

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: 300-6382-1
 TestAmerica Sample Delivery Group: WC2516
 Client Project/Site: I18-002

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 4:39:18 PM
 Kristine Allen, Manager of Project Management
 (253)248-4970
kristine.allen@testamericainc.com

Designee for
 Ashley Worthy, Project Manager I
 (509)375-3131
ashley.worthy@testamericainc.com

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.

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Chain of Custody	5
Detection Summary	9
Client Sample Results	10
QC Sample Results	12
QC Association Summary	14
Lab Chronicle	15
Method Summary	18
Sample Summary	19
Receipt Checklists	20



Definitions/Glossary

Client: CH2M Hill Plateau Remediation Company
Project/Site: I18-002

TestAmerica Job ID: 300-6382-1
SDG: WC2516

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.
B	Estimated result. Result is less than the RL, but greater than MDL

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: I18-002

TestAmerica Job ID: 300-6382-1
SDG: WC2516

Job ID: 300-6382-1

Laboratory: TestAmerica Richland

Narrative

**Job Narrative
300-6382-1**

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.



CH2MHill Plateau
Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.#
I18-002-420
Page 1 of 1

Collector: David Yates David Yates **Contact/Requester:** Karen Waters-Husted
 SAF No.: I18-002 **Sampling Origin:** Hanford Site
 Project Title: CERCLA, NOVEMBER 2017 **Logbook No.:** HNF-N-506-95-63
 Shipped To (Lab): TestAmerica Incorporated, Rich **Method of Shipment:** GOVERNMENT VEHICLE
 Protocol: CERCLA **Priority:** 30 Days
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
B3F468	Y	W	11-13-17	1548	1x60-ml aG	7196_CR6: COMMON	24 Hours	Cool <=6C
B3F467	N	W	11-13-17	1348	1x60-ml aG	7196_CR6: COMMON	24 Hours	Cool <=6C

10382
WCSIP

Relinquished By: Daniel King Daniel King **Received By:** SSU-1
 Print First and Last Name: D. King **Signature:** [Signature] **Date/Time:** NOV 13 2017 1440
 Relinquished By: SSU-1 **Received By:** SSU-1
 Print First and Last Name: SSU-1 **Signature:** [Signature] **Date/Time:** NOV 14 2017 0735
 Relinquished By: Jeff Lucas Jeff Lucas **Received By:** B. Johnson, TARL
 Print First and Last Name: Jeff Lucas **Signature:** [Signature] **Date/Time:** NOV 14 2017 1100
 Relinquished By: Jeff Lucas Jeff Lucas **Received By:** B. Johnson
 Print First and Last Name: Jeff Lucas **Signature:** [Signature] **Date/Time:** NOV 14 2017 0735
 Relinquished By: [Signature] **Received By:** [Signature]
 Print First and Last Name: [Signature] **Signature:** [Signature] **Date/Time:** [Signature]

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

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

**CH2MHill Plateau
Remediation Company**

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.#
I18-002-424
Page 1 of 1

Collector: Larry Rosane ICF/RC	Contact/Requester: Karen Waters-Husted	Telephone No.: 509-376-4650
SAF No.: I18-002	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300071
Project Title: CERCLA, NOVEMBER 2017	Logbook No.: HNF-N-506 98/1	Ice Chest No.: N/A
Shipped To (Lab): TestAmerica Incorporated, Rich	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/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
B3F475	N	W	11-13-17	1349	1x60-mL aG	7196_CR6: COMMON	24 Hours	COOL <=6C
B3F476	Y	W	11-13-17	1349	1x60-mL aG	7196_CR6: COMMON	24 Hours	COOL <=6C

W347
W34514

Relinquished By: Larry Rosane ICF/RC	Received By: SSU-1
<i>Signature</i>	<i>Signature</i>
NOV 13 2017 1500	NOV 13 2017 1500
Relinquished By: SSU-1	Received By: SSU-1
<i>Signature</i>	<i>Signature</i>
NOV 14 2017 0735	NOV 14 2017 0735
Relinquished By: Larry Rosane ICF/RC	Received By: B. Jorgenson, TARI
<i>Signature</i>	<i>Signature</i>
NOV 14 2017 1100	NOV 14 2017 1100
Relinquished By: Larry Rosane ICF/RC	Received By: B. Jorgenson, TARI
<i>Signature</i>	<i>Signature</i>
NOV 14 2017 1100	NOV 14 2017 1100

Matrix *

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

CH2MHill Plateau
Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.#
I18-002-423
Page 1 of 1

