

# 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: 300-1745-1  
TestAmerica Sample Delivery Group: WC0658  
Client Project/Site: F12-023

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

Attn: CPP Sample Management



Authorized for release by:  
12/8/2015 10:41:09 AM  
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*I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed in this package. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the attached signature.*

*The laboratory is accredited to EPA 7196A in Solid and Chemical Materials, per Washington State Department of Ecology this is approved for non-discharge water samples. The sample/ sample duplicate RPD agreement is not applicable if one or both results are elss than five times the MDL.*



### 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 . . . . .	8
Client Sample Results . . . . .	9
QC Sample Results . . . . .	10
QC Association Summary . . . . .	12
Lab Chronicle . . . . .	13
Method Summary . . . . .	16
Sample Summary . . . . .	17
Receipt Checklists . . . . .	18

## 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
B	Estimated result. Result is less than the RL, but greater than MDL
U	Analyzed for but not detected.

## Glossary

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

Client: CH2M Hill Plateau Remediation Company  
Project/Site: F12-023

TestAmerica Job ID: 300-1745-1  
SDG: WC0658

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**Job ID: 300-1745-1**

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**Laboratory: TestAmerica Richland**

**Narrative**

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**Job Narrative  
300-1745-1**

**Comments**

No additional comments.

**Receipt**

The samples were received on 12/3/2015 3:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 7.9° 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.



<b>COLLECTOR</b> S.W. King/CHRC	<b>COMPANY CONTACT</b> SUMNER, LC	<b>TELEPHONE NO.</b> 376-3922	<b>PROJECT COORDINATOR</b> SUMNER, LC	<b>PRICE CODE</b> 7H	<b>DATA TURNAROUND</b> 30 Days / 30 Days
<b>SAMPLING LOCATION</b> 100-DX Bldg 1804D INF Tank VAL T-M3 V-ME006A	<b>PROJECT DESIGNATION</b> 100-DX Pump and Treat - INF/EHF/TRANSFER TANK - WATER	<b>FIELD LOGBOOK NO.</b> HNF-N-491-156	<b>ACTUAL SAMPLE DEPTH</b> (N/A)	<b>SAF NO.</b> F12-023	<b>METHOD OF SHIPMENT</b> GOVERNMENT VEHICLE
<b>ICE CHEST NO.</b>		<b>OFFSITE PROPERTY NO.</b>	<b>COA</b> 302841	<b>SAF NO.</b>	<b>ORIGINAL</b>
<b>SHIPPED TO</b> TestAmerica Incorporated, Richland		<b>BILL OF LADING/AIR BILL NO.</b>			

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	PRESERVATION			HOLDING TIME			TYPE OF CONTAINER			NO. OF CONTAINER(S)			VOLUME			SPECIAL HANDLING AND/OR STORAGE
				COOL-4C	HNO3 to pH <2	HCl to pH <2	24 Hours	6 Months	6 Months	6 Months	6 Months	6 Months	6 Months	6 Months	6 Months	6 Months	6 Months		
B33KM4	WATER	DEC 03 2015	1130	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

→ INHS  
WCCORSY



300-1745 COC

CHAIN OF POSSESSION	SIGN / PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM S.W. King/CHRC RECEIVED BY/STORED IN CHRC DEC 03 2015 1245	RECEIVED BY/STORED IN CHRC DEC 03 2015 1245	TRVL-16-013; The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. The extraction wells associated with this SAF are all located at the Transfer Building.
RELINQUISHED BY/REMOVED FROM CHRC DEC 03 2015 1515	RECEIVED BY/STORED IN J. Friesz, TARK DEC 03 2015 1515	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	

December 08 2015

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

PRINTED ON 12/2/2015 FSR ID = FSR8626 TRVL NUM = TRVL-16-013 A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F12-023-258

PAGE 1 OF 1

COLLECTOR S.W. King/CHPRC

COMPANY CONTACT SUMNER, LC

TELEPHONE NO. 376-3922

PROJECT COORDINATOR SUMNER, LC

PRICE CODE 7H

DATA TURNAROUND 30 Days / 30 Days

SAMPLING LOCATION 100-DX Bldg 1804D EFF Tank VAL T-M5 V-M030A DUP

PROJECT DESIGNATION 100-DX Pump and Treat - INF/EFF/TRANSFER TANK - WATER

FIELD LOGBOOK NO. HNF-N-491-15/2

SAF NO. F12-023

AIR QUALITY

METHOD OF SHIPMENT GOVERNMENT VEHICLE ORIGINAL

ICE CHEST NO.

