

June 28, 2016

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

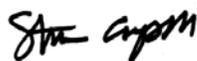
## ANALYTICAL REPORT

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

TestAmerica Job ID: 300-3255-1  
TestAmerica Sample Delivery Group: WC1156  
Client Project/Site: X16-033

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

Attn: CPP Sample Management



Authorized for release by:  
6/28/2016 8:31:04 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 less 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)

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Definitions/Glossary

Client: CH2M Hill Plateau Remediation Company  
 Project/Site: X16-033

TestAmerica Job ID: 300-3255-1  
 SDG: WC1156

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
D	The reported value is from a dilution.
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, 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: X16-033

TestAmerica Job ID: 300-3255-1  
SDG: WC1156

Job ID: 300-3255-1

Laboratory: TestAmerica Richland

Narrative

Job Narrative  
300-3255-1

Comments

No additional comments.

Receipt

The samples were received on 6/10/2016 3:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 10.0° C.

HPLC/IC

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. #  
**X16-033-128**

Page 1 of 1

Collector	JR Aguilera/CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	X16-033	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303064
Project Title	AQUIFER TUBES, JUNE 2016	Logbook No.	HNF-N-506-79/25	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
<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b>		<b>PRIORITY</b>		<b>Hold Time</b>	
*** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1		SPECIAL INSTRUCTIONS		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
		N/A			
Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis
B35DF9	N	JUN 10 2016	0804	1x500-mL P	300.0_ANIONS_IC: COMMON
					Holding Time
					48 Hours
					Preservative
					Cool <=6C

3255  
WCLISE



300-3255 COC

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
JR Aguilera/CHPRC			JUN 10 2016 0930	Troy Bacon/CHPRC			JUN 10 2016 0930	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
Troy Bacon/CHPRC			JUN 10 2016 1555	J. Beck, TARL			JUN 10 2016 1555	DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
Relinquished By			Date/Time	Received By			Date/Time	

<b>FINAL SAMPLE DISPOSITION</b>	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

CH2M/Hill Plateau Remediation Company

C.O.C.#  
X16-033-075  
Page 1 of 1

Collector	JR. Aguilar/CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	X16-033	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303064
Project Title	AQUIFER TUBES, JUNE 2016	Logbook No.	HNF-N-506_75/85	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
<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b>			<b>PRIORITY</b>		
*** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1			SPECIAL INSTRUCTIONS		
			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
B358C6	N	WJUN 10 2016	1045	1x500-ml P	300.0_ANIONS_IC: COMMON	48 Hours	Cool <=6C

3255  
WJUN 10 2016

Relinquished By	JR. Aguilar/CHPRC	Print	Sign	Date/Time	JUN 10 2016	1220	Received By	J. Bock, TARL	Print	Sign	Date/Time	JUN 10 2016	1220	Matrix *
Relinquished By	Frank Hill CHPRC			Date/Time	JUN 10 2016		Received By				Date/Time	JUN 10 2016		S = Soil
Relinquished By				Date/Time			Received By				Date/Time			SE = Sediment
Relinquished By				Date/Time			Received By				Date/Time			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			WI = 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 \_\_\_\_\_ Date/Time \_\_\_\_\_

PRINTED ON 4/21/2016 FSR ID = FSR2346 A-6004-842 (REV 2)

**CH2M/Hill Plateau Remediation Company**

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

C.O.C.#  
**X16-033-123**  
Page 1 of 1

Collector	JR. Aguilar/CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	X16-033	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303064
Project Title	AQUIFER TUBES, JUNE 2016	Logbook No.	HNF-N-506 79/25	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
<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b>			<b>SPECIAL INSTRUCTIONS</b>		
*** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1			N/A		
Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis
B35DF4	N	W/JUN 10 2016	1011	1x500-mL P	300.0_ANIONS_IC: COMMON
					Holding Time
					48 Hours
					Preservative
					Cool <=6C

