

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: 300-1816-1
TestAmerica Sample Delivery Group: WC0696
Client Project/Site: X15-069

For:
CH2M Hill Plateau Remediation Company
PO BOX 1600
Mail Stop R3-50
Richland, Washington 99352

Attn: CPP Sample Management



Authorized for release by:
12/21/2015 9:32:06 AM
Steven Campbell, Quality Assurance Assistant
steven.campbell@testamericainc.com

Designee for
Whitney Ritari, Project Manager I
(509)375-3131 ext164
whitney.ritari@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. The sample/ sample duplicate RPD agreement is not applicable if one or both results are elss than five times the MDL.



LINKS

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Qualifiers

HPLC/IC

Qualifier	Qualifier Description
D	The reported value is from a dilution.
U	Analyzed for but not detected.
B	Estimated result. Result is less than the RL, but greater than MDL
N	MS, MSD: Spike recovery is outside acceptance limits.

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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: X15-069

TestAmerica Job ID: 300-1816-1
SDG: WC0696

Job ID: 300-1816-1

Laboratory: TestAmerica Richland

Narrative

**Job Narrative
300-1816-1**

Comments

No additional comments.

Receipt

The samples were received on 12/10/2015 2:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 6.7° C.

HPLC/IC

Method 300.0: Manual integration was performed on the following samples for Sulfate: B33982 (300-1816-3), B33958 (300-1816-11) and B339C8 (300-1816-12). Manual integration was performed on the following sample for Nitrite as N: B33954 (300-1816-10).

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



CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #

X15-069-038

Page 1 of 1

Collector	K.C. Patterson/CHPRC	Contact/Requester	WHITLEY, KM	Telephone No.	373-4929
SAF No.	X15-069	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300205
Project Title	300 Area Uranium Sequestration Post Inj	Logbook No.	HNF-N-506 <u>80 / 56</u>	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority:	30 Days	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS			SPECIAL INSTRUCTIONS		
*Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR/LATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.			Hold Time		
			Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Sample No.	Filter	* Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B33978	N	DEC 10 2015	0934	1x500-mL P	300.0_ANIONS_IC: COMMON; 300.0_ANIONS_IC: GW 01	48 Hours	Cool <=6C

#1814
W50694

300-1816 COC



December 21 2015

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
K.C. Patterson/CHPRC			DEC 10 2015 1130	T.L. BACON/CHPRC			DEC 10 2015 1130	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By			Date/Time	Received By			Date/Time	DS = Drum Solids DL = Drum Liquids T = Tissue WT = Wipe L = Liquid V = Vegetation X = Other
T.L. BACON/CHPRC			DEC 10 2015 1440	J. Bock, TARI			DEC 10 2015 1440	
Relinquished By			Date/Time	Received By			Date/Time	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time
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CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.#
X15-069-031

Page 1 of 1

Collector	K.C. Patterson/CHPRC	Contact/Requester	WHITLEY, KM	Telephone No.	373-4929
SAF No.	X15-069	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300205
Project Title	300 Area Uranium Sequestration Post Inj	Logbook No.	HNF-N-506 <u>80/57-57</u>	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority:	30 Days	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS			SPECIAL INSTRUCTIONS		
*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/ATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.			Hold Time		
Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			Preservative		
Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis
B33994	W	12/10/15	1051	1x500-mL P	300.0 ANIONS_IC: COMMON; 300.0 ANIONS_IC: GW 01
					Holding Time
					48 Hours

#1814
WCOEAP

December 21 2015

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
K.C. Patterson/CHPRC			DEC 10 2015 1130	TL BACON/CHPRC			DEC 10 2015 1130	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By			DEC 10 2015 1448	TL BACON/CHPRC			DEC 10 2015 1448	DS = Drum Solids DL = Drum Liquids T = Tissue WT = Wipe L = Liquid V = Vegetation X = Other
Relinquished By			DEC 10 2015	J. Bock, TARL			DEC 10 2015	
Relinquished By								
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By		Date/Time		

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
X15-069-050
Page 1 of 1

Collector	K.C. Patterson/CHPRC	Contact/Requester	WHITLEY, KM	Telephone No.	373-4929
SAF No.	X15-069	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300205
Project Title	300 Area Uranium Sequestration Post Inj	Logbook No.	HNF-N-506 <u>80/56-57</u>	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority:	30 Days	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS			SPECIAL INSTRUCTIONS		
*Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR/JATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.			Hold Time		
			Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Sample No.	B33982	Filter	N	Date	DEC 10 2015
		No/Type Container	1x500-mL P	Sample Analysis	300.0_ANIONS_IC: COMMON; 300.0_ANIONS_IC: GW/01
		Time	1607	Sample Analysis	
		Holding Time	48 Hours	Preservative	Cool <=6C

#1816
WCD694

December 21, 2015

Relinquished By	K.C. Patterson/CHPRC	Print	Sign	Date/Time	DEC 10 2015 1130	Received By	T.L. BACON/CHPRC	Print	Sign	Date/Time	DEC 10 2015 1130
Relinquished By	T.L. BACON/CHPRC	Print	Sign	Date/Time	DEC 10 2015 1448	Received By	J. BOCK, TARL	Print	Sign	Date/Time	DEC 10 2015 1448
Relinquished By		Print	Sign	Date/Time		Received By		Print	Sign	Date/Time	
Relinquished By		Print	Sign	Date/Time		Received By		Print	Sign	Date/Time	

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
SO	= Solid	T	= Tissue
SL	= Sludge	WL	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other



CH2M/Hill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
X15-069-039
Page 1 of 1

