

# 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: 300-1476-1  
TestAmerica Sample Delivery Group: WC0581  
Client Project/Site: X15-062

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

Attn: CPP Sample Management



Authorized for release by:  
12/7/2015 11:53:39 AM  
Steven Campbell, Quality Assurance Assistant  
[steven.campbell@testamericainc.com](mailto:steven.campbell@testamericainc.com)

Designee for  
Whitney Ritari, Project Manager I  
(509)375-3131 ext164  
[whitney.ritari@testamericainc.com](mailto: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

Review your project results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://www.testamericainc.com)

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



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Definitions/Glossary . . . . .	3
Case Narrative . . . . .	4
Chain of Custody . . . . .	5
Detection Summary . . . . .	12
Client Sample Results . . . . .	13
QC Sample Results . . . . .	14
QC Association Summary . . . . .	15
Lab Chronicle . . . . .	16
Method Summary . . . . .	18
Sample Summary . . . . .	19
Receipt Checklists . . . . .	20

**Qualifiers****HPLC/IC**

Qualifier	Qualifier Description
N	MS, MSD: Spike recovery is outside acceptance limits.
U	Analyzed for but not detected.
D	The reported value is from a dilution.

**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: X15-062

TestAmerica Job ID: 300-1476-1  
SDG: WC0581

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**Job ID: 300-1476-1**

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**Laboratory: TestAmerica Richland**

**Narrative**

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**Job Narrative  
300-1476-1**

**Comments**

No additional comments.

**Receipt**

The samples were received on 11/11/2015 3:05 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.6° C.

**HPLC/IC**

Method 300.0: The matrix spike (MS) recoveries for analytical batch 300-1940 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

**CH2M Hill Plateau Remediation Company**

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

C.O.C. # **X15-062-009**  
Page 1 of 1

Collector	S.W. King/CHSRC	Contact/Requester	WHITTLEBY, KM	Telephone No.	373-4929
SAF No.	X15-062	Sampling Origin	HANFORD SITE	Purchase Order/Charge Code	300205
Project Title	Uranium Sequestration - Day 6	Logbook No.	HNF-N-506 <b>81 / 29</b>	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:	<b>30 Days</b>	Offsite Property No.	N/A
<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b>			<b>SPECIAL INSTRUCTIONS</b>		
*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		
Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis
B32VP7	N	NOV 11 2015	1010	1x500-mL P	300.0_ANIONS_IC: GW/ 01
					Holding Time
					48 Hours
					Preservative
					Cool <=6C

# 14916  
WCE0581



December 07 2015

Reinquished By S.W. King/CHSRC Print Sign NOV 11 2015 1054 Date/Time	Received By F.M. HALL/CHSRC Print Sign NOV 11 2015 1055 Date/Time
Reinquished By F.M. HALL/CHSRC NOV 11 2015 1505 Date/Time	Received By J. BOCK, TARL NOV 11 2015 1505 Date/Time
Reinquished By Date/Time	Received By Date/Time

- Matrix \***
- |               |                   |
|---------------|-------------------|
| S = Soil      | DS = Drum Solids  |
| SE = Sediment | DL = Drum Liquids |
| SO = Solid    | T = Tissue        |
| SL = Sludge   | WT = 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. #  
**X15-062-008**  
Page 1 of 1

Collector	S.W. King/CHPRC	Contact/Requester	WHITLEY, KM	Telephone No.	373-4929
SAR No.	X15-062	Sampling Origin	HANFORD SITE	Purchase Order/Charge Code	300205
Project Title	Uranium Sequestration - Day 6	Logbook No.	HNF-N-50681 / 28	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
<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b>			<b>SPECIAL INSTRUCTIONS</b>		
*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 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
B32YP3	N	NOV 11 2015	0935	1X500-mL P	300.0 ANIONS_IC: GW 01	48 Hours	Cool <=6C

# 1414  
W 20581

December 07 2015

Relinquished By	S.W. King/CHPRC	Date	NOV 11 2015	Signature	Received By	F.M. Hall/CHPRC	Date	NOV 11 2015	Signature	Date	NOV 11 2015	Matrix *
Relinquished By	F.M. Hall/CHPRC	Date	NOV 11 2015	Signature	Received By	J. Bock, TARI	Date	NOV 11 2015	Signature	Date	NOV 11 2015	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.#