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WCLISY

Relinquished By	JR. Aguilar/CHPRC	Print	Sign	Date/Time	Received By	JR. Aguilar/CHPRC	Print	Sign	Date/Time	Matrix *
Relinquished By	Frank Hill/CHPRC			JUN 10 2016 1220	Received By	Frank Hill/CHPRC			JUN 10 2016 1220	S = Soil
Relinquished By				JUN 10 2016 1515	Received By	J. Bock, TARL			JUN 10 2016 1515	SE = Sediment
Relinquished By					Received By					SO = Solid
Relinquished By					Received By					SL = Sludge
Relinquished By					Received By					W = Water
Relinquished By					Received By					O = Oil
Relinquished By					Received By					A = Air
Relinquished By					Received By					DS = Drum Solids
Relinquished By					Received By					DL = Drum Liquids
Relinquished By					Received By					T = Tissue
Relinquished By					Received By					WI = Wipe
Relinquished By					Received By					L = Liquid
Relinquished By					Received By					V = Vegetation
Relinquished By					Received By					X = Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time
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**CH2M Hill Plateau Remediation Company**

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

C.O.C. #  
**X16-033-122**  
Page 1 of 1

Collector	J.R. Aguilera/CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	X16-033	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303064
Project Title	AQUIFER TUBES, JUNE 2016	Logbook No.	HNF-N-506 79 / 25	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
<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b>			<b>PRIORITY</b>		
*** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1			SPECIAL INSTRUCTIONS N/A		
Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis
B35DF3	N	WJUN 10 2016	0932	1x500-mL P	300.0_ANIONS_IC: COMMON
					Holding Time
					48 Hours
					Preservative
					Cool <=6C
					Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

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Relinquished By	J.R. Aguilera/CHPRC	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
Relinquished By	Frank Hall/CHPRC	Print	Sign	JUN 10 2016 1220	Received By	Frank Hall/CHPRC	Print	JUN 10 2016 1220	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By		Print	Sign	JUN 10 2016 1515	Received By	J. Bock, TARL	Print	JUN 10 2016 1515	DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
Relinquished By		Print	Sign		Received By		Print		
Relinquished By		Print	Sign		Received By		Print		

Detection Summary

Client: CH2M Hill Plateau Remediation Company  
 Project/Site: X16-033

TestAmerica Job ID: 300-3255-1  
 SDG: WC1156

Client Sample ID: B35DF9

Lab Sample ID: 300-3255-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.3	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	0.28	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.11	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	8.6	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B358C6

Lab Sample ID: 300-3255-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.4	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	1.3	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.078	B D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	9.0	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B35DF4

Lab Sample ID: 300-3255-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	2.2	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	0.54	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.055	B D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	14	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B35DF3

Lab Sample ID: 300-3255-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.2	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	0.38	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.10	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	10	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: X16-033

TestAmerica Job ID: 300-3255-1  
SDG: WC1156

Client Sample ID: B35DF9

Lab Sample ID: 300-3255-1

Date Collected: 06/10/16 08:04

Matrix: Water

Date Received: 06/10/16 15:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.3	D	0.40	0.20	mg/L			06/10/16 20:54	2
Nitrate as N	0.28	D	0.056	0.028	mg/L			06/10/16 20:54	2
Fluoride	0.11	D	0.10	0.050	mg/L			06/10/16 20:54	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			06/10/16 20:54	2
Sulfate	8.6	D	0.50	0.25	mg/L			06/10/16 20:54	2

Client Sample ID: B358C6

Lab Sample ID: 300-3255-2

Date Collected: 06/10/16 10:45

Matrix: Water

Date Received: 06/10/16 15:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.4	D	0.40	0.20	mg/L			06/10/16 21:39	2
Nitrate as N	1.3	D	0.056	0.028	mg/L			06/10/16 21:39	2
Fluoride	0.078	B D	0.10	0.050	mg/L			06/10/16 21:39	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			06/10/16 21:39	2
Sulfate	9.0	D	0.50	0.25	mg/L			06/10/16 21:39	2

Client Sample ID: B35DF4

Lab Sample ID: 300-3255-3

Date Collected: 06/10/16 10:11

Matrix: Water

Date Received: 06/10/16 15:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2.2	D	0.40	0.20	mg/L			06/10/16 21:54	2
Nitrate as N	0.54	D	0.056	0.028	mg/L			06/10/16 21:54	2
Fluoride	0.055	B D	0.10	0.050	mg/L			06/10/16 21:54	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			06/10/16 21:54	2
Sulfate	14	D	0.50	0.25	mg/L			06/10/16 21:54	2

