

October 22, 2015

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: 300-933-1
TestAmerica Sample Delivery Group: WC0399
Client Project/Site: CH2M Hill Chemical

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

Attn: CPP Sample Management



Authorized for release by:
10/22/2015 2:26:22 PM
Steven Campbell, Quality Assurance Assistant
steven.campbell@testamericainc.com

Designee for
Whitney Ritari, Project Manager I
(509)375-3131 ext164
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 elss than five times the MDL.



LINKS

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Qualifiers

HPLC/IC

Qualifier	Qualifier Description
U	Analyzed for but not detected.
D	The reported value is from a dilution.

Glossary

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

Client: CH2M Hill Plateau Remediation Company
Project/Site: CH2M Hill Chemical

TestAmerica Job ID: 300-933-1
SDG: WC0399

Job ID: 300-933-1

Laboratory: TestAmerica Richland

Narrative

**Job Narrative
300-933-1**

Comments

No additional comments.

Receipt

The samples were received on 10/2/2015 11:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 12.8° 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. #

X16-001-069

Page 1 of 1

Collector	JR. Aguilar/CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	X16-001	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303271
Project Title	100-BC-5 RI, OCTOBER 2015	Logbook No.	HNF-N-506 <u>76 / 70</u>	Ice Chest No.	
Shipped To (Lab)	GEE Laboratories, LLC TRC	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	
Protocol	CERCLA	Priority:	30 Days	Offsite Property No.	
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			Submit deliverables & invoices to ^CPP Sample Management		
Sample No.	B32TT4	Filter	N	Date	10-2-15
		*	W	Time	0715
		No./Type Container	1x250-ml G/P	Sample Analysis	9056_ANIONS_IC: COMMON
		Holding Time	28 Days/48 Hours	Preservative	Cool <=6C

October 22, 2015

300-933 COC



#933
LW0399

Relinquished By	JR. Aguilar/CHPRC	Print	Sign	Date/Time	OCT 02 2015	0905	Received By	CHRIS FULTON	Print	Sign	Date/Time	OCT 02 2015	0905	Received By	Jordan Fresco	Print	Sign	Date/Time	OCT 02 2015	1100
Relinquished By	CHRIS FULTON	Print	Sign	Date/Time	OCT 02 2015	0905	Received By	CHRIS FULTON	Print	Sign	Date/Time	OCT 02 2015	0905	Received By	Jordan Fresco	Print	Sign	Date/Time	OCT 02 2015	1100
Relinquished By	CHRIS FULTON	Print	Sign	Date/Time	OCT 02 2015	0905	Received By	CHRIS FULTON	Print	Sign	Date/Time	OCT 02 2015	0905	Received By	Jordan Fresco	Print	Sign	Date/Time	OCT 02 2015	1100
Relinquished By		Print	Sign	Date/Time			Received By		Print	Sign	Date/Time			Received By		Print	Sign	Date/Time		
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)																		

- Matrix *
- S = Soil
 - SE = Sediment
 - SO = Solid
 - SL = Sludge
 - W = Water
 - O = Oil
 - A = Air
 - DS = Drum Solids
 - DJL = Drum Liquids
 - T = Tissue
 - WI = Wipe
 - L = Liquid
 - V = Vegetation
 - X = Other

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #

X16-001-071

Page 1 of 1

Collector	J.R. Aguilar/CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650			
SAF No.	X16-001	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303271			
Project Title	100-BC-5 RI, OCTOBER 2015	Logbook No.	HNF-N-506 <u>7670</u>	Ice Chest No.	<u>NA</u>			
Shipped To (Lab)	<u>GEL Laboratories, Inc. 1A2L</u>	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	<u>NA</u>			
Protocol	CERCLA	Priority:	30 Days	Offsite Property No.	<u>NA</u>			
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					
			Submit deliverables & invoices to ^CPP Sample Management.					
			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	
B321T5	N	W	10-2-15	0800	1x250-mL G/P	9056_ANIONS_IC: COMMON	28 Days/48 Hours	Cool <=6C