Collector	BE Briggs/CHPRC		Contact/Requester	WHITLEY, KM		Telephone No.	373-4929	
SAF No.	X15-069		Sampling Origin	Hanford Site		Purchase Order/Charge Code	300205	
Project Title	300 Area Uranium Sequestration Post Inj		Logbook No.	HNF-N-506 <u>80/57e</u>		Ice Chest No.	N/A	
Shipped To (Lab)	TestAmerica Incorporated, Richland		Method of Shipment	GOVERNMENT VEHICLE		Bill of Lading/Air Bill No.	N/A	
Protocol	CERCLA		Priority:	30 Days		Offsite Property No.	N/A	
POSSIBLE SAMPLE HAZARDS/REMARKS			SPECIAL INSTRUCTIONS			Hold Time		
*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.						Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Sample No.	Filter	*	Date	Time	No./Type Container	Sample Analysis	Holding Time	Preservative
B339H4	N	W	DEC 10 2015	0700	1x500-ml P	300.0_ANIONS_IC: COMMON; 300.0_ANIONS_IC: GW 01	48 Hours	Cool <=6C

1814
WCOVER

December 21, 2015

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
BE Briggs/CHPRC		<i>[Signature]</i>	DEC 10 2015 1130	T.L. BACON/CHPRC		<i>[Signature]</i>	DEC 10 2015 1130	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By			Date/Time	Received By			Date/Time	DS = Drum Solids DL = Drum Liquids T = Tissue WT = Wipe L = Liquid V = Vegetation X = Other
T.L. BACON/CHPRC		<i>[Signature]</i>	DEC 10 2015	J. BOCK, TARL		<i>[Signature]</i>	DEC 10 2015	
Relinquished By			Date/Time	Received By			Date/Time	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
X15-069-037
Page 1 of 1

Collector	K.C. Patterson/CHPRC	Contact/Requester	WHITLEY, KM	Telephone No.	373-4929
SAF No.	X15-069	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300205
Project Title	300 Area Uranium Sequestration Post Inj	Logbook No.	HNF-N-506 <u>80 56</u>	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority:	30 Days	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS			SPECIAL INSTRUCTIONS	Hold Time	Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/ATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.					

Sample No.	Filter	*	Date	Time	No./Type Container	Sample Analysis	Holding Time	Preservative
B339D2	N		DEC 10 2015	8:07	1x500-mL P	300.0_ANIONS_IC: COMMON; 300.0_ANIONS_IC: GW 01	48 Hours	Cool <=6C

Handwritten: 1816
used 1816

December 21, 2015

Relinquished By	K.C. Patterson/CHPRC	Print	Sign	DEC 10 2015	Date/Time	1130	Received By	T.L. BACON/CHPRC	Print	Sign	DEC 10 2015	Date/Time	1130	Matrix *
Relinquished By	T.L. BACON/CHPRC	Print	Sign	DEC 10 2015	Date/Time	1440	Received By	T.L. BACON/CHPRC	Print	Sign	DEC 10 2015	Date/Time	1440	Matrix *
Relinquished By		Print	Sign	DEC 10 2015	Date/Time		Received By	J. BOCK, TARL	Print	Sign	DEC 10 2015	Date/Time		Matrix *
Relinquished By		Print	Sign		Date/Time		Received By		Print	Sign		Date/Time		Matrix *

- S = Soil
- SE = Sediment
- SO = Solid
- SL = Sludge
- W = Water
- O = Oil
- A = Air
- DS = Drum Solids
- DL = Drum Liquids
- T = Tissue
- WI = Wipe
- L = Liquid
- V = Vegetation
- X = Other

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
X15-069-048

Page 1 of 1

Collector	S.W. King/CHPRC	Contact/Requester	WHITLEY, KM	Telephone No.	373-4929
SAF No.	X15-069	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300205
Project Title	300 Area Uranium Sequestration Post Inj	Logbook No.	HNF-N-506 <u>83/7</u>	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority:	30 Days	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS			SPECIAL INSTRUCTIONS		
*Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CER/LATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.			Hold Time		
			Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Sample No.	Filter	* Date	Time	No./Type Container	Sample Analysis	Holding Time	Preservative
B339C4	Y	DEC 10 2015	0857	1x500-mL P	300.0_ANIONS_IC: COMMON; 300.0_ANIONS_IC: GW 01	48 Hours	Cool <=6C

21816
WCOVAP

December 21, 2015

Relinquished By S.W. King/CHPRC Print Sign Date/Time DEC 10 2015	Received By F.M. Hall/CHPRC Print Sign Date/Time DEC 10 2015
Relinquished By F.M. Hall/CHPRC Print Sign Date/Time DEC 10 2015	Received By J. Bock, TARL Print Sign Date/Time DEC 10 2015
Relinquished By _____ Print Sign Date/Time _____	Received By _____ Print Sign Date/Time _____

- Matrix ***
- S = Soil
 - SE = Sediment
 - SO = Solid
 - SL = Sludge
 - W = Water
 - O = Oil
 - A = Air
 - DS = Drum Solids
 - DL = Drum Liquids
 - T = Tissue
 - WI = Wipe
 - L = Liquid
 - V = Vegetation
 - X = Other

Collector	S.W. King/CHPRC	Contact/Requester	WHITLEY, KM	Telephone No.	373-4929
SAF No.	X15-069	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300205
Project Title	300 Area Uranium Segregation Post Inj	Logbook No.	HNF-N-50683/7	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority:	30 Days	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS			SPECIAL INSTRUCTIONS		
*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CER/LATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.			Hold Time		
			Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B339C0	Y	DEC 10 2015	0831	1x500-mL P	300.0_ANIONS_IC: COMMON; 300.0_ANIONS_IC: GW 01	48 Hours	Cool <=6C

