

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

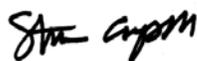
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Richland
2800 George Washington Way
Richland, WA 99352
Tel: (509)375-3131

TestAmerica Job ID: 300-3141-1
TestAmerica Sample Delivery Group: WC1104
Client Project/Site: I16-023

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

Attn: CPP Sample Management



Authorized for release by:
6/27/2016 2:53:58 PM
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Designee for
Whitney Ritari, Project Manager I
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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 less than five times the MDL.



LINKS

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Definitions/Glossary

Client: CH2M Hill Plateau Remediation Company
 Project/Site: I16-023

TestAmerica Job ID: 300-3141-1
 SDG: WC1104

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)



Case Narrative

Client: CH2M Hill Plateau Remediation Company
Project/Site: I16-023

TestAmerica Job ID: 300-3141-1
SDG: WC1104

Job ID: 300-3141-1

Laboratory: TestAmerica Richland

Narrative

Job Narrative
300-3141-1

Comments

No additional comments.

Receipt

The samples were received on 5/27/2016 9:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 6.4° 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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CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
I16-023-197
Page 1 of 1

Collector	D.L. Floyd/CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	I16-023	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	100KR4, MAY 2016	Logbook No.	HNF-N-506 <u>85/63</u>	Ice Chest No.	N/A
Shipped to (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority:	30 Days	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS			PRIORITY		
*** 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 Special Handling: N/A		
Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			Hold Time		

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B34YF0	N	W	stack	1236	1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C
B34YF1	Y	W	↓	↓	1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C

3141
WCE1104



300-3141 COC

Relinquished By	D.L. Floyd/CHPRC	Print	Sign	Date/Time	1920	Received By	SSU-1	Print	Sign	Date/Time	1920	Matrix *
Relinquished By	SSU-1			Date/Time	MAY 27 2016	Received By	Lesly Weir / CHPRC			Date/Time	MAY 27 2016	S = Soil
Relinquished By	Lesly Weir / CHPRC			Date/Time	MAY 27 2016	Received By	L Anderson, TARI			Date/Time	MAY 27 2016	SB = Sediment
Relinquished By				Date/Time	0915	Received By				Date/Time	0915	SO = Solid
Relinquished By				Date/Time		Received By				Date/Time		SL = Sludge
Relinquished By				Date/Time		Received By				Date/Time		W = Water
Relinquished By				Date/Time		Received By				Date/Time		O = Oil
Relinquished By				Date/Time		Received By				Date/Time		A = Air
Relinquished By				Date/Time		Received By				Date/Time		DS = Drum Solids
Relinquished By				Date/Time		Received By				Date/Time		DL = Drum Liquids
Relinquished By				Date/Time		Received By				Date/Time		T = Tissue
Relinquished By				Date/Time		Received By				Date/Time		WL = Wipe
Relinquished By				Date/Time		Received By				Date/Time		L = Liquid
Relinquished By				Date/Time		Received By				Date/Time		V = Vegetation
Relinquished By				Date/Time		Received By				Date/Time		X = Other
FINAL SAMPLE DISPOSITION												
Disposal Method (e.g., Return to customer, per lab procedure, used in process)												
Disposed By												

CH2M Hill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
116-023-199
Page 1 of 1

Collector	D.L. Floyd/CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	116-023	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	100KR4, MAY 2016	Logbook No.	HNF-N-506 <u>SS/64</u>	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority:	30 Days	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS			SPECIAL INSTRUCTIONS		
*** 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 Special Handling: N/A		

Sample No.	Filter	*	Date	Time	No./Type Container	Sample Analysis	Holding Time	Preservative
B34YF6	N	W	5/26/16	1338	1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C
B34YF8	Y	W	↓	↓	1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C

#3141
WGC1104

Reinquished By	D.L. Floyd/CHPRC	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
Reinquished By	SSU-1			MAY 26 2016 1420	SSU-1			MAY 26 2016 1420	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Reinquished By	Lesly Neal CHPRC			MAY 27 2016 0648	Lesly Neal CHPRC			MAY 27 2016 0648	DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
Reinquished By	Lesly Neal CHPRC			MAY 27 2016 0915	Lesly Neal CHPRC			MAY 27 2016 0915	