**X15-062-014**

Page 1 of 1

Collector	S.W. King/CHPRC	Contact/Requester	WHITLEY, KM	Telephone No.	373-4929
SAF No.	X15-062	Sampling Origin	HANFORD SITE	Purchase Order/Charge Code	300205
Project Title	Uranium Sequestration - Day 6	Logbook No.	HNF-N-506 <u>81/28</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
<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b>			<b>SPECIAL INSTRUCTIONS</b>		
*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
B32YT7	N	NOV 11 2015	6902	1x500-mL P	300.0_ANIONS_IC: GW 01
					Holding Time
					48 Hours
					Preservative
					Cool <=6C

# 14714  
WCD581

December 07 2015

Relinquished By	S.W. King/CHPRC	Print	Sign	Date/Time	1055	Received By	F.M. HANIC/CHPRC	Print	Sign	Date/Time	1055
Relinquished By	F.M. HANIC/CHPRC	<i>[Signature]</i>	<i>[Signature]</i>	NOV 11 2015		Received By	J. BOCK, TARL	<i>[Signature]</i>	<i>[Signature]</i>	NOV 11 2015	
Relinquished By				NOV 11 2015	1505	Received By				NOV 11 2015	1505
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

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. #

**X15-062-013**

Page 1 of 1

Collector <b>D.W. Brotherton/CHPRC</b>	Contact/Requester <b>WHITLEY, KM</b>	Telephone No. <b>373-4929</b>
SAF No. <b>X15-062</b>	Sampling Origin <b>HANFORD SITE</b>	Purchase Order/Charge Code <b>300205</b>
Project Title <b>Uranium Sequestration - Day 6</b>	Logbook No. <b>HNF-N-506-<del>77</del> / 94</b>	Ice Chest No. <b>N/A</b>
Shipped To (Lab) <b>Test/America Incorporated, Richland</b>	Method of Shipment <b>GOVERNMENT VEHICLE</b>	Bill of Lading/Air Bill No. <b>N/A</b>
Protocol <b>CERCLA</b>	Priority: <b>30 Days</b>	Offsite Property No. <b>N/A</b>
<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b>		<b>SPECIAL INSTRUCTIONS</b>
*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/LATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.		<b>HOLD TIME</b>
		<b>Total Activity Exemption:</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Sample No. <b>B32YT3</b>	Filter <b>N</b>	Date <b>NOV 11 2015</b>
	No/Type Container <b>1x500-mL P</b>	Time <b>1015</b>
	Sample Analysis	Holding Time <b>48 Hours</b>
		Preservative <b>Cool &lt;=6C</b>

*A 14916  
W20581*

December 07 2015

Relinquished By <b>D.W. Brotherton/CHPRC</b>	Print	Sign	Date/Time <b>NOV 11 2015 1111</b>	Received By <b>L.D. Wall/CHPRC</b>	Print	Sign	Date/Time <b>NOV 11 2015 1111</b>	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 <b>L.D. Wall/CHPRC</b>	Print	Sign	Date/Time <b>NOV 11 2015 1505</b>	Received By <b>J. Bock/TARL</b>	Print	Sign	Date/Time <b>NOV 11 2015 1505</b>	
Relinquished By			Date/Time	Received By			Date/Time	

<b>FINAL SAMPLE DISPOSITION</b>	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. # **X15-062-012**  
Page 1 of 1

Collector	D.W. Brotherton/CH2MHC	Contact/Requester	WHITLEY, KM	Telephone No.	373-4929		
SAF No.	X15-062	Sampling Origin	HANFORD SITE	Purchase Order/Charge Code	300205		
Project Title	Uranium Sequestration - Day 6	Logbook No.	HNF-N-50677 / 94	Ice Chest No.	N/A		
Shipped To (Lab)	TestAmerica Incorporated, Richmond	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A		
Protocol	CERCLA	Priority:	30 Days	Offsite Property No.	N/A		
<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b>		<b>SPECIAL INSTRUCTIONS</b>		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
B32YR9	N	NOV 11 2015	0943	1x500-mL P	300.0_ANIONS_IC: GW/ 01	48 Hours	Cool <=6C

to 1476  
W20581

December 07 2015

Relinquished By	D.W. Brotherton/CH2MHC	Print	Sign	Date/Time	NOV 11 2015 1111	Received By	L.D. Wall/CH2MHC	Print	Sign	Date/Time	NOV 11 2015 1111	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	L.D. Wall/CH2MHC	Print	Sign	Date/Time	NOV 11 2015 1505	Received By	J. Bock, TARL	Print	Sign	Date/Time	NOV 11 2015 1505	

Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time



**CH2MHill Plateau Remediation Company**

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

C.O.C. # **X15-062-011**  
Page 1 of 1

Collector <b>D.W. Broderick/CHPRC</b>	Contact/Requester <b>WHITLEY, KM</b>	Telephone No. <b>373-4929</b>	C.O.C. # <b>X15-062-011</b>
SAF No. <b>X15-062</b>	Sampling Origin <b>HANFORD SITE</b>	Purchase Order/Charge Code <b>300205</b>	
Project Title <b>Uranium Sequestration - Day 6</b>	Logbook No. <b>HNF-N-506-SP / 94</b>	Ice Chest No. <b>N/A</b>	
Shipped To (Lab) <b>TestAmerica Incorporated, Richland</b>	Method of Shipment <b>GOVERNMENT VEHICLE</b>	Bill of Lading/Air Bill No. <b>N/A</b>	
Protocol <b>CERCLA</b>	Priority: <b>30 Days PRIORITY</b>	Offsite Property No. <b>N/A</b>	
<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b>		<b>SPECIAL INSTRUCTIONS</b>	
*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 <b>30 Days</b>	
		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
B32YR5	N	W	NOV 11 2015 0834	1x500-mL P	300.0_ANIONS_IC: GW 01	48 Hours	Cool <=6C

A  
14114  
W20581

December 07 2015

Reinquished By <b>D.W. Broderick/CHPRC</b> Print Sign NOV 11 2015 1111	Received By <b>L.D. Wall/CHPRC</b> Print Sign NOV 11 2015 1111
Reinquished By <b>L.D. Wall/CHPRC</b> Print Sign NOV 11 2015 1505	Received By <b>J. Bock, TARL</b> Print Sign NOV 11 2015 1505
Reinquished By Date/Time	Received By Date/Time

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

<b>FINAL SAMPLE DISPOSITION</b>	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. # **X15-062-010**  
Page 1 of 1

Collector <b>D.W. Brantton/CHPRC</b>	Contact/Requester <b>WHITLEY, KM</b>	Telephone No. <b>373-4929</b>
SAF No. <b>X15-062</b>	Sampling Origin <b>HANFORD SITE</b>	Purchase Order/Charge Code <b>300205</b>
Project Title <b>Uranium Sequestration - Day 6</b>	Logbook No. <b>HNF-N-506 <u>99</u> / <u>94</u></b>	Ice Chest No. <b>N/A</b>
Shipped To (Lab) <b>TestAmerica Incorporated, Richland</b>	Method of Shipment <b>GOVERNMENT VEHICLE</b>	Bill of Lading/Air Bill No. <b>N/A</b>
Protocol <b>CERCLA</b>	Priority: <b>30 Days PRIORITY</b>	Offsite Property No. <b>N/A</b>
<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b> *Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/LATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.		
Sample No. <b>B32YR1</b>	Filter <b>N</b>	Date <b>NOV 11 2015</b>
	* <b>W</b>	Time <b>0904</b>
	No/Type Container <b>1X500-ml P</b>	Sample Analysis <b>300.0 ANIONS IC: GW 01</b>
	Holding Time <b>48 Hours</b>	Preservative <b>Cool &lt;=6C</b>

*# 1496  
W20581*

December 07 2015

Relinquished By <b>D.W. Brantton/CHPRC</b>	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time <b>NOV 11 2015 1111</b>	Received By <b>LD Wall CHPRC</b>	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time <b>NOV 11 2015 1111</b>	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 <b>LD Wall CHPRC</b>	<i>[Signature]</i>	<i>[Signature]</i>	<b>NOV 11 2015 1505</b>	Received By <b>J. Beck, TARL</b>	<i>[Signature]</i>	<i>[Signature]</i>	<b>NOV 11 2015 1505</b>	

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

### Detection Summary

Client: CH2M Hill Plateau Remediation Company  
 Project/Site: X15-062

TestAmerica Job ID: 300-1476-1  
 SDG: WC0581

**Client Sample ID: B32YP7**

**Lab Sample ID: 300-1476-1**

No Detections.