October 22, 2015

#933
W0399

Relinquished By	J.R. Aguilar/CHPRC	Print	Sign	Date/Time	Received By	J. Friesz, TARL	Print	Sign	Date/Time	Matrix *
Relinquished By	<u>CHRIS FULTON</u>			OCT 02 2015 0905	Received By	<u>J. Friesz, TARL</u>			OCT 02 2015 0905	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By					Received By					DS = Drum Solids DL = Drum Liquids T = Tissue WL = Wipe L = Liquid V = Vegetation X = Other
Relinquished By					Received By					
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. # **X16-001-127**

Page 1 of 1

Collector	J.R. Aguilar/CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	X16-001	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303271
Project Title	100-BC-5 RI, OCTOBER 2015	Logbook No.	HNF-N-506 76 / 70	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			Hold Time		
			Submit deliverables & invoices to CCP Sample Management.		
Sample No.	B32TR6	Filter	N	Date	10-2-15
		* W		Time	0849
		No/Type Container	1X500-mL P	Sample Analysis	300.0_ANIONS_IC: COMMON
		Holding Time	48 Hours	Preservative	Cool <=6C

October 22, 2015

#933
WCO399

Requisitioned By	J.R. Aguilar/CHPRC	Print	Sign	Date/Time	OCT 02 2015	0905	Received By	CHRIS FULTON/CHPRC	Print	Sign	Date/Time	OCT 02 2015	0905	Received By	J. Priesz, TARI	Print	Sign	Date/Time	OCT 02 2015	1100
Requisitioned By	CHRIS FULTON/CHPRC			Date/Time	OCT 02 2015	1160	Received By				Date/Time			Received By				Date/Time		
Requisitioned By				Date/Time			Received By				Date/Time			Received By				Date/Time		
Requisitioned By				Date/Time			Received By				Date/Time			Received By				Date/Time		

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

CH2M/Hill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
X16-001-105

Page 1 of 1

Collector	S.W. King/CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	X16-001	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303271
Project Title	100-BC-5 RI, OCTOBER 2015	Logbook No.	HNF-N-506 75/89	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			Submit deliverables & invoices to ^CPP Sample Management.		
			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
B32TH4	N	W	10-2-15	0819	1x500-mL P	300.0_ANIONS_IC: COMMON	48 Hours	Cool <=6C

October 22, 2015

#933
W60399

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
Relinquished By S.W. King/CHPRC			OCT 02 2015 0915	Received By CHRIS FULTON CHPRC			OCT 02 2015 0915	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By CHRIS FULTON CHPRC			OCT 02 2015 1100	Received By Jordan Fressz			OCT 02 2015 1100	DS = Drum Solids DL = Drum Liquids T = Tissue WT = Wipe L = Liquid V = Vegetation X = Other
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. #
X16-001-097
Page 1 of 1

Collector	S.W. King/CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	X16-001	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303271
Project Title	100-BC-5 RI, OCTOBER 2015	Logbook No.	HNF-N-506 <u>75 / 87</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			Hold Time		
			Submit deliverables & invoices to ^CPP Sample Management		
Sample No.	Filter	Date	No/Type Container	Sample Analysis	Holding Time
B32TD0	N	10-2-15	1x500-mL P	300.0_ANIONS_IC: COMMON	48 Hours
		0715			Preservative
					Cool <=6C

October 22, 2015

#933
W 6599

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
Relinquished By	S.W. King/CHPRC	<i>[Signature]</i>	OCT 02 2015 0815	Received By	CHRIS FULTON	<i>[Signature]</i>	OCT 02 2015 0815	S = Soil
Relinquished By	CHRIS FULTON	<i>[Signature]</i>	OCT 02 2015 1100	Received By	J Friesz	<i>[Signature]</i>	OCT 02 2015 1100	SE = Sediment
Relinquished By	CHPRC	<i>[Signature]</i>		Received By	MLK	<i>[Signature]</i>		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
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. #

