

03/28/2018

REV.0

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Richland
2800 George Washington Way
Richland, WA 99352
Tel: (509)375-3131

TestAmerica Job ID: 300-6863-1
TestAmerica Sample Delivery Group: WC2762
Client Project/Site: F16-046

For:
CH2M Hill Plateau Remediation Company
825 Jadwin Avenue
Richland, Washington 99352

Attn: CPP Sample Management



Authorized for release by:
3/28/2018 11:18:40 AM

Ashley Worthy, Project Manager I
(509)375-3131
ashley.worthy@testamericainc.com

LINKS

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www.testamericainc.com

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed in this package. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the attached signature.

The laboratory is accredited to EPA 7196A in Solid and Chemical Materials, per Washington State Department of Ecology this is approved for non-discharge water samples.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13



Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Chain of Custody	5
Detection Summary	17
Client Sample Results	19
QC Sample Results	22
QC Association Summary	25
Lab Chronicle	26
Method Summary	30
Sample Summary	31
Receipt Checklists	32

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-046

TestAmerica Job ID: 300-6863-1
SDG: WC2762

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
D	The reported value is from a dilution.
B	Estimated result. Result is less than the RL, but greater than MDL
U	Analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
U	Analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-046

TestAmerica Job ID: 300-6863-1
SDG: WC2762

Job ID: 300-6863-1

Laboratory: TestAmerica Richland

Narrative

Job Narrative
300-6863-1

Comments

No additional comments.

Receipt

The samples were received on 3/13/2018 12:05 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.4° C.

HPLC/IC

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F16-046-1613	PAGE 1 OF 1
COLLECTOR Kevin Patterson CHPRC		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC	REQUIRED TAT 15 Days	
SAMPLING LOCATION 289-T, Influent Tank, Valve V12-Y30		PROJECT DESIGNATION 200W Pump & Treat - Treatment Plant Compliance Sampling - Water		SAF NO. F16-046	ORIGINAL	
ICE CHEST NO. N/A		FIELD LOGBOOK NO. HNF-N-4911694	ACTUAL SAMPLE DEPTH N/A	PURCHASE ORDER/CHARGE CODE 304235		
SHIPPED TO TestAmerica Incorporated, Richland		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION	Cool <=6C
		HOLDING TIME	24 Hours
		TYPE OF CONTAINER	aG
		NO. OF CONTAINER(S)	1
	SPECIAL HANDLING AND/OR STORAGE	N/A	SAMPLE ANALYSIS

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03/28/2018

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS TRVL-18-085
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
Kevin Patterson CHPRC	MAR 13 2018 12:55	Frank Holm CHPRC	MAR 13 2018 1:05	
Frank Holm CHPRC	MAR 13 2018 12:05	Tina R Holm TARL	3/13/18/12:05	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME	

REV.0

03/28/2018

3/28/2018

Page 6 of 32

CH2M Hill Plateau Remediation Company			CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F16-046-1619	PAGE 1 OF 1
COLLECTOR Kevin Patterson CHPRC		COMPANY CONTACT SUMNER, LC		TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC		REQUIRED TAT 15 Days	
SAMPLING LOCATION 289-T, Effluent Tank, Valve V20-Y80 <u>C</u> *		PROJECT DESIGNATION 200W Pump & Treat - Treatment Plant Compliance Sampling - Water			SAF NO. F16-046	ORIGINAL		
ICE CHEST NO. N/A		FIELD LOGBOOK NO. HNF-N-49116/94		ACTUAL SAMPLE DEPTH N/A	PURCHASE ORDER/CHARGE CODE 304235		METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO TestAmerica Incorporated, Richland			OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A			
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.		PRESERVATION Cool <=6C	24 Hours	68063 WC2762			
	SPECIAL HANDLING AND/OR STORAGE N/A		HOLDING TIME	aG				
			TYPE OF CONTAINER	1				
			NO. OF CONTAINER(S)	60mL				
			VOLUME	7196 CR6; COMMON;				
SAMPLE ANALYSIS								
SAMPLE NO.	FILTERED	MATRIX*	SAMPLE DATE	SAMPLE TIME				
83HMT7	N/A	WATER	MAR 13 2018	0942	✓			

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM Kevin Patterson CHPRC	DATE/TIME MAR 13 2018	RECEIVED BY/STORED IN Mike Esparza CHPRC	DATE/TIME MAR 13 2018 1010	TRVL-18-085	
Mike Esparza CHPRC	MAR 13 2018 1030	Frank Holt CHPRC	MAR 13 2018 1030		
Frank Holt CHPRC	MAR 13 2018 1205	Tina R Holm	TARL J = 3/13/18/12:05		
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F16-046-1630	PAGE 1 OF 1
COLLECTOR Kevin Patterson CHPRC		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC	REQUIRED TAT 15 Days	
SAMPLING LOCATION 289-TA, Pre UIX Resin Column, Valve V25-Y11A1		PROJECT DESIGNATION 200W Pump & Treat - Treatment Plant Compliance Sampling - Water		SAF NO. F16-046	ORIGINAL	
ICE CHEST NO. N/A		FIELD LOGBOOK NO. HNF-N-491 16/99	ACTUAL SAMPLE DEPTH N/A	PURCHASE ORDER/CHARGE CODE 304235	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO TestAmerica Incorporated, Richland		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION	Cool <=6C
		HOLDING TIME	24 Hours
		TYPE OF CONTAINER	aG
		NO. OF CONTAINER(S)	1
		VOLUME	60mL
SPECIAL HANDLING AND/OR STORAGE N/A		SAMPLE ANALYSIS	7196, CR6; COMMON;

