

# 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: 300-6380-1

TestAmerica Sample Delivery Group: WC2514

Client Project/Site: S18-011

For:

CH2M Hill Plateau Remediation Company

825 Jadwin Avenue

Richland, Washington 99352

Attn: CPP Sample Management

*Kristine D. Allen*

Authorized for release by:

11/29/2017 4:48:06 PM

Kristine Allen, Manager of Project Management

(253)248-4970

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Designee for

Ashley Worthy, Project Manager I

(509)375-3131

[ashley.worthy@testamericainc.com](mailto:ashley.worthy@testamericainc.com)

### LINKS

Review your project  
results through

**TotalAccess**

Have a Question?



Visit us at:

[www.testamericainc.com](http://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.*

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## Definitions/Glossary

Client: CH2M Hill Plateau Remediation Company  
Project/Site: S18-011

TestAmerica Job ID: 300-6380-1  
SDG: WC2514

## Qualifiers

### HPLC/IC

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

### General Chemistry

Qualifier	Qualifier Description
U	Analyzed for but not detected.

## Glossary

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

**Case Narrative**

Client: CH2M Hill Plateau Remediation Company  
Project/Site: S18-011

TestAmerica Job ID: 300-6380-1  
SDG: WC2514

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**Job ID: 300-6380-1**

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**Laboratory: TestAmerica Richland****Narrative**

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**Job Narrative  
300-6380-1****Comments**

No additional comments.

**Receipt**

The samples were received on 11/14/2017 11:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.3° C.

**HPLC/IC**

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

**General Chemistry**

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

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**CH2M Hill Plateau  
Remediation Company**

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

C.O.C.#  
**S18-011-408**  
Page 1 of 1

<b>Collector:</b>	Roger Fiesz Jr. ICHRPC	<b>Contact/Requester:</b>	Karen Waters-Husted	<b>Telephone No.:</b>	509-376-4650
<b>SAF No.:</b>	S18-011	<b>Sampling Origin:</b>	Hanford Site	<b>Purchase Order/Charge Code:</b>	300071
<b>Project Title:</b>	SURV, NOVEMBER 2017	<b>Logbook No.:</b>	HNF-N-506 <b>97/25</b>	<b>Ice Chest No.:</b>	N/A
<b>Shipped To (Lab):</b>	TestAmerica Incorporated, Rich	<b>Method of Shipment:</b>	GOVERNMENT VEHICLE	<b>Bill of Lading/Air Bill No.:</b>	N/A
<b>Protocol:</b>	SURV	<b>Priority:</b>	30 Days	<b>Offsite Property No.:</b>	N/A
<b>POSSIBLE SAMPLE HAZARDS/REMARK</b>			<b>SPECIAL INSTRUCTIONS</b>		
** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1			N/A		

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3F4T6	N		NOV 13 2017	1410	1x125-ml P	300.0_ANTIONS_IC: COMMON	48 Hours	COOL <=6C

10380  
1002514



300-6380 COC

<b>Relinquished By:</b>	<i>[Signature]</i> ICHRPC	<b>Received By:</b>	<i>[Signature]</i> SSU-1	<b>NOV 13 2017 / 1535</b>	<b>NOV 13 2017 / 1535</b>	<b>Matrix *</b> S = Soil DS = Drum Solids SE = Sediment DL = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wipe W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
<b>Relinquished By:</b>	SSU-1 Signature	<b>Received By:</b>	<i>[Signature]</i> SSU-1	<b>NOV 14 2017 0735</b>	<b>NOV 14 2017 0735</b>	
<b>Relinquished By:</b>	Jeff Lucas ICHRPC Signature	<b>Received By:</b>	<i>[Signature]</i> B. Jorgenson, TARL	<b>NOV 14 2017 1100</b>	<b>NOV 14 2017 1100</b>	
<b>Relinquished By:</b>	Jeff Lucas ICHRPC Signature	<b>Received By:</b>	<i>[Signature]</i> B. Jorgenson	<b>NOV 14 2017 1100</b>	<b>NOV 14 2017 1100</b>	
<b>Relinquished By:</b>	Signature	<b>Received By:</b>	Signature	Date/Time	Date/Time	
<b>Relinquished By:</b>	Signature	<b>Received By:</b>	Signature	Date/Time	Date/Time	



