

August 12, 2016

# 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: 300-3515-1

TestAmerica Sample Delivery Group: WC1272

Client Project/Site: F16-039

For:

CH2M Hill Plateau Remediation Company

PO BOX 1600

Mail Stop R3-50

Richland, Washington 99352

Attn: CPP Sample Management



Authorized for release by:

8/12/2016 8:19:03 AM

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### LINKS

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Have a Question?



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[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. The sample/ sample duplicate RPD agreement is not applicable if one or both results are less than five times the MDL.*



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### Qualifiers

#### HPLC/IC

Qualifier	Qualifier Description
D	The reported value is from a dilution.
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, 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)

# August 12, 2016

## Case Narrative

Client: CH2M Hill Plateau Remediation Company  
Project/Site: F16-039

TestAmerica Job ID: 300-3515-1  
SDG: WC1272

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**Job ID: 300-3515-1**

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**Laboratory: TestAmerica Richland**

### Narrative

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#### Job Narrative 300-3515-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 7/19/2016 3:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.0° 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		F16-039-036	PAGE 1 OF 1
COLLECTOR Curt Hoffman CHPRC	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 7H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C9542, SCREENED INTERVAL	PROJECT DESIGNATION 100-HR-3 Long Term & Interim Action Monitoring - Water	FIELD LOGBOOK NO. HMF-N-645-4827	SAF NO. F16-039	AIR QUALITY <input type="checkbox"/>	METHOD OF SHIPMENT GOVERNMENT VEHICLE
ICE CHEST NO. N/A	OFFSITE PROPERTY NO. N/A	ACTUAL SAMPLE DEPTH 09.24'	COA 300115	ORIGINAL	
SHIPPED TO TestAmerica Incorporated, Richland		BILL OF LADING/AIR BILL NO. N/A			

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/DATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1. N/A	PRESERVATION Cool-to-4C	HOLDING TIME 24 Hours	TYPE OF CONTAINER ag	NO. OF CONTAINER(S) 1	VOLUME 60ml	SAMPLE ANALYSIS 7196 CR6: COMMON;
SAMPLE NO. B35H00	MATRIX* WATER	SAMPLE DATE JUL 19 2016	SAMPLE TIME 1124				

#3515  
uscia22

300-3515 COC



CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Curt Hoffman CHPRC	RECEIVED BY/STORED IN Janelle Zunker CHPRC	
DATE/TIME JUL 19 2016 1135	DATE/TIME JUL 19 2016 1135	
RELINQUISHED BY/REMOVED FROM Janelle Zunker CHPRC	RECEIVED BY/STORED IN J. Bock CHPRC	
DATE/TIME JUL 19 2016 1500	DATE/TIME JUL 19 2016 1500	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	

**FILTER**

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME



CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F16-039-031	PAGE 1 OF 1
COLLECTOR Curt Hoffman CHPRC	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 7H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C9542, SCREENED INTERVAL	PROJECT DESIGNATION 100-HR-3 Long Term & Interim Action Monitoring - Water	FIELD LOGBOOK NO. HNF-N-645-4	ACTUAL SAMPLE DEPTH 99.24'	SAF NO. F16-039	<input type="checkbox"/> AIR QUALITY <input type="checkbox"/> METHOD OF SHIPMENT GOVERNMENT VEHICLE
ICE CHEST NO.	OFFSITE PROPERTY NO.		COA 300115	BILL OF LADING/AIR BILL NO.	<b>ORIGINAL</b>
SHIPPED TO TestAmerica Incorporated, Richland		PRESERVATION Cool~4C			
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WT=Wipe X=Other		*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/DATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1. N/A			
HOLDING TIME 24 Hours		TYPE OF CONTAINER ag			
NO. OF CONTAINER(S) 1		VOLUME 60ml			
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS 7196 CR6: COMMON;			
SAMPLE NO. B35FV5	MATRIX* WATER	SAMPLE DATE JUL 19 2016	SAMPLE TIME 11:24		

# 3515  
WCI 2122

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Curt Hoffman CHPRC	RECEIVED BY/STORED IN Janelle Zunker CHPRC	
DATE/TIME JUL 19 2016 11:35	DATE/TIME JUL 19 2016 11:35	
RELINQUISHED BY/REMOVED FROM Janelle Zunker CHPRC	RECEIVED BY/STORED IN Janelle Zunker CHPRC	
DATE/TIME JUL 19 2016 15:00	DATE/TIME JUL 19 2016 15:00	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