ACTUAL SAMPLE DEPTH (N/A)

COA 302841

BILL OF LADING/AIR BILL NO.

SHIPPED TO TestAmerica Incorporated, Richland

MATRIX\* POSSIBLE SAMPLE HAZARDS/ REMARKS

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

PRESERVATION	HOLDING TIME	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	7196 CR6: COMMON;	SRTOT_SEP PR EQP GRC: COMMON;	TC99_LETVDSC LSC: COMMON;	TRETIUM_DIST LSC: COMMON;	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
Cool~4C	24 Hours	ag	1	60mL	✓	✓	✓	✓	
HNO3 to pH <2	6 Months	G/P	3	1L	✓	✓	✓	✓	
HCl to pH <2	6 Months	P	1	500mL	✓	✓	✓	✓	
None	6 Months	P	1	1L	✓	✓	✓	✓	
Cool <=6C	48 Hours	P	1	500mL	✓	✓	✓	✓	

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W20058

SPECIAL HANDLING AND/OR STORAGE N/A

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	✓	✓	✓	✓	✓
B33KM/8	WATER	DEC 03 2015	1100	✓	✓	✓	✓	✓

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
S.W. King/CHPRC	DEC 03 2015 12:15	CHRIS FULTON	DEC 03 2015 12:15
CHRIS FULTON	DEC 03 2015 1:55	CHRIS FULTON	DEC 03 2015 1:55
CHRIS FULTON	DEC 03 2015 1:55	J. Friesz, TARL	DEC 03 2015 1:55

TRVL-16-013: The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. The extraction wells associated with this SAF are all located at the Transfer Building. (1) 300.0\_ANIONS\_IC: COMMON {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrate, Sulfate};

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

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

December 08 2015

PRINTED ON 12/2/2015

FSR ID = FSR8623

TRVL NUM = TRVL-16-013

A-6003-618 (REV 2)

<b>COLLECTOR</b>	S.W. King/CHPRC	<b>COMPANY CONTACT</b>	SUMNER, LC	<b>TELEPHONE NO.</b>	376-3922	<b>PROJECT COORDINATOR</b>	SUMNER, LC	<b>PRICE CODE</b>	7H	<b>DATA TURNAROUND</b>	30 Days / 30 Days
<b>SAMPLING LOCATION</b>	100-DX Bldg 1804D EFF Tank VAL T-M5 V-MU030A	<b>PROJECT DESIGNATION</b>	100-DX Pump and Treat - INF/EFF/TRANSFER TANK - WATER	<b>SAF NO.</b>	F12-023	<b>AIR QUALITY</b>	<input type="checkbox"/>	<b>METHOD OF SHIPMENT</b>	GOVERNMENT VEHICLE	<b>ORIGINAL</b>	
<b>ICE CHEST NO.</b>		<b>FIELD LOGBOOK NO.</b>	HNFA-4915/2	<b>ACTUAL SAMPLE DEPTH</b>	(N/A)	<b>COA</b>	302841				
<b>SHIPPED TO</b>	TestAmerica Incorporated, Richland	<b>OFFSITE PROPERTY NO.</b>		<b>BILL OF LADING/AIR BILL NO.</b>							

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	PRESERVATION				NO. OF CONTAINER(S)	VOLUME	SPECIAL HANDLING AND/OR STORAGE			
				Cool-to 4C	HNO3 to pH <2	HCl to pH <2	None			Cool <=6C	7196_G66: COMMON;	SRTOT_SEP_PR EGP_GRC: COMMON;	TC99_ETVDSK_LSC: COMMON;
B33KM6	WATER	DEC 03 2015	1100	✓	✓	✓	✓	1	60ml	1L	500ml	500ml	✓

