

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: 300-1518-1
TestAmerica Sample Delivery Group: WC0605
Client Project/Site: X15-065
Revision: 1

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

Attn: CPP Sample Management



Authorized for release by:
3/28/2016 12:09:06 PM
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LINKS

Review your project results through
TotalAccess

Have a Question?



Visit us at:
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. The sample/ sample duplicate RPD agreement is not applicable if one or both results are elss than five times the MDL.





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Client: CH2M Hill Plateau Remediation Company
 Project/Site: X15-065

TestAmerica Job ID: 300-1518-1
 SDG: WC0605

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
D	The reported value is from a dilution.
N	MS, MSD: Spike recovery is outside acceptance limits.
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, 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: X15-065

TestAmerica Job ID: 300-1518-1
SDG: WC0605

Job ID: 300-1518-1

Laboratory: TestAmerica Richland

Narrative

**Job Narrative
300-1518-1**

Comments

This job has been amended to include missing qualifiers. For more information refer to P&D attached to report.

Receipt

The samples were received on 11/15/2015 12:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 12.1° C.

HPLC/IC

Method 300.0: The matrix spike (MS) recoveries for analytical batch 300-1993 were outside control limits for Orthophosphate as P. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

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Problem and Discrepancy Report**TARL****WC0605****03/14/16**

The data package has the following issues:

Analysis batch 300-1993 (p 15) has a MS outside control limits for PO4 (p 4, 14). Samples B33025 and B33021 are part of analysis batch 300-1993 but do not have N qualifiers applied to the results.

Resolution: *Provide correction.*

Lab Response: **Qualifiers have been added to both hardcopy and EDD.**

Please correct the issues and submit the electronic data package.

Provide a resolution to each issue noted on the report

Page 1 of 1

Rev 1

Collector	K.C. Patterson/CHPRC	Contact/Requester	WHITLEY, KM	Telephone No.	373-4929
SAF No.	X15-065	Sampling Origin	HANFORD SITE	Purchase Order/Charge Code	300205
Project Title	Uranium Sequestration - Day 9	Logbook No.	HNF-N-506 81/37	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
B33017	N	NOV 15 2015	1018	1x500-ml P	300.0 ANIONS_IC: GW 01	48 Hours	Cool <=6C

31518
WCC0605



300-1518 COC

March 25, 2016

Relinquished By	K.C. Patterson	Print	Sign	Date/Time	NOV 15 2015 12:15	Received By	J. Bock, TARL	Print	Sign	Date/Time	NOV 15 2015 12:15	Matrix *
Relinquished By				Date/Time		Received By				Date/Time		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
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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CH2M Hill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
X15-065-009
Page 1 of 1

Collector	K.C. Paterson/CHPRC		Contact/Requester	WHITLEY, KM		Telephone No.	373-4929	
SAF No.	X15-065		Sampling Origin	HANFORD SITE		Purchase Order/Charge Code	300205	
Project Title	Uranium Sequestration - Day 9		Logbook No.	HNF-N-506 81 / 37		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			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
B33021	N	W	NOV 15 2015	1040	1x500-mL P	300.0_ANIONS_IC: GW/01	48 Hours	Cool <=6C

#1519
WSD0605

March 25, 2016

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
K.C. Paterson/CHPRC			NOV 15 2015	1. Bock, TARL			NOV 15 2015	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
Relinquished By			Date/Time	Received By			Date/Time	
Relinquished By			Date/Time	Received By			Date/Time	
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		



CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.#
X15-065-010
Page 1 of 1

Collector	K.C. Patterson/CHPRC	Contact/Requester	WHITLEY, KM	Telephone No.	373-4929
SAF No.	X15-065	Sampling Origin	HANFORD SITE	Purchase Order/Charge Code	300205
Project Title	Uranium Sequestration - Day 9	Logbook No.	HNF-N-506 81 / 37	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"/>		

Sample No.	Filter	* Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B33025	N	NOV 15 2015	1153	1x500-mL P	300.0_ANIONS_IC: GW 01	48 Hours	Cool <=6C

