

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: 300-1519-1
TestAmerica Sample Delivery Group: WC0606
Client Project/Site: X15-064
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 2:27:51 PM
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LINKS

Review your project results through
TotalAccess

Have a Question?



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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.

- 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	6
Detection Summary	13
Client Sample Results	14
QC Sample Results	15
QC Association Summary	16
Lab Chronicle	17
Method Summary	19
Sample Summary	20
Receipt Checklists	21

Client: CH2M Hill Plateau Remediation Company
Project/Site: X15-064

TestAmerica Job ID: 300-1519-1
SDG: WC0606

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: X15-064

TestAmerica Job ID: 300-1519-1
SDG: WC0606

Job ID: 300-1519-1

Laboratory: TestAmerica Richland

Narrative

**Job Narrative
300-1519-1**

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 3:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 10.9° C.

HPLC/IC

Method 300.0: The matrix spike (MS) recoveries for analytical batch 300-1995 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.

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

Problem and Discrepancy Report**TARL****WC0606****03/14/16**

The data package has the following issues:

Analysis batch 300-1995 (p 15) has a MS outside control limits for PO4 (p 4, 14). Samples B32YY7 and B33009 are part of analysis batch 300-1995 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. Paterson/CHPRC	Contact/Requester	WHITLEY, KM	Telephone No.	373-4929
SAP No.	X15-064	Sampling Origin	HANFORD SITE	Purchase Order/Charge Code	300205
Project Title	Uranium Sequestration - Day 8	Logbook No.	HNF-N-506 81/35	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
B32YX9	N	NOV 14 2015	1010	1x500-mL P	300.0_ANIONS_IC: GW/ 01
					Holding Time
					48 Hours
					Preservative
					Cool <=6C

March 28, 2016

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300-1519 CCC



Relinquished By	Print	Sign	NOV 14 2015 1349	Received By	Print	Sign	NOV 14 2015 1349	Matrix *
K.C. Paterson/CHPRC				SSU-1				S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By	Print	Sign	NOV 15 2015 0700	Received By	Print	Sign	NOV 15 2015 0700	DS = Drum Solids DL = Drum Liquids T = Tissue WT = Wipe L = Liquid V = Vegetation X = Other
SSU-1				L.D. Wall CHPRC				
Relinquished By	Print	Sign	NOV 15 2015 1520	Received By	Print	Sign	NOV 15 2015 1520	
L.D. Wall CHPRC				J. Bock, TARL				
Relinquished By	Print	Sign		Received By	Print	Sign		
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)		Disposed By		Date/Time		

Rev 1

Collector	K.C. Patterson/CH2MRC		Contact/Requester	WHITLEY, KM	Telephone No.	373-4929
SAR No.	X15-064	Sampling Origin	HANFORD SITE	Purchase Order/Charge Code	300205	
Project Title	Uranium Sequestration - Day 8	Logbook No.	HNF-N-506 81 / 35	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 CERMTA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.			Hold Time			
Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis	Holding Time
B32YY3	N	NOV 14 2015	1117	1x500-mL P	300.0_ANIONS_IC: GW 01	48 Hours
						Preservative
						Cool <=6C

March 28, 2016

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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 WT = Wipe L = Liquid V = Vegetation X = Other
K.C. Patterson/CH2MRC			NOV 14 2015 1349	SSU-1			NOV 14 2015 1349	
Relinquished By			NOV 15 2015 0700	LD. Wall CH2MRC			NOV 15 2015 0700	
SSU-1			NOV 15 2015 1520	J. Bock, TARL			NOV 15 2015 1520	
Relinquished By				Received By				
LD. Wall CH2MRC								
Relinquished By				Received 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. #
X15-064-010
Page 1 of 1

Collector	K.C. Paterson/CHPRC	Contact/Requester	WHITLEY, KM	Telephone No.	373-4929
SAF No.	X15-064	Sampling Origin	HANFORD SITE	Purchase Order/Charge Code	300205
Project Title	Uranium Sequestration - Day 8	Logbook No.	HNF-N-506 <u>81 / 35</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/LATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.			Hold Time		
Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis
B32YY7	N	NOV 14 2015	1255	1x500-mL P	300.0_ANIONS_IC: GW 01
					Holding Time
					48 Hours
					Preservative
					Cool <=6C

Rev 1

March 28, 2016

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Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
K.C. Paterson/CHPRC		<i>[Signature]</i>	NOV 14 2015 1349	SSU-1		<i>[Signature]</i>	NOV 14 2015 1349	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By			NOV 15 2015 0700	Received By		<i>[Signature]</i>	NOV 15 2015 0700	DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
Relinquished By		<i>[Signature]</i>	NOV 15 2015 1520	Received By		J. Bock, TARL	NOV 15 2015 1520	
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)							Date/Time