41MHS  
WCOUSS

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM S.W. King/CHPRC	RECEIVED BY/STORED IN CHRIS FULTON	TRVL-16-013: The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. The extraction wells associated with this SAF are all located at the Transfer Building. (1) 300.0_ANIONS_IC: COMMON {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};
RELINQUISHED BY/REMOVED FROM CHRIS FULTON	RECEIVED BY/STORED IN CHRIS FULTON	
RELINQUISHED BY/REMOVED FROM CHRIS FULTON	RECEIVED BY/STORED IN CHRIS FULTON	
RELINQUISHED BY/REMOVED FROM CHRIS FULTON	RECEIVED BY/STORED IN CHRIS FULTON	
RELINQUISHED BY/REMOVED FROM CHRIS FULTON	RECEIVED BY/STORED IN CHRIS FULTON	

December 08 2015

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

Detection Summary

Client: CH2M Hill Plateau Remediation Company  
 Project/Site: F12-023

TestAmerica Job ID: 300-1745-1  
 SDG: WC0658

Client Sample ID: B33KM4

Lab Sample ID: 300-1745-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.048		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B33KM8

Lab Sample ID: 300-1745-2

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	5.7	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.15	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	180	D	1.3	0.63	mg/L	5		300.0	Total/NA
Cr (VI)	0.0031	B	0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B33KM6

Lab Sample ID: 300-1745-3

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	5.7	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.15	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	180	D	1.3	0.63	mg/L	5		300.0	Total/NA
Cr (VI)	0.0033	B	0.0040	0.0015	mg/L	1		7196A	Total/NA

This Detection Summary does not include radiochemical test results.

Client: CH2M Hill Plateau Remediation Company  
Project/Site: F12-023

TestAmerica Job ID: 300-1745-1  
SDG: WC0658

**Client Sample ID: B33KM4**

Date Collected: 12/03/15 11:30

Date Received: 12/03/15 15:15

**Lab Sample ID: 300-1745-1**

Matrix: Water

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.048		0.0040	0.0015	mg/L			12/03/15 19:36	1

**Client Sample ID: B33KM8**

Date Collected: 12/03/15 11:00

Date Received: 12/03/15 15:15

**Lab Sample ID: 300-1745-2**

Matrix: Water

**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			12/03/15 20:49	2
Nitrate as N	5.7	D	0.056	0.028	mg/L			12/03/15 20:49	2
Fluoride	0.15	D	0.10	0.050	mg/L			12/03/15 20:49	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			12/03/15 20:49	2
Sulfate	180	D	1.3	0.63	mg/L			12/04/15 00:20	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0031	B	0.0040	0.0015	mg/L			12/03/15 19:37	1

**Client Sample ID: B33KM6**

Date Collected: 12/03/15 11:00

Date Received: 12/03/15 15:15

**Lab Sample ID: 300-1745-3**

Matrix: Water

**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			12/03/15 21:04	2
Nitrate as N	5.7	D	0.056	0.028	mg/L			12/03/15 21:04	2
Fluoride	0.15	D	0.10	0.050	mg/L			12/03/15 21:04	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			12/03/15 21:04	2
Sulfate	180	D	1.3	0.63	mg/L			12/04/15 00:35	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0033	B	0.0040	0.0015	mg/L			12/03/15 19:37	1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 300-2228/27  
Matrix: Water  
Analysis Batch: 2228

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			12/03/15 19:34	1
Nitrite as N	0.019	U	0.038	0.019	mg/L			12/03/15 19:34	1

Lab Sample ID: LCS 300-2228/28  
Matrix: Water  
Analysis Batch: 2228

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	2.38		mg/L		105	80 - 120
Nitrite as N	3.04	3.22		mg/L		106	80 - 120

Lab Sample ID: 300-1744-A-3 MS  
Matrix: Water  
Analysis Batch: 2228

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	2.2	D	0.452	2.73	D	mg/L		108	75 - 125
Nitrite as N	0.038	U	0.609	0.582	D	mg/L		96	75 - 125

