

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: 300-3506-1

TestAmerica Sample Delivery Group: WC1269

Client Project/Site: W16-007

Revision: 1

For:

CH2M Hill Plateau Remediation Company

PO BOX 1600

Mail Stop R3-50

Richland, Washington 99352

Attn: CPP Sample Management



Authorized for release by:

8/11/2016 12:14:08 PM

Steven Campbell, Project Mgmt. Assistant

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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.



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Definitions/Glossary

Client: CH2M Hill Plateau Remediation Company
Project/Site: W16-007

TestAmerica Job ID: 300-3506-1
SDG: WC1269

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
D	The reported value is from a dilution.
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: W16-007

TestAmerica Job ID: 300-3506-1
SDG: WC1269

Job ID: 300-3506-1

Laboratory: TestAmerica Richland

Narrative

**Job Narrative
300-3506-1**

Comments

This report has been revised in response to a P&D generated 8/11/2016.

Receipt

The samples were received on 7/18/2016 11:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 6.8° C.

HPLC/IC

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



SAMPLE ISSUE RESOLUTION

SIR NUM SIR16-506
REV NUM 0
DATE INITIATED 7/19/2016

SAMPLE EVENT INFORMATION

SAF NUM(S) A16-006, W16-007, S16-007
OPERABLE UNIT(S) NONE
PROJECT(S) SURV16, RCRA16
SAMPLE EVENT TITLE(S) SURV16, RCRA16
LABORATORY TestAmerica Incorporated, Richland

SAMPLING INFORMATION

NUMBER OF SAMPLES 3
SAMPLE NUMBERS B35NN4, B35RK7, B35TT6
SAMPLE MATRIX WATER
COLLECTION DATE 7/14/2016 - 7/14/2016
SDG NUM WC1256, W07543

ISSUE BACKGROUND

CLASS Sample Management Issues
TYPE Sample Number Correction
DESCRIPTION The above sample numbers were inadvertently used for two sampling events. The sample numbers associated with the second sample event need to be corrected.

DISPOSITION

DESCRIPTION The proposed correction is for the lab to add an "A" to the above CHPRC generated sample numbers from the 07/17/2016 sampling event. The original chains of custody related to those samples will also need an "A" added to the COC number.

JUSTIFICATION Final Disposition:

SUBMITTED BY: Scot Fitzgerald DATE: 07/19/2016
ACCEPTED BY: Steven Campbell DATE: 07/19/2016

Problem and Discrepancy Report**TARL****WC1269****08/11/16**

The data package has the following issues:

- The data package is missing SIR16-506.
- Sample B35NN4 is supposed changed to B35NN4A (per SIR16-506) in the results and on COC W16-007-141.

Resolution: *Provide correction.*

Lab Response: **SIR has been attached to amended report and sample ID and COC have been corrected.**

Please correct the issue and resubmit the hard copy and electronic data packages.

Provide a resolution to each issue noted on the report

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CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.#
W16-007-135
Page 1 of 1

Collector	Scott King CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	W16-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	RCRA, JULY 2016	Logbook No.	HNF-N-506 <i>56/54</i>	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	RCRA	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			Hold Time		
			N/A		
			Special Handling: N/A		
Sample No.	Filter	Date	Time	No./Type Container	Sample Analysis
B35NLI0	N	JUL 17 2016	0810	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"/>					

#3506
WCI1269



300-3506 COC

Relinquished By	Scott King CHPRC	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
Relinquished By	<i>[Signature]</i>			JUL 17 2016 1500	Received By	<i>[Signature]</i>		JUL 17 2016 1500	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By	<i>[Signature]</i>			JUL 18 2016	Received By	<i>[Signature]</i>		JUL 18 2016	DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
Relinquished By	Frank Hill CHPRC			JUL 18 2016	Received By	L Anderson, TARE	<i>[Signature]</i>	JUL 19 2016	
Relinquished By				Date/Time	Received By			Date/Time	

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

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #

W16-007-136

Page 1 of 1

Collector	Scott King CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	W16-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	RORA, JULY 2016	Logbook No.	HNF-N-506 80/54	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	RORA	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.	B35NL1	Filter	*	Date	JUL 17 2016
		Time			0810
		No./Type Container	1x500-ml P	Sample Analysis	300.0_ANIONS_IC: COMMON
		Holding Time	48 Hours	Preservative	Cool <=6C