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CH2MHILL Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F16-039-032	PAGE 1 OF 1
COLLECTOR Curt Hoffman CHPRC	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 7H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C9542, SCREENED INTERVAL	PROJECT DESIGNATION 100-HR-3 Long Term & Interim Action Monitoring - Water	FIELD LOGBOOK NO. NAF-2-6454	ACTUAL SAMPLE DEPTH 99.24	SAF NO. F16-039	METHOD OF SHIPMENT GOVERNMENT VEHICLE <b>ORIGINAL</b>
ICE CHEST NO. N/A	OFFSITE PROPERTY NO. N/A	NO. OF CONTAINER(S) 1	VOLUME 500ml	BILL OF LADING/AIR BILL NO. N/A	
SHIPPED TO TestAmerica Incorporated, Richland					

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HOLDING TIME	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WT=Wipe X=Other	*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/JATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1, N/A	Cool <=6C	48 Hours	P	1	500ml		
B35FY6							JUL 19 2016 11:24	✓

#3515  
wcr12

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM Curt Hoffman CHPRC	RECEIVED BY/STORED IN Janelle Zunker CHPRC	(1) 300.0 ANIONS_IC: COMMON {Chloride, Nitrogen in Nitrate, Sulfate}; 300.0 ANIONS_IC: COMMON (Add-on) {Phosphorus in phosphate};
DATE/TIME JUL 19 2016 11:35	DATE/TIME JUL 19 2016 11:35	
RELINQUISHED BY/REMOVED FROM Janelle Zunker CHPRC	RECEIVED BY/STORED IN Janelle Zunker CHPRC	
DATE/TIME JUL 19 2016 15:00	DATE/TIME JUL 19 2016 15:00	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
LABORATORY SECTION	RECEIVED BY	TITLE
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY
DATE/TIME	DATE/TIME	DATE/TIME

# August 12, 2016 Detection Summary

Client: CH2M Hill Plateau Remediation Company  
Project/Site: F16-039

TestAmerica Job ID: 300-3515-1  
SDG: WC1272

## Client Sample ID: B35H00

## Lab Sample ID: 300-3515-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.053		0.0040	0.0015	mg/L	1		7196A	Total/NA

## Client Sample ID: B35FY5

## Lab Sample ID: 300-3515-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.050		0.0040	0.0015	mg/L	1		7196A	Total/NA

## Client Sample ID: B35FY6

## Lab Sample ID: 300-3515-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	16	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	6.8	D	0.056	0.028	mg/L	2		300.0	Total/NA
Sulfate	170	D	2.5	1.3	mg/L	10		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

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# August 12, 2016

## Client Sample Results

Client: CH2M Hill Plateau Remediation Company  
 Project/Site: F16-039

TestAmerica Job ID: 300-3515-1  
 SDG: WC1272

**Client Sample ID: B35H00**

**Lab Sample ID: 300-3515-1**

Date Collected: 07/19/16 11:24

Matrix: Water

Date Received: 07/19/16 15:00

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.053		0.0040	0.0015	mg/L			07/19/16 16:55	1

**Client Sample ID: B35FY5**

**Lab Sample ID: 300-3515-2**

Date Collected: 07/19/16 11:24

Matrix: Water

Date Received: 07/19/16 15:00

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.050		0.0040	0.0015	mg/L			07/19/16 16:55	1

**Client Sample ID: B35FY6**

**Lab Sample ID: 300-3515-3**

Date Collected: 07/19/16 11:24

Matrix: Water

Date Received: 07/19/16 15:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	16	D	0.40	0.20	mg/L			07/19/16 18:12	2
Nitrate as N	6.8	D	0.056	0.028	mg/L			07/19/16 18:12	2
Orthophosphate as P	0.41	U D	0.82	0.41	mg/L			07/19/16 19:58	10
Sulfate	170	D	2.5	1.3	mg/L			07/19/16 19:58	10

# August 12, 2016

## QC Sample Results

Client: CH2M Hill Plateau Remediation Company  
 Project/Site: F16-039

TestAmerica Job ID: 300-3515-1  
 SDG: WC1272

### Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 300-4948/5**  
**Matrix: Water**  
**Analysis Batch: 4948**