**Client Sample ID: B32YP3**

**Lab Sample ID: 300-1476-2**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Orthophosphate as P	0.55	D N	0.16	0.082	mg/L	2		300.0	Total/NA

**Client Sample ID: B32YT7**

**Lab Sample ID: 300-1476-3**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Orthophosphate as P	220	D	4.1	2.1	mg/L	50		300.0	Total/NA

**Client Sample ID: B32YT3**

**Lab Sample ID: 300-1476-4**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Orthophosphate as P	0.88	D N	0.16	0.082	mg/L	2		300.0	Total/NA

**Client Sample ID: B32YR9**

**Lab Sample ID: 300-1476-5**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Orthophosphate as P	1.9	D N	0.16	0.082	mg/L	2		300.0	Total/NA

**Client Sample ID: B32YR5**

**Lab Sample ID: 300-1476-6**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Orthophosphate as P	0.90	D N	0.16	0.082	mg/L	2		300.0	Total/NA

**Client Sample ID: B32YR1**

**Lab Sample ID: 300-1476-7**

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.

Client: CH2M Hill Plateau Remediation Company  
Project/Site: X15-062

TestAmerica Job ID: 300-1476-1  
SDG: WC0581

**Client Sample ID: B32YP7**

Date Collected: 11/11/15 10:10

Date Received: 11/11/15 15:05

**Lab Sample ID: 300-1476-1**

Matrix: Water

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Orthophosphate as P	0.082	U N	0.16	0.082	mg/L			11/11/15 20:13	2

**Client Sample ID: B32YP3**

Date Collected: 11/11/15 09:35

Date Received: 11/11/15 15:05

**Lab Sample ID: 300-1476-2**

Matrix: Water

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Orthophosphate as P	0.55	D N	0.16	0.082	mg/L			11/11/15 19:28	2

**Client Sample ID: B32YT7**

Date Collected: 11/11/15 09:02

Date Received: 11/11/15 15:05

**Lab Sample ID: 300-1476-3**

Matrix: Water

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Orthophosphate as P	220	D	4.1	2.1	mg/L			11/12/15 12:12	50

**Client Sample ID: B32YT3**

Date Collected: 11/11/15 10:15

Date Received: 11/11/15 15:05

**Lab Sample ID: 300-1476-4**

Matrix: Water

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Orthophosphate as P	0.88	D N	0.16	0.082	mg/L			11/11/15 20:43	2

**Client Sample ID: B32YR9**

Date Collected: 11/11/15 09:43

Date Received: 11/11/15 15:05

**Lab Sample ID: 300-1476-5**

Matrix: Water

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Orthophosphate as P	1.9	D N	0.16	0.082	mg/L			11/11/15 20:58	2

**Client Sample ID: B32YR5**

Date Collected: 11/11/15 08:34

Date Received: 11/11/15 15:05

**Lab Sample ID: 300-1476-6**

Matrix: Water

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Orthophosphate as P	0.90	D N	0.16	0.082	mg/L			11/11/15 21:13	2

**Client Sample ID: B32YR1**

Date Collected: 11/11/15 09:04

Date Received: 11/11/15 15:05

**Lab Sample ID: 300-1476-7**

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			11/12/15 12:57	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 300-1940/5  
Matrix: Water  
Analysis Batch: 1940

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	-		11/11/15 18:58	1

Lab Sample ID: LCS 300-1940/6  
Matrix: Water  
Analysis Batch: 1940

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	6.72		mg/L	-	103	80 - 120

Lab Sample ID: 300-1476-2 MS  
Matrix: Water  
Analysis Batch: 1940

Client Sample ID: B32YP3  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Orthophosphate as P	0.55	D N	1.31	0.993	D N	mg/L	-	34	75 - 125

Lab Sample ID: 300-1476-2 DU  
Matrix: Water  
Analysis Batch: 1940

Client Sample ID: B32YP3  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Orthophosphate as P	0.55	D N	0.490	D	mg/L	-	11	20