Lab Sample ID: 300-1744-A-3 DU  
Matrix: Water  
Analysis Batch: 2228

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	2.2	D	2.26	D	mg/L		0.6	20
Nitrite as N	0.038	U	0.038	U	mg/L		NC	20

Lab Sample ID: MB 300-2229/27  
Matrix: Water  
Analysis Batch: 2229

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			12/03/15 19:34	1
Fluoride	0.025	U	0.050	0.025	mg/L			12/03/15 19:34	1
Sulfate	0.13	U	0.25	0.13	mg/L			12/03/15 19:34	1

Lab Sample ID: LCS 300-2229/28  
Matrix: Water  
Analysis Batch: 2229

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	16.6		mg/L		104	80 - 120
Fluoride	4.00	4.18		mg/L		105	80 - 120
Sulfate	20.0	21.0		mg/L		105	80 - 120

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 300-1744-A-3 MS

Matrix: Water

Analysis Batch: 2229

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	5.9	D	3.20	9.30	D	mg/L		106	75 - 125
Fluoride	0.18	D	0.800	0.972	D	mg/L		99	75 - 125
Sulfate	60	D	4.00	64.4	D	mg/L		99	75 - 125

Lab Sample ID: 300-1744-A-3 DU

Matrix: Water

Analysis Batch: 2229

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	5.9	D	5.95	D	mg/L		0.7	20
Fluoride	0.18	D	0.184	D	mg/L		0.2	20
Sulfate	60	D	60.9	D	mg/L		0.7	20

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 300-2248/3

Matrix: Water

Analysis Batch: 2248

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			12/03/15 19:33	1

Lab Sample ID: LCS 300-2248/4

Matrix: Water

Analysis Batch: 2248

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	0.268		mg/L		107	80 - 120

Lab Sample ID: 300-1745-1 MS

Matrix: Water

Analysis Batch: 2248

Client Sample ID: B33KM4

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.048		0.0500	0.0985		mg/L		101	85 - 115

Lab Sample ID: 300-1745-1 DU

Matrix: Water

Analysis Batch: 2248

Client Sample ID: B33KM4

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cr (VI)	0.048		0.0485		mg/L		0.8	20

Client: CH2M Hill Plateau Remediation Company  
 Project/Site: F12-023

TestAmerica Job ID: 300-1745-1  
 SDG: WC0658

## HPLC/IC

### Analysis Batch: 2228

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-1744-A-3 DU	Duplicate	Total/NA	Water	300.0	
300-1744-A-3 MS	Matrix Spike	Total/NA	Water	300.0	
300-1745-2	B33KM8	Total/NA	Water	300.0	
300-1745-3	B33KM6	Total/NA	Water	300.0	
LCS 300-2228/28	Lab Control Sample	Total/NA	Water	300.0	
MB 300-2228/27	Method Blank	Total/NA	Water	300.0	

### Analysis Batch: 2229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-1744-A-3 DU	Duplicate	Total/NA	Water	300.0	
300-1744-A-3 MS	Matrix Spike	Total/NA	Water	300.0	
300-1745-2	B33KM8	Total/NA	Water	300.0	
300-1745-2	B33KM8	Total/NA	Water	300.0	
300-1745-3	B33KM6	Total/NA	Water	300.0	
300-1745-3	B33KM6	Total/NA	Water	300.0	
LCS 300-2229/28	Lab Control Sample	Total/NA	Water	300.0	
MB 300-2229/27	Method Blank	Total/NA	Water	300.0	

## General Chemistry

### Analysis Batch: 2248

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-1745-1	B33KM4	Total/NA	Water	7196A	
300-1745-1 DU	B33KM4	Total/NA	Water	7196A	
300-1745-1 MS	B33KM4	Total/NA	Water	7196A	
300-1745-2	B33KM8	Total/NA	Water	7196A	
300-1745-3	B33KM6	Total/NA	Water	7196A	
LCS 300-2248/4	Lab Control Sample	Total/NA	Water	7196A	
MB 300-2248/3	Method Blank	Total/NA	Water	7196A	