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03/28/2018

SAMPLE NO.	FILTERED	MATRIX*	SAMPLE DATE	SAMPLE TIME	
PSHXP9	N/A	WATER	MAR 13 2018	0802	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	TRVL-18-085
Kevin Patterson CHPRC	MAR 13 2018 0900	Mike Esparza CHPRC	MAR 13 2018 0900	3/13/18/12:05
Mike Esparza CHPRC	MAR 13 2018 0925	Frank Hall CHPRC	MAR 13 2018 0925	
Frank Hall CHPRC	MAR 13 2018 1205	Tina R Holm TARK		
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F16-046-1636	PAGE 1 OF 1
COLLECTOR Kevin Patterson CHPRC	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC		REQUIRED TAT 15 Days	
SAMPLING LOCATION 289-TA, Pre Tc99IX Resin Tanks, Valve V11-Y20_*A	PROJECT DESIGNATION 200W Pump & Treat - Treatment Plant Compliance Sampling - Water		SAF NO. F16-046	ORIGINAL		
CHEST NO. N/A	FIELD LOGBOOK NO. HNF-N- 491 16/04	ACTUAL SAMPLE DEPTH N/A	PURCHASE ORDER/CHARGE CODE 304235	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO TestAmerica Incorporated, Richland	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A				

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION	Cool <=6C
		HOLDING TIME	24 Hours
		TYPE OF CONTAINER	aG
		NO. OF CONTAINER(S)	1
		VOLUME	60mL
SPECIAL HANDLING AND/OR STORAGE N/A		SAMPLE ANALYSIS 7196 CR6: COMMON;	

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SAMPLE NO.	FILTERED	MATRIX*	SAMPLE DATE	SAMPLE TIME	
13HXR5	N/A	WATER	MAR 13 2018	0915	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
Kevin Patterson CHPRC	MAR 13 2018 1010	Mike Esparza CHPRC	MAR 13 2018 1010	TRVL-18-085 3/13/18/12:05
Mike Esparza CHPRC	MAR 13 2018 1030	Frank Hall CHPRC	MAR 13 2018 1030	
Frank Hall CHPRC	MAR 13 2018 1205	Tina R. Holm TARL		
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME

REV. 0 03/28/2018

3/28/2018 Page 9 of 32

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F16-046-1647	PAGE 1 OF 1
COLLECTOR Kevin Patterson CHPRC		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC	REQUIRED TAT 15 Days	
SAMPLING LOCATION 289-TA, Post Tc99IX Resin Tanks, Valve V06-Y22		PROJECT DESIGNATION 200W Pump & Treat - Treatment Plant Compliance Sampling - Water		SAF NO. F16-046	ORIGINAL	
ICE CHEST NO. N/A		FIELD LOGBOOK NO. HNF-N-49116/94	ACTUAL SAMPLE DEPTH N/A	PURCHASE ORDER/CHARGE CODE 304235	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO TestAmerica Incorporated, Richland		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

REV.0

03/28/2018

MATRIX*
A=Air
DL=Drum
L=Liquids
DS=Drum
S=Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

SPECIAL HANDLING AND/OR STORAGE
N/A

PRESERVATION	Cool <=6C
HOLDING TIME	24 Hours
TYPE OF CONTAINER	aG
NO. OF CONTAINER(S)	1
VOLUME	60mL
SAMPLE ANALYSIS	7196, CR6: COMMON;

6863
W02762

SAMPLE NO.	FILTERED	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B3HXT6	N/A	WATER	MAR 13 2018	0828	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	TRVL-18-085	
Kevin Patterson CHPRC	MAR 13 2018 0925	Mike Esparza CHPRC	MAR 13 2018 0925	3/13/18/12:05	
Mike Esparza CHPRC	MAR 13 2018 0925	Frank Heil CHPRC	MAR 13 2018 0925		
Frank Heil CHPRC	MAR 13 2018 12:05	Tina R Holm THAL J He			
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F16-046-1614	PAGE 1 OF 1
COLLECTOR Kevin Patterson CHPRC		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC	REQUIRED TAT 15 Days ORIGINAL	
SAMPLING LOCATION 289-T, Influent Tank, Valve V12-Y30		PROJECT DESIGNATION 200W Pump & Treat - Treatment Plant Compliance Sampling - Water		SAF NO. F16-046		
ICE CHEST NO. N/A		FIELD LOGBOOK NO. HNF-N-491 16/94	ACTUAL SAMPLE DEPTH N/A	PURCHASE ORDER/CHARGE CODE 304235	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO TestAmerica Incorporated, Richland		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION Cool <=6C
		HOLDING TIME 48 Hours
		TYPE OF CONTAINER P
		NO. OF CONTAINER(S) 1
	VOLUME 250mL	
SPECIAL HANDLING AND/OR STORAGE N/A		SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS

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W02762

SAMPLE NO.	FILTERED	MATRIX*	SAMPLE DATE	SAMPLE TIME	
33HMT2	N/A	WATER	MAR 13 2018	1015	✓

CHAIN OF POSSESSION RELINQUISHED BY/REMOVED FROM Kevin Patterson, CHPRC		DATE/TIME MAR 13 2018 1055		SIGN/ PRINT NAMES RECEIVED BY/STORED IN Frank Hais, CHPRC		DATE/TIME MAR 13 2018 1055		SPECIAL INSTRUCTIONS TRVL-18-085 (1) 300.0_ANIONS_IC: COMMON; 300.0_ANIONS_IC: COMMON (Add-on) {Bromide};
Frank Hais, CHPRC		MAR 13 2018 1205		B. Jergenson, TARL		3-13-18/1205		
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY				DATE/TIME		

