>APPENDIX A - XML CHANGES RELATED TO RELEASE 1.11 (MARCH 2018)</u> for a summary of the changes to the XML structure and data elements for CMDP Release 1.11.

XML	XML Element		Required (R), Optional (O), Conditional (C)		
Element	Name	Data Type		Format/Valid Values	Description
samples	samples	XML Root Element			
>composi teSample	compositeSample				
	compositeSampleId	R			Lab assigned Composite Sample ID
	compositeDate	R			Enter Composite Sample Date in YYYY-MM-DD or MM/DD/YYYY format
	sampleVolume	decimal	0	Precision 9, Scale 2 [0000000.00]	Sample Volume (ML)
	legalEntityName	String	N/A	Accepted for POST but will eventually be no longer supported. Use laboratoryId.	GET contains Laboratory Name
				11,	,
	laboratoryId	String	R		Laboratory ID
				true	
	rad	boolean		false	Enter response For Radionuclides

XML Element	XML Element Name	Data Type	Required (R), Optional (O), Conditional (C)	Format/Valid Values	Description
>sample	sample				
	wsId facilityName	string string	R N/A	9 chars – first 2 chars for state code and next 7 chars for water system ID Accepted for POST but will eventually be no longer supported. Use stateAssignedFacId.	Expected value is Water System ID followed by the Federal ID assigned to the water system GET contains Facility Name
	stateAssignedFacId	string	R	Alphanumeric - 40 chars	State Assigned Facility Identifier / Code
	samplingPointId	string	R	Alphanumeric - 40 chars	State Assigned Sampling Point ID
	samplingLocation	string	О	Alphanumeric - 250 chars	Free Form Text
	sampleCd	string	R	Alphanumeric - 80 chars	Laboratory assigned Sample ID
	collectionDate	string	R	Date format: YYYY-MM-DD or MM/DD/YYYY	Enter Collection Date in YYYY-MM-DD or MM/DD/YYYY format
	collectionTime	string	O	Time format: 00:00	Enter Collection Time in 00:00 format
	legalEntityName	string	N/A	Accepted for POST but will eventually be no longer supported. Use laboratoryId.	GET contains Reporting Laboratory Name
	laboratoryId	string	R	Alphanumeric - 40 chars	Reporting Laboratory ID
	sampleTypeName	string	N/A	Accepted for POST but will eventually be no longer supported. Use sampleTypeCd. Submit Code (i.e. RT)	GET contains Sample Type Name
	sampleTypeCd	string	R	[Code] - [Description]: (Microbial /ChemsRads) RT - Routine RP - Repeat TG - Triggered CO - Confirmation	Expected value is the Sample Type code

XML Element	XML Element Name	Data Type	Required (R), Optional (O), Conditional (C)	Format/Valid Values	Description
				SP - Special BB - Batch Blanks FB - Field Blanks PE - Performance Evaluation SB - Shipping Blanks ST - Split Blanks MR - Maximum Residence Time MS - Matrix Spike	
				[Code] - [Description]: (Cryptosporidium) RT - Field (i.e., Routine) MS - Matrix Spike SP - Special PE - Performance Evaluation BB - Batch Blanks FB - Field Blanks SB - Shipping Blanks ST - Split Blanks	
	sampleVolume	decimal	O	Precision 9, Scale 2 [0000000.00]	Sample Volume
	comments	string	O	Alphanumeric - 250 chars	Comments
	sampleCategoryNam e	string	R	Composite	Sample Category Name
>composi teSample ResultCh em	compositeSampleRe sultChem				

XML	XML Element		Required (R), Optional (O), Conditional (C)		
Element	Name	Data Type		Format/Valid Values	Description
	analyteName		N/A	Accepted for POST but will eventually be no longer supported. Use analyteCd. NOTE: Valid values cannot	GET contains Analyte Name
	onolytoCd	atain a	D	be listed due to the large size of possible values (which is also dependent upon user	Anglyta Code Name
	analyteCd	string	R	primacyAgency) NOTE: Valid values cannot	Analyte Code Name
	methodCd	string	0	be listed due to the large size of possible values (which is also dependent upon user primacyAgency)	Method Code If value submitted, must submit Method Name. Used as lookup for Method.
		j	0	NOTE: Valid values cannot be listed due to the large size of possible values (which is also dependent upon user	Method Code If value submitted, must submit Method Code.
	methodName	string	О	primacyAgency) Date format: YYYY-MM-DD	Used as lookup for Method. Enter Analysis Start Date in YYYY-MM-DD or
	analysisStartDt	string	O	or MM/DD/YYYY	MM/DD/YYYY format
	analysisStartTime	string	O	Time format: 00:00	Enter Analysis Start Time in 00:00 format
	analysisComplDt	string	O	Date format: YYYY-MM-DD or MM/DD/YYYY	Analysis Completed Date in YYYY-MM-DD or MM/DD/YYYY format
	analysisComplTime	string	O	Time format: 00:00	Enter Analysis Completed Time in 00:00 format
	name	string	N/A	Accepted for POST but will eventually be no longer supported. Use analyzingLabId.	GET contains Analyzing Lab Name
	analyzingLabId	string	O	Alphanumeric - 80 chars	Analyzing Laboratory ID
	comments	string	0	Alphanumeric - 250 chars	, , ,

