

8/11/2016

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: 300-3506-1
TestAmerica Sample Delivery Group: WC1269
Client Project/Site: W16-007

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 8:35:22 AM
Steven Campbell, Project Mgmt. Assistant
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Designee for
Whitney Ritari, Project Manager I
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whitney.ritari@testamericainc.com

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed in this package. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the attached signature.

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



LINKS

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Have a Question?



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- 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	11
Client Sample Results	12
QC Sample Results	14
QC Association Summary	16
Lab Chronicle	17
Method Summary	19
Sample Summary	20
Receipt Checklists	21

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.
□	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

No additional comments.

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.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

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 <u>8654</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	RCRA	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		
Sample No.	Filter	Date	Time	No./Type Container	Sample Analysis
B35NLO	N	JUL 17 2016	0810	1x500-ml P	300.0 ANIONS, IC: COMMON
					Holding Time
					48 Hours
					Preservative
					Cool <=6C

#3506
WCE1269



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 A = Air
Relinquished By	<i>[Signature]</i>			JUL 18 2016 1000	Received By	<i>[Signature]</i>		JUL 18 2016 1000	DS = Drum Solids DL = Drum Liquids T = Tissue WT = Wipe L = Liquid V = Vegetation X = Other
Relinquished By	Frankie Hagg CHPRC	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	
Relinquished By	<i>[Signature]</i>			JUL 19 2016 1145	Received By	L. Anderson, TARA	<i>[Signature]</i>	JUL 19 2016 1145	
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. #
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	RCRA, JULY 2016	Logbook No.	HNF-N-506 <u>80/54</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	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			N/A Special Handling: N/A		
Sample No.	Filter	Date	Time	No./Type Container	Sample Analysis
B35NL1	N	<u>WJL 17 2016</u>	<u>0810</u>	1x500-mL P	300.0_ANIONS_IC: COMMON
					Holding Time
					48 Hours
					Preservative
					Cool <=6C

3506
WJL1269

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
Scott King CHPRC			JUL 17 2016 1530	<u>3506#1</u>			JUL 17 2016 1530	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 *
<u>3506#1</u>			JUL 18 2016 1145	L Anderson, TARI			JUL 18 2016 1145	DS = Drum Solids DL = Drum Liquids T = Tissue WL = Wipe L = Liquid V = Vegetation X = Other
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
Frank Hill ACPRC			JUL 18 2016					
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. #
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	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			N/A Special Handling: N/A		
Sample No.	B35NM1	Filter	N	Date	JUL 17 2016 0946
		* Date		Time	
		No./Type Container	1x500-ml P	Sample Analysis	300.0 ANIONS_IC: COMMON
		Holding Time	48 Hours	Preservative	Cool <=6C

#3506
WC1269

Relinquished By	Scott King CHPRC	Print	Sign	Date/Time	JUL 17 2016 1500	Received By	Scott King CHPRC	Print	Sign	Date/Time	JUL 17 2016 1500	Matrix *	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By	Scott King CHPRC	Print	Sign	Date/Time	JUL 18 2016 1800	Received By	Scott King CHPRC	Print	Sign	Date/Time	JUL 18 2016 1800	Matrix *	DS = Drum Solids DL = Drum Liquids T = Tissue WT = Wipe L = Liquid V = Vegetation X = Other
Relinquished By	Scott King CHPRC	Print	Sign	Date/Time	JUL 18 2016 1145	Received By	L. Anderson, TRRL CHPRC	Print	Sign	Date/Time	JUL 18 2016 1145	Matrix *	

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. #
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-506/2016/54	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			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		
Sample No.	Filter *	Date	Time	No/Type Container	Sample Analysis
B35NM5	N	JUL 17 2016	1037	1x500-mL P	300.0_ANIONS_IC: COMMON
					Holding Time
					48 Hours
					Preservative
					Cool <=6C

3506
WC 1269

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
Scott King CHPRC			JUL 17 2016 1500	SSV#1			JUL 17 2016 1500	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
SSV#1			JUL 18 2016 1000	Frank King CHPRC			JUL 18 2016 1000	
Relinquished By			Date/Time	Received By			Date/Time	
Frank King			JUL 18 2016 1144	L. Anderson, TRL			JUL 18 2016 1144	
Relinquished By			Date/Time	Received By			Date/Time	
Frank King			JUL 18 2016	L. Anderson, TRL			JUL 18 2016	
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. #
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-506 <i>810/54</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			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 N/A Special Handling: N/A		
Sample No.	Filter	Date	Time	No./Type Container	Sample Analysis
B35NN4	N	JUL 17 2016	0809	1x500-mL P	300.0 ANIONS, JC: COMMON
					Sample Analysis
					Holding Time
					48 Hours
					Preservative
					Cool <=6C