REV 0 03/28/2018

3/28/2018 Page 11 of 32

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F16-046-1637	PAGE 1 OF 1
COLLECTOR Kevin Patterson CHPRC	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC		REQUIRED TAT 15 Days	
SAMPLING LOCATION 289-TA, Pre Tc99IX Resin Tanks, Valve V11-Y20_* A		PROJECT DESIGNATION 200W Pump & Treat - Treatment Plant Compliance Sampling - Water		SAF NO. F16-046	ORIGINAL	
ICE CHEST NO. N/A	FIELD LOGBOOK NO. HNF-N-491 16/94	ACTUAL SAMPLE DEPTH N/A	PURCHASE ORDER/CHARGE CODE 304235	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO TestAmerica Incorporated, Richland		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION	Cool <=6C
		HOLDING TIME	48 Hours
		TYPE OF CONTAINER	P
		NO. OF CONTAINER(S)	1
		VOLUME	250mL
SPECIAL HANDLING AND/OR STORAGE N/A		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	FILTERED	MATRIX*	SAMPLE DATE	SAMPLE TIME	
33HXR6	N/A	WATER	MAR 13 2018	0915	✓

03/28/2018

REV 0

3/28/2018

Page 12 of 32

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	TRVL-18-085 (1) 300.0_ANIONS_IC: COMMON; 300.0_ANIONS_IC: COMMON (Add-on) {Bromide};	
Kevin Patterson CHPRC	MAR 13 2018 1010	Mike Esparza CHPRC	MAR 13 2018 1010		
Mike Esparza CHPRC	MAR 13 2018 1030	Frank Heff CHPRC	MAR 13 2018 1030		
Frank Heff CHPRC	MAR 13 2018 1205	B. Jorgenson, TARL	3-13-18 / 1205		
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F16-046-1620	PAGE 1 OF 1
COLLECTOR Kevin Patterson CHPRC		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. . 376-3922	PROJECT COORDINATOR SUMNER, LC	REQUIRED TAT 15 Days	
SAMPLING LOCATION 289-T, Effluent Tank, Valve V20-Y80 <i>C*</i>		PROJECT DESIGNATION 200W Pump & Treat - Treatment Plant Compliance Sampling - Water		SAF NO. F16-046	ORIGINAL	
ICE CHEST NO. N/A		FIELD LOGBOOK NO. HNF-N- 491 16/04	ACTUAL SAMPLE DEPTH N/A	PURCHASE ORDER/CHARGE CODE 304235		
SHIPPED TO TestAmerica Incorporated, Richland		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION	Cool <=6C
		HOLDING TIME	48 Hours
		TYPE OF CONTAINER	P
		NO. OF CONTAINER(S)	1
		VOLUME	250mL
SPECIAL HANDLING AND/OR STORAGE N/A		SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS	

*68603
WCT762*

03/28/2018

SAMPLE NO.	FILTERED	MATRIX*	SAMPLE DATE	SAMPLE TIME	
33HMT8	N/A	WATER	MAR 13 2018	0942	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
Kevin Patterson CHPRC	<i>[Signature]</i> MAR 13 2018 1010	Mike Esparza CHPRC	<i>[Signature]</i> MAR 13 2018 1010	
Mike Esparza CHPRC	<i>[Signature]</i> MAR 13 2018 1030	Frank Hall CHPRC	<i>[Signature]</i> MAR 13 2018 1030	
Frank Hall CHPRC	<i>[Signature]</i> MAR 13 2018 1205	B. Jorgenson, TARL	3-13-18/1205	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME

TRVL-18-085
(1) 300.0_ANIONS_IC: COMMON; 300.0_ANIONS_IC: COMMON (Add-on) {Bromide};

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F16-046-1648	PAGE 1 OF 1
COLLECTOR Kevin Patterson CHPRC		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC	REQUIRED TAT 15 Days	
SAMPLING LOCATION 289-TA, Post Tc99IX Resin Tanks, Valve V06-Y22		PROJECT DESIGNATION 200W Pump & Treat - Treatment Plant Compliance Sampling - Water		SAF NO. F16-046	ORIGINAL	
ICE CHEST NO. N/A		FIELD LOGBOOK NO. HNF-N-49116/94	ACTUAL SAMPLE DEPTH N/A	PURCHASE ORDER/CHARGE CODE 304235		
SHIPPED TO TestAmerica Incorporated, Richland		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION	Cool <=6C
		HOLDING TIME	48 Hours
		TYPE OF CONTAINER	P
		NO. OF CONTAINER(S)	1
	SPECIAL HANDLING AND/OR STORAGE	N/A	SAMPLE ANALYSIS

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WC 2762

SAMPLE NO.	FILTERED	MATRIX*	SAMPLE DATE	SAMPLE TIME	
33HXT7	N/A	WATER	MAR 13 2018	0828	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS TRVL-18-085 (1) 300.0_ANIONS_IC: COMMON; 300.0_ANIONS_IC: COMMON (Add-on) {Bromide};
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
Kevin Patterson CHPRC	MAR 13 2018 0828	Mike Esparza CHPRC	MAR 13 2018 0825	
Mike Esparza CHPRC	MAR 13 2018 0828	Frank Hall CHPRC	MAR 13 2018 0825	
Frank Hall CHPRC	MAR 13 2018 0828	B. Jorgenson, TARL	3-13-18/1205	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME	