1814
WCO694

Relinquished By	S.W. King/CHPRC	Print	Sign	Date/Time	12/10	Received By	F.M. Hall/CHPRC	Print	Sign	Date/Time	12/10	Matrix *
Relinquished By				DEC 10 2015		Received By				DEC 10 2015		S = Soil
Relinquished By	F.M. Hall/CHPRC			DEC 10 2015		Received By	J. Bock, TARL			DEC 10 2015		SE = Sediment
Relinquished By				DEC 10 2015		Received By				DEC 10 2015		SO = Solid
Relinquished By				DEC 10 2015		Received By				DEC 10 2015		SL = Sludge
Relinquished By				DEC 10 2015		Received By				DEC 10 2015		W = Water
Relinquished By				DEC 10 2015		Received By				DEC 10 2015		O = Oil
Relinquished By				DEC 10 2015		Received By				DEC 10 2015		A = Air
Relinquished By				DEC 10 2015		Received By				DEC 10 2015		DS = Drum Solids
Relinquished By				DEC 10 2015		Received By				DEC 10 2015		DL = Drum Liquids
Relinquished By				DEC 10 2015		Received By				DEC 10 2015		T = Tissue
Relinquished By				DEC 10 2015		Received By				DEC 10 2015		WI = Wipe
Relinquished By				DEC 10 2015		Received By				DEC 10 2015		L = Liquid
Relinquished By				DEC 10 2015		Received By				DEC 10 2015		V = Vegetation
Relinquished By				DEC 10 2015		Received By				DEC 10 2015		X = Other

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #

X15-069-052

Page 1 of 1

Collector	S.W. King/CHPRC	Contact/Requester	WHITLEY, KM	Telephone No.	373-4929
SAF No.	X15-069	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300205
Project Title	300 Area Uranium Sequestration Post Inj	Logbook No.	HNF-N-506 <u>83/7</u>	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority:	30 Days PRIORITY	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS			SPECIAL INSTRUCTIONS	Hold Time	Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CER/LATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.					

Sample No.	Filter	* Date	Time	No./Type Container	Sample Analysis	Holding Time	Preservative
B339B2	N	DEC 10 2015	0932	1x500-mL P	300.0_ANIONS_IC: COMMON; 300.0_ANIONS_IC: GW 01	48 Hours	Cool <=6C

21811p
W306916

December 21, 2015

Relinquished By	S.W. King/CHPRC	Print	Sign	Date/Time	1/10	Received By	F.M. Heilich/PRC	Print	Sign	Date/Time	1/210
Relinquished By	F.M. Heilich/PRC	Print	Sign	Date/Time	DEC 10 2015	Received By	J. Bock, TARL	Print	Sign	Date/Time	1/220
Relinquished By		Print	Sign	Date/Time	DEC 10 2015	Received By		Print	Sign	Date/Time	

Matrix *	
S	= Soil
SE	= Sediment
SO	= Solid
SL	= Sludge
W	= Water
O	= Oil
A	= Air
DS	= Drum Solids
DL	= Drum Liquids
T	= Tissue
WT	= Wipe
L	= Liquid
V	= Vegetation
X	= Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time
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Collector	S.W. King/CHPRC	Contact/Requester	WHITLEY, KM	Telephone No.	373-4929
SAF No.	X15-069	Sampling Origin	Hamford Site	Purchase Order/Charge Code	300205
Project Title	300 Area Uranium Segregation Post Inj	Logbook No.	HNF-N-506 <u>8317</u>	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority:	30 Days	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS			SPECIAL INSTRUCTIONS		
*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CER/ATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.			Hold Time		
			Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Sample No.	Filter	Date	Time	No./Type Container	Sample Analysis	Holding Time	Preservative
B339B6	N	DEC 10 2015	0952	1x500-mL P	300.0_ANIONS_IC: COMMON; 300.0_ANIONS_IC: GW 01	48 Hours	Cool <=6C

21816
W520694

December 21, 2015

Relinquished By	S.W. King/CHPRC	Print	Sign	Date/Time	1740	Received By	F.M. Hall/CHPRC	Print	Sign	Date/Time	1213
Relinquished By				DEC 10 2015		Received By				DEC 10 2015	
Relinquished By	F.M. Hall/CHPRC			DEC 10 2015	1442	Received By	J. Bock, TARI			DEC 10 2015	1442
Relinquished By						Received By					

- Matrix *
- S = Soil
 - SE = Sediment
 - SO = Solid
 - SL = Sludge
 - W = Water
 - O = Oil
 - A = Air
 - DS = Drum Solids
 - DL = Drum Liquids
 - T = Tissue
 - WI = Wipe
 - L = Liquid
 - V = Vegetation
 - X = Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time
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CH2M Hill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **X15-069-053**
Page 1 of 1

Collector	S.W. King/CHPRC	Contact/Requester	WHITLEY, KM	Telephone No.	373-4929
SAF No.	X15-069	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300205
Project Title	300 Area Uranium Sequestration Post Inj	Logbook No.	HNF-N-5068317	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority:	30 Days	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS			SPECIAL INSTRUCTIONS		
*Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR/ATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.			Hold Time		
			Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B33954	N	W	DEC 10 2015	1030	1x500-mL P	300.0_ANIONS_IC: COMMON; 300.0_ANIONS_IC: GW 01	48 Hours	Cool <=6C

1819
W20694

December 21, 2015

Relinquished By	S.W. King/CHPRC	Print	Sign	Date/Time	12/10	Received By	F.M. Hall/CHPRC	Print	Sign	Date/Time	12/10	Matrix *
Relinquished By	F.M. Hall/CHPRC			Date/Time	12/10 2015	Received By	J. Bock, TARL			Date/Time	12/10 2015	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By				Date/Time		Received By				Date/Time		DS = Drum Solids DL = Drum Liquids T = Tissue WT = Wipe L = Liquid V = Vegetation X = Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time
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CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #

X15-069-032

Page 1 of 1

Collector	S.W. King/CHPRC	Contact/Requester	WHITLEY, KM	Telephone No.	373-4929
SAF No.	X15-069	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300205
Project Title	300 Area Uranium Sequestration Post Inj	Logbook No.	HNF-N-5068317	Ice Chest No.	N/A
Shipped To (Lab)	Test/America Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority:	30 Days	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS			SPECIAL INSTRUCTIONS		
*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CER/LATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.			Hold Time		
			Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Sample No.	Filter	* Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B33958	N	DEC 10 2015	1050	1X500-mL P	300.0_ANIONS_IC: COMMON; 300.0_ANIONS_IC: GW 01	48 Hours	Cool <=6C