FINAL SAMPLE DISPOSITION

Disposal Method (e.g., Return to customer, per lab procedure, used in process)

Disposed By

Date/Time

CH2M Hill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #

116-023-196

Page 1 of 1

Collector	b.L. Floyd/CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	116-023	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	100KR4, MAY 2016	Logbook No.	HNF-N-506 <u>85 / 63</u>	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority:	30 Days	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS			PRIORITY		
*** 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 438.1			SPECIAL INSTRUCTIONS		
			Hold Time		
			Special Handling: N/A		
Sample No.	Filter	*	Date	Time	No/Type Container
B34YD9	N	W	5/26/16	1236	1x500-ml P
			Sample Analysis		
			300.0_ANIONS_IC: COMMON		
			Holding Time		
			48 Hours		
			Preservative		
			Cool <=6C		
			Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

#3141
WCE1104

Reinquished By	D.L. Floyd/CHPRC	Print	Sign	Date/Time	Received By	SSU-1	Print	Sign	Date/Time	Matrix *
Reinquished By	SSU-1			MAY 26 2016 1420	Received By	SSU-1			MAY 26 2016 1420	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Reinquished By	Lesly West/CHPRC			MAY 27 2016 0648	Received By	Lesly West/CHPRC			MAY 27 2016 0648	DS = Drum Solids DL = Drum Liquids T = Tissue WT = Wipe L = Liquid V = Vegetation X = Other
Reinquished By	Lesly West/CHPRC			MAY 27 2016 0915	Received By	L. Anderson, TARI			MAY 27 2016 0915	
FINAL SAMPLE DISPOSITION										
Disposal Method (e.g., Return to customer, per lab procedure, used in process)					Disposed By					
Date/Time										

CH2M Hill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
I16-023-198
Page 1 of 1

Collector	D.L. Floyd/CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	I16-023	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	100KRR4, MAY 2016	Logbook No.	HNF-N-506 <u>85/24</u>	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority:	30 Days	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS			PRIORITY		
*** 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 Special Handling: N/A		
			Hold Time		
			Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Sample No.	Filter	*	Date	Time	No./Type Container	Sample Analysis	Holding Time	Preservative
B34YF4	N	W	5/26/16	1538	1x500-mL P	300_0_ANIONS_IC: COMMON	48 Hours	Cool <=6C

#3141
WCE1104

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
Relinquished By DL Floyd/CHPRC			MAY 26 2016 1420	Received By SSU-1			MAY 26 2016 1428	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By SSU-1			MAY 27 2016 0648	Received By L Anderson, TARR			MAY 27 2016 0648	DS = Drums Solids DL = Drums Liquids T = Tissue WT = Wipe L = Liquid V = Vegetation X = Other
Relinquished By Lester West CHPRC			MAY 27 2016 0915	Received By L Anderson, TARR			MAY 27 2016 0915	

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: I16-023

TestAmerica Job ID: 300-3141-1
 SDG: WC1104

Client Sample ID: B34YF0

Lab Sample ID: 300-3141-1

No Detections.

Client Sample ID: B34YF1

Lab Sample ID: 300-3141-2

No Detections.

Client Sample ID: B34YF6

Lab Sample ID: 300-3141-3

No Detections.

Client Sample ID: B34YF8

Lab Sample ID: 300-3141-4

No Detections.

Client Sample ID: B34YD9

Lab Sample ID: 300-3141-5

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
Fluoride	0.28	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	74	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B34YF4

Lab Sample ID: 300-3141-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	14	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	0.32	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
Sulfate	74	D	0.50	0.25	mg/L	2		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: I16-023

TestAmerica Job ID: 300-3141-1
SDG: WC1104

Client Sample ID: B34YF0

Lab Sample ID: 300-3141-1

Date Collected: 05/26/16 12:36

Matrix: Water

Date Received: 05/27/16 09:15

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0015	U	0.0040	0.0015	mg/L			05/27/16 12:19	1