REV 0 03/28/2018

3/28/2018 Page 15 of 32

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F16-046-1631	PAGE 1 OF 1
COLLECTOR Kevin Patterson CHPRC		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC	REQUIRED TAT 15 Days	
SAMPLING LOCATION 289-TA, Pre UDX Resin Column, Valve V25-Y11A1		PROJECT DESIGNATION 200W Pump & Treat - Treatment Plant Compliance Sampling - Water		SAF NO. F16-046	ORIGINAL	
ICE CHEST NO. N/A		FIELD LOGBOOK NO. HNF-N- 491 16/94	ACTUAL SAMPLE DEPTH N/A	PURCHASE ORDER/CHARGE CODE 304235	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO TestAmerica Incorporated, Richland		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

REV.0

03/28/2018

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.		PRESERVATION Cool <=6C		
			HOLDING TIME 48 Hours		
			TYPE OF CONTAINER P		
			NO. OF CONTAINER(S) 1		
			VOLUME 250mL		
SPECIAL HANDLING AND/OR STORAGE N/A		SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	FILTERED	MATRIX*	SAMPLE DATE	SAMPLE TIME	
83HXRO	N/A	WATER	MAR 13 2018	0802	✓

6863
WC2762

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN		TRVL-18-085	
DATE/TIME		DATE/TIME		(1) 300.0_ANIONS_IC: COMMON; 300.0_ANIONS_IC: COMMON (Add-on) {Bromide};	
Kevin Patterson CHPRC	MAR 13 2018 0902	Mike Esperza CHPRC	MAR 13 2018 0900		
Mike Esperza CHPRC	MAR 13 2018 1205	Frank Hall CHPRC	MAR 13 2018		
Frank Hall CHPRC	MAR 13 2018	B.Jorgenson, TARL	3-13-18/1205		
FINAL SAMPLE DISPOSITION		DISPOSAL METHOD		DISPOSED BY	
				DATE/TIME	

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-046

TestAmerica Job ID: 300-6863-1
SDG: WC2762

Client Sample ID: B3HMT1

Lab Sample ID: 300-6863-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.032		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B3HMT7

Lab Sample ID: 300-6863-2

No Detections.

Client Sample ID: B3HMT3

Lab Sample ID: 300-6863-3

No Detections.

Client Sample ID: B3HXP9

Lab Sample ID: 300-6863-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.0048		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B3HXR5

Lab Sample ID: 300-6863-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.026		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B3HXT6

Lab Sample ID: 300-6863-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.018		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B3HMT2

Lab Sample ID: 300-6863-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	22	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	32	D	0.28	0.14	mg/L	10		300.0	Total/NA
Fluoride	0.33	D	0.10	0.050	mg/L	2		300.0	Total/NA
Nitrite as N	0.077	D	0.076	0.038	mg/L	2		300.0	Total/NA
Sulfate	64	D	0.50	0.25	mg/L	2		300.0	Total/NA
Bromide	0.22	B D	0.25	0.13	mg/L	2		300.0	Total/NA

Client Sample ID: B3HXR6

Lab Sample ID: 300-6863-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	16	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	32	D	0.28	0.14	mg/L	10		300.0	Total/NA
Fluoride	0.41	D	0.10	0.050	mg/L	2		300.0	Total/NA
Nitrite as N	0.084	D	0.076	0.038	mg/L	2		300.0	Total/NA
Sulfate	61	D	0.50	0.25	mg/L	2		300.0	Total/NA
Bromide	0.22	B D	0.25	0.13	mg/L	2		300.0	Total/NA

Client Sample ID: B3HMT4

Lab Sample ID: 300-6863-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	59	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	1.1	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.32	D	0.10	0.050	mg/L	2		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Richland

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-046

TestAmerica Job ID: 300-6863-1
SDG: WC2762

Client Sample ID: B3HMV4 (Continued)

Lab Sample ID: 300-6863-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrite as N	0.24	D	0.076	0.038	mg/L	2		300.0	Total/NA
Sulfate	110	D	2.5	1.3	mg/L	10		300.0	Total/NA
Bromide	0.56	D	0.25	0.13	mg/L	2		300.0	Total/NA

Client Sample ID: B3HMT8

Lab Sample ID: 300-6863-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	59	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	1.1	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.31	D	0.10	0.050	mg/L	2		300.0	Total/NA
Nitrite as N	0.24	D	0.076	0.038	mg/L	2		300.0	Total/NA
Sulfate	110	D	2.5	1.3	mg/L	10		300.0	Total/NA
Bromide	0.56	D	0.25	0.13	mg/L	2		300.0	Total/NA

Client Sample ID: B3HXT7

Lab Sample ID: 300-6863-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	16	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	31	D	0.28	0.14	mg/L	10		300.0	Total/NA
Fluoride	0.42	D	0.10	0.050	mg/L	2		300.0	Total/NA
Nitrite as N	0.077	D	0.076	0.038	mg/L	2		300.0	Total/NA
Sulfate	80	D	2.5	1.3	mg/L	10		300.0	Total/NA
Bromide	0.22	B D	0.25	0.13	mg/L	2		300.0	Total/NA

Client Sample ID: B3HXR0

Lab Sample ID: 300-6863-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	15	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	37	D	0.28	0.14	mg/L	10		300.0	Total/NA
Fluoride	0.34	D	0.10	0.050	mg/L	2		300.0	Total/NA
Nitrite as N	0.081	D	0.076	0.038	mg/L	2		300.0	Total/NA
Sulfate	70	D	0.50	0.25	mg/L	2		300.0	Total/NA
Bromide	0.20	B D	0.25	0.13	mg/L	2		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Richland

Client: CH2M Hill Plateau Remediation Company
 Project/Site: F16-046

TestAmerica Job ID: 300-6863-1
 SDG: WC2762

Client Sample ID: B3HMT1

Lab Sample ID: 300-6863-1

Date Collected: 03/13/18 10:15
 Date Received: 03/13/18 12:05

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.032		0.0040	0.0015	mg/L			03/13/18 13:58	1