1814
WROK94

December 21 2015

Relinquished By	S.W. King/CHPRC	Date	DEC 10 2015	Received By	F.M. Hall/CHPRC	Date	DEC 10 2015	Matrix *
Relinquished By	<i>[Signature]</i>	Date/Time	1440	Received By	<i>[Signature]</i>	Date/Time	120	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By	F.M. Hall/CHPRC	Date	DEC 10 2015	Received By	J. Bock, TARL	Date	DEC 10 2015	DS = Drum Solids DL = Drum Liquids T = Tissue WT = Wipe L = Liquid V = Vegetation X = Other
Relinquished By	<i>[Signature]</i>	Date/Time	1440	Received By	<i>[Signature]</i>	Date/Time	2440	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time
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CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
X15-069-054

Page 1 of 1

Collector K.C. Patterson/CH2M	Contact/Requester WHITLEY, KM	Telephone No. 373-4929
SAF No. X15-069	Sampling Origin Hanford Site	Purchase Order/Charge Code 300205
Project Title 300 Area Uranium Sequestration Post Inj	Logbook No. HNF-N-506 /	Ice Chest No. N/A
Shipped To (Lab) TestAmerica Incorporated, Richland	Method of Shipment GOVERNMENT VEHICLE	Bill of Lading/Air Bill No. N/A
Protocol CERCLA	Priority: 30 Days	Offsite Property No. N/A
POSSIBLE SAMPLE HAZARDS/REMARKS		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
*Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR/ATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.		
Sample No. B53998	Filter N	Date DEC 10 2015 12:47
No/Type Container 1x500-mL P	Sample Analysis 300.0_ANIONS_IC: COMMON; 300.0_ANIONS_IC: GW 01	Holding Time 48 Hours
Preservative Cool <=6C		

A 18114
W5206914

December 21, 2015

Relinquished By K.C. Patterson/CH2M	Print 	Sign 	Date/Time DEC 10 2015 13:30	Received By F.M. Hall/CH2M	Print 	Sign 	Date/Time DEC 10 2015 13:30
Relinquished By F.M. Hall/CH2M			Date/Time DEC 10 2015 14:40	Received By J. Bock, TARL			Date/Time DEC 10 2015 14:40
Relinquished By			Date/Time	Received By			Date/Time

- Matrix *
- S = Soil
 - SE = Sediment
 - SO = Solid
 - SL = Sludge
 - W = Water
 - O = Oil
 - A = Air
 - DS = Drum Solids
 - DL = Drum Liquids
 - T = Tissue
 - WT = Wipe
 - L = Liquid
 - V = Vegetation
 - X = Other

Client: CH2M Hill Plateau Remediation Company
Project/Site: X15-069TestAmerica Job ID: 300-1816-1
SDG: WC0696

Client Sample ID: B33978

Lab Sample ID: 300-1816-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	20	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	5.5	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.29	D	0.10	0.050	mg/L	2		300.0	Total/NA
Orthophosphate as P	65	D	0.82	0.41	mg/L	10		300.0	Total/NA
Sulfate	56	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B33994

Lab Sample ID: 300-1816-2

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	4.1	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.36	D	0.10	0.050	mg/L	2		300.0	Total/NA
Orthophosphate as P	96	D	0.82	0.41	mg/L	10		300.0	Total/NA
Sulfate	46	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B33982

Lab Sample ID: 300-1816-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	20	D	10	5.0	mg/L	50		300.0	Total/NA
Nitrate as N	6.5	D	1.4	0.70	mg/L	50		300.0	Total/NA
Orthophosphate as P	440	D	4.1	2.1	mg/L	50		300.0	Total/NA
Sulfate	44	D	13	6.3	mg/L	50		300.0	Total/NA

Client Sample ID: B339H4

Lab Sample ID: 300-1816-4

No Detections.

Client Sample ID: B339D2

Lab Sample ID: 300-1816-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	18	D	10	5.0	mg/L	50		300.0	Total/NA
Nitrate as N	5.6	D	1.4	0.70	mg/L	50		300.0	Total/NA
Orthophosphate as P	240	D	4.1	2.1	mg/L	50		300.0	Total/NA
Sulfate	51	D	13	6.3	mg/L	50		300.0	Total/NA

Client Sample ID: B339C4

Lab Sample ID: 300-1816-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	48	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	9.0	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	1.0	D	0.10	0.050	mg/L	2		300.0	Total/NA
Orthophosphate as P	0.83	D N	0.16	0.082	mg/L	2		300.0	Total/NA
Sulfate	58	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B339C0

Lab Sample ID: 300-1816-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	32	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	0.082	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.19	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	120	D	2.5	1.3	mg/L	10		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Richland

Client: CH2M Hill Plateau Remediation Company
Project/Site: X15-069

TestAmerica Job ID: 300-1816-1
SDG: WC0696

Client Sample ID: B339B2

Lab Sample ID: 300-1816-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	16	D	10	5.0	mg/L	50		300.0	Total/NA
Nitrate as N	4.9	D	1.4	0.70	mg/L	50		300.0	Total/NA
Orthophosphate as P	210	D	4.1	2.1	mg/L	50		300.0	Total/NA
Sulfate	45	D	13	6.3	mg/L	50		300.0	Total/NA

Client Sample ID: B339B6

Lab Sample ID: 300-1816-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	19	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	5.8	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.23	D	0.10	0.050	mg/L	2		300.0	Total/NA
Orthophosphate as P	71	D	0.82	0.41	mg/L	10		300.0	Total/NA
Sulfate	55	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B33954