3506
WGC1269

Relinquished By	Scott King CHPRC	Print		Sign		Date/Time	JUL 17 2016 1500	Received By	SSU#1	Print		Sign		Date/Time	JUL 17 2016 1500	Matrix *	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air	DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
Relinquished By	Frank Hill CHPRC	Print		Sign		Date/Time	JUL 18 2016	Received By	L Anderson, TARI	Print		Sign		Date/Time	JUL 18 2016			

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By		Date/Time	
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CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
W16-007-138
Page 1 of 1

Collector	Scott King CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	W16-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	RORA, JULY 2016	Logbook No.	HNF-N-506810/54	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	RORA	Priority:	30 Days	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS		SPECIAL INSTRUCTIONS		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
*** 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
B35NM1	N	W JUL 17 2016	0940	1x500-ml P	300.0_ANIONS_IC: COMMON
					Sample Analysis
					Hold Time
					48 Hours
					Preservative
					Cool <=6C

#3506
WGC1269

Relinquished By	Scott King CHPRC	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
Relinquished By	<i>[Signature]</i>		JUL 17 2016 0900	Received By	<i>[Signature]</i>		JUL 17 2016 1500	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By	<i>[Signature]</i>		JUL 18 2016	Received By	<i>[Signature]</i>		JUL 18 2016	DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
Relinquished By	<i>[Signature]</i>		JUL 19 2016	Received By	L Anderson, TRL	<i>[Signature]</i>	JUL 19 2016	
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)		Disposed By		Date/Time		

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
W16-007-139
Page 1 of 1

Collector	Scott King CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	W16-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	RCRA, JULY 2016	Logbook No.	HNF-N-506 <i>210/54</i>	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	RCRA	Priority:	30 Days	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS		SPECIAL INSTRUCTIONS		Hold Time	
*** 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		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Sample No.	Filter *	Date	Time	No./Type Container	Sample Analysis
B35NM/5	N	JUL 17 2016	1537	1x500-mL P	300.0_ANIONS_IC: COMMON
					Sample Analysis
					Preservative
					Cool <=6C

3506
WC1269

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
Scott King CHPRC			JUL 17 2016 1500	SSD#1			JUL 17 2016 1530	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By			Date/Time	Received By			Date/Time	DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
SSD#1			JUL 18 2016 1800	Frank King CHPRC			JUL 18 2016 1800	
Relinquished By			Date/Time	Received By			Date/Time	
Frank King CHPRC			JUL 18 2016 1144	L. Anderson, TARI			JUL 18 2016 1144	
Relinquished By			Date/Time	Received By			Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By		Date/Time	

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
W16-007-141
Page 1 of 1

Collector	Scott King GHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	W16-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	RCRA, JULY 2016	Logbook No.	HNF-N-506810/54	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	RCRA	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			Hold Time		
			N/A Special Handling: N/A		
Sample No.	Filtrer *	Date	Time	No./Type Container	Sample Analysis
B35MND A	N	JUL 17 2016	0809	1x500-ml P	300.0_ANIONS_IC: COMMON
					Sample Analysis
					Hold Time
					48 Hours
					Preservative
					Cool <=6C

8
8/11/16

#3506
W161269

Relinquished By	Scott King GHPRC	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
Relinquished By	<i>[Signature]</i>			JUL 17 2016 1500	Received By	<i>[Signature]</i>		JUL 17 2016 1500	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By	<i>[Signature]</i>			JUL 18 2016 1145	Received By	<i>[Signature]</i>		JUL 18 2016 1145	DS = Dram Solids DL = Drum Liquids T = Tissue WT = Wipe L = Liquid V = Vegetation X = Other
Relinquished By	<i>[Signature]</i>			JUL 18 2016 1145	Received By	<i>[Signature]</i>		JUL 18 2016 1145	
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. # W16-007-157 Page 1 of 1

Collector	CHRIS FULTON CHPRC		Contact/Requester	Karen Waters-Husted		Telephone No.	509-376-4650	
SAF No.	W16-007		Sampling Origin	Hanford Site		Purchase Order/Charge Code	300071	
Project Title	RCRA, JULY 2016		Logbook No.	HNF-N-506 82/88		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	RCRA		Priority:	30 Days		Offsite Property No.	N/A	
POSSIBLE SAMPLE HAZARDS/REMARKS			PRIORITY			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 438.1			N/A			Special Handling: N/A		
Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B35P48	N	W	JUL 17 2016	0950	1x500-ml P	300.0_ANIONS_IC: COMMON	48 Hours	Cool <=6C