March 25, 2016

*#1514
WCCROSS*

Relinquished By	K.C. Patterson/CHPRC	Print	<i>[Signature]</i>	Sign	<i>[Signature]</i>	Date/Time	NOV 15 2015 1215	Received By	<i>[Signature]</i>	Print	J. BOCK, TARL	Sign	<i>[Signature]</i>	Date/Time	NOV 15 2015 1215
Relinquished By		Date/Time		Received By		Date/Time		Received By		Date/Time		Date/Time		Date/Time	
Relinquished By		Date/Time		Received By		Date/Time		Received By		Date/Time		Date/Time		Date/Time	

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

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



CH2M/Hill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
X15-065-011
Page 1 of 1

Collector	K.C. Patterson/CH2M	Contact/Requester	WHITLEY, KM	Telephone No.	373-4929
SAF No.	X15-065	Sampling Origin	HANFORD SITE	Purchase Order/Charge Code	300205
Project Title	Uranium Sequestration - Day 9	Logbook No.	HNF-N-506 81 / 37	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"/>		

Sample No.	Filter	* Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B33029	N	NOV 15 2015	1130	1x500-ml P	300.0_ANIONS_IC: GW 01	48 Hours	Cool <=6C

March 25, 2016

#1518
wc2005

Relinquished By	<i>[Signature]</i>	Print	<i>[Signature]</i>	Date/Time	NOV 15 2015 1215	Received By	<i>[Signature]</i>	Print	J. BOCK, TARK	Date/Time	NOV 15 2015 1215	Matrix *
Relinquished By				Date/Time		Received By				Date/Time		S = Soil
Relinquished By				Date/Time		Received By				Date/Time		SE = Sediment
Relinquished By				Date/Time		Received By				Date/Time		SO = Solid
Relinquished By				Date/Time		Received By				Date/Time		SL = Sludge
Relinquished By				Date/Time		Received By				Date/Time		W = Water
Relinquished By				Date/Time		Received By				Date/Time		O = Oil
Relinquished By				Date/Time		Received By				Date/Time		A = Air
Relinquished By				Date/Time		Received By				Date/Time		DS = Drum Solids
Relinquished By				Date/Time		Received By				Date/Time		DL = Drum Liquids
Relinquished By				Date/Time		Received By				Date/Time		T = Tissue
Relinquished By				Date/Time		Received By				Date/Time		WI = Wipe
Relinquished By				Date/Time		Received By				Date/Time		L = Liquid
Relinquished By				Date/Time		Received By				Date/Time		V = Vegetation
Relinquished By				Date/Time		Received By				Date/Time		X = Other

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



CH2M Hill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **X15-065-012**
Page 1 of 1

Collector	K.C. Patterson/CHPRC	Contact/Requester	WHITLEY, KM	Telephone No.	373-4929
QAF No.	X15-065	Sampling Origin	HANFORD SITE	Purchase Order/Charge Code	300205
Project Title	Uranium Sequestration - Day 9	Logbook No.	HNF-N-506 81/36	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 regulated for transportation per 49 CER/LATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.					
Sample No.	B33033	Filter	N	Date	NOV 15 2015
		* Date	NOV 15 2015	Time	0845
		No/Type Container	1x500-mL P	Sample Analysis	300.0_ANIONS_IC: GW 01
		Sample Analysis		Holding Time	48 Hours
		Preservative			Cool <=6C

March 25, 2016

Handwritten: 1519
WCD605

Relinquished By	<i>Print</i> <i>Sign</i>	Date/Time	Received By	<i>Print</i> <i>Sign</i>	Date/Time	Matrix *
K.C. Patterson/CHPRC	<i>[Signature]</i>	NOV 15 2015	<i>[Signature]</i>	1. BOCK, TAPL	NOV 15 2015	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
Relinquished By		Date/Time	Received By		Date/Time	
Relinquished By		Date/Time	Received By		Date/Time	
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		