X16-001-099

Page 1 of 1

Collector	S.W. King/CHPRC		Contact/Requester	Karen Waters-Husted		Telephone No.	509-376-4650	
SAF No.	X16-001		Sampling Origin	Hanford Site		Purchase Order/Charge Code	303271	
Project Title	100-BG-5 RI, OCTOBER 2015		Logbook No.	HNF-N-506 75 / 89		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			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			Submit deliverables & invoices to ^CPP Sample Management.					
Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B32TD1	N	W	10-2-15	0848	1x500-mL P	300.0_ANIONS_IC: COMMON	48 Hours	Cool <=6C

October 22, 2015

#933
W CO 399

Reinquired By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
S.W. King/CHPRC			OCT 02 2015 0915	CHRIS FULTON			OCT 02 2015 0915	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Reinquired By			OCT 02 2015	J. Fiesz, TARL			OCT 02 2015	DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
Reinquired By:			Date/Time	Received By			Date/Time	
Reinquired By:			Date/Time	Received By			Date/Time	
Reinquired 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. #

X16-001-125

Page 1 of 1

Collector	J.R. Aguilar/CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	X16-001	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303271
Project Title	100-BC-5 RI, OCTOBER 2015	Logbook No.	HNF-N-506 76 / 70	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		
*** Contaminants 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			Submit deliverables & invoices to ^CP Sample Management.		
Sample No.	B32TR5	Filter	N	Date	10-2-15
		Time	0849	No./Type Container	1x500-mL P
				Sample Analysis	300.0_ANIONS_IC: COMMON
				Holding Time	48 Hours
				Preservative	Cool <=6C

October 22, 2015

#933
W C0399

Relinquished By	J.R. Aguilar/CHPRC	Print	Sign	Date/Time	OCT 02 2015 0905	Received By	CHRIS FULTON/CHPRC	Print	Sign	Date/Time	OCT 02 2015 0905	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	CHRIS FULTON/CHPRC	Print	Sign	Date/Time	OCT 02 2015 1150	Received By	J. Friesz, TARRL	Print	Sign	Date/Time	OCT 02 2015 1101	
Relinquished By		Print	Sign	Date/Time		Received By		Print	Sign	Date/Time		
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)				Disposed By				Date/Time		

Nagel, Sarah

From: Loeber, Bob
Sent: Tuesday, July 21, 2015 2:22 PM
To: Nagel, Sarah
Subject: Direction on IC samples diverted to TARL from GEL

From: Fitzgerald, Scot L [mailto:Scot_L_Fitzgerald@rl.gov]
Sent: Tuesday, November 25, 2014 3:40 PM
To: Seger, Sandra
Cc: Fitzgerald, Scot L; Waters-husted, Karen S
Subject: Direction on IC samples diverted to TARL from GEL

Sandra,

This e-mail serves as a blanket instruction to allow Test America Richland to change the method from 9056_Anions_IC to 300.0_Anions_IC on all chains that are diverted from GEL laboratory.

Please place a copy of this e-mail in each affected data package. An individual SIR form will not be needed.

Scot Fitzgerald
Analytical Support Group
Soil & Groundwater Remediation Project (S&GRP)
Phone: (509) 373-7495



October 22, 2015
Detection Summary

Client: CH2M Hill Plateau Remediation Company
 Project/Site: CH2M Hill Chemical

TestAmerica Job ID: 300-933-1
 SDG: WC0399

Client Sample ID: B32TT4

Lab Sample ID: 300-933-1

No Detections.

Client Sample ID: B32TT5

Lab Sample ID: 300-933-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	10	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	2.0	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.26	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: B32TR6

Lab Sample ID: 300-933-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.5	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	0.23	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.26	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: B32TH4

Lab Sample ID: 300-933-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.7	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	1.4	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.30	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	35	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B32TD0

Lab Sample ID: 300-933-5

No Detections.