Client Sample ID: B34YF1

Lab Sample ID: 300-3141-2

Date Collected: 05/26/16 12:36

Matrix: Water

Date Received: 05/27/16 09:15

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0015	U	0.0040	0.0015	mg/L			05/27/16 12:19	1

Client Sample ID: B34YF6

Lab Sample ID: 300-3141-3

Date Collected: 05/26/16 13:38

Matrix: Water

Date Received: 05/27/16 09:15

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0015	U	0.0040	0.0015	mg/L			05/27/16 12:20	1

Client Sample ID: B34YF8

Lab Sample ID: 300-3141-4

Date Collected: 05/26/16 13:38

Matrix: Water

Date Received: 05/27/16 09:15

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0015	U	0.0040	0.0015	mg/L			05/27/16 12:20	1

Client Sample ID: B34YD9

Lab Sample ID: 300-3141-5

Date Collected: 05/26/16 12:36

Matrix: Water

Date Received: 05/27/16 09:15

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			05/27/16 15:25	2
Nitrate as N	0.028	U D	0.056	0.028	mg/L			05/27/16 15:25	2
Fluoride	0.28	D	0.10	0.050	mg/L			05/27/16 15:25	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			05/27/16 15:25	2
Sulfate	74	D	0.50	0.25	mg/L			05/27/16 15:25	2

Client Sample ID: B34YF4

Lab Sample ID: 300-3141-6

Date Collected: 05/26/16 13:38

Matrix: Water

Date Received: 05/27/16 09:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14	D	0.40	0.20	mg/L			05/27/16 16:10	2
Nitrate as N	0.32	D	0.056	0.028	mg/L			05/27/16 16:10	2
Fluoride	0.21	D	0.10	0.050	mg/L			05/27/16 16:10	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			05/27/16 16:10	2
Sulfate	74	D	0.50	0.25	mg/L			05/27/16 16:10	2

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: I16-023

TestAmerica Job ID: 300-3141-1
SDG: WC1104

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 300-4349/5
Matrix: Water
Analysis Batch: 4349

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			05/27/16 13:10	1
Nitrite as N	0.019	U	0.038	0.019	mg/L			05/27/16 13:10	1

Lab Sample ID: LCS 300-4349/6
Matrix: Water
Analysis Batch: 4349

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	3.14		mg/L		103	80 - 120

Lab Sample ID: 300-3140-A-26 MS
Matrix: Water
Analysis Batch: 4349

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	0.37	D	0.452	0.821	D	mg/L		99	75 - 125
Nitrite as N	0.038	U D	0.609	0.561	D	mg/L		92	75 - 125

Lab Sample ID: 300-3140-A-26 DU
Matrix: Water
Analysis Batch: 4349

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Nitrate as N	0.37	D	0.370	D	mg/L		0.9	20
Nitrite as N	0.038	U D	0.038	U D	mg/L		NC	20

Lab Sample ID: MB 300-4350/5
Matrix: Water
Analysis Batch: 4350

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			05/27/16 13:10	1
Fluoride	0.025	U	0.050	0.025	mg/L			05/27/16 13:10	1
Sulfate	0.13	U	0.25	0.13	mg/L			05/27/16 13:10	1

Lab Sample ID: LCS 300-4350/6
Matrix: Water
Analysis Batch: 4350

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	16.1		mg/L		101	80 - 120
Fluoride	4.00	4.06		mg/L		102	80 - 120
Sulfate	20.0	20.3		mg/L		101	80 - 120

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: I16-023

TestAmerica Job ID: 300-3141-1
SDG: WC1104

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 300-3140-A-26 MS
Matrix: Water
Analysis Batch: 4350

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

Analyte	Sample		Spike Added	MS MS		Unit	D	%Rec	%Rec. Limits	
	Result	Qualifier		Result	Qualifier				Limits	
Chloride	1.2	D	3.20	4.42	D	mg/L		99	75 - 125	
Fluoride	0.12	D	0.800	0.859	D	mg/L		92	75 - 125	
Sulfate	9.6	D	4.00	13.7	D	mg/L		105	75 - 125	