Lab Sample ID: 300-1816-10

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	4.4	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.36	D	0.10	0.050	mg/L	2		300.0	Total/NA
Nitrite as N	0.041	B D	0.076	0.038	mg/L	2		300.0	Total/NA
Orthophosphate as P	4.1	D N	0.16	0.082	mg/L	2		300.0	Total/NA
Sulfate	47	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B33958

Lab Sample ID: 300-1816-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	19	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	5.8	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.35	D	0.10	0.050	mg/L	2		300.0	Total/NA
Orthophosphate as P	0.14	B D	0.16	0.082	mg/L	2		300.0	Total/NA
Sulfate	59	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B339C8

Lab Sample ID: 300-1816-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	16	D	10	5.0	mg/L	50		300.0	Total/NA
Nitrate as N	4.9	D	1.4	0.70	mg/L	50		300.0	Total/NA
Orthophosphate as P	400	D	4.1	2.1	mg/L	50		300.0	Total/NA
Sulfate	44	D	13	6.3	mg/L	50		300.0	Total/NA

Client Sample ID: B33998

Lab Sample ID: 300-1816-13

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	6.0	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.29	D	0.10	0.050	mg/L	2		300.0	Total/NA
Orthophosphate as P	26	D N	0.16	0.082	mg/L	2		300.0	Total/NA
Sulfate	57	D	0.50	0.25	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: X15-069

TestAmerica Job ID: 300-1816-1
SDG: WC0696

Client Sample ID: B33978

Date Collected: 12/10/15 09:34

Date Received: 12/10/15 14:40

Lab Sample ID: 300-1816-1

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	20	D	0.40	0.20	mg/L			12/10/15 19:59	2
Nitrate as N	5.5	D	0.056	0.028	mg/L			12/10/15 19:59	2
Fluoride	0.29	D	0.10	0.050	mg/L			12/10/15 19:59	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			12/10/15 19:59	2
Orthophosphate as P	65	D	0.82	0.41	mg/L			12/11/15 01:45	10
Sulfate	56	D	0.50	0.25	mg/L			12/10/15 19:59	2

Client Sample ID: B33994

Date Collected: 12/10/15 10:51

Date Received: 12/10/15 14:40

Lab Sample ID: 300-1816-2

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			12/10/15 20:14	2
Nitrate as N	4.1	D	0.056	0.028	mg/L			12/10/15 20:14	2
Fluoride	0.36	D	0.10	0.050	mg/L			12/10/15 20:14	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			12/10/15 20:14	2
Orthophosphate as P	96	D	0.82	0.41	mg/L			12/11/15 02:00	10
Sulfate	46	D	0.50	0.25	mg/L			12/10/15 20:14	2

Client Sample ID: B33982

Date Collected: 12/10/15 10:07

Date Received: 12/10/15 14:40

Lab Sample ID: 300-1816-3

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	20	D	10	5.0	mg/L			12/10/15 22:59	50
Nitrate as N	6.5	D	1.4	0.70	mg/L			12/10/15 22:59	50
Fluoride	1.3	U	2.5	1.3	mg/L			12/10/15 22:59	50
Nitrite as N	0.95	U	1.9	0.95	mg/L			12/10/15 22:59	50
Orthophosphate as P	440	D	4.1	2.1	mg/L			12/10/15 22:59	50
Sulfate	44	D	13	6.3	mg/L			12/10/15 22:59	50

Client Sample ID: B339H4

Date Collected: 12/10/15 07:00

Date Received: 12/10/15 14:40

Lab Sample ID: 300-1816-4

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.20	U	0.40	0.20	mg/L			12/10/15 20:29	2
Nitrate as N	0.028	U	0.056	0.028	mg/L			12/10/15 20:29	2
Fluoride	0.050	U	0.10	0.050	mg/L			12/10/15 20:29	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			12/10/15 20:29	2
Orthophosphate as P	0.082	U N	0.16	0.082	mg/L			12/10/15 20:29	2
Sulfate	0.25	U	0.50	0.25	mg/L			12/10/15 20:29	2

Client: CH2M Hill Plateau Remediation Company
Project/Site: X15-069

TestAmerica Job ID: 300-1816-1
SDG: WC0696

Client Sample ID: B339D2

Date Collected: 12/10/15 09:07

Date Received: 12/10/15 14:40

Lab Sample ID: 300-1816-5

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	18	D	10	5.0	mg/L			12/10/15 23:14	50
Nitrate as N	5.6	D	1.4	0.70	mg/L			12/10/15 23:14	50
Fluoride	1.3	U	2.5	1.3	mg/L			12/10/15 23:14	50
Nitrite as N	0.95	U	1.9	0.95	mg/L			12/10/15 23:14	50
Orthophosphate as P	240	D	4.1	2.1	mg/L			12/10/15 23:14	50
Sulfate	51	D	13	6.3	mg/L			12/10/15 23:14	50

Client Sample ID: B339C4

Date Collected: 12/10/15 08:57

Date Received: 12/10/15 14:40

Lab Sample ID: 300-1816-6

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	48	D	0.40	0.20	mg/L			12/10/15 20:44	2
Nitrate as N	9.0	D	0.056	0.028	mg/L			12/10/15 20:44	2
Fluoride	1.0	D	0.10	0.050	mg/L			12/10/15 20:44	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			12/10/15 20:44	2
Orthophosphate as P	0.83	D N	0.16	0.082	mg/L			12/10/15 20:44	2
Sulfate	58	D	0.50	0.25	mg/L			12/10/15 20:44	2

Client Sample ID: B339C0

Date Collected: 12/10/15 08:31

Date Received: 12/10/15 14:40

Lab Sample ID: 300-1816-7

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	32	D	0.40	0.20	mg/L			12/10/15 20:59	2
Nitrate as N	0.082	D	0.056	0.028	mg/L			12/10/15 20:59	2
Fluoride	0.19	D	0.10	0.050	mg/L			12/10/15 20:59	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			12/10/15 20:59	2
Orthophosphate as P	0.082	U N	0.16	0.082	mg/L			12/10/15 20:59	2
Sulfate	120	D	2.5	1.3	mg/L			12/11/15 02:45	10