Client Sample ID: B32TD1

Lab Sample ID: 300-933-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.0	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	1.8	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.22	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	40	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B32TR5

Lab Sample ID: 300-933-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.5	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	0.23	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.26	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

This Detection Summary does not include radiochemical test results.

TestAmerica Richland

October 22, 2015
Client Sample Results

Client: CH2M Hill Plateau Remediation Company
 Project/Site: CH2M Hill Chemical

TestAmerica Job ID: 300-933-1
 SDG: WC0399

Client Sample ID: B32TT4
Date Collected: 10/02/15 07:15
Date Received: 10/02/15 11:00

Lab Sample ID: 300-933-1
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.20	U	0.40	0.20	mg/L			10/02/15 18:05	2
Nitrate as N	0.028	U	0.056	0.028	mg/L			10/02/15 18:05	2
Fluoride	0.050	U	0.10	0.050	mg/L			10/02/15 18:05	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			10/02/15 18:05	2
Sulfate	0.25	U	0.50	0.25	mg/L			10/02/15 18:05	2

Client Sample ID: B32TT5
Date Collected: 10/02/15 08:06
Date Received: 10/02/15 11:00

Lab Sample ID: 300-933-2
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10	D	0.40	0.20	mg/L			10/02/15 18:50	2
Nitrate as N	2.0	D	0.056	0.028	mg/L			10/02/15 18:50	2
Fluoride	0.26	D	0.10	0.050	mg/L			10/02/15 18:50	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			10/02/15 18:50	2
Sulfate	43	D	0.50	0.25	mg/L			10/02/15 18:50	2

Client Sample ID: B32TR6
Date Collected: 10/02/15 08:49
Date Received: 10/02/15 11:00

Lab Sample ID: 300-933-3
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.5	D	0.40	0.20	mg/L			10/02/15 19:05	2
Nitrate as N	0.23	D	0.056	0.028	mg/L			10/02/15 19:05	2
Fluoride	0.26	D	0.10	0.050	mg/L			10/02/15 19:05	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			10/02/15 19:05	2
Sulfate	14	D	0.50	0.25	mg/L			10/02/15 19:05	2

Client Sample ID: B32TH4
Date Collected: 10/02/15 08:19
Date Received: 10/02/15 11:00

Lab Sample ID: 300-933-4
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.7	D	0.40	0.20	mg/L			10/02/15 19:20	2
Nitrate as N	1.4	D	0.056	0.028	mg/L			10/02/15 19:20	2
Fluoride	0.30	D	0.10	0.050	mg/L			10/02/15 19:20	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			10/02/15 19:20	2
Sulfate	35	D	0.50	0.25	mg/L			10/02/15 19:20	2

Client Sample ID: B32TD0
Date Collected: 10/02/15 07:15
Date Received: 10/02/15 11:00

Lab Sample ID: 300-933-5
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.20	U	0.40	0.20	mg/L			10/02/15 19:35	2
Nitrate as N	0.028	U	0.056	0.028	mg/L			10/02/15 19:35	2

TestAmerica Richland

October 22, 2015
Client Sample Results

Client: CH2M Hill Plateau Remediation Company
 Project/Site: CH2M Hill Chemical

TestAmerica Job ID: 300-933-1
 SDG: WC0399

Client Sample ID: B32TD0
Date Collected: 10/02/15 07:15
Date Received: 10/02/15 11:00

Lab Sample ID: 300-933-5
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.050	U	0.10	0.050	mg/L			10/02/15 19:35	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			10/02/15 19:35	2
Sulfate	0.25	U	0.50	0.25	mg/L			10/02/15 19:35	2

Client Sample ID: B32TD1
Date Collected: 10/02/15 08:48
Date Received: 10/02/15 11:00