CH2MHill Plateau  
Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.#  
S18-011-527  
Page 1 of 1

Collector: Roger Friesz Jr.  
SAF No.: S18-011  
Project Title: SURV, NOVEMBER 2017  
Shipped To (Lab): TestAmerica Incorporated, Rich  
Protocol: SURV

Contact/Requester: Karen Waters-Husted  
Sampling Origin: Hanford Site  
Logbook No.: HNF-N-506 97/25  
Method of Shipment: GOVERNMENT VEHICLE  
Priority: 30 Days

Telephone No.: 509-376-4650  
Purchase Order/Charge Code: 300071  
Ice Chest No.: N/A  
Bill of Lading/Air Bill No.: N/A  
Offsite Property No.: N/A

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

SPECIAL INSTRUCTIONS  
N/A

Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3F7K7	N	NOV 13 2017	1430	1x60-ml ag	7196_CR6: COMMON	24 Hours	COOL <=6C
B3F7L1	Y	NOV 13 2017	1430	1x60-ml ag	7196_CR6: COMMON	24 Hours	COOL <=6C

WC 2514  
10380

Relinquished By: Roger Friesz Jr.  
Print First and Last Name: Roger Friesz Jr.  
Signature: [Signature]  
Date/Time: NOV 13 2017 1535

Received By: SSU-1  
Print First and Last Name: SSU-1  
Signature: [Signature]  
Date/Time: NOV 13 2017 1535

Relinquished By: Jeff Lucas  
Print First and Last Name: Jeff Lucas  
Signature: [Signature]  
Date/Time: NOV 14 2017 0735

Received By: Jeff Lucas  
Print First and Last Name: Jeff Lucas  
Signature: [Signature]  
Date/Time: NOV 14 2017 0735

Relinquished By: Jeff Lucas  
Print First and Last Name: Jeff Lucas  
Signature: [Signature]  
Date/Time: NOV 14 2017 1100

Received By: B. Jorgenson, TARI  
Print First and Last Name: B. Jorgenson, TARI  
Signature: [Signature]  
Date/Time: NOV 14 2017 1447

Relinquished By: [Signature]  
Print First and Last Name: [Signature]  
Signature: [Signature]  
Date/Time: [Date/Time]

Received By: [Signature]  
Print First and Last Name: [Signature]  
Signature: [Signature]  
Date/Time: [Date/Time]

Matrix \*  
S = Soil  
SE = Sediment  
SO = Solid  
SL = Sludge  
W = Water  
O = Oil  
A = Air  
DS = Drum Solids  
DL = Drum Liquid  
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: [Signature]  
Date/Time: [Date/Time]



## Detection Summary

Client: CH2M Hill Plateau Remediation Company  
Project/Site: S18-011

TestAmerica Job ID: 300-6380-1  
SDG: WC2514

## Client Sample ID: B3F4T6

Lab Sample ID: 300-6380-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	23	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	0.21	D	0.10	0.050	mg/L	2		300.0	Total/NA
Nitrite as N	0.091	D	0.076	0.038	mg/L	2		300.0	Total/NA
Sulfate	75	D	1.3	0.63	mg/L	5		300.0	Total/NA

## Client Sample ID: B3F7K9

Lab Sample ID: 300-6380-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	5.0	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.24	D	0.10	0.050	mg/L	2		300.0	Total/NA
Nitrite as N	0.076	D	0.076	0.038	mg/L	2		300.0	Total/NA
Sulfate	64	D	1.3	0.63	mg/L	5		300.0	Total/NA

## Client Sample ID: B3F7L2

Lab Sample ID: 300-6380-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	5.1	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.24	D	0.10	0.050	mg/L	2		300.0	Total/NA
Nitrite as N	0.073	B D	0.076	0.038	mg/L	2		300.0	Total/NA
Sulfate	64	D	1.3	0.63	mg/L	5		300.0	Total/NA