Client Sample ID: B339B2

Date Collected: 12/10/15 09:32

Date Received: 12/10/15 14:40

Lab Sample ID: 300-1816-8

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	16	D	10	5.0	mg/L			12/10/15 23:29	50
Nitrate as N	4.9	D	1.4	0.70	mg/L			12/10/15 23:29	50
Fluoride	1.3	U	2.5	1.3	mg/L			12/10/15 23:29	50
Nitrite as N	0.95	U	1.9	0.95	mg/L			12/10/15 23:29	50
Orthophosphate as P	210	D	4.1	2.1	mg/L			12/10/15 23:29	50
Sulfate	45	D	13	6.3	mg/L			12/10/15 23:29	50

Client: CH2M Hill Plateau Remediation Company
Project/Site: X15-069

TestAmerica Job ID: 300-1816-1
SDG: WC0696

Client Sample ID: B339B6

Date Collected: 12/10/15 09:52

Date Received: 12/10/15 14:40

Lab Sample ID: 300-1816-9

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19	D	0.40	0.20	mg/L			12/10/15 21:44	2
Nitrate as N	5.8	D	0.056	0.028	mg/L			12/10/15 21:44	2
Fluoride	0.23	D	0.10	0.050	mg/L			12/10/15 21:44	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			12/10/15 21:44	2
Orthophosphate as P	71	D	0.82	0.41	mg/L			12/11/15 03:00	10
Sulfate	55	D	0.50	0.25	mg/L			12/10/15 21:44	2

Client Sample ID: B33954

Date Collected: 12/10/15 10:30

Date Received: 12/10/15 14:40

Lab Sample ID: 300-1816-10

Matrix: Water

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			12/10/15 19:14	2
Nitrate as N	4.4	D	0.056	0.028	mg/L			12/10/15 19:14	2
Fluoride	0.36	D	0.10	0.050	mg/L			12/10/15 19:14	2
Nitrite as N	0.041	B D	0.076	0.038	mg/L			12/10/15 19:14	2
Orthophosphate as P	4.1	D N	0.16	0.082	mg/L			12/10/15 19:14	2
Sulfate	47	D	0.50	0.25	mg/L			12/10/15 19:14	2

Client Sample ID: B33958

Date Collected: 12/10/15 10:50

Date Received: 12/10/15 14:40

Lab Sample ID: 300-1816-11

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19	D	0.40	0.20	mg/L			12/10/15 22:14	2
Nitrate as N	5.8	D	0.056	0.028	mg/L			12/10/15 22:14	2
Fluoride	0.35	D	0.10	0.050	mg/L			12/10/15 22:14	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			12/10/15 22:14	2
Orthophosphate as P	0.14	B D	0.16	0.082	mg/L			12/10/15 22:14	2
Sulfate	59	D	0.50	0.25	mg/L			12/10/15 22:14	2

Client Sample ID: B339C8

Date Collected: 12/10/15 08:41

Date Received: 12/10/15 14:40

Lab Sample ID: 300-1816-12

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	16	D	10	5.0	mg/L			12/10/15 23:44	50
Nitrate as N	4.9	D	1.4	0.70	mg/L			12/10/15 23:44	50
Fluoride	1.3	U	2.5	1.3	mg/L			12/10/15 23:44	50
Nitrite as N	0.95	U	1.9	0.95	mg/L			12/10/15 23:44	50
Orthophosphate as P	400	D	4.1	2.1	mg/L			12/10/15 23:44	50
Sulfate	44	D	13	6.3	mg/L			12/10/15 23:44	50

Client: CH2M Hill Plateau Remediation Company
 Project/Site: X15-069

TestAmerica Job ID: 300-1816-1
 SDG: WC0696

Client Sample ID: B33998
Date Collected: 12/10/15 12:47
Date Received: 12/10/15 14:40

Lab Sample ID: 300-1816-13
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			12/10/15 21:59	2
Nitrate as N	6.0	D	0.056	0.028	mg/L			12/10/15 21:59	2
Fluoride	0.29	D	0.10	0.050	mg/L			12/10/15 21:59	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			12/10/15 21:59	2
Orthophosphate as P	26	D N	0.16	0.082	mg/L			12/10/15 21:59	2
Sulfate	57	D	0.50	0.25	mg/L			12/10/15 21:59	2

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- 8
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- 10
- 11
- 12
- 13

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 300-2327/5

Matrix: Water

Analysis Batch: 2327

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			12/10/15 18:23	1
Nitrite as N	0.019	U	0.038	0.019	mg/L			12/10/15 18:23	1
Orthophosphate as P	0.041	U	0.082	0.041	mg/L			12/10/15 18:23	1

Lab Sample ID: LCS 300-2327/6

Matrix: Water

Analysis Batch: 2327

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	2.35		mg/L		104	80 - 120
Nitrite as N	3.04	3.16		mg/L		104	80 - 120
Orthophosphate as P	6.53	6.65		mg/L		102	80 - 120

Lab Sample ID: 300-1816-11 MS

Matrix: Water

Analysis Batch: 2327

Client Sample ID: B33958

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	5.8	D	0.452	6.20	D	mg/L		96	75 - 125
Nitrite as N	0.038	U	0.609	0.556	D	mg/L		91	75 - 125
Orthophosphate as P	0.14	B D	1.31	1.27	D	mg/L		87	75 - 125

Lab Sample ID: 300-1816-11 DU

Matrix: Water

Analysis Batch: 2327

Client Sample ID: B33958

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Nitrate as N	5.8	D	5.74	D	mg/L		0.4	20
Nitrite as N	0.038	U	0.038	U	mg/L		NC	20
Orthophosphate as P	0.14	B D	0.135	B D	mg/L		3	20