Lab Sample ID: 300-933-6
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.0	D	0.40	0.20	mg/L			10/02/15 19:50	2
Nitrate as N	1.8	D	0.056	0.028	mg/L			10/02/15 19:50	2
Fluoride	0.22	D	0.10	0.050	mg/L			10/02/15 19:50	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			10/02/15 19:50	2
Sulfate	40	D	0.50	0.25	mg/L			10/02/15 19:50	2

Client Sample ID: B32TR5
Date Collected: 10/02/15 08:49
Date Received: 10/02/15 11:00

Lab Sample ID: 300-933-7
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.5	D	0.40	0.20	mg/L			10/02/15 20:35	2
Nitrate as N	0.23	D	0.056	0.028	mg/L			10/02/15 20:35	2
Fluoride	0.26	D	0.10	0.050	mg/L			10/02/15 20:35	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			10/02/15 20:35	2
Sulfate	14	D	0.50	0.25	mg/L			10/02/15 20:35	2

October 22, 2015
QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: CH2M Hill Chemical

TestAmerica Job ID: 300-933-1
SDG: WC0399

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 300-1276/41
Matrix: Water
Analysis Batch: 1276

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			10/02/15 17:35	1
Nitrite as N	0.019	U	0.038	0.019	mg/L			10/02/15 17:35	1

Lab Sample ID: LCS 300-1276/42
Matrix: Water
Analysis Batch: 1276

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	2.37		mg/L		105	80 - 120
Nitrite as N	3.04	3.18		mg/L		105	80 - 120

Lab Sample ID: 300-933-1 MS
Matrix: Water
Analysis Batch: 1276

Client Sample ID: B32TT4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.028	U	0.452	0.429	D	mg/L		95	75 - 125
Nitrite as N	0.038	U	0.609	0.575	D	mg/L		95	75 - 125

Lab Sample ID: 300-933-1 DU
Matrix: Water
Analysis Batch: 1276

Client Sample ID: B32TT4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Nitrate as N	0.028	U	0.028	U	mg/L		NC	20
Nitrite as N	0.038	U	0.038	U	mg/L		NC	20

Lab Sample ID: MB 300-1277/41
Matrix: Water
Analysis Batch: 1277

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			10/02/15 17:35	1
Fluoride	0.025	U	0.050	0.025	mg/L			10/02/15 17:35	1
Sulfate	0.13	U	0.25	0.13	mg/L			10/02/15 17:35	1

Lab Sample ID: LCS 300-1277/42
Matrix: Water
Analysis Batch: 1277

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	16.5		mg/L		103	80 - 120
Fluoride	4.00	4.16		mg/L		104	80 - 120
Sulfate	20.0	20.8		mg/L		104	80 - 120

Client: CH2M Hill Plateau Remediation Company
 Project/Site: CH2M Hill Chemical

TestAmerica Job ID: 300-933-1
 SDG: WC0399

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 300-933-1 MS
Matrix: Water
Analysis Batch: 1277

Client Sample ID: B32TT4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	0.20	U	3.20	3.14	D	mg/L		98	75 - 125
Fluoride	0.050	U	0.800	0.770	D	mg/L		96	75 - 125
Sulfate	0.25	U	4.00	3.92	D	mg/L		98	75 - 125

Lab Sample ID: 300-933-1 DU
Matrix: Water
Analysis Batch: 1277

Client Sample ID: B32TT4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	0.20	U	0.20	U	mg/L		NC	20
Fluoride	0.050	U	0.050	U	mg/L		NC	20
Sulfate	0.25	U	0.25	U	mg/L		NC	20