#3506
WCE1269

Reinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
CHRIS FULTON CHPRC			JUL 17 2016 1525	SSUH1			JUL 17 2016 1525	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Reinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
Frank Heil CHPRC			JUL 18 2016 1445	L. Anderson, TARI			JUL 18 2016 1445	DS = Drum Solids DL = Drum Liquids T = Tissue WT = Wipe L = Liquid V = Vegetation X = Other
Reinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
SSU-1			JUL 18 2016 1445					
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: W16-007

TestAmerica Job ID: 300-3506-1
SDG: WC1269

Client Sample ID: B35NLO

Lab Sample ID: 300-3506-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	18	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	24	D	0.56	0.28	mg/L	20		300.0	Total/NA
Fluoride	0.36	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	99	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B35NL1

Lab Sample ID: 300-3506-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	19	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	24	D	0.56	0.28	mg/L	20		300.0	Total/NA
Fluoride	0.36	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	100	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B35NM1

Lab Sample ID: 300-3506-3

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
Nitrate as N	10	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.46	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	54	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B35NM5

Lab Sample ID: 300-3506-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	11	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	9.8	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.51	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	37	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B35NN4A

Lab Sample ID: 300-3506-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	12	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	9.4	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.50	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	43	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B35P48

Lab Sample ID: 300-3506-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.6	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	3.2	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.34	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	43	D	0.50	0.25	mg/L	2		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Richland

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W16-007

TestAmerica Job ID: 300-3506-1
SDG: WC1269

Client Sample ID: B35NLO

Date Collected: 07/17/16 08:10

Date Received: 07/18/16 11:45

Lab Sample ID: 300-3506-1

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	18	D	0.40	0.20	mg/L			07/18/16 18:30	2
Nitrate as N	24	D	0.56	0.28	mg/L			07/18/16 21:01	20
Fluoride	0.36	D	0.10	0.050	mg/L			07/18/16 18:30	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			07/18/16 18:30	2
Sulfate	99	D	0.50	0.25	mg/L			07/18/16 18:30	2

Client Sample ID: B35NL1

Date Collected: 07/17/16 08:10

Date Received: 07/18/16 11:45

Lab Sample ID: 300-3506-2

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19	D	0.40	0.20	mg/L			07/18/16 18:15	2
Nitrate as N	24	D	0.56	0.28	mg/L			07/18/16 20:46	20
Fluoride	0.36	D	0.10	0.050	mg/L			07/18/16 18:15	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			07/18/16 18:15	2
Sulfate	100	D	0.50	0.25	mg/L			07/18/16 18:15	2

Client Sample ID: B35NM1

Date Collected: 07/17/16 09:46

Date Received: 07/18/16 11:45

Lab Sample ID: 300-3506-3

Matrix: Water

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			07/18/16 18:00	2
Nitrate as N	10	D	0.056	0.028	mg/L			07/18/16 18:00	2
Fluoride	0.46	D	0.10	0.050	mg/L			07/18/16 18:00	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			07/18/16 18:00	2
Sulfate	54	D	0.50	0.25	mg/L			07/18/16 18:00	2

Client Sample ID: B35NM5

Date Collected: 07/17/16 10:37

Date Received: 07/18/16 11:45

Lab Sample ID: 300-3506-4

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11	D	0.40	0.20	mg/L			07/18/16 17:45	2
Nitrate as N	9.8	D	0.056	0.028	mg/L			07/18/16 17:45	2
Fluoride	0.51	D	0.10	0.050	mg/L			07/18/16 17:45	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			07/18/16 17:45	2
Sulfate	37	D	0.50	0.25	mg/L			07/18/16 17:45	2

Client Sample ID: B35NN4A

Date Collected: 07/17/16 08:59

Date Received: 07/18/16 11:45

Lab Sample ID: 300-3506-5

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12	D	0.40	0.20	mg/L			07/18/16 17:30	2
Nitrate as N	9.4	D	0.056	0.028	mg/L			07/18/16 17:30	2

TestAmerica Richland

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W16-007

TestAmerica Job ID: 300-3506-1
SDG: WC1269

Client Sample ID: B35NN4A

Date Collected: 07/17/16 08:59

Date Received: 07/18/16 11:45

Lab Sample ID: 300-3506-5

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.50	D	0.10	0.050	mg/L			07/18/16 17:30	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			07/18/16 17:30	2
Sulfate	43	D	0.50	0.25	mg/L			07/18/16 17:30	2