Client Sample ID: B3HMT7

Lab Sample ID: 300-6863-2

Date Collected: 03/13/18 09:42
 Date Received: 03/13/18 12:05

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0015	U	0.0040	0.0015	mg/L			03/13/18 13:59	1

Client Sample ID: B3HMT3

Lab Sample ID: 300-6863-3

Date Collected: 03/13/18 09:42
 Date Received: 03/13/18 12:05

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0015	U	0.0040	0.0015	mg/L			03/13/18 13:59	1

Client Sample ID: B3HXP9

Lab Sample ID: 300-6863-4

Date Collected: 03/13/18 08:02
 Date Received: 03/13/18 12:05

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0048		0.0040	0.0015	mg/L			03/13/18 13:59	1

Client Sample ID: B3HXR5

Lab Sample ID: 300-6863-5

Date Collected: 03/13/18 09:15
 Date Received: 03/13/18 12:05

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.026		0.0040	0.0015	mg/L			03/13/18 14:00	1

Client Sample ID: B3HXT6

Lab Sample ID: 300-6863-6

Date Collected: 03/13/18 08:28
 Date Received: 03/13/18 12:05

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.018		0.0040	0.0015	mg/L			03/13/18 14:00	1

Client Sample ID: B3HMT2

Lab Sample ID: 300-6863-7

Date Collected: 03/13/18 10:15
 Date Received: 03/13/18 12:05

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22	D	0.40	0.20	mg/L			03/13/18 21:44	2
Nitrate as N	32	D	0.28	0.14	mg/L			03/14/18 00:25	10
Fluoride	0.33	D	0.10	0.050	mg/L			03/13/18 21:44	2

TestAmerica Richland

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-046

TestAmerica Job ID: 300-6863-1
SDG: WC2762

Client Sample ID: B3HMT2

Lab Sample ID: 300-6863-7

Date Collected: 03/13/18 10:15

Matrix: Water

Date Received: 03/13/18 12:05

Method: 300.0 - Anions, Ion Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	0.077	D	0.076	0.038	mg/L			03/13/18 21:44	2
Sulfate	64	D	0.50	0.25	mg/L			03/13/18 21:44	2
Bromide	0.22	B D	0.25	0.13	mg/L			03/13/18 21:44	2

Client Sample ID: B3HXR6

Lab Sample ID: 300-6863-8

Date Collected: 03/13/18 09:15

Matrix: Water

Date Received: 03/13/18 12:05

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	16	D	0.40	0.20	mg/L			03/13/18 21:28	2
Nitrate as N	32	D	0.28	0.14	mg/L			03/14/18 00:09	10
Fluoride	0.41	D	0.10	0.050	mg/L			03/13/18 21:28	2
Nitrite as N	0.084	D	0.076	0.038	mg/L			03/13/18 21:28	2
Sulfate	61	D	0.50	0.25	mg/L			03/13/18 21:28	2
Bromide	0.22	B D	0.25	0.13	mg/L			03/13/18 21:28	2

Client Sample ID: B3HMV4

Lab Sample ID: 300-6863-9

Date Collected: 03/13/18 09:42

Matrix: Water

Date Received: 03/13/18 12:05

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	59	D	0.40	0.20	mg/L			03/13/18 21:12	2
Nitrate as N	1.1	D	0.056	0.028	mg/L			03/13/18 21:12	2
Fluoride	0.32	D	0.10	0.050	mg/L			03/13/18 21:12	2
Nitrite as N	0.24	D	0.076	0.038	mg/L			03/13/18 21:12	2
Sulfate	110	D	2.5	1.3	mg/L			03/13/18 23:53	10
Bromide	0.56	D	0.25	0.13	mg/L			03/13/18 21:12	2

Client Sample ID: B3HMT8

Lab Sample ID: 300-6863-10

Date Collected: 03/13/18 09:42

Matrix: Water

Date Received: 03/13/18 12:05

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	59	D	0.40	0.20	mg/L			03/13/18 20:56	2
Nitrate as N	1.1	D	0.056	0.028	mg/L			03/13/18 20:56	2
Fluoride	0.31	D	0.10	0.050	mg/L			03/13/18 20:56	2
Nitrite as N	0.24	D	0.076	0.038	mg/L			03/13/18 20:56	2
Sulfate	110	D	2.5	1.3	mg/L			03/13/18 23:36	10
Bromide	0.56	D	0.25	0.13	mg/L			03/13/18 20:56	2

Client Sample ID: B3HXT7

Lab Sample ID: 300-6863-11

Date Collected: 03/13/18 08:28

Matrix: Water

Date Received: 03/13/18 12:05

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	16	D	0.40	0.20	mg/L			03/13/18 19:51	2

TestAmerica Richland

Client: CH2M Hill Plateau Remediation Company
 Project/Site: F16-046

TestAmerica Job ID: 300-6863-1
 SDG: WC2762

Client Sample ID: B3HXT7

Lab Sample ID: 300-6863-11

Date Collected: 03/13/18 08:28

Matrix: Water

Date Received: 03/13/18 12:05

Method: 300.0 - Anions, Ion Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	31	D	0.28	0.14	mg/L			03/13/18 22:16	10
Fluoride	0.42	D	0.10	0.050	mg/L			03/13/18 19:51	2
Nitrite as N	0.077	D	0.076	0.038	mg/L			03/13/18 19:51	2
Sulfate	80	D	2.5	1.3	mg/L			03/13/18 22:16	10
Bromide	0.22	B D	0.25	0.13	mg/L			03/13/18 19:51	2