Client Sample ID: B35DF3

Lab Sample ID: 300-3255-4

Date Collected: 06/10/16 09:32

Matrix: Water

Date Received: 06/10/16 15:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.2	D	0.40	0.20	mg/L			06/10/16 22:09	2
Nitrate as N	0.38	D	0.056	0.028	mg/L			06/10/16 22:09	2
Fluoride	0.10	D	0.10	0.050	mg/L			06/10/16 22:09	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			06/10/16 22:09	2
Sulfate	10	D	0.50	0.25	mg/L			06/10/16 22:09	2

QC Sample Results

Client: CH2M Hill Plateau Remediation Company  
Project/Site: X16-033

TestAmerica Job ID: 300-3255-1  
SDG: WC1156

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 300-4510/5  
Matrix: Water  
Analysis Batch: 4510

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			06/10/16 18:38	1
Nitrite as N	0.019	U	0.038	0.019	mg/L			06/10/16 18:38	1

Lab Sample ID: LCS 300-4510/6  
Matrix: Water  
Analysis Batch: 4510

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	2.24		mg/L		99	80 - 120
Nitrite as N	3.04	3.05		mg/L		100	80 - 120

Lab Sample ID: 300-3253-A-5 MS  
Matrix: Water  
Analysis Batch: 4510

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	3.3	D	0.452	3.66	D	mg/L		84	75 - 125
Nitrite as N	0.038	U D	0.609	0.525	D	mg/L		86	75 - 125

Lab Sample ID: 300-3253-A-5 DU  
Matrix: Water  
Analysis Batch: 4510

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	3.3	D	3.31	D	mg/L		0.7	20
Nitrite as N	0.038	U D	0.038	U D	mg/L		NC	20

Lab Sample ID: MB 300-4511/5  
Matrix: Water  
Analysis Batch: 4511

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			06/10/16 18:38	1
Fluoride	0.025	U	0.050	0.025	mg/L			06/10/16 18:38	1
Sulfate	0.13	U	0.25	0.13	mg/L			06/10/16 18:38	1

Lab Sample ID: LCS 300-4511/6  
Matrix: Water  
Analysis Batch: 4511

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	15.6		mg/L		98	80 - 120
Fluoride	4.00	3.92		mg/L		98	80 - 120
Sulfate	20.0	19.6		mg/L		98	80 - 120

QC Sample Results

Client: CH2M Hill Plateau Remediation Company  
 Project/Site: X16-033

TestAmerica Job ID: 300-3255-1  
 SDG: WC1156

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 300-3253-A-5 MS

Matrix: Water

Analysis Batch: 4511

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	13	D	3.20	15.5	D	mg/L		90	75 - 125
Fluoride	0.23	D	0.800	0.952	D	mg/L		91	75 - 125

Lab Sample ID: 300-3253-A-5 MS

Matrix: Water

Analysis Batch: 4511

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	54	D	20.0	74.3	D	mg/L		99	75 - 125

Lab Sample ID: 300-3253-A-5 DU

Matrix: Water

Analysis Batch: 4511

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	13	D	12.7	D	mg/L		0.7	20
Fluoride	0.23	D	0.227	D	mg/L		0.6	20

Lab Sample ID: 300-3253-A-5 DU

Matrix: Water

Analysis Batch: 4511

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate	54	D	53.8	D	mg/L		1	20

QC Association Summary

Client: CH2M Hill Plateau Remediation Company  
 Project/Site: X16-033

TestAmerica Job ID: 300-3255-1  
 SDG: WC1156

HPLC/IC

Analysis Batch: 4510

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-3253-A-5 DU	Duplicate	Total/NA	Water	300.0	
300-3253-A-5 MS	Matrix Spike	Total/NA	Water	300.0	
300-3255-1	B35DF9	Total/NA	Water	300.0	
300-3255-2	B358C6	Total/NA	Water	300.0	
300-3255-3	B35DF4	Total/NA	Water	300.0	
300-3255-4	B35DF3	Total/NA	Water	300.0	
LCS 300-4510/6	Lab Control Sample	Total/NA	Water	300.0	
MB 300-4510/5	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 4511