Lab Sample ID: 300-3140-A-26 DU
Matrix: Water
Analysis Batch: 4350

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample		DU DU		Unit	D	RPD	RPD Limit	
	Result	Qualifier	Result	Qualifier				RPD	Limit
Chloride	1.2	D	1.24	D	mg/L		0.4	20	
Fluoride	0.12	D	0.119	D	mg/L		0.5	20	
Sulfate	9.6	D	9.50	D	mg/L		0.6	20	

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 300-4357/3
Matrix: Water
Analysis Batch: 4357

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

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cr (VI)	0.0015	U	0.0040	0.0015	mg/L			05/27/16 12:15	1

Lab Sample ID: LCS 300-4357/4
Matrix: Water
Analysis Batch: 4357

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

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits	
		Result	Qualifier				Limits	
Cr (VI)	0.250	0.251		mg/L		100	80 - 120	

Lab Sample ID: 300-3141-1 MS
Matrix: Water
Analysis Batch: 4357

Client Sample ID: B34YF0
Prep Type: Total/NA

Analyte	Sample		Spike Added	MS MS		Unit	D	%Rec	%Rec. Limits	
	Result	Qualifier		Result	Qualifier				Limits	
Cr (VI)	0.0015	U	0.0500	0.0445		mg/L		89	75 - 125	

Lab Sample ID: 300-3141-1 DU
Matrix: Water
Analysis Batch: 4357

Client Sample ID: B34YF0
Prep Type: Total/NA

Analyte	Sample		DU DU		Unit	D	RPD	RPD Limit	
	Result	Qualifier	Result	Qualifier				RPD	Limit
Cr (VI)	0.0015	U	0.0015	U	mg/L		NC	20	

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
 Project/Site: I16-023

TestAmerica Job ID: 300-3141-1
 SDG: WC1104

HPLC/IC

Analysis Batch: 4349

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-3140-A-26 DU	Duplicate	Total/NA	Water	300.0	
300-3140-A-26 MS	Matrix Spike	Total/NA	Water	300.0	
300-3141-5	B34YD9	Total/NA	Water	300.0	
300-3141-6	B34YF4	Total/NA	Water	300.0	
LCS 300-4349/6	Lab Control Sample	Total/NA	Water	300.0	
MB 300-4349/5	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 4350

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-3140-A-26 DU	Duplicate	Total/NA	Water	300.0	
300-3140-A-26 MS	Matrix Spike	Total/NA	Water	300.0	
300-3141-5	B34YD9	Total/NA	Water	300.0	
300-3141-6	B34YF4	Total/NA	Water	300.0	
LCS 300-4350/6	Lab Control Sample	Total/NA	Water	300.0	
MB 300-4350/5	Method Blank	Total/NA	Water	300.0	

General Chemistry

Analysis Batch: 4357

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-3141-1	B34YF0	Total/NA	Water	7196A	
300-3141-1 DU	B34YF0	Total/NA	Water	7196A	
300-3141-1 MS	B34YF0	Total/NA	Water	7196A	
300-3141-2	B34YF1	Total/NA	Water	7196A	
300-3141-3	B34YF6	Total/NA	Water	7196A	
300-3141-4	B34YF8	Total/NA	Water	7196A	
LCS 300-4357/4	Lab Control Sample	Total/NA	Water	7196A	
MB 300-4357/3	Method Blank	Total/NA	Water	7196A	

Lab Chronicle

Client: CH2M Hill Plateau Remediation Company
 Project/Site: I16-023

TestAmerica Job ID: 300-3141-1
 SDG: WC1104

Client Sample ID: B34YF0

Date Collected: 05/26/16 12:36

Date Received: 05/27/16 09:15

Lab Sample ID: 300-3141-1

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			4357	05/27/16 12:19	RLC	TAL RCH

Client Sample ID: B34YF1

Date Collected: 05/26/16 12:36

Date Received: 05/27/16 09:15

Lab Sample ID: 300-3141-2

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			4357	05/27/16 12:19	RLC	TAL RCH