**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			07/19/16 16:56	1
Orthophosphate as P	0.041	U	0.082	0.041	mg/L			07/19/16 16:56	1

**Lab Sample ID: LCS 300-4948/6**  
**Matrix: Water**  
**Analysis Batch: 4948**

**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	2.21		mg/L		98	80 - 120
Orthophosphate as P	6.53	6.27		mg/L		96	80 - 120

**Lab Sample ID: 300-3508-A-1 MS**  
**Matrix: Water**  
**Analysis Batch: 4948**

**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	8.1	D	2.26	10.4	D	mg/L		101	75 - 125
Orthophosphate as P	0.41	U D	6.53	5.53	D	mg/L		85	75 - 125

**Lab Sample ID: 300-3508-A-1 DU**  
**Matrix: Water**  
**Analysis Batch: 4948**

**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	8.1	D	8.07	D	mg/L		0.9	20
Orthophosphate as P	0.41	U D	0.41	U D	mg/L		NC	20

**Lab Sample ID: MB 300-4949/5**  
**Matrix: Water**  
**Analysis Batch: 4949**

**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			07/19/16 16:56	1
Sulfate	0.13	U	0.25	0.13	mg/L			07/19/16 16:56	1

**Lab Sample ID: LCS 300-4949/6**  
**Matrix: Water**  
**Analysis Batch: 4949**

**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	15.4		mg/L		96	80 - 120
Sulfate	20.0	19.2		mg/L		96	80 - 120

**Lab Sample ID: 300-3508-A-1 MS**  
**Matrix: Water**  
**Analysis Batch: 4949**

**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	8.4	D	3.20	11.8	D	mg/L		107	75 - 125

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# August 12, 2016

## QC Sample Results

Client: CH2M Hill Plateau Remediation Company  
 Project/Site: F16-039

TestAmerica Job ID: 300-3515-1  
 SDG: WC1272

### Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 300-3508-A-1 MS**  
**Matrix: Water**  
**Analysis Batch: 4949**

**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	39	D	4.00	44.2	D	mg/L		121	75 - 125

**Lab Sample ID: 300-3508-A-1 DU**  
**Matrix: Water**  
**Analysis Batch: 4949**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	8.4	D	8.61	D	mg/L		2	20
Sulfate	39	D	40.3	D	mg/L		2	20

### Method: 7196A - Chromium, Hexavalent

**Lab Sample ID: MB 300-5010/3**  
**Matrix: Water**  
**Analysis Batch: 5010**

**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			07/19/16 16:51	1

**Lab Sample ID: LCS 300-5010/4**  
**Matrix: Water**  
**Analysis Batch: 5010**

**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		101	80 - 120

**Lab Sample ID: 300-3515-1 MS**  
**Matrix: Water**  
**Analysis Batch: 5010**

**Client Sample ID: B35H00**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.053		0.0500	0.102		mg/L		99	75 - 125

**Lab Sample ID: 300-3515-1 DU**  
**Matrix: Water**  
**Analysis Batch: 5010**

**Client Sample ID: B35H00**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cr (VI)	0.053		0.0525		mg/L		0	20

# August 12, 2016

## QC Association Summary

Client: CH2M Hill Plateau Remediation Company  
Project/Site: F16-039

TestAmerica Job ID: 300-3515-1  
SDG: WC1272

### HPLC/IC

#### Analysis Batch: 4948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-3515-3	B35FY6	Total/NA	Water	300.0	
300-3515-3	B35FY6	Total/NA	Water	300.0	
MB 300-4948/5	Method Blank	Total/NA	Water	300.0	
LCS 300-4948/6	Lab Control Sample	Total/NA	Water	300.0	
300-3508-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
300-3508-A-1 DU	Duplicate	Total/NA	Water	300.0	

#### Analysis Batch: 4949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-3515-3	B35FY6	Total/NA	Water	300.0	
300-3515-3	B35FY6	Total/NA	Water	300.0	
MB 300-4949/5	Method Blank	Total/NA	Water	300.0	
LCS 300-4949/6	Lab Control Sample	Total/NA	Water	300.0	
300-3508-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
300-3508-A-1 DU	Duplicate	Total/NA	Water	300.0	