Collector: Larry Roseme / JCHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 509-376-4650
SAF No.: I18-002	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300071
Project Title: CERCLA, NOVEMBER 2017	Logbook No.: HNF-N-506 90/4	Ice Chest No.: N/A
Shipped To (Lab): TestAmerica Incorporated, Rich	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/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
B3F474	N	W	11-13-17	1349	1x125-mL P	300.0_ANTIONS_IC: COMMON	48 Hours	COOL <=6C

6382
WCA514

Relinquished By: Larry Roseme / JCHPRC	Received By: SSU-1	NOV 13 2017 1500	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
<i>Signature</i>	<i>Signature</i>	<i>Date/Time</i>	
Relinquished By: SSU-1	Received By: Jeff Lucas / JCHPRC	NOV 14 2017 0735	
<i>Signature</i>	<i>Signature</i>	<i>Date/Time</i>	
Relinquished By: Jeff Lucas / JCHPRC	Received By: B. Jorgensen, TARL	NOV 14 2017 1100	
<i>Signature</i>	<i>Signature</i>	<i>Date/Time</i>	
Relinquished By: Jeff Lucas / JCHPRC	Received By:		
<i>Signature</i>	<i>Signature</i>	<i>Date/Time</i>	

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: I18-002

TestAmerica Job ID: 300-6382-1
SDG: WC2516

Client Sample ID: B3F4C6

Lab Sample ID: 300-6382-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.021		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B3F4C7

Lab Sample ID: 300-6382-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.023		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B3F468

Lab Sample ID: 300-6382-3

No Detections.

Client Sample ID: B3F467

Lab Sample ID: 300-6382-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.0026	B	0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B3F475

Lab Sample ID: 300-6382-5

No Detections.

Client Sample ID: B3F476

Lab Sample ID: 300-6382-6

No Detections.

Client Sample ID: B3F474

Lab Sample ID: 300-6382-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	11	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	4.3	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	0.069	B D	0.076	0.038	mg/L	2		300.0	Total/NA
Sulfate	71	D	1.3	0.63	mg/L	5		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Richland

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
 Project/Site: I18-002

TestAmerica Job ID: 300-6382-1
 SDG: WC2516

Client Sample ID: B3F4C6

Lab Sample ID: 300-6382-1

Date Collected: 11/13/17 13:02

Matrix: Water

Date Received: 11/14/17 11:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.021		0.0040	0.0015	mg/L			11/14/17 12:48	1

Client Sample ID: B3F4C7

Lab Sample ID: 300-6382-2

Date Collected: 11/13/17 13:02

Matrix: Water

Date Received: 11/14/17 11:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.023		0.0040	0.0015	mg/L			11/14/17 12:49	1

Client Sample ID: B3F468

Lab Sample ID: 300-6382-3

Date Collected: 11/13/17 13:48

Matrix: Water

Date Received: 11/14/17 11:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0015	U	0.0040	0.0015	mg/L			11/14/17 12:49	1

Client Sample ID: B3F467

Lab Sample ID: 300-6382-4

Date Collected: 11/13/17 13:48

Matrix: Water

Date Received: 11/14/17 11:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0026	B	0.0040	0.0015	mg/L			11/14/17 12:49	1

Client Sample ID: B3F475

Lab Sample ID: 300-6382-5

Date Collected: 11/13/17 13:49

Matrix: Water

Date Received: 11/14/17 11:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0015	U	0.0040	0.0015	mg/L			11/14/17 12:50	1

Client Sample ID: B3F476

Lab Sample ID: 300-6382-6

Date Collected: 11/13/17 13:49

Matrix: Water

Date Received: 11/14/17 11:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0015	U	0.0040	0.0015	mg/L			11/14/17 12:50	1

Client Sample ID: B3F474

Lab Sample ID: 300-6382-7

Date Collected: 11/13/17 13:49

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	11	D	0.40	0.20	mg/L			11/14/17 16:15	2
Nitrate as N	4.3	D	0.056	0.028	mg/L			11/14/17 16:15	2
Fluoride	0.24	D	0.10	0.050	mg/L			11/14/17 16:15	2

TestAmerica Richland

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: I18-002

TestAmerica Job ID: 300-6382-1
SDG: WC2516

Client Sample ID: B3F474

Lab Sample ID: 300-6382-7

Date Collected: 11/13/17 13:49

Matrix: Water

Date Received: 11/14/17 11:00

Method: 300.0 - Anions, Ion Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	0.069	B D	0.076	0.038	mg/L			11/14/17 16:15	2
Sulfate	71	D	1.3	0.63	mg/L			11/14/17 15:45	5