Client Sample ID: B3HXR0

Lab Sample ID: 300-6863-12

Date Collected: 03/13/18 08:02

Matrix: Water

Date Received: 03/13/18 12:05

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15	D	0.40	0.20	mg/L			03/13/18 20:40	2
Nitrate as N	37	D	0.28	0.14	mg/L			03/13/18 22:00	10
Fluoride	0.34	D	0.10	0.050	mg/L			03/13/18 20:40	2
Nitrite as N	0.081	D	0.076	0.038	mg/L			03/13/18 20:40	2
Sulfate	70	D	0.50	0.25	mg/L			03/13/18 20:40	2
Bromide	0.20	B D	0.25	0.13	mg/L			03/13/18 20:40	2

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-046

TestAmerica Job ID: 300-6863-1
SDG: WC2762

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 300-10609/5
Matrix: Water
Analysis Batch: 10609

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.014	U	0.028	0.014	mg/L			03/13/18 15:02	1
Nitrite as N	0.019	U	0.038	0.019	mg/L			03/13/18 15:02	1

Lab Sample ID: LCS 300-10609/6
Matrix: Water
Analysis Batch: 10609

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	2.26	2.24		mg/L		99	80 - 120
Nitrite as N	3.04	3.15		mg/L		103	80 - 120

Lab Sample ID: 300-6863-11 MS
Matrix: Water
Analysis Batch: 10609

Client Sample ID: B3HXT7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	0.077	D	0.609	0.567	D	mg/L		81	75 - 125

Lab Sample ID: 300-6863-11 MS
Matrix: Water
Analysis Batch: 10609

Client Sample ID: B3HXT7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	31	D	2.26	33.2	D	mg/L		78	75 - 125

Lab Sample ID: 300-6863-11 DU
Matrix: Water
Analysis Batch: 10609

Client Sample ID: B3HXT7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrite as N	0.077	D	0.0789	D	mg/L		2	20

Lab Sample ID: 300-6863-11 DU
Matrix: Water
Analysis Batch: 10609

Client Sample ID: B3HXT7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate as N	31	D	30.9	D	mg/L		2	20

Lab Sample ID: MB 300-10610/5
Matrix: Water
Analysis Batch: 10610

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.10	U	0.20	0.10	mg/L			03/13/18 15:02	1
Fluoride	0.025	U	0.050	0.025	mg/L			03/13/18 15:02	1
Sulfate	0.13	U	0.25	0.13	mg/L			03/13/18 15:02	1
Bromide	0.063	U	0.13	0.063	mg/L			03/13/18 15:02	1

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-046

TestAmerica Job ID: 300-6863-1
SDG: WC2762

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 300-10610/6
Matrix: Water
Analysis Batch: 10610

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	16.0	16.2		mg/L		101	80 - 120
Fluoride	4.00	4.07		mg/L		102	80 - 120
Sulfate	20.0	20.2		mg/L		101	80 - 120
Bromide	10.0	10.2		mg/L		102	80 - 120

Lab Sample ID: 300-6863-11 MS
Matrix: Water
Analysis Batch: 10610

Client Sample ID: B3HXT7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	16	D	3.20	18.6	D	mg/L		86	75 - 125
Fluoride	0.42	D	0.800	1.18	D	mg/L		96	75 - 125
Bromide	0.22	B D	2.00	1.89	D	mg/L		83	75 - 125

Lab Sample ID: 300-6863-11 MS
Matrix: Water
Analysis Batch: 10610

Client Sample ID: B3HXT7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	80	D	20.0	101	D	mg/L		104	75 - 125

Lab Sample ID: 300-6863-11 DU
Matrix: Water
Analysis Batch: 10610

Client Sample ID: B3HXT7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	16	D		15.7	D	mg/L		1	20
Fluoride	0.42	D		0.412	D	mg/L		1	20
Bromide	0.22	B D		0.219	B D	mg/L		0.6	20

Lab Sample ID: 300-6863-11 DU
Matrix: Water
Analysis Batch: 10610

Client Sample ID: B3HXT7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate	80	D		79.1	D	mg/L		2	20

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 300-10615/3
Matrix: Water
Analysis Batch: 10615

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0015	U	0.0040	0.0015	mg/L			03/13/18 13:55	1

Client: CH2M Hill Plateau Remediation Company
 Project/Site: F16-046

TestAmerica Job ID: 300-6863-1
 SDG: WC2762

Method: 7196A - Chromium, Hexavalent (Continued)

Lab Sample ID: LCS 300-10615/4
Matrix: Water
Analysis Batch: 10615

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.250	0.260		mg/L		104	80 - 120

Lab Sample ID: 300-6863-1 MS
Matrix: Water
Analysis Batch: 10615

Client Sample ID: B3HMT1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.032		0.0501	0.0838		mg/L		104	75 - 125

Lab Sample ID: 300-6863-1 DU
Matrix: Water
Analysis Batch: 10615

Client Sample ID: B3HMT1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cr (VI)	0.032		0.0330		mg/L		3	20

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Client: CH2M Hill Plateau Remediation Company
 Project/Site: F16-046