Lab Sample ID: MB 300-2328/5

Matrix: Water

Analysis Batch: 2328

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			12/10/15 18:23	1
Fluoride	0.025	U	0.050	0.025	mg/L			12/10/15 18:23	1
Sulfate	0.13	U	0.25	0.13	mg/L			12/10/15 18:23	1

Lab Sample ID: LCS 300-2328/6

Matrix: Water

Analysis Batch: 2328

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	16.3		mg/L		102	80 - 120
Fluoride	4.00	4.11		mg/L		103	80 - 120
Sulfate	20.0	20.4		mg/L		102	80 - 120

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 300-1816-11 MS
 Matrix: Water
 Analysis Batch: 2328

Client Sample ID: B33958
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	19	D	3.20	22.6	D	mg/L		98	75 - 125
Fluoride	0.35	D	0.800	1.16	D	mg/L		101	75 - 125
Sulfate	59	D	4.00	62.8	D	mg/L		95	75 - 125

Lab Sample ID: 300-1816-11 DU
 Matrix: Water
 Analysis Batch: 2328

Client Sample ID: B33958
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	19	D	19.4	D	mg/L		0.5	20
Fluoride	0.35	D	0.354	D	mg/L		0	20
Sulfate	59	D	58.7	D	mg/L		0.6	20

HPLC/IC

Analysis Batch: 2327

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-1816-1	B33978	Total/NA	Water	300.0	
300-1816-1	B33978	Total/NA	Water	300.0	
300-1816-2	B33994	Total/NA	Water	300.0	
300-1816-2	B33994	Total/NA	Water	300.0	
300-1816-3	B33982	Total/NA	Water	300.0	
300-1816-4	B339H4	Total/NA	Water	300.0	
300-1816-5	B339D2	Total/NA	Water	300.0	
300-1816-6	B339C4	Total/NA	Water	300.0	
300-1816-7	B339C0	Total/NA	Water	300.0	
300-1816-8	B339B2	Total/NA	Water	300.0	
300-1816-9	B339B6	Total/NA	Water	300.0	
300-1816-9	B339B6	Total/NA	Water	300.0	
300-1816-10	B33954	Total/NA	Water	300.0	
300-1816-11	B33958	Total/NA	Water	300.0	
300-1816-11 DU	B33958	Total/NA	Water	300.0	
300-1816-11 MS	B33958	Total/NA	Water	300.0	
300-1816-12	B339C8	Total/NA	Water	300.0	
300-1816-13	B33998	Total/NA	Water	300.0	
LCS 300-2327/6	Lab Control Sample	Total/NA	Water	300.0	
MB 300-2327/5	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 2328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-1816-1	B33978	Total/NA	Water	300.0	
300-1816-2	B33994	Total/NA	Water	300.0	
300-1816-3	B33982	Total/NA	Water	300.0	
300-1816-4	B339H4	Total/NA	Water	300.0	
300-1816-5	B339D2	Total/NA	Water	300.0	
300-1816-6	B339C4	Total/NA	Water	300.0	
300-1816-7	B339C0	Total/NA	Water	300.0	
300-1816-7	B339C0	Total/NA	Water	300.0	
300-1816-8	B339B2	Total/NA	Water	300.0	
300-1816-9	B339B6	Total/NA	Water	300.0	
300-1816-10	B33954	Total/NA	Water	300.0	
300-1816-11	B33958	Total/NA	Water	300.0	
300-1816-11 DU	B33958	Total/NA	Water	300.0	
300-1816-11 MS	B33958	Total/NA	Water	300.0	
300-1816-12	B339C8	Total/NA	Water	300.0	
300-1816-13	B33998	Total/NA	Water	300.0	
LCS 300-2328/6	Lab Control Sample	Total/NA	Water	300.0	
MB 300-2328/5	Method Blank	Total/NA	Water	300.0	

Client: CH2M Hill Plateau Remediation Company
Project/Site: X15-069

TestAmerica Job ID: 300-1816-1
SDG: WC0696

Client Sample ID: B33978**Date Collected: 12/10/15 09:34****Date Received: 12/10/15 14:40****Lab Sample ID: 300-1816-1****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	300.0		2	10 mL		2327	12/10/15 19:59	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		2328	12/10/15 19:59	CPM	TAL RCH
Total/NA	Analysis	300.0		10	10 mL		2327	12/11/15 01:45	CPM	TAL RCH

Client Sample ID: B33994**Date Collected: 12/10/15 10:51****Date Received: 12/10/15 14:40****Lab Sample ID: 300-1816-2****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	300.0		2	10 mL		2327	12/10/15 20:14	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		2328	12/10/15 20:14	CPM	TAL RCH
Total/NA	Analysis	300.0		10	10 mL		2327	12/11/15 02:00	CPM	TAL RCH

Client Sample ID: B33982**Date Collected: 12/10/15 10:07****Date Received: 12/10/15 14:40****Lab Sample ID: 300-1816-3****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	300.0		50	10 mL		2327	12/10/15 22:59	CPM	TAL RCH
Total/NA	Analysis	300.0		50	10 mL		2328	12/10/15 22:59	CPM	TAL RCH

Client Sample ID: B339H4**Date Collected: 12/10/15 07:00****Date Received: 12/10/15 14:40****Lab Sample ID: 300-1816-4****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	300.0		2	10 mL		2327	12/10/15 20:29	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		2328	12/10/15 20:29	CPM	TAL RCH

Client Sample ID: B339D2**Date Collected: 12/10/15 09:07****Date Received: 12/10/15 14:40****Lab Sample ID: 300-1816-5****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	300.0		50	10 mL		2327	12/10/15 23:14	CPM	TAL RCH
Total/NA	Analysis	300.0		50	10 mL		2328	12/10/15 23:14	CPM	TAL RCH