Client Sample ID: B35P48

Date Collected: 07/17/16 09:50

Date Received: 07/18/16 11:45

Lab Sample ID: 300-3506-6

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.6	D	0.40	0.20	mg/L			07/18/16 16:44	2
Nitrate as N	3.2	D	0.056	0.028	mg/L			07/18/16 16:44	2
Fluoride	0.34	D	0.10	0.050	mg/L			07/18/16 16:44	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			07/18/16 16:44	2
Sulfate	43	D	0.50	0.25	mg/L			07/18/16 16:44	2

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
 Project/Site: W16-007

TestAmerica Job ID: 300-3506-1
 SDG: WC1269

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 300-4938/5
 Matrix: Water
 Analysis Batch: 4938

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			07/18/16 16:14	1
Nitrite as N	0.019	U	0.038	0.019	mg/L			07/18/16 16:14	1

Lab Sample ID: LCS 300-4938/6
 Matrix: Water
 Analysis Batch: 4938

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: 300-3506-6 MS
 Matrix: Water
 Analysis Batch: 4938

Client Sample ID: B35P48
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	3.2	D	0.452	3.58	D	mg/L		94	75 - 125
Nitrite as N	0.038	U D	0.609	0.519	D	mg/L		85	75 - 125

Lab Sample ID: 300-3506-6 DU
 Matrix: Water
 Analysis Batch: 4938

Client Sample ID: B35P48
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Nitrate as N	3.2	D	3.16	D	mg/L		0.1	20
Nitrite as N	0.038	U D	0.038	U D	mg/L		NC	20

Lab Sample ID: MB 300-4939/5
 Matrix: Water
 Analysis Batch: 4939

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			07/18/16 16:14	1
Fluoride	0.025	U	0.050	0.025	mg/L			07/18/16 16:14	1
Sulfate	0.13	U	0.25	0.13	mg/L			07/18/16 16:14	1

Lab Sample ID: LCS 300-4939/6
 Matrix: Water
 Analysis Batch: 4939

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	16.0	16.2		mg/L		101	80 - 120
Fluoride	4.00	4.07		mg/L		102	80 - 120
Sulfate	20.0	20.4		mg/L		102	80 - 120

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
 Project/Site: W16-007

TestAmerica Job ID: 300-3506-1
 SDG: WC1269

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 300-3506-6 MS
 Matrix: Water
 Analysis Batch: 4939

Client Sample ID: B35P48
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	5.6	D	3.20	8.69	D	mg/L		97	75 - 125
Fluoride	0.34	D	0.800	1.08	D	mg/L		93	75 - 125
Sulfate	43	D	4.00	46.9	D	mg/L		85	75 - 125

Lab Sample ID: 300-3506-6 DU
 Matrix: Water
 Analysis Batch: 4939

Client Sample ID: B35P48
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	5.6	D	5.58	D	mg/L		0.2	20
Fluoride	0.34	D	0.340	D	mg/L		0.2	20
Sulfate	43	D	43.4	D	mg/L		0.2	20

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
 Project/Site: W16-007

TestAmerica Job ID: 300-3506-1
 SDG: WC1269

HPLC/IC

Analysis Batch: 4938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-3506-1	B35NL0	Total/NA	Water	300.0	
300-3506-1	B35NL0	Total/NA	Water	300.0	
300-3506-2	B35NL1	Total/NA	Water	300.0	
300-3506-2	B35NL1	Total/NA	Water	300.0	
300-3506-3	B35NM1	Total/NA	Water	300.0	
300-3506-4	B35NM5	Total/NA	Water	300.0	
300-3506-5	B35NN4A	Total/NA	Water	300.0	
300-3506-6	B35P48	Total/NA	Water	300.0	
MB 300-4938/5	Method Blank	Total/NA	Water	300.0	
LCS 300-4938/6	Lab Control Sample	Total/NA	Water	300.0	
300-3506-6 MS	B35P48	Total/NA	Water	300.0	
300-3506-6 DU	B35P48	Total/NA	Water	300.0	

Analysis Batch: 4939

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-3506-1	B35NL0	Total/NA	Water	300.0	
300-3506-2	B35NL1	Total/NA	Water	300.0	
300-3506-3	B35NM1	Total/NA	Water	300.0	
300-3506-4	B35NM5	Total/NA	Water	300.0	
300-3506-5	B35NN4A	Total/NA	Water	300.0	
300-3506-6	B35P48	Total/NA	Water	300.0	
MB 300-4939/5	Method Blank	Total/NA	Water	300.0	
LCS 300-4939/6	Lab Control Sample	Total/NA	Water	300.0	
300-3506-6 MS	B35P48	Total/NA	Water	300.0	
300-3506-6 DU	B35P48	Total/NA	Water	300.0	