## Client Sample ID: B3F7K7

Lab Sample ID: 300-6380-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.060		0.0040	0.0015	mg/L	1		7196A	Total/NA

## Client Sample ID: B3F7L1

Lab Sample ID: 300-6380-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.060		0.0040	0.0015	mg/L	1		7196A	Total/NA

## Client Sample ID: B3F651

Lab Sample ID: 300-6380-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.015		0.0040	0.0015	mg/L	1		7196A	Total/NA

## Client Sample ID: B3F4W5

Lab Sample ID: 300-6380-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.015		0.0040	0.0015	mg/L	1		7196A	Total/NA

This Detection Summary does not include radiochemical test results.

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Client Sample Results

Client: CH2M Hill Plateau Remediation Company  
Project/Site: S18-011

TestAmerica Job ID: 300-6380-1  
SDG: WC2514

Client Sample ID: B3F4T6

Lab Sample ID: 300-6380-1

Date Collected: 11/13/17 14:10

Matrix: Water

Date Received: 11/14/17 11:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	23	D	0.40	0.20	mg/L			11/14/17 15:00	2
Nitrate as N	5.8	D	0.056	0.028	mg/L			11/14/17 15:00	2
Fluoride	0.21	D	0.10	0.050	mg/L			11/14/17 15:00	2
Nitrite as N	0.091	D	0.076	0.038	mg/L			11/14/17 15:00	2
Sulfate	75	D	1.3	0.63	mg/L			11/14/17 14:30	5

Client Sample ID: B3F7K9

Lab Sample ID: 300-6380-2

Date Collected: 11/13/17 14:30

Matrix: Water

Date Received: 11/14/17 11:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13	D	0.40	0.20	mg/L			11/14/17 15:15	2
Nitrate as N	5.0	D	0.056	0.028	mg/L			11/14/17 15:15	2
Fluoride	0.24	D	0.10	0.050	mg/L			11/14/17 15:15	2
Nitrite as N	0.076	D	0.076	0.038	mg/L			11/14/17 15:15	2
Sulfate	64	D	1.3	0.63	mg/L			11/14/17 14:45	5

Client Sample ID: B3F7L2

Lab Sample ID: 300-6380-3

Date Collected: 11/13/17 14:30

Matrix: Water

Date Received: 11/14/17 11:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13	D	0.40	0.20	mg/L			11/14/17 15:30	2
Nitrate as N	5.1	D	0.056	0.028	mg/L			11/14/17 15:30	2
Fluoride	0.24	D	0.10	0.050	mg/L			11/14/17 15:30	2
Nitrite as N	0.073	B D	0.076	0.038	mg/L			11/14/17 15:30	2
Sulfate	64	D	1.3	0.63	mg/L			11/14/17 15:00	5

Client Sample ID: B3F7K7

Lab Sample ID: 300-6380-4

Date Collected: 11/13/17 14:30

Matrix: Water

Date Received: 11/14/17 11:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.060		0.0040	0.0015	mg/L			11/14/17 12:44	1

Client Sample ID: B3F7L1

Lab Sample ID: 300-6380-5

Date Collected: 11/13/17 14:30

Matrix: Water

Date Received: 11/14/17 11:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.060		0.0040	0.0015	mg/L			11/14/17 12:43	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company  
 Project/Site: S18-011

TestAmerica Job ID: 300-6380-1  
 SDG: WC2514

Client Sample ID: B3F651

Lab Sample ID: 300-6380-6

Date Collected: 11/13/17 14:10

Matrix: Water

Date Received: 11/14/17 11:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.015		0.0040	0.0015	mg/L			11/14/17 12:44	1

Client Sample ID: B3F4W5

Lab Sample ID: 300-6380-7

Date Collected: 11/13/17 14:10

Matrix: Water

Date Received: 11/14/17 11:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.015		0.0040	0.0015	mg/L			11/14/17 12:45	1