CH2M Hill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #

X15-064-011

Page 1 of 1

Rev 1

Collector	K.C. Patterson/CHPRC	Contact/Requester	WHITLEY, KM	Telephone No.	373-4929
SAF No.	X15-064	Sampling Origin	HANFORD SITE	Purchase Order/Charge Code	300205
Project Title	Uranium Sequestration - Day 8	Logbook No.	HNF-N-506 <u>81 / 85</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/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
B33001	N		NOV 14 2015	1225	1x500-mL P	300.0_ANIONS_IC: GW/01	48 Hours	Cool <=6C

March 28, 2016

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Relinquished By	<i>[Signature]</i>	Print	SSU-1	Date/Time	NOV 14 2015 1349	Received By	<i>[Signature]</i>	Print	SSU-1	Date/Time	NOV 14 2015 1349	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
Relinquished By	<i>[Signature]</i>	Print	SSU-1	Date/Time	NOV 15 2015 0700	Received By	<i>[Signature]</i>	Print	SSU-1	Date/Time	NOV 15 2015 0700	
Relinquished By	<i>[Signature]</i>	Print	SSU-1	Date/Time	NOV 15 2015 1520	Received By	<i>[Signature]</i>	Print	SSU-1	Date/Time	NOV 15 2015 1520	
Relinquished By	<i>[Signature]</i>	Print	SSU-1	Date/Time	NOV 15 2015 1520	Received By	<i>[Signature]</i>	Print	SSU-1	Date/Time	NOV 15 2015 1520	
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. #

X15-064-012

Page 1 of 1

Rev 1

Collector	K.C. Patterson/CHPRC	Contact/Requester	WHITLEY, KM	Telephone No.	373-4929
SAF No.	X15-064	Sampling Origin	HANFORD SITE	Purchase Order/Charge Code	300205
Project Title	Uranium Sequestration - Day 8	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	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/LA/VA 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
B33005	N	NOV 14 2015	0825	1x500-mL P	300.0_ANIONS_IC: GW 01	48 Hours	Cool <=6C

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March 28, 2016

Relinquished By	<i>[Signature]</i> K.C. Patterson/CHPRC	Print	<i>[Signature]</i> SSU-1	Sign	NOV 14 2015 1549	Date/Time	NOV 14 2015 1549	Date/Time	NOV 14 2015 1549	Date/Time	NOV 14 2015 1549	Matrix *
Received By	<i>[Signature]</i> LD. Weir/CHPRC	Print	<i>[Signature]</i> J. Beck, TARL	Sign	NOV 15 2015 0700	Date/Time	NOV 15 2015 0700	Date/Time	NOV 15 2015 0700	Date/Time	NOV 15 2015 1520	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
Relinquished By	<i>[Signature]</i> LD. Weir/CHPRC	Print	<i>[Signature]</i> J. Beck, TARL	Sign	NOV 15 2015 1520	Date/Time	NOV 15 2015 1520	Date/Time	NOV 15 2015 1520	Date/Time	NOV 15 2015 1520	

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. #

X15-064-013

Page 1 of 1

Collector: **K.C. Patterson/CHPRC** Contact/Requester: **WHITLEY, KM** Telephone No.: **373-4929**

SAF No.: **X15-064** Sampling Origin: **HANFORD SITE** Purchase Order/Charge Code: **300205**

Project Title: **Uranium Sequestration - Day 8** 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** **PRIORITY** Offsite Property No.: **N/A**

POSSIBLE SAMPLE HAZARDS/REMARKS
 *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
B33009	N	NOV 14 2015	0900	1x500-mL P	300.0_ANIONS_IC: GW 01	48 Hours	Cool <=6C

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Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
Relinquished By K.C. Patterson/CHPRC		<i>[Signature]</i>	NOV 14 2015 1349	Received By SSU-1			NOV 14 2015 1349	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By SSU-1		<i>[Signature]</i>	NOV 15 2015 0700	Received By L.D. Wall CHPRC	<i>[Signature]</i>		NOV 15 2015 0700	DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
Relinquished By L.D. Wall CHPRC		<i>[Signature]</i>	NOV 15 2015 1520	Received By J. Bock, TAPL	<i>[Signature]</i>		NOV 15 2015 1520	
Relinquished By			Date/Time	Received By			Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)							Date/Time

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #

X15-064-014

Page 1 of 1

Collector	K.C. Paterson/CHPRC		Contact/Requester	WHITTLE, KM		Telephone No.	373-4929	
SAF No.	X15-064		Sampling Origin	HANFORD SITE		Purchase Order/Charge Code	300205	
Project Title	Uranium Sequestration - Day 8		Logbook No.	HNF-N-506 <u>81/35</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			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		Preservative
B33013	N		NOV 14 2015	0940	1x500-mL P	300.0_ANIONS_IC: GW/01		Cool <=6C
					Holding Time	48 Hours		