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-3253-A-5 DU	Duplicate	Total/NA	Water	300.0	
300-3253-A-5 DU	Duplicate	Total/NA	Water	300.0	
300-3253-A-5 MS	Matrix Spike	Total/NA	Water	300.0	
300-3253-A-5 MS	Matrix Spike	Total/NA	Water	300.0	
300-3255-1	B35DF9	Total/NA	Water	300.0	
300-3255-2	B358C6	Total/NA	Water	300.0	
300-3255-3	B35DF4	Total/NA	Water	300.0	
300-3255-4	B35DF3	Total/NA	Water	300.0	
LCS 300-4511/6	Lab Control Sample	Total/NA	Water	300.0	
MB 300-4511/5	Method Blank	Total/NA	Water	300.0	

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Lab Chronicle

Client: CH2M Hill Plateau Remediation Company  
 Project/Site: X16-033

TestAmerica Job ID: 300-3255-1  
 SDG: WC1156

**Client Sample ID: B35DF9**

Date Collected: 06/10/16 08:04

Date Received: 06/10/16 15:15

**Lab Sample ID: 300-3255-1**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2	10 mL		4510	06/10/16 20:54	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		4511	06/10/16 20:54	CPM	TAL RCH

**Client Sample ID: B358C6**

Date Collected: 06/10/16 10:45

Date Received: 06/10/16 15:15

**Lab Sample ID: 300-3255-2**

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		4510	06/10/16 21:39	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		4511	06/10/16 21:39	CPM	TAL RCH

**Client Sample ID: B35DF4**

Date Collected: 06/10/16 10:11

Date Received: 06/10/16 15:15

**Lab Sample ID: 300-3255-3**

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		4510	06/10/16 21:54	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		4511	06/10/16 21:54	CPM	TAL RCH

**Client Sample ID: B35DF3**

Date Collected: 06/10/16 09:32

Date Received: 06/10/16 15:15

**Lab Sample ID: 300-3255-4**

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	300.0		2	10 mL		4510	06/10/16 22:09	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		4511	06/10/16 22:09	CPM	TAL RCH

**Client Sample ID: Duplicate**

Date Collected: 06/10/16 13:24

Date Received: 06/10/16 15:15

**Lab Sample ID: 300-3253-A-5 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		4510	06/10/16 19:39	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		4511	06/10/16 19:39	CPM	TAL RCH
Total/NA	Analysis	300.0		10	10 mL		4511	06/10/16 22:55	CPM	TAL RCH

Lab Chronicle

Client: CH2M Hill Plateau Remediation Company  
 Project/Site: X16-033

TestAmerica Job ID: 300-3255-1  
 SDG: WC1156

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-4510/6

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

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	10 mL		4510	06/10/16 18:53	CPM	TAL RCH

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-4511/6

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

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	10 mL		4511	06/10/16 18:53	CPM	TAL RCH

Client Sample ID: Method Blank

Lab Sample ID: MB 300-4510/5

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		4510	06/10/16 18:38	CPM	TAL RCH

Client Sample ID: Method Blank

Lab Sample ID: MB 300-4511/5

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		4511	06/10/16 18:38	CPM	TAL RCH

Client Sample ID: Matrix Spike

Lab Sample ID: 300-3253-A-5 MS

Date Collected: 06/10/16 13:24  
 Date Received: 06/10/16 15:15

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	300.0		2	10 mL		4510	06/10/16 19:23	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		4511	06/10/16 19:23	CPM	TAL RCH
Total/NA	Analysis	300.0		10	10 mL		4511	06/10/16 22:40	CPM	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: X16-033

TestAmerica Job ID: 300-3255-1  
SDG: WC1156

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Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL RCH

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**Protocol References:**

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

**Laboratory References:**

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



June 28, 2016

### Sample Summary

Client: CH2M Hill Plateau Remediation Company  
Project/Site: X16-033

TestAmerica Job ID: 300-3255-1  
SDG: WC1156

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-3255-1	B35DF9	Water	06/10/16 08:04	06/10/16 15:15
300-3255-2	B358C6	Water	06/10/16 10:45	06/10/16 15:15
300-3255-3	B35DF4	Water	06/10/16 10:11	06/10/16 15:15
300-3255-4	B35DF3	Water	06/10/16 09:32	06/10/16 15:15

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Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 300-3255-1

SDG Number: WC1156

Login Number: 3255

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	