- 1
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- 3
- 4
- 5
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- 12
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QC Sample Results

Client: CH2M Hill Plateau Remediation Company  
 Project/Site: S18-011

TestAmerica Job ID: 300-6380-1  
 SDG: WC2514

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 300-6374-A-3 MS  
 Matrix: Water  
 Analysis Batch: 9666

Client Sample ID: Matrix Spike  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	78	D	10.0	89.1	D	mg/L		106	75 - 125

Lab Sample ID: 300-6374-A-3 DU  
 Matrix: Water  
 Analysis Batch: 9666

Client Sample ID: Duplicate  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate	78	D	79.1	D	mg/L		0.8	20

Lab Sample ID: MB 300-9667/5  
 Matrix: Water  
 Analysis Batch: 9667

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			11/14/17 10:59	1
Nitrite as N	0.019	U	0.038	0.019	mg/L			11/14/17 10:59	1

Lab Sample ID: LCS 300-9667/6  
 Matrix: Water  
 Analysis Batch: 9667

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	2.32		mg/L		103	80 - 120
Nitrite as N	3.04	3.19		mg/L		105	80 - 120

Lab Sample ID: 300-6374-A-3 MS  
 Matrix: Water  
 Analysis Batch: 9667

Client Sample ID: Matrix Spike  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	5.4	D	0.452	5.88	D	mg/L		100	75 - 125
Nitrite as N	0.072	B D	0.609	0.549	D	mg/L		78	75 - 125

Lab Sample ID: 300-6374-A-3 DU  
 Matrix: Water  
 Analysis Batch: 9667

Client Sample ID: Duplicate  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate as N	5.4	D	5.46	D	mg/L		0.5	20
Nitrite as N	0.072	B D	0.0676	B D	mg/L		6	20

Lab Sample ID: MB 300-9668/5  
 Matrix: Water  
 Analysis Batch: 9668

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			11/14/17 10:59	1
Fluoride	0.025	U	0.050	0.025	mg/L			11/14/17 10:59	1
Sulfate	0.13	U	0.25	0.13	mg/L			11/14/17 10:59	1

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QC Sample Results

Client: CH2M Hill Plateau Remediation Company  
 Project/Site: S18-011

TestAmerica Job ID: 300-6380-1  
 SDG: WC2514

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 300-9668/6  
 Matrix: Water  
 Analysis Batch: 9668

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	16.0	16.2		mg/L		101	80 - 120
Fluoride	4.00	4.19		mg/L		105	80 - 120
Sulfate	20.0	20.9		mg/L		105	80 - 120

Lab Sample ID: 300-6374-A-3 MS  
 Matrix: Water  
 Analysis Batch: 9668

Client Sample ID: Matrix Spike  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	14	D	3.20	17.1	D	mg/L		100	75 - 125
Fluoride	0.20	D	0.800	0.938	D	mg/L		93	75 - 125

Lab Sample ID: 300-6374-A-3 DU  
 Matrix: Water  
 Analysis Batch: 9668

Client Sample ID: Duplicate  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	14	D	14.0	D	mg/L		0.6	20
Fluoride	0.20	D	0.198	D	mg/L		0.5	20

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 300-9673/3  
 Matrix: Water  
 Analysis Batch: 9673

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0015	U	0.0040	0.0015	mg/L			11/14/17 12:40	1

Lab Sample ID: LCS 300-9673/4  
 Matrix: Water  
 Analysis Batch: 9673

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.250	0.254		mg/L		102	80 - 120

Lab Sample ID: 300-6380-5 MS  
 Matrix: Water  
 Analysis Batch: 9673

Client Sample ID: B3F7L1  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.060		0.0501	0.110		mg/L		100	75 - 125

Lab Sample ID: 300-6380-5 DU  
 Matrix: Water  
 Analysis Batch: 9673

Client Sample ID: B3F7L1  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cr (VI)	0.060		0.0600		mg/L		0.3	20