Client Sample ID: B34YF6

Date Collected: 05/26/16 13:38

Date Received: 05/27/16 09:15

Lab Sample ID: 300-3141-3

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			4357	05/27/16 12:20	RLC	TAL RCH

Client Sample ID: B34YF8

Date Collected: 05/26/16 13:38

Date Received: 05/27/16 09:15

Lab Sample ID: 300-3141-4

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			4357	05/27/16 12:20	RLC	TAL RCH

Client Sample ID: B34YD9

Date Collected: 05/26/16 12:36

Date Received: 05/27/16 09:15

Lab Sample ID: 300-3141-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2	10 mL		4349	05/27/16 15:25	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		4350	05/27/16 15:25	CPM	TAL RCH

Client Sample ID: B34YF4

Date Collected: 05/26/16 13:38

Date Received: 05/27/16 09:15

Lab Sample ID: 300-3141-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2	10 mL		4349	05/27/16 16:10	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		4350	05/27/16 16:10	CPM	TAL RCH

Lab Chronicle

Client: CH2M Hill Plateau Remediation Company
Project/Site: I16-023

TestAmerica Job ID: 300-3141-1
SDG: WC1104

Client Sample ID: Duplicate

Lab Sample ID: 300-3140-A-26 DU

Date Collected: 05/26/16 09:37

Matrix: Water

Date Received: 05/26/16 14:00

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		2	10 mL		4349	05/27/16 14:10	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		4350	05/27/16 14:10	CPM	TAL RCH

Client Sample ID: B34YF0

Lab Sample ID: 300-3141-1 DU

Date Collected: 05/26/16 12:36

Matrix: Water

Date Received: 05/27/16 09:15

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			4357	05/27/16 12:19	RLC	TAL RCH

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-4349/6

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	10 mL		4349	05/27/16 13:25	CPM	TAL RCH

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-4350/6

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	10 mL		4350	05/27/16 13:25	CPM	TAL RCH

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-4357/4

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			4357	05/27/16 12:16	RLC	TAL RCH

Client Sample ID: Method Blank

Lab Sample ID: MB 300-4349/5

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	10 mL		4349	05/27/16 13:10	CPM	TAL RCH

Lab Chronicle

Client: CH2M Hill Plateau Remediation Company
 Project/Site: I16-023

TestAmerica Job ID: 300-3141-1
 SDG: WC1104

Client Sample ID: Method Blank

Lab Sample ID: MB 300-4350/5

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	10 mL		4350	05/27/16 13:10	CPM	TAL RCH

Client Sample ID: Method Blank

Lab Sample ID: MB 300-4357/3

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			4357	05/27/16 12:15	RLC	TAL RCH

Client Sample ID: Matrix Spike

Lab Sample ID: 300-3140-A-26 MS

Date Collected: 05/26/16 09:37
 Date Received: 05/26/16 14:00

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	300.0		2	10 mL		4349	05/27/16 13:55	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		4350	05/27/16 13:55	CPM	TAL RCH

Client Sample ID: B34YF0

Lab Sample ID: 300-3141-1 MS

Date Collected: 05/26/16 12:36
 Date Received: 05/27/16 09:15

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		3.0 mL	4357	05/27/16 12:16	RLC	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: I16-023

TestAmerica Job ID: 300-3141-1
SDG: WC1104

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



June 27, 2016

Sample Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: I16-023

TestAmerica Job ID: 300-3141-1
SDG: WC1104

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-3141-1	B34YF0	Water	05/26/16 12:36	05/27/16 09:15
300-3141-2	B34YF1	Water	05/26/16 12:36	05/27/16 09:15
300-3141-3	B34YF6	Water	05/26/16 13:38	05/27/16 09:15
300-3141-4	B34YF8	Water	05/26/16 13:38	05/27/16 09:15
300-3141-5	B34YD9	Water	05/26/16 12:36	05/27/16 09:15
300-3141-6	B34YF4	Water	05/26/16 13:38	05/27/16 09:15

- 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: 300-3141-1

SDG Number: WC1104

Login Number: 3141

List Number: 1

Creator: Anderson, Lori F

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.	N/A	
Residual Chlorine Checked.	N/A	