March 28, 2016

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Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
K.C. Paterson/CHPRC			NOV 14 2015 1349	SSU-1			NOV 14 2015 1349	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By			NOV 15 2015 0700	LD Weil CHPRC			NOV 15 2015 0700	DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
Relinquished By			NOV 15 2015 1520	J. Bock, TARL			NOV 15 2015 1520	
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By		Date/Time	

March 28, 2016
Detection Summary

Rev 1

Client: CH2M Hill Plateau Remediation Company
Project/Site: X15-064

TestAmerica Job ID: 300-1519-1
SDG: WC0606

Client Sample ID: B32YX9

Lab Sample ID: 300-1519-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Orthophosphate as P	0.42	D N	0.16	0.082	mg/L	2		300.0	Total/NA

Client Sample ID: B32YY3

Lab Sample ID: 300-1519-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Orthophosphate as P	14	D N	0.16	0.082	mg/L	2		300.0	Total/NA

Client Sample ID: B32YY7

Lab Sample ID: 300-1519-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Orthophosphate as P	73	D N	0.41	0.21	mg/L	5		300.0	Total/NA

Client Sample ID: B33001

Lab Sample ID: 300-1519-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Orthophosphate as P	240	D	1.6	0.82	mg/L	20		300.0	Total/NA

Client Sample ID: B33005

Lab Sample ID: 300-1519-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Orthophosphate as P	10	D N	0.16	0.082	mg/L	2		300.0	Total/NA

Client Sample ID: B33009

Lab Sample ID: 300-1519-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Orthophosphate as P	81	D N	0.41	0.21	mg/L	5		300.0	Total/NA

Client Sample ID: B33013

Lab Sample ID: 300-1519-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Orthophosphate as P	150	D	1.6	0.82	mg/L	20		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Richland

March 28, 2016
Client Sample Results

Rev 1

Client: CH2M Hill Plateau Remediation Company
 Project/Site: X15-064

TestAmerica Job ID: 300-1519-1
 SDG: WC0606

Client Sample ID: B32YX9
 Date Collected: 11/14/15 10:10
 Date Received: 11/15/15 15:20

Lab Sample ID: 300-1519-1
 Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Orthophosphate as P	0.42	D N	0.16	0.082	mg/L	-		11/15/15 18:05	2

Client Sample ID: B32YY3
 Date Collected: 11/14/15 11:17
 Date Received: 11/15/15 15:20

Lab Sample ID: 300-1519-2
 Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Orthophosphate as P	14	D N	0.16	0.082	mg/L	-		11/15/15 18:51	2

Client Sample ID: B32YY7
 Date Collected: 11/14/15 12:55
 Date Received: 11/15/15 15:20

Lab Sample ID: 300-1519-3
 Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Orthophosphate as P	73	D N	0.41	0.21	mg/L	-		11/16/15 00:07	5

Client Sample ID: B33001
 Date Collected: 11/14/15 12:25
 Date Received: 11/15/15 15:20

Lab Sample ID: 300-1519-4
 Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Orthophosphate as P	240	D	1.6	0.82	mg/L	-		11/16/15 14:17	20

Client Sample ID: B33005
 Date Collected: 11/14/15 08:25
 Date Received: 11/15/15 15:20

Lab Sample ID: 300-1519-5
 Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Orthophosphate as P	10	D N	0.16	0.082	mg/L	-		11/15/15 19:36	2

Client Sample ID: B33009
 Date Collected: 11/14/15 09:00
 Date Received: 11/15/15 15:20

Lab Sample ID: 300-1519-6
 Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Orthophosphate as P	81	D N	0.41	0.21	mg/L	-		11/16/15 00:52	5

Client Sample ID: B33013
 Date Collected: 11/14/15 09:40
 Date Received: 11/15/15 15:20

Lab Sample ID: 300-1519-7
 Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Orthophosphate as P	150	D	1.6	0.82	mg/L	-		11/16/15 15:02	20

TestAmerica Richland

Client: CH2M Hill Plateau Remediation Company
 Project/Site: X15-064

TestAmerica Job ID: 300-1519-1
 SDG: WC0606

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 300-1995/5
Matrix: Water
Analysis Batch: 1995

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 15:41	1

Lab Sample ID: LCS 300-1995/6
Matrix: Water
Analysis Batch: 1995

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	6.46		mg/L	-	99	80 - 120

Lab Sample ID: 300-1519-1 MS
Matrix: Water
Analysis Batch: 1995

Client Sample ID: B32YX9
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Orthophosphate as P	0.42	D N	1.31	0.644	D N	mg/L	-	17	75 - 125