TestAmerica Richland

## QC Association Summary

Client: CH2M Hill Plateau Remediation Company  
Project/Site: S18-011

TestAmerica Job ID: 300-6380-1  
SDG: WC2514

## HPLC/IC

## Analysis Batch: 9666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-6380-1	B3F4T6	Total/NA	Water	300.0	
300-6380-2	B3F7K9	Total/NA	Water	300.0	
300-6380-3	B3F7L2	Total/NA	Water	300.0	
300-6374-A-3 MS	Matrix Spike	Total/NA	Water	300.0	
300-6374-A-3 DU	Duplicate	Total/NA	Water	300.0	

## Analysis Batch: 9667

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-6380-1	B3F4T6	Total/NA	Water	300.0	
300-6380-2	B3F7K9	Total/NA	Water	300.0	
300-6380-3	B3F7L2	Total/NA	Water	300.0	
MB 300-9667/5	Method Blank	Total/NA	Water	300.0	
LCS 300-9667/6	Lab Control Sample	Total/NA	Water	300.0	
300-6374-A-3 MS	Matrix Spike	Total/NA	Water	300.0	
300-6374-A-3 DU	Duplicate	Total/NA	Water	300.0	

## Analysis Batch: 9668

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-6380-1	B3F4T6	Total/NA	Water	300.0	
300-6380-2	B3F7K9	Total/NA	Water	300.0	
300-6380-3	B3F7L2	Total/NA	Water	300.0	
MB 300-9668/5	Method Blank	Total/NA	Water	300.0	
LCS 300-9668/6	Lab Control Sample	Total/NA	Water	300.0	
300-6374-A-3 MS	Matrix Spike	Total/NA	Water	300.0	
300-6374-A-3 DU	Duplicate	Total/NA	Water	300.0	

## General Chemistry

## Analysis Batch: 9673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-6380-4	B3F7K7	Total/NA	Water	7196A	
300-6380-5	B3F7L1	Total/NA	Water	7196A	
300-6380-6	B3F651	Total/NA	Water	7196A	
300-6380-7	B3F4W5	Total/NA	Water	7196A	
MB 300-9673/3	Method Blank	Total/NA	Water	7196A	
LCS 300-9673/4	Lab Control Sample	Total/NA	Water	7196A	
300-6380-5 MS	B3F7L1	Total/NA	Water	7196A	
300-6380-5 DU	B3F7L1	Total/NA	Water	7196A	

Lab Chronicle

Client: CH2M Hill Plateau Remediation Company  
 Project/Site: S18-011

TestAmerica Job ID: 300-6380-1  
 SDG: WC2514

**Client Sample ID: B3F4T6**

Date Collected: 11/13/17 14:10

Date Received: 11/14/17 11:00

**Lab Sample ID: 300-6380-1**

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		5			9666	11/14/17 14:30	DRM	TAL RCH
Total/NA	Analysis	300.0		2			9667	11/14/17 15:00	DRM	TAL RCH
Total/NA	Analysis	300.0		2			9668	11/14/17 15:00	DRM	TAL RCH

**Client Sample ID: B3F7K9**

Date Collected: 11/13/17 14:30

Date Received: 11/14/17 11:00

**Lab Sample ID: 300-6380-2**

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			9666	11/14/17 14:45	DRM	TAL RCH
Total/NA	Analysis	300.0		2			9667	11/14/17 15:15	DRM	TAL RCH
Total/NA	Analysis	300.0		2			9668	11/14/17 15:15	DRM	TAL RCH

**Client Sample ID: B3F7L2**

Date Collected: 11/13/17 14:30

Date Received: 11/14/17 11:00

**Lab Sample ID: 300-6380-3**

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			9666	11/14/17 15:00	DRM	TAL RCH
Total/NA	Analysis	300.0		2			9667	11/14/17 15:30	DRM	TAL RCH
Total/NA	Analysis	300.0		2			9668	11/14/17 15:30	DRM	TAL RCH