TestAmerica Job ID: 300-6863-1
 SDG: WC2762

HPLC/IC

Analysis Batch: 10609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-6863-7	B3HMT2	Total/NA	Water	300.0	
300-6863-7	B3HMT2	Total/NA	Water	300.0	
300-6863-8	B3HXR6	Total/NA	Water	300.0	
300-6863-8	B3HXR6	Total/NA	Water	300.0	
300-6863-9	B3HMT4	Total/NA	Water	300.0	
300-6863-10	B3HMT8	Total/NA	Water	300.0	
300-6863-11	B3HXT7	Total/NA	Water	300.0	
300-6863-11	B3HXT7	Total/NA	Water	300.0	
300-6863-12	B3HXR0	Total/NA	Water	300.0	
300-6863-12	B3HXR0	Total/NA	Water	300.0	
MB 300-10609/5	Method Blank	Total/NA	Water	300.0	
LCS 300-10609/6	Lab Control Sample	Total/NA	Water	300.0	
300-6863-11 MS	B3HXT7	Total/NA	Water	300.0	
300-6863-11 MS	B3HXT7	Total/NA	Water	300.0	
300-6863-11 DU	B3HXT7	Total/NA	Water	300.0	
300-6863-11 DU	B3HXT7	Total/NA	Water	300.0	

Analysis Batch: 10610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-6863-7	B3HMT2	Total/NA	Water	300.0	
300-6863-8	B3HXR6	Total/NA	Water	300.0	
300-6863-9	B3HMT4	Total/NA	Water	300.0	
300-6863-9	B3HMT4	Total/NA	Water	300.0	
300-6863-10	B3HMT8	Total/NA	Water	300.0	
300-6863-10	B3HMT8	Total/NA	Water	300.0	
300-6863-11	B3HXT7	Total/NA	Water	300.0	
300-6863-11	B3HXT7	Total/NA	Water	300.0	
300-6863-12	B3HXR0	Total/NA	Water	300.0	
MB 300-10610/5	Method Blank	Total/NA	Water	300.0	
LCS 300-10610/6	Lab Control Sample	Total/NA	Water	300.0	
300-6863-11 MS	B3HXT7	Total/NA	Water	300.0	
300-6863-11 MS	B3HXT7	Total/NA	Water	300.0	
300-6863-11 DU	B3HXT7	Total/NA	Water	300.0	
300-6863-11 DU	B3HXT7	Total/NA	Water	300.0	

General Chemistry

Analysis Batch: 10615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-6863-1	B3HMT1	Total/NA	Water	7196A	
300-6863-2	B3HMT7	Total/NA	Water	7196A	
300-6863-3	B3HMT3	Total/NA	Water	7196A	
300-6863-4	B3HXP9	Total/NA	Water	7196A	
300-6863-5	B3HXR5	Total/NA	Water	7196A	
300-6863-6	B3HXT6	Total/NA	Water	7196A	
MB 300-10615/3	Method Blank	Total/NA	Water	7196A	
LCS 300-10615/4	Lab Control Sample	Total/NA	Water	7196A	
300-6863-1 MS	B3HMT1	Total/NA	Water	7196A	
300-6863-1 DU	B3HMT1	Total/NA	Water	7196A	

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-046

TestAmerica Job ID: 300-6863-1
SDG: WC2762

Client Sample ID: B3HMT1
Date Collected: 03/13/18 10:15
Date Received: 03/13/18 12:05

Lab Sample ID: 300-6863-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1			10615	03/13/18 13:58	TRH	TAL RCH

Client Sample ID: B3HMT7
Date Collected: 03/13/18 09:42
Date Received: 03/13/18 12:05

Lab Sample ID: 300-6863-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1			10615	03/13/18 13:59	TRH	TAL RCH

Client Sample ID: B3HMV3
Date Collected: 03/13/18 09:42
Date Received: 03/13/18 12:05

Lab Sample ID: 300-6863-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1			10615	03/13/18 13:59	TRH	TAL RCH

Client Sample ID: B3HXP9
Date Collected: 03/13/18 08:02
Date Received: 03/13/18 12:05

Lab Sample ID: 300-6863-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1			10615	03/13/18 13:59	TRH	TAL RCH

Client Sample ID: B3HXR5
Date Collected: 03/13/18 09:15
Date Received: 03/13/18 12:05

Lab Sample ID: 300-6863-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1			10615	03/13/18 14:00	TRH	TAL RCH

Client Sample ID: B3HXT6
Date Collected: 03/13/18 08:28
Date Received: 03/13/18 12:05

Lab Sample ID: 300-6863-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1			10615	03/13/18 14:00	TRH	TAL RCH

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-046

TestAmerica Job ID: 300-6863-1
SDG: WC2762

Client Sample ID: B3HMT2

Lab Sample ID: 300-6863-7

Date Collected: 03/13/18 10:15

Matrix: Water

Date Received: 03/13/18 12:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2			10609	03/13/18 21:44	RTQ	TAL RCH
Total/NA	Analysis	300.0		2			10610	03/13/18 21:44	RTQ	TAL RCH
Total/NA	Analysis	300.0		10			10609	03/14/18 00:25	RTQ	TAL RCH

Client Sample ID: B3HXR6

Lab Sample ID: 300-6863-8

Date Collected: 03/13/18 09:15

Matrix: Water

Date Received: 03/13/18 12:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2			10609	03/13/18 21:28	RTQ	TAL RCH
Total/NA	Analysis	300.0		2			10610	03/13/18 21:28	RTQ	TAL RCH
Total/NA	Analysis	300.0		10			10609	03/14/18 00:09	RTQ	TAL RCH

Client Sample ID: B3HMV4

Lab Sample ID: 300-6863-9

Date Collected: 03/13/18 09:42

Matrix: Water

Date Received: 03/13/18 12:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2			10609	03/13/18 21:12	RTQ	TAL RCH
Total/NA	Analysis	300.0		2			10610	03/13/18 21:12	RTQ	TAL RCH
Total/NA	Analysis	300.0		10			10610	03/13/18 23:53	RTQ	TAL RCH