#3506
W161269

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
Scott King GHPRC			JUL 17 2016 1500	SSW1			JUL 17 2016 1500	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 WL = Wipe L = Liquid V = Vegetation X = Other
<i>SSW1</i>			JUL 18 2016 1445	Frank Hoff GHPRC			JUL 18 2016 1445	
Relinquished By			Date/Time	Received By			Date/Time	
Frank Hoff GHPRC			JUL 18 2016 1445	L. Anderson, TURL			JUL 18 2016 1445	

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. #

W16-007-157

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 <u>82/82</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	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 458.1			N/A			N/A			
Sample No.	Filter	*	Date	Time	No./Type Container	Sample Analysis		Holding Time	Preservative
B35P48	N		JUL 17 2016	0950	1x500-mL P	300_0_ANIONS_IC: COMMON		48 Hours	Cool <=6C

#3506
WCE1269

Relinquished By		Print	CHRIS FULTON	Sign		Date/Time	JUL 17 2016	Received By		Print	SSU-1	Sign		Date/Time	JUL 17 2016	Matrix *	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air	DS = Drum Solids DL = Drum Liquids T = Tissue WT = Wipe L = Liquid V = Vegetation X = Other
Relinquished By		Print	Frank Hart CHPRC	Sign		Date/Time	JUL 18 2016	Received By		Print	Frank Hart CHPRC	Sign		Date/Time	JUL 18 2016	Matrix *		
Relinquished By		Print	Frank Hart CHPRC	Sign		Date/Time	JUL 19 2016	Received By		Print	L. Anderson, TARR	Sign		Date/Time	JUL 19 2016	Matrix *		

Detection Summary

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

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

Client Sample ID: B35NL0

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: B35NN4

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: B35NL0

Lab Sample ID: 300-3506-1

Date Collected: 07/17/16 08:10

Matrix: Water

Date Received: 07/18/16 11:45

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

Lab Sample ID: 300-3506-2

Date Collected: 07/17/16 08:10

Matrix: Water

Date Received: 07/18/16 11:45

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

Lab Sample ID: 300-3506-3

Date Collected: 07/17/16 09:46

Matrix: Water

Date Received: 07/18/16 11:45

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

Lab Sample ID: 300-3506-4

Date Collected: 07/17/16 10:37

Matrix: Water

Date Received: 07/18/16 11:45

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: B35NN4

Lab Sample ID: 300-3506-5

Date Collected: 07/17/16 08:59

Matrix: Water

Date Received: 07/18/16 11:45

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: B35NN4

Lab Sample ID: 300-3506-5

Date Collected: 07/17/16 08:59

Matrix: Water

Date Received: 07/18/16 11:45

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

Lab Sample ID: 300-3506-6

Date Collected: 07/17/16 09:50

Matrix: Water

Date Received: 07/18/16 11:45

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	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	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier		Result	Qualifier					
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	Sample	DU		Unit	D	RPD	RPD	
	Result	Qualifier	Result	Qualifier				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	B35NN4	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	B35NN4	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: B35NL0

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: B35NN4

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

Lab Chronicle

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

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

Client Sample ID: B35P48

Lab Sample ID: 300-3506-6

Date Collected: 07/17/16 09:50

Matrix: Water

Date Received: 07/18/16 11:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2			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

Lab Sample ID: MB 300-4938/5

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			4938	07/18/16 16:14	RLC	TAL RCH

Client Sample ID: Method Blank

Lab Sample ID: MB 300-4939/5

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			4939	07/18/16 16:14	RLC	TAL RCH

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-4938/6

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			4938	07/18/16 16:29	RLC	TAL RCH

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-4939/6

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			4939	07/18/16 16:29	RLC	TAL RCH

Client Sample ID: B35P48

Lab Sample ID: 300-3506-6 MS

Date Collected: 07/17/16 09:50

Matrix: Water

Date Received: 07/18/16 11:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2			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	B35NL0	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	B35NN4	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 <=/ 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	