**Client Sample ID: B3F7K7**

Date Collected: 11/13/17 14:30

Date Received: 11/14/17 11:00

**Lab Sample ID: 300-6380-4**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1			9673	11/14/17 12:44	TRH	TAL RCH

**Client Sample ID: B3F7L1**

Date Collected: 11/13/17 14:30

Date Received: 11/14/17 11:00

**Lab Sample ID: 300-6380-5**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1			9673	11/14/17 12:43	TRH	TAL RCH

Lab Chronicle

Client: CH2M Hill Plateau Remediation Company  
Project/Site: S18-011

TestAmerica Job ID: 300-6380-1  
SDG: WC2514

**Client Sample ID: B3F651**

**Lab Sample ID: 300-6380-6**

Date Collected: 11/13/17 14:10

Matrix: Water

Date Received: 11/14/17 11:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1			9673	11/14/17 12:44	TRH	TAL RCH

**Client Sample ID: B3F4W5**

**Lab Sample ID: 300-6380-7**

Date Collected: 11/13/17 14:10

Matrix: Water

Date Received: 11/14/17 11:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1			9673	11/14/17 12:45	TRH	TAL RCH

**Client Sample ID: Method Blank**

**Lab Sample ID: MB 300-9667/5**

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			9667	11/14/17 10:59	DRM	TAL RCH

**Client Sample ID: Method Blank**

**Lab Sample ID: MB 300-9668/5**

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			9668	11/14/17 10:59	DRM	TAL RCH

**Client Sample ID: Method Blank**

**Lab Sample ID: MB 300-9673/3**

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1			9673	11/14/17 12:40	TRH	TAL RCH

**Client Sample ID: Lab Control Sample**

**Lab Sample ID: LCS 300-9667/6**

Date Collected: N/A

Matrix: Water

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1			9667	11/14/17 11:14	DRM	TAL RCH

Lab Chronicle

Client: CH2M Hill Plateau Remediation Company  
Project/Site: S18-011

TestAmerica Job ID: 300-6380-1  
SDG: WC2514

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-9668/6

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

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			9668	11/14/17 11:14	DRM	TAL RCH

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-9673/4

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

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1			9673	11/14/17 12:40	TRH	TAL RCH

Client Sample ID: Matrix Spike

Lab Sample ID: 300-6374-A-3 MS

Date Collected: 11/13/17 13:06  
Date Received: 11/13/17 14:50

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			9666	11/14/17 11:14	DRM	TAL RCH
Total/NA	Analysis	300.0		2			9667	11/14/17 11:44	DRM	TAL RCH
Total/NA	Analysis	300.0		2			9668	11/14/17 11:44	DRM	TAL RCH

Client Sample ID: B3F7L1

Lab Sample ID: 300-6380-5 MS

Date Collected: 11/13/17 14:30  
Date Received: 11/14/17 11:00

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1			9673	11/14/17 12:41	TRH	TAL RCH

Laboratory References:

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

Method Summary

Client: CH2M Hill Plateau Remediation Company  
 Project/Site: S18-011

TestAmerica Job ID: 300-6380-1  
 SDG: WC2514

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

**Protocol References:**

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.  
 SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

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



Sample Summary

Client: CH2M Hill Plateau Remediation Company  
 Project/Site: S18-011

TestAmerica Job ID: 300-6380-1  
 SDG: WC2514

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-6380-1	B3F4T6	Water	11/13/17 14:10	11/14/17 11:00
300-6380-2	B3F7K9	Water	11/13/17 14:30	11/14/17 11:00
300-6380-3	B3F7L2	Water	11/13/17 14:30	11/14/17 11:00
300-6380-4	B3F7K7	Water	11/13/17 14:30	11/14/17 11:00
300-6380-5	B3F7L1	Water	11/13/17 14:30	11/14/17 11:00
300-6380-6	B3F651	Water	11/13/17 14:10	11/14/17 11:00
300-6380-7	B3F4W5	Water	11/13/17 14:10	11/14/17 11:00

- 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: 300-6380-1

SDG Number: WC2514

Login Number: 6380

List Number: 1

Creator: Jorgenson, Briana F

List Source: TestAmerica Richland

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