Client Sample ID: B3HMT8

Lab Sample ID: 300-6863-10

Date Collected: 03/13/18 09:42

Matrix: Water

Date Received: 03/13/18 12:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2			10609	03/13/18 20:56	RTQ	TAL RCH
Total/NA	Analysis	300.0		2			10610	03/13/18 20:56	RTQ	TAL RCH
Total/NA	Analysis	300.0		10			10610	03/13/18 23:36	RTQ	TAL RCH

Client Sample ID: B3HXT7

Lab Sample ID: 300-6863-11

Date Collected: 03/13/18 08:28

Matrix: Water

Date Received: 03/13/18 12:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2			10609	03/13/18 19:51	RTQ	TAL RCH
Total/NA	Analysis	300.0		2			10610	03/13/18 19:51	RTQ	TAL RCH
Total/NA	Analysis	300.0		10			10609	03/13/18 22:16	RTQ	TAL RCH
Total/NA	Analysis	300.0		10			10610	03/13/18 22:16	RTQ	TAL RCH

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-046

TestAmerica Job ID: 300-6863-1
SDG: WC2762

Client Sample ID: B3HXR0

Lab Sample ID: 300-6863-12

Date Collected: 03/13/18 08:02

Matrix: Water

Date Received: 03/13/18 12:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2			10609	03/13/18 20:40	RTQ	TAL RCH
Total/NA	Analysis	300.0		2			10610	03/13/18 20:40	RTQ	TAL RCH
Total/NA	Analysis	300.0		10			10609	03/13/18 22:00	RTQ	TAL RCH

Client Sample ID: Method Blank

Lab Sample ID: MB 300-10609/5

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			10609	03/13/18 15:02	RTQ	TAL RCH

Client Sample ID: Method Blank

Lab Sample ID: MB 300-10610/5

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			10610	03/13/18 15:02	RTQ	TAL RCH

Client Sample ID: Method Blank

Lab Sample ID: MB 300-10615/3

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1			10615	03/13/18 13:55	TRH	TAL RCH

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-10609/6

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			10609	03/13/18 15:18	RTQ	TAL RCH

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-10610/6

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			10610	03/13/18 15:18	RTQ	TAL RCH

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-046

TestAmerica Job ID: 300-6863-1
SDG: WC2762

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-10615/4

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1			10615	03/13/18 13:55	TRH	TAL RCH

Client Sample ID: B3HMT1

Lab Sample ID: 300-6863-1 MS

Date Collected: 03/13/18 10:15

Matrix: Water

Date Received: 03/13/18 12:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1			10615	03/13/18 13:55	TRH	TAL RCH

Client Sample ID: B3HXT7

Lab Sample ID: 300-6863-11 MS

Date Collected: 03/13/18 08:28

Matrix: Water

Date Received: 03/13/18 12:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2			10609	03/13/18 20:08	RTQ	TAL RCH
Total/NA	Analysis	300.0		2			10610	03/13/18 20:08	RTQ	TAL RCH
Total/NA	Analysis	300.0		10			10609	03/13/18 23:04	RTQ	TAL RCH
Total/NA	Analysis	300.0		10			10610	03/13/18 23:04	RTQ	TAL RCH

Client Sample ID: B3HMT1

Lab Sample ID: 300-6863-1 DU

Date Collected: 03/13/18 10:15

Matrix: Water

Date Received: 03/13/18 12:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1			10615	03/13/18 13:58	TRH	TAL RCH

Client Sample ID: B3HXT7

Lab Sample ID: 300-6863-11 DU

Date Collected: 03/13/18 08:28

Matrix: Water

Date Received: 03/13/18 12:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2			10609	03/13/18 20:24	RTQ	TAL RCH
Total/NA	Analysis	300.0		2			10610	03/13/18 20:24	RTQ	TAL RCH
Total/NA	Analysis	300.0		10			10609	03/13/18 23:20	RTQ	TAL RCH
Total/NA	Analysis	300.0		10			10610	03/13/18 23:20	RTQ	TAL RCH

Laboratory References:

TAL RCH = TestAmerica Richland, 2800 George Washington Way, Richland, WA 99352, TEL (509)375-3131

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-046

TestAmerica Job ID: 300-6863-1
SDG: WC2762

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL RCH
7196A	Chromium, Hexavalent	SW846	TAL RCH

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL RCH = TestAmerica Richland, 2800 George Washington Way, Richland, WA 99352, TEL (509)375-3131



Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-046

TestAmerica Job ID: 300-6863-1
SDG: WC2762

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-6863-1	B3HMT1	Water	03/13/18 10:15	03/13/18 12:05
300-6863-2	B3HMT7	Water	03/13/18 09:42	03/13/18 12:05
300-6863-3	B3HMT3	Water	03/13/18 09:42	03/13/18 12:05
300-6863-4	B3HXP9	Water	03/13/18 08:02	03/13/18 12:05
300-6863-5	B3HXR5	Water	03/13/18 09:15	03/13/18 12:05
300-6863-6	B3HXT6	Water	03/13/18 08:28	03/13/18 12:05
300-6863-7	B3HMT2	Water	03/13/18 10:15	03/13/18 12:05
300-6863-8	B3HXR6	Water	03/13/18 09:15	03/13/18 12:05
300-6863-9	B3HMT4	Water	03/13/18 09:42	03/13/18 12:05
300-6863-10	B3HMT8	Water	03/13/18 09:42	03/13/18 12:05
300-6863-11	B3HXT7	Water	03/13/18 08:28	03/13/18 12:05
300-6863-12	B3HXR0	Water	03/13/18 08:02	03/13/18 12:05



Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 300-6863-1

SDG Number: WC2762

Login Number: 6863

List Number: 1

Creator: Jorgenson, Briana F

List Source: TestAmerica Richland

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