XML	XML Element		Required (R), Optional (O), Conditional (C)		
Element	Name	Data Type		Format/Valid Values	Description
	volumeAssayed	string	O	1 5 10 100 400 500	Enter one of the Volume Assayed –(Microbial and ChemsRads) options Per – (Cryptosporidium)
	voiumeAssayeu	Sumg	U	500	r er – (Cryptosportatum)
	notDetected	boolean	R	true false	Enter response whether the Analyte was Not Detected
			_	Precision 15, Scale 9	
	result	decimal	O	[000000.000000000]	Result Value
				C LANG NTU pH umho/cm TON CU mg/L ug/L ng/L pCi/L	
	resultUomName	string	O	MFL O. G. 1. 2	Expected value is the type of Result Unit of Measure
	standardDeviation	decimal	О	Precision 9, Scale 2 [0000000.00] Precision 15, Scale 9	Standard Deviation
	reportingLevel	decimal	O	[000000.000000000]	Reporting Limit

Element Name Data Type Format/Valid Values Description C LANG	
LANG	
NTU pH umho/cm TON CU mg/L ug/L ng/L reportingLevelUomNa pCi/L pCi/L Expected value is the type of Reporting Limit Un me string O MFL Measure	nit of

APPENDIX A - XML CHANGES RELATED TO RELEASE 1.11 (MARCH 2018)

Changes were made to the XML structure and data elements for CMDP Release 1.11. Although these changes are noted in the main tables above, a summary of the specific changes are being provided below.

NOTE: This appendix is <u>applicable only to users who are currently submitting</u> (POST) sampling data of any type into CMDP. <u>If you are creating an XML file to submit any sample data type to CMDP for the first time, this information does not apply, because you should be structuring your XML based on the updated XML schema tags as detailed in the tables above.</u>

REQUIRED CHANGES FOR POST (SAMPLE DATA INTO CMDP)

The following changes were made to the Method elements and are required for submission (POST). **Note: if either element has a value, both are required.**

Original XML Tag	New XML Tag	Description	Note (Element)	Nodes2
				opDataBromateRe
				sult
			bromateResult	opDataLcrWqpDts
			lcrWqpDts	opDataLcrWqpEps
			lcrWqpEps	opDataHaa5Detail
			haa5Detail	op Data Tthm Detail
			tthmDetail	sampleResult
			sampleResult	$composite {\sf Sample R}$
methodName	methodCd	Method Code	compositeSampleResultChem	esultChem
methodName	methodName	Method Name	same as above	same as above

OPTIONAL CHANGES FOR POST (SAMPLE DATA INTO CMDP)

The following changes were made to XML elements for Sample Data submission (POST).

While the tags listed under the "Original XML tag" column may still be used, it is strongly recommended that submitters update their XML submissions to use the values under the "New XML Tag" column. The Original XML tag will eventually be no longer supported (for POST data into CMDP) in a future release.

Original XML Tag	New XML Tag	Description	Node (Element)
Original XIVIE Tag	New Airie Tag	Сэсприон	Hode (Element)
			an manda Dansult
	1 . 01		sampleResult
analyteName	analyteCd	Analyte Code	compositeSampleResultChem
			operationalData
			IcrWqpDts
			IcrWqpEps
			sample
facilityName	stateAssignedFacId	State Assigned Facility ID	compositeSample
			sample
legalEntityName	laboratoryId	Reporting Lab ID	compositeSample
original Legal Entity Name	originalLaboratoryId	Original Reporting Lab ID	sample
			bromateResult
			chlorineDioxideChlorite
			IcrWqpDts
			IcrWqpEps
			haa5Detail
			tthmDetail
			sampleResult
name	analyzingLabId	Analyzing Lab Id	compositeSampleResultChem
	, ,	, ,	chlorineDioxide
name	laboratoryId	Reporting Lab Id	toc
			bromate
reportingLabName	laboratoryId	Reporting Lab Id	opDataTthmHaa5
sampleTypeName	sampleTypeCd	Sample Type	sample
interferenceName	interferenceCd	Interference	sample Result Micro
measureName	measureCd	Measures	sampleResultMeasure
waterSourceDisplay	waterSourceCd	Filtering/Water Source	chlorineChloraminePoe
typeName	typeCd	Units	sampleResultMicro
./	.71 **		