Client: CH2M Hill Plateau Remediation Company
Project/Site: X15-069

TestAmerica Job ID: 300-1816-1
SDG: WC0696

Client Sample ID: B339C4

Date Collected: 12/10/15 08:57

Date Received: 12/10/15 14:40

Lab Sample ID: 300-1816-6

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	300.0		2	10 mL		2327	12/10/15 20:44	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		2328	12/10/15 20:44	CPM	TAL RCH

Client Sample ID: B339C0

Date Collected: 12/10/15 08:31

Date Received: 12/10/15 14:40

Lab Sample ID: 300-1816-7

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	300.0		2	10 mL		2327	12/10/15 20:59	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		2328	12/10/15 20:59	CPM	TAL RCH
Total/NA	Analysis	300.0		10	10 mL		2328	12/11/15 02:45	CPM	TAL RCH

Client Sample ID: B339B2

Date Collected: 12/10/15 09:32

Date Received: 12/10/15 14:40

Lab Sample ID: 300-1816-8

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	300.0		50	10 mL		2327	12/10/15 23:29	CPM	TAL RCH
Total/NA	Analysis	300.0		50	10 mL		2328	12/10/15 23:29	CPM	TAL RCH

Client Sample ID: B339B6

Date Collected: 12/10/15 09:52

Date Received: 12/10/15 14:40

Lab Sample ID: 300-1816-9

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	300.0		2	10 mL		2327	12/10/15 21:44	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		2328	12/10/15 21:44	CPM	TAL RCH
Total/NA	Analysis	300.0		10	10 mL		2327	12/11/15 03:00	CPM	TAL RCH

Client Sample ID: B33954

Date Collected: 12/10/15 10:30

Date Received: 12/10/15 14:40

Lab Sample ID: 300-1816-10

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	300.0		2	10 mL		2327	12/10/15 19:14	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		2328	12/10/15 19:14	CPM	TAL RCH

Client Sample ID: B33958

Date Collected: 12/10/15 10:50
Date Received: 12/10/15 14:40

Lab Sample ID: 300-1816-11

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	300.0		2	10 mL		2327	12/10/15 22:14	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		2328	12/10/15 22:14	CPM	TAL RCH

Client Sample ID: B339C8

Date Collected: 12/10/15 08:41
Date Received: 12/10/15 14:40

Lab Sample ID: 300-1816-12

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	300.0		50	10 mL		2327	12/10/15 23:44	CPM	TAL RCH
Total/NA	Analysis	300.0		50	10 mL		2328	12/10/15 23:44	CPM	TAL RCH

Client Sample ID: B33998

Date Collected: 12/10/15 12:47
Date Received: 12/10/15 14:40

Lab Sample ID: 300-1816-13

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	300.0		2	10 mL		2327	12/10/15 21:59	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		2328	12/10/15 21:59	CPM	TAL RCH

Client Sample ID: B33958

Date Collected: 12/10/15 10:50
Date Received: 12/10/15 14:40

Lab Sample ID: 300-1816-11 DU

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	300.0		2	10 mL		2327	12/10/15 22:44	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		2328	12/10/15 22:44	CPM	TAL RCH

Client Sample ID: Lab Control Sample

Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 300-2327/6

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	300.0		1	10 mL		2327	12/10/15 18:59	CPM	TAL RCH

Client Sample ID: Lab Control Sample

Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 300-2328/6

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	300.0		1	10 mL		2328	12/10/15 18:59	CPM	TAL RCH

Client: CH2M Hill Plateau Remediation Company
 Project/Site: X15-069

TestAmerica Job ID: 300-1816-1
 SDG: WC0696

Client Sample ID: Method Blank

Lab Sample ID: MB 300-2327/5

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	10 mL		2327	12/10/15 18:23	CPM	TAL RCH

Client Sample ID: Method Blank

Lab Sample ID: MB 300-2328/5

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	10 mL		2328	12/10/15 18:23	CPM	TAL RCH

Client Sample ID: B33958

Lab Sample ID: 300-1816-11 MS

Date Collected: 12/10/15 10:50

Matrix: Water

Date Received: 12/10/15 14:40

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	10 mL		2327	12/10/15 22:29	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		2328	12/10/15 22:29	CPM	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: X15-069

TestAmerica Job ID: 300-1816-1
SDG: WC0696

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL RCH

Protocol References:

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

Laboratory References:

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



Sample Summary

Client: CH2M Hill Plateau Remediation Company
 Project/Site: X15-069

TestAmerica Job ID: 300-1816-1
 SDG: WC0696

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-1816-1	B33978	Water	12/10/15 09:34	12/10/15 14:40
300-1816-2	B33994	Water	12/10/15 10:51	12/10/15 14:40
300-1816-3	B33982	Water	12/10/15 10:07	12/10/15 14:40
300-1816-4	B339H4	Water	12/10/15 07:00	12/10/15 14:40
300-1816-5	B339D2	Water	12/10/15 09:07	12/10/15 14:40
300-1816-6	B339C4	Water	12/10/15 08:57	12/10/15 14:40
300-1816-7	B339C0	Water	12/10/15 08:31	12/10/15 14:40
300-1816-8	B339B2	Water	12/10/15 09:32	12/10/15 14:40
300-1816-9	B339B6	Water	12/10/15 09:52	12/10/15 14:40
300-1816-10	B33954	Water	12/10/15 10:30	12/10/15 14:40
300-1816-11	B33958	Water	12/10/15 10:50	12/10/15 14:40
300-1816-12	B339C8	Water	12/10/15 08:41	12/10/15 14:40
300-1816-13	B33998	Water	12/10/15 12:47	12/10/15 14:40



Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 300-1816-1

SDG Number: WC0696

Login Number: 1816

List Number: 1

Creator: Bock, Julie A

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.	True	
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.	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.	True	
Sample Preservation Verified.	True	
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	