**Client Sample ID: B33KM4**

Date Collected: 12/03/15 11:30

Date Received: 12/03/15 15:15

**Lab Sample ID: 300-1745-1**

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			2248	12/03/15 19:36	AMC	TAL RCH

**Client Sample ID: B33KM8**

Date Collected: 12/03/15 11:00

Date Received: 12/03/15 15:15

**Lab Sample ID: 300-1745-2**

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		2228	12/03/15 20:49	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		2229	12/03/15 20:49	CPM	TAL RCH
Total/NA	Analysis	300.0		5	10 mL		2229	12/04/15 00:20	CPM	TAL RCH
Total/NA	Analysis	7196A		1			2248	12/03/15 19:37	AMC	TAL RCH

**Client Sample ID: B33KM6**

Date Collected: 12/03/15 11:00

Date Received: 12/03/15 15:15

**Lab Sample ID: 300-1745-3**

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	10 mL		2228	12/03/15 21:04	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		2229	12/03/15 21:04	CPM	TAL RCH
Total/NA	Analysis	300.0		5	10 mL		2229	12/04/15 00:35	CPM	TAL RCH
Total/NA	Analysis	7196A		1			2248	12/03/15 19:37	AMC	TAL RCH

**Client Sample ID: Duplicate**

Date Collected: 12/03/15 11:02

Date Received: 12/03/15 15:28

**Lab Sample ID: 300-1744-A-3 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		2228	12/03/15 20:34	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		2229	12/03/15 20:34	CPM	TAL RCH

**Client Sample ID: B33KM4**

Date Collected: 12/03/15 11:30

Date Received: 12/03/15 15:15

**Lab Sample ID: 300-1745-1 DU**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1			2248	12/03/15 19:37	AMC	TAL RCH

**Client Sample ID: Lab Control Sample**

**Lab Sample ID: LCS 300-2228/28**

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	10 mL		2228	12/03/15 19:49	CPM	TAL RCH

**Client Sample ID: Lab Control Sample**

**Lab Sample ID: LCS 300-2229/28**

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	10 mL		2229	12/03/15 19:49	CPM	TAL RCH

**Client Sample ID: Lab Control Sample**

**Lab Sample ID: LCS 300-2248/4**

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			2248	12/03/15 19:33	AMC	TAL RCH

**Client Sample ID: Method Blank**

**Lab Sample ID: MB 300-2228/27**

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	10 mL		2228	12/03/15 19:34	CPM	TAL RCH

**Client Sample ID: Method Blank**

**Lab Sample ID: MB 300-2229/27**

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	10 mL		2229	12/03/15 19:34	CPM	TAL RCH

**Client Sample ID: Method Blank**

**Lab Sample ID: MB 300-2248/3**

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			2248	12/03/15 19:33	AMC	TAL RCH

Client: CH2M Hill Plateau Remediation Company  
 Project/Site: F12-023

TestAmerica Job ID: 300-1745-1  
 SDG: WC0658

**Client Sample ID: Matrix Spike**

**Lab Sample ID: 300-1744-A-3 MS**

Date Collected: 12/03/15 11:02

Matrix: Water

Date Received: 12/03/15 15:28

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		2228	12/03/15 20:19	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		2229	12/03/15 20:19	CPM	TAL RCH

**Client Sample ID: B33KM4**

**Lab Sample ID: 300-1745-1 MS**

Date Collected: 12/03/15 11:30

Matrix: Water

Date Received: 12/03/15 15:15

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		3.0 mL	2248	12/03/15 19:34	AMC	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: F12-023

TestAmerica Job ID: 300-1745-1  
SDG: WC0658

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: F12-023

TestAmerica Job ID: 300-1745-1  
SDG: WC0658

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-1745-1	B33KM4	Water	12/03/15 11:30	12/03/15 15:15
300-1745-2	B33KM8	Water	12/03/15 11:00	12/03/15 15:15
300-1745-3	B33KM6	Water	12/03/15 11:00	12/03/15 15:15

- 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: 300-1745-1

SDG Number: WC0658

**Login Number: 1745**

**List Number: 1**

**Creator: Bock, Julie A**

**List Source: TestAmerica Richland**

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