### General Chemistry

#### Analysis Batch: 5010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-3515-1	B35H00	Total/NA	Water	7196A	
300-3515-2	B35FY5	Total/NA	Water	7196A	
MB 300-5010/3	Method Blank	Total/NA	Water	7196A	
LCS 300-5010/4	Lab Control Sample	Total/NA	Water	7196A	
300-3515-1 MS	B35H00	Total/NA	Water	7196A	
300-3515-1 DU	B35H00	Total/NA	Water	7196A	

# August 12, 2016 Lab Chronicle

Client: CH2M Hill Plateau Remediation Company  
Project/Site: F16-039

TestAmerica Job ID: 300-3515-1  
SDG: WC1272

**Client Sample ID: B35H00**  
Date Collected: 07/19/16 11:24  
Date Received: 07/19/16 15:00

**Lab Sample ID: 300-3515-1**  
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			5010	07/19/16 16:55	RLC	TAL RCH

**Client Sample ID: B35FY5**  
Date Collected: 07/19/16 11:24  
Date Received: 07/19/16 15:00

**Lab Sample ID: 300-3515-2**  
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			5010	07/19/16 16:55	RLC	TAL RCH

**Client Sample ID: B35FY6**  
Date Collected: 07/19/16 11:24  
Date Received: 07/19/16 15:00

**Lab Sample ID: 300-3515-3**  
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		2			4948	07/19/16 18:12	RLC	TAL RCH
Total/NA	Analysis	300.0		2			4949	07/19/16 18:12	RLC	TAL RCH
Total/NA	Analysis	300.0		10			4948	07/19/16 19:58	RLC	TAL RCH
Total/NA	Analysis	300.0		10			4949	07/19/16 19:58	RLC	TAL RCH

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

**Lab Sample ID: MB 300-4948/5**  
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			4948	07/19/16 16:56	RLC	TAL RCH

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

**Lab Sample ID: MB 300-4949/5**  
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			4949	07/19/16 16:56	RLC	TAL RCH

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

**Lab Sample ID: MB 300-5010/3**  
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			5010	07/19/16 16:51	RLC	TAL RCH

TestAmerica Richland

# August 12, 2016 Lab Chronicle

Client: CH2M Hill Plateau Remediation Company  
Project/Site: F16-039

TestAmerica Job ID: 300-3515-1  
SDG: WC1272

**Client Sample ID: Lab Control Sample**

**Lab Sample ID: LCS 300-4948/6**

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			4948	07/19/16 17:11	RLC	TAL RCH

**Client Sample ID: Lab Control Sample**

**Lab Sample ID: LCS 300-4949/6**

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			4949	07/19/16 17:11	RLC	TAL RCH

**Client Sample ID: Lab Control Sample**

**Lab Sample ID: LCS 300-5010/4**

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			5010	07/19/16 16:52	RLC	TAL RCH

**Client Sample ID: Matrix Spike**

**Lab Sample ID: 300-3508-A-1 MS**

Date Collected: 07/18/16 13:34

Matrix: Water

Date Received: 07/19/16 08:45

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			4949	07/19/16 17:41	RLC	TAL RCH
Total/NA	Analysis	300.0		10			4948	07/19/16 19:27	RLC	TAL RCH

**Client Sample ID: B35H00**

**Lab Sample ID: 300-3515-1 MS**

Date Collected: 07/19/16 11:24

Matrix: Water

Date Received: 07/19/16 15:00

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			5010	07/19/16 16:52	RLC	TAL RCH

**Laboratory References:**

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

# August 12, 2016

## Method Summary

Client: CH2M Hill Plateau Remediation Company  
Project/Site: F16-039

TestAmerica Job ID: 300-3515-1  
SDG: WC1272

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



# August 12, 2016

## Sample Summary

Client: CH2M Hill Plateau Remediation Company  
Project/Site: F16-039

TestAmerica Job ID: 300-3515-1  
SDG: WC1272

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-3515-1	B35H00	Water	07/19/16 11:24	07/19/16 15:00
300-3515-2	B35FY5	Water	07/19/16 11:24	07/19/16 15:00
300-3515-3	B35FY6	Water	07/19/16 11:24	07/19/16 15:00

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## Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 300-3515-1

SDG Number: WC1272

**Login Number: 3515**

**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.	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 <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	