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **X15-065-013**
Page 1 of 1

Collector	K.C. Patterson/CHPRC	Contact/Requester	WHITLEY, KM	Telephone No.	373-4929
RAF No.	X15-065	Sampling Origin	HANFORD SITE	Purchase Order/Charge Code	300205
Project Title	Uranium Sequestration - Day 9	Logbook No.	HNF-N-506 81 / 34	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 438.1.			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
B33037	N	NOV 15 2015	0915	1x500-mL P	300.0_ANIONS_IC: GW 01	48 Hours	Cool <=6C

March 25, 2016
 1518
 WEDDAYS

Relinquished By	K.C. Patterson/CHPRC	Print	Sign	Date/Time	NOV 15 2015 1215	Received By	J. Bock, TARL	Print	Sign	Date/Time	NOV 15 2015 1215	Matrix *
Relinquished By				Date/Time		Received By				Date/Time		S = Soil
Relinquished By				Date/Time		Received By				Date/Time		SE = Sediment
Relinquished By				Date/Time		Received By				Date/Time		SO = Solid
Relinquished By				Date/Time		Received By				Date/Time		SL = Sludge
Relinquished By				Date/Time		Received By				Date/Time		W = Water
Relinquished By				Date/Time		Received By				Date/Time		O = Oil
Relinquished By				Date/Time		Received By				Date/Time		A = Air
Relinquished By				Date/Time		Received By				Date/Time		DS = Drum Solids
Relinquished By				Date/Time		Received By				Date/Time		DL = Drum Liquids
Relinquished By				Date/Time		Received By				Date/Time		I = Tissue
Relinquished By				Date/Time		Received By				Date/Time		WT = Wipe
Relinquished By				Date/Time		Received By				Date/Time		L = Liquid
Relinquished By				Date/Time		Received By				Date/Time		V = Vegetation
Relinquished By				Date/Time		Received By				Date/Time		X = Other

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

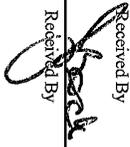
C.O.C. # X15-065-014
Page 1 of 1

Collector	K.C. Patterson/CHPRC	Contact/Requester	WHITLEY, KM	Telephone No.	373-4929
QAP No.	X15-065	Sampling Origin	HANFORD SITE	Purchase Order/Charge Code	300205
Project Title	Uranium Sequestration - Day 9	Logbook No.	HNF-N-506 81/37	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"/>		

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B33041	N		NOV 15 2015	0950	1x500-ml P	300.0_ANIONS_IC: GW 01	48 Hours	Cool <=6C

March 25, 2016

WISID
wedges

Relinquished By	 K.C. Patterson/CHPRC	Print	Sign	Date/Time	NOV 15 2015 1215	Received By	 J. Bock, TARL	Print	Sign	Date/Time	NOV 15 2015 1215	Matrix *
Relinquished By				Date/Time		Received By				Date/Time		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 WI = Waste L = Liquid V = Vegetation X = Other
FINAL SAMPLE DISPOSITION												
Disposal Method (e.g., Return to customer, per lab procedure, used in process)						Disposed By						

March 25, 2016
Detection Summary

Rev 1

Client: CH2M Hill Plateau Remediation Company
Project/Site: X15-065

TestAmerica Job ID: 300-1518-1
SDG: WC0605

Client Sample ID: B33017

Lab Sample ID: 300-1518-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Orthophosphate as P	0.48	D N	0.16	0.082	mg/L	2		300.0	Total/NA

Client Sample ID: B33021

Lab Sample ID: 300-1518-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Orthophosphate as P	51	N D	0.41	0.21	mg/L	5		300.0	Total/NA

Client Sample ID: B33025

Lab Sample ID: 300-1518-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Orthophosphate as P	69	D N	0.41	0.21	mg/L	5		300.0	Total/NA

Client Sample ID: B33029

Lab Sample ID: 300-1518-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Orthophosphate as P	380	D	4.1	2.1	mg/L	50		300.0	Total/NA

Client Sample ID: B33033

Lab Sample ID: 300-1518-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Orthophosphate as P	25	D	0.16	0.082	mg/L	2		300.0	Total/NA