HPLC/IC

Analysis Batch: 1940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-1476-1	B32YP7	Total/NA	Water	300.0	
300-1476-2	B32YP3	Total/NA	Water	300.0	
300-1476-2 DU	B32YP3	Total/NA	Water	300.0	
300-1476-2 MS	B32YP3	Total/NA	Water	300.0	
300-1476-4	B32YT3	Total/NA	Water	300.0	
300-1476-5	B32YR9	Total/NA	Water	300.0	
300-1476-6	B32YR5	Total/NA	Water	300.0	
LCS 300-1940/6	Lab Control Sample	Total/NA	Water	300.0	
MB 300-1940/5	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 1965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-1476-3	B32YT7	Total/NA	Water	300.0	
300-1476-7	B32YR1	Total/NA	Water	300.0	



**Client Sample ID: B32YP7**

Date Collected: 11/11/15 10:10

Date Received: 11/11/15 15:05

**Lab Sample ID: 300-1476-1**

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		1940	11/11/15 20:13	RLC	TAL RCH

**Client Sample ID: B32YP3**

Date Collected: 11/11/15 09:35

Date Received: 11/11/15 15:05

**Lab Sample ID: 300-1476-2**

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		1940	11/11/15 19:28	RLC	TAL RCH

**Client Sample ID: B32YT7**

Date Collected: 11/11/15 09:02

Date Received: 11/11/15 15:05

**Lab Sample ID: 300-1476-3**

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		1965	11/12/15 12:12	CPM	TAL RCH

**Client Sample ID: B32YT3**

Date Collected: 11/11/15 10:15

Date Received: 11/11/15 15:05

**Lab Sample ID: 300-1476-4**

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		1940	11/11/15 20:43	RLC	TAL RCH

**Client Sample ID: B32YR9**

Date Collected: 11/11/15 09:43

Date Received: 11/11/15 15:05

**Lab Sample ID: 300-1476-5**

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		1940	11/11/15 20:58	RLC	TAL RCH

**Client Sample ID: B32YR5**

Date Collected: 11/11/15 08:34

Date Received: 11/11/15 15:05

**Lab Sample ID: 300-1476-6**

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		1940	11/11/15 21:13	RLC	TAL RCH

Client: CH2M Hill Plateau Remediation Company  
 Project/Site: X15-062

TestAmerica Job ID: 300-1476-1  
 SDG: WC0581

**Client Sample ID: B32YR1**

Date Collected: 11/11/15 09:04  
 Date Received: 11/11/15 15:05

**Lab Sample ID: 300-1476-7**

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		1965	11/12/15 12:57	CPM	TAL RCH

**Client Sample ID: B32YP3**

Date Collected: 11/11/15 09:35  
 Date Received: 11/11/15 15:05

**Lab Sample ID: 300-1476-2 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		1940	11/11/15 19:58	RLC	TAL RCH

**Client Sample ID: Lab Control Sample**

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

**Lab Sample ID: LCS 300-1940/6**

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		1940	11/11/15 19:13	RLC	TAL RCH

**Client Sample ID: Method Blank**

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

**Lab Sample ID: MB 300-1940/5**

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		1940	11/11/15 18:58	RLC	TAL RCH

**Client Sample ID: B32YP3**

Date Collected: 11/11/15 09:35  
 Date Received: 11/11/15 15:05

**Lab Sample ID: 300-1476-2 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		1940	11/11/15 19:43	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: X15-062

TestAmerica Job ID: 300-1476-1  
SDG: WC0581

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

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**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: X15-062

TestAmerica Job ID: 300-1476-1  
SDG: WC0581

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-1476-1	B32YP7	Water	11/11/15 10:10	11/11/15 15:05
300-1476-2	B32YP3	Water	11/11/15 09:35	11/11/15 15:05
300-1476-3	B32YT7	Water	11/11/15 09:02	11/11/15 15:05
300-1476-4	B32YT3	Water	11/11/15 10:15	11/11/15 15:05
300-1476-5	B32YR9	Water	11/11/15 09:43	11/11/15 15:05
300-1476-6	B32YR5	Water	11/11/15 08:34	11/11/15 15:05
300-1476-7	B32YR1	Water	11/11/15 09:04	11/11/15 15:05

- 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: 300-1476-1

SDG Number: WC0581

**Login Number: 1476**

**List Number: 1**

**Creator: Bock, Julie A**

**List Source: TestAmerica Richland**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> 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 <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	