Lab Chronicle

Client: CH2M Hill Plateau Remediation Company
Project/Site: W16-007

TestAmerica Job ID: 300-3506-1
SDG: WC1269

Client Sample ID: B35NLO**Date Collected: 07/17/16 08:10****Date Received: 07/18/16 11:45****Lab Sample ID: 300-3506-1****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			4938	07/18/16 18:30	RLC	TAL RCH
Total/NA	Analysis	300.0		2			4939	07/18/16 18:30	RLC	TAL RCH
Total/NA	Analysis	300.0		20			4938	07/18/16 21:01	RLC	TAL RCH

Client Sample ID: B35NL1**Date Collected: 07/17/16 08:10****Date Received: 07/18/16 11:45****Lab Sample ID: 300-3506-2****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			4938	07/18/16 18:15	RLC	TAL RCH
Total/NA	Analysis	300.0		2			4939	07/18/16 18:15	RLC	TAL RCH
Total/NA	Analysis	300.0		20			4938	07/18/16 20:46	RLC	TAL RCH

Client Sample ID: B35NM1**Date Collected: 07/17/16 09:46****Date Received: 07/18/16 11:45****Lab Sample ID: 300-3506-3****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			4938	07/18/16 18:00	RLC	TAL RCH
Total/NA	Analysis	300.0		2			4939	07/18/16 18:00	RLC	TAL RCH

Client Sample ID: B35NM5**Date Collected: 07/17/16 10:37****Date Received: 07/18/16 11:45****Lab Sample ID: 300-3506-4****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			4938	07/18/16 17:45	RLC	TAL RCH
Total/NA	Analysis	300.0		2			4939	07/18/16 17:45	RLC	TAL RCH

Client Sample ID: B35NN4A**Date Collected: 07/17/16 08:59****Date Received: 07/18/16 11:45****Lab Sample ID: 300-3506-5****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			4938	07/18/16 17:30	RLC	TAL RCH
Total/NA	Analysis	300.0		2			4939	07/18/16 17:30	RLC	TAL RCH

TestAmerica Richland

Lab Chronicle

Client: CH2M Hill Plateau Remediation Company
 Project/Site: W16-007

TestAmerica Job ID: 300-3506-1
 SDG: WC1269

Client Sample ID: B35P48
Date Collected: 07/17/16 09:50
Date Received: 07/18/16 11:45

Lab Sample ID: 300-3506-6
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			4938	07/18/16 16:44	RLC	TAL RCH
Total/NA	Analysis	300.0		2			4939	07/18/16 16:44	RLC	TAL RCH

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

Lab Sample ID: MB 300-4938/5
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			4938	07/18/16 16:14	RLC	TAL RCH

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

Lab Sample ID: MB 300-4939/5
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			4939	07/18/16 16:14	RLC	TAL RCH

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 300-4938/6
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		1			4938	07/18/16 16:29	RLC	TAL RCH

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 300-4939/6
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		1			4939	07/18/16 16:29	RLC	TAL RCH

Client Sample ID: B35P48
Date Collected: 07/17/16 09:50
Date Received: 07/18/16 11:45

Lab Sample ID: 300-3506-6 MS
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			4938	07/18/16 16:59	RLC	TAL RCH
Total/NA	Analysis	300.0		2			4939	07/18/16 16:59	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: W16-007

TestAmerica Job ID: 300-3506-1
SDG: WC1269

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

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



Sample Summary

Client: CH2M Hill Plateau Remediation Company
 Project/Site: W16-007

TestAmerica Job ID: 300-3506-1
 SDG: WC1269

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-3506-1	B35NLO	Water	07/17/16 08:10	07/18/16 11:45
300-3506-2	B35NL1	Water	07/17/16 08:10	07/18/16 11:45
300-3506-3	B35NM1	Water	07/17/16 09:46	07/18/16 11:45
300-3506-4	B35NM5	Water	07/17/16 10:37	07/18/16 11:45
300-3506-5	B35NN4A	Water	07/17/16 08:59	07/18/16 11:45
300-3506-6	B35P48	Water	07/17/16 09:50	07/18/16 11:45

- 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: 300-3506-1

SDG Number: WC1269

Login Number: 3506**List Number: 1****Creator: Anderson, Lori F****List Source: TestAmerica Richland**

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