Lab Sample ID: 300-1519-1 DU
Matrix: Water
Analysis Batch: 1995

Client Sample ID: B32YX9
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Orthophosphate as P	0.42	D N	0.395	D	mg/L	-	6	20

March 28, 2016
QC Association Summary

Rev 1

Client: CH2M Hill Plateau Remediation Company
 Project/Site: X15-064

TestAmerica Job ID: 300-1519-1
 SDG: WC0606

HPLC/IC

Analysis Batch: 1995

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-1519-1	B32YX9	Total/NA	Water	300.0	
300-1519-1 DU	B32YX9	Total/NA	Water	300.0	
300-1519-1 MS	B32YX9	Total/NA	Water	300.0	
300-1519-2	B32YY3	Total/NA	Water	300.0	
300-1519-3	B32YY7	Total/NA	Water	300.0	
300-1519-5	B33005	Total/NA	Water	300.0	
300-1519-6	B33009	Total/NA	Water	300.0	
LCS 300-1995/6	Lab Control Sample	Total/NA	Water	300.0	
MB 300-1995/5	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 2001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-1519-4	B33001	Total/NA	Water	300.0	
300-1519-7	B33013	Total/NA	Water	300.0	

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Client: CH2M Hill Plateau Remediation Company
Project/Site: X15-064

TestAmerica Job ID: 300-1519-1
SDG: WC0606

Client Sample ID: B32YX9
Date Collected: 11/14/15 10:10
Date Received: 11/15/15 15:20

Lab Sample ID: 300-1519-1
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		1995	11/15/15 18:05	RLC	TAL RCH

Client Sample ID: B32YY3
Date Collected: 11/14/15 11:17
Date Received: 11/15/15 15:20

Lab Sample ID: 300-1519-2
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		1995	11/15/15 18:51	RLC	TAL RCH

Client Sample ID: B32YY7
Date Collected: 11/14/15 12:55
Date Received: 11/15/15 15:20

Lab Sample ID: 300-1519-3
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		1995	11/16/15 00:07	RLC	TAL RCH

Client Sample ID: B33001
Date Collected: 11/14/15 12:25
Date Received: 11/15/15 15:20

Lab Sample ID: 300-1519-4
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		20	10 mL		2001	11/16/15 14:17	RLC	TAL RCH

Client Sample ID: B33005
Date Collected: 11/14/15 08:25
Date Received: 11/15/15 15:20

Lab Sample ID: 300-1519-5
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		1995	11/15/15 19:36	RLC	TAL RCH

Client Sample ID: B33009
Date Collected: 11/14/15 09:00
Date Received: 11/15/15 15:20

Lab Sample ID: 300-1519-6
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		5	10 mL		1995	11/16/15 00:52	RLC	TAL RCH

Client: CH2M Hill Plateau Remediation Company
 Project/Site: X15-064

TestAmerica Job ID: 300-1519-1
 SDG: WC0606

Client Sample ID: B33013
Date Collected: 11/14/15 09:40
Date Received: 11/15/15 15:20

Lab Sample ID: 300-1519-7
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		2001	11/16/15 15:02	RLC	TAL RCH

Client Sample ID: B32YX9
Date Collected: 11/14/15 10:10
Date Received: 11/15/15 15:20

Lab Sample ID: 300-1519-1 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		1995	11/15/15 18:35	RLC	TAL RCH

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

Lab Sample ID: LCS 300-1995/6
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		1995	11/15/15 15:56	RLC	TAL RCH

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

Lab Sample ID: MB 300-1995/5
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		1	10 mL		1995	11/15/15 15:41	RLC	TAL RCH

Client Sample ID: B32YX9
Date Collected: 11/14/15 10:10
Date Received: 11/15/15 15:20

Lab Sample ID: 300-1519-1 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		1995	11/15/15 18:20	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: X15-064

TestAmerica Job ID: 300-1519-1
SDG: WC0606

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: X15-064

TestAmerica Job ID: 300-1519-1
SDG: WC0606

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-1519-1	B32YX9	Water	11/14/15 10:10	11/15/15 15:20
300-1519-2	B32YY3	Water	11/14/15 11:17	11/15/15 15:20
300-1519-3	B32YY7	Water	11/14/15 12:55	11/15/15 15:20
300-1519-4	B33001	Water	11/14/15 12:25	11/15/15 15:20
300-1519-5	B33005	Water	11/14/15 08:25	11/15/15 15:20
300-1519-6	B33009	Water	11/14/15 09:00	11/15/15 15:20
300-1519-7	B33013	Water	11/14/15 09:40	11/15/15 15:20

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Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 300-1519-1
SDG Number: WC0606

Login Number: 1519
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	