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

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
 Project/Site: I18-002

TestAmerica Job ID: 300-6382-1
 SDG: WC2516

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

TestAmerica Richland

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: I18-002

TestAmerica Job ID: 300-6382-1
SDG: WC2516

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-A-5 MS
Matrix: Water
Analysis Batch: 9673

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
Cr (VI)	0.060		0.0501	0.110		mg/L		100	75 - 125

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

Client Sample ID: Duplicate
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: I18-002

TestAmerica Job ID: 300-6382-1
 SDG: WC2516

HPLC/IC

Analysis Batch: 9666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-6382-7	B3F474	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
300-6382-7	B3F474	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
300-6382-7	B3F474	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
300-6382-1	B3F4C6	Total/NA	Water	7196A	
300-6382-2	B3F4C7	Total/NA	Water	7196A	
300-6382-3	B3F468	Total/NA	Water	7196A	
300-6382-4	B3F467	Total/NA	Water	7196A	
300-6382-5	B3F475	Total/NA	Water	7196A	
300-6382-6	B3F476	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-A-5 MS	Matrix Spike	Total/NA	Water	7196A	
300-6380-A-5 DU	Duplicate	Total/NA	Water	7196A	

Lab Chronicle

Client: CH2M Hill Plateau Remediation Company
 Project/Site: I18-002

TestAmerica Job ID: 300-6382-1
 SDG: WC2516

Client Sample ID: B3F4C6
 Date Collected: 11/13/17 13:02
 Date Received: 11/14/17 11:00

Lab Sample ID: 300-6382-1
 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	7196A		1			9673	11/14/17 12:48	TRH	TAL RCH

Client Sample ID: B3F4C7
 Date Collected: 11/13/17 13:02
 Date Received: 11/14/17 11:00

Lab Sample ID: 300-6382-2
 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	7196A		1			9673	11/14/17 12:49	TRH	TAL RCH

Client Sample ID: B3F468
 Date Collected: 11/13/17 13:48
 Date Received: 11/14/17 11:00

Lab Sample ID: 300-6382-3
 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	7196A		1			9673	11/14/17 12:49	TRH	TAL RCH

Client Sample ID: B3F467
 Date Collected: 11/13/17 13:48
 Date Received: 11/14/17 11:00

Lab Sample ID: 300-6382-4
 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 12:49	TRH	TAL RCH

Client Sample ID: B3F475
 Date Collected: 11/13/17 13:49
 Date Received: 11/14/17 11:00

Lab Sample ID: 300-6382-5
 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 12:50	TRH	TAL RCH

Client Sample ID: B3F476
 Date Collected: 11/13/17 13:49
 Date Received: 11/14/17 11:00

Lab Sample ID: 300-6382-6
 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	7196A		1			9673	11/14/17 12:50	TRH	TAL RCH

Lab Chronicle

Client: CH2M Hill Plateau Remediation Company
Project/Site: I18-002

TestAmerica Job ID: 300-6382-1
SDG: WC2516

Client Sample ID: B3F474

Lab Sample ID: 300-6382-7

Date Collected: 11/13/17 13:49

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	300.0		5			9666	11/14/17 15:45	DRM	TAL RCH
Total/NA	Analysis	300.0		2			9667	11/14/17 16:15	DRM	TAL RCH
Total/NA	Analysis	300.0		2			9668	11/14/17 16:15	DRM	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

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-9668/6

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

Lab Chronicle

Client: CH2M Hill Plateau Remediation Company
 Project/Site: I18-002

TestAmerica Job ID: 300-6382-1
 SDG: WC2516

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: Matrix Spike

Lab Sample ID: 300-6380-A-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: I18-002

TestAmerica Job ID: 300-6382-1
 SDG: WC2516

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: I18-002

TestAmerica Job ID: 300-6382-1
SDG: WC2516

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-6382-1	B3F4C6	Water	11/13/17 13:02	11/14/17 11:00
300-6382-2	B3F4C7	Water	11/13/17 13:02	11/14/17 11:00
300-6382-3	B3F468	Water	11/13/17 13:48	11/14/17 11:00
300-6382-4	B3F467	Water	11/13/17 13:48	11/14/17 11:00
300-6382-5	B3F475	Water	11/13/17 13:49	11/14/17 11:00
300-6382-6	B3F476	Water	11/13/17 13:49	11/14/17 11:00
300-6382-7	B3F474	Water	11/13/17 13:49	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: 300-6382-1

SDG Number: WC2516

Login Number: 6382

List Number: 1

Creator: Bock, Julie A

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	