Client Sample ID: B33037

Lab Sample ID: 300-1518-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Orthophosphate as P	170	D	1.6	0.82	mg/L	20		300.0	Total/NA

Client Sample ID: B33041

Lab Sample ID: 300-1518-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Orthophosphate as P	120	D	1.6	0.82	mg/L	20		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Richland

March 25, 2016
Client Sample Results

Rev 1

Client: CH2M Hill Plateau Remediation Company
 Project/Site: X15-065

TestAmerica Job ID: 300-1518-1
 SDG: WC0605

Client Sample ID: B33017
 Date Collected: 11/15/15 10:18
 Date Received: 11/15/15 12:15

Lab Sample ID: 300-1518-1
 Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Orthophosphate as P	0.48	D N	0.16	0.082	mg/L			11/15/15 18:02	2

Client Sample ID: B33021
 Date Collected: 11/15/15 10:40
 Date Received: 11/15/15 12:15

Lab Sample ID: 300-1518-2
 Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Orthophosphate as P	51	N D	0.41	0.21	mg/L			11/15/15 21:33	5

Client Sample ID: B33025
 Date Collected: 11/15/15 11:53
 Date Received: 11/15/15 12:15

Lab Sample ID: 300-1518-3
 Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Orthophosphate as P	69	D N	0.41	0.21	mg/L			11/15/15 21:48	5

Client Sample ID: B33029
 Date Collected: 11/15/15 11:30
 Date Received: 11/15/15 12:15

Lab Sample ID: 300-1518-4
 Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Orthophosphate as P	380	D	4.1	2.1	mg/L			11/16/15 15:46	50

Client Sample ID: B33033
 Date Collected: 11/15/15 08:45
 Date Received: 11/15/15 12:15

Lab Sample ID: 300-1518-5
 Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Orthophosphate as P	25	D	0.16	0.082	mg/L			11/15/15 19:32	2

Client Sample ID: B33037
 Date Collected: 11/15/15 09:15
 Date Received: 11/15/15 12:15

Lab Sample ID: 300-1518-6
 Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Orthophosphate as P	170	D	1.6	0.82	mg/L			11/16/15 15:01	20

Client Sample ID: B33041
 Date Collected: 11/15/15 09:50
 Date Received: 11/15/15 12:15

Lab Sample ID: 300-1518-7
 Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Orthophosphate as P	120	D	1.6	0.82	mg/L			11/16/15 15:16	20

TestAmerica Richland

Client: CH2M Hill Plateau Remediation Company
 Project/Site: X15-065

TestAmerica Job ID: 300-1518-1
 SDG: WC0605

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 300-1993/7
Matrix: Water
Analysis Batch: 1993

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Orthophosphate as P	0.041	U	0.082	0.041	mg/L			11/15/15 16:04	1

Lab Sample ID: LCS 300-1993/6
Matrix: Water
Analysis Batch: 1993

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Orthophosphate as P	6.53	6.67		mg/L		102	80 - 120

Lab Sample ID: 300-1518-1 MS
Matrix: Water
Analysis Batch: 1993

Client Sample ID: B33017
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Orthophosphate as P	0.48	D N	1.31	0.672	D	mg/L		15	75 - 125

Lab Sample ID: 300-1518-1 DU
Matrix: Water
Analysis Batch: 1993

Client Sample ID: B33017
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Orthophosphate as P	0.48	D N	0.469	D	mg/L		2	20

March 25, 2016
QC Association Summary

Rev 1

Client: CH2M Hill Plateau Remediation Company
Project/Site: X15-065

TestAmerica Job ID: 300-1518-1
SDG: WC0605

HPLC/IC

Analysis Batch: 1993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-1518-1	B33017	Total/NA	Water	300.0	
300-1518-1 DU	B33017	Total/NA	Water	300.0	
300-1518-1 MS	B33017	Total/NA	Water	300.0	
300-1518-2	B33021	Total/NA	Water	300.0	
300-1518-3	B33025	Total/NA	Water	300.0	
300-1518-5	B33033	Total/NA	Water	300.0	
LCS 300-1993/6	Lab Control Sample	Total/NA	Water	300.0	
MB 300-1993/7	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 1999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-1518-4	B33029	Total/NA	Water	300.0	
300-1518-6	B33037	Total/NA	Water	300.0	
300-1518-7	B33041	Total/NA	Water	300.0	

Client: CH2M Hill Plateau Remediation Company
Project/Site: X15-065

TestAmerica Job ID: 300-1518-1
SDG: WC0605

Client Sample ID: B33017
Date Collected: 11/15/15 10:18
Date Received: 11/15/15 12:15

Lab Sample ID: 300-1518-1
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		1993	11/15/15 18:02	RLC	TAL RCH

Client Sample ID: B33021
Date Collected: 11/15/15 10:40
Date Received: 11/15/15 12:15

Lab Sample ID: 300-1518-2
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		5	10 mL		1993	11/15/15 21:33	RLC	TAL RCH

Client Sample ID: B33025
Date Collected: 11/15/15 11:53
Date Received: 11/15/15 12:15

Lab Sample ID: 300-1518-3
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		5	10 mL		1993	11/15/15 21:48	RLC	TAL RCH

Client Sample ID: B33029
Date Collected: 11/15/15 11:30
Date Received: 11/15/15 12:15

Lab Sample ID: 300-1518-4
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		50	10 mL		1999	11/16/15 15:46	RLC	TAL RCH

Client Sample ID: B33033
Date Collected: 11/15/15 08:45
Date Received: 11/15/15 12:15

Lab Sample ID: 300-1518-5
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		2	10 mL		1993	11/15/15 19:32	RLC	TAL RCH

Client Sample ID: B33037
Date Collected: 11/15/15 09:15
Date Received: 11/15/15 12:15

Lab Sample ID: 300-1518-6
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		20	10 mL		1999	11/16/15 15:01	RLC	TAL RCH

Client: CH2M Hill Plateau Remediation Company
Project/Site: X15-065

TestAmerica Job ID: 300-1518-1
SDG: WC0605

Client Sample ID: B33041
Date Collected: 11/15/15 09:50
Date Received: 11/15/15 12:15

Lab Sample ID: 300-1518-7
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		20	10 mL		1999	11/16/15 15:16	RLC	TAL RCH

Client Sample ID: B33017
Date Collected: 11/15/15 10:18
Date Received: 11/15/15 12:15

Lab Sample ID: 300-1518-1 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		1993	11/15/15 18:32	RLC	TAL RCH

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 300-1993/6
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		1993	11/15/15 16:21	RLC	TAL RCH

Client Sample ID: Method Blank
Date Collected: N/A
Date Received: N/A

Lab Sample ID: MB 300-1993/7
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		1	10 mL		1993	11/15/15 16:04	RLC	TAL RCH

Client Sample ID: B33017
Date Collected: 11/15/15 10:18
Date Received: 11/15/15 12:15

Lab Sample ID: 300-1518-1 MS
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		1993	11/15/15 18:17	RLC	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: X15-065

TestAmerica Job ID: 300-1518-1
SDG: WC0605

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



Client: CH2M Hill Plateau Remediation Company
Project/Site: X15-065

TestAmerica Job ID: 300-1518-1
SDG: WC0605

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-1518-1	B33017	Water	11/15/15 10:18	11/15/15 12:15
300-1518-2	B33021	Water	11/15/15 10:40	11/15/15 12:15
300-1518-3	B33025	Water	11/15/15 11:53	11/15/15 12:15
300-1518-4	B33029	Water	11/15/15 11:30	11/15/15 12:15
300-1518-5	B33033	Water	11/15/15 08:45	11/15/15 12:15
300-1518-6	B33037	Water	11/15/15 09:15	11/15/15 12:15
300-1518-7	B33041	Water	11/15/15 09:50	11/15/15 12:15

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

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 300-1518-1
SDG Number: WC0605

Login Number: 1518
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	