October 22, 2015
QC Association Summary

Client: CH2M Hill Plateau Remediation Company
 Project/Site: CH2M Hill Chemical

TestAmerica Job ID: 300-933-1
 SDG: WC0399

HPLC/IC

Analysis Batch: 1276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-933-1	B32TT4	Total/NA	Water	300.0	
300-933-1 DU	B32TT4	Total/NA	Water	300.0	
300-933-1 MS	B32TT4	Total/NA	Water	300.0	
300-933-2	B32TT5	Total/NA	Water	300.0	
300-933-3	B32TR6	Total/NA	Water	300.0	
300-933-4	B32TH4	Total/NA	Water	300.0	
300-933-5	B32TD0	Total/NA	Water	300.0	
300-933-6	B32TD1	Total/NA	Water	300.0	
300-933-7	B32TR5	Total/NA	Water	300.0	
LCS 300-1276/42	Lab Control Sample	Total/NA	Water	300.0	
MB 300-1276/41	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 1277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-933-1	B32TT4	Total/NA	Water	300.0	
300-933-1 DU	B32TT4	Total/NA	Water	300.0	
300-933-1 MS	B32TT4	Total/NA	Water	300.0	
300-933-2	B32TT5	Total/NA	Water	300.0	
300-933-3	B32TR6	Total/NA	Water	300.0	
300-933-4	B32TH4	Total/NA	Water	300.0	
300-933-5	B32TD0	Total/NA	Water	300.0	
300-933-6	B32TD1	Total/NA	Water	300.0	
300-933-7	B32TR5	Total/NA	Water	300.0	
LCS 300-1277/42	Lab Control Sample	Total/NA	Water	300.0	
MB 300-1277/41	Method Blank	Total/NA	Water	300.0	

Client: CH2M Hill Plateau Remediation Company
 Project/Site: CH2M Hill Chemical

TestAmerica Job ID: 300-933-1
 SDG: WC0399

Client Sample ID: B32TT4
Date Collected: 10/02/15 07:15
Date Received: 10/02/15 11:00

Lab Sample ID: 300-933-1
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		1276	10/02/15 18:05	RLC	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		1277	10/02/15 18:05	RLC	TAL RCH

Client Sample ID: B32TT5
Date Collected: 10/02/15 08:06
Date Received: 10/02/15 11:00

Lab Sample ID: 300-933-2
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		1276	10/02/15 18:50	RLC	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		1277	10/02/15 18:50	RLC	TAL RCH

Client Sample ID: B32TR6
Date Collected: 10/02/15 08:49
Date Received: 10/02/15 11:00

Lab Sample ID: 300-933-3
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		1276	10/02/15 19:05	RLC	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		1277	10/02/15 19:05	RLC	TAL RCH

Client Sample ID: B32TH4
Date Collected: 10/02/15 08:19
Date Received: 10/02/15 11:00

Lab Sample ID: 300-933-4
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		1276	10/02/15 19:20	RLC	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		1277	10/02/15 19:20	RLC	TAL RCH

Client Sample ID: B32TD0
Date Collected: 10/02/15 07:15
Date Received: 10/02/15 11:00

Lab Sample ID: 300-933-5
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		1276	10/02/15 19:35	RLC	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		1277	10/02/15 19:35	RLC	TAL RCH

Client Sample ID: B32TD1
Date Collected: 10/02/15 08:48
Date Received: 10/02/15 11:00

Lab Sample ID: 300-933-6
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		1276	10/02/15 19:50	RLC	TAL RCH

Client: CH2M Hill Plateau Remediation Company
 Project/Site: CH2M Hill Chemical

TestAmerica Job ID: 300-933-1
 SDG: WC0399

Client Sample ID: B32TD1
Date Collected: 10/02/15 08:48
Date Received: 10/02/15 11:00

Lab Sample ID: 300-933-6
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		1277	10/02/15 19:50	RLC	TAL RCH

Client Sample ID: B32TR5
Date Collected: 10/02/15 08:49
Date Received: 10/02/15 11:00

Lab Sample ID: 300-933-7
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		1276	10/02/15 20:35	RLC	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		1277	10/02/15 20:35	RLC	TAL RCH

Client Sample ID: B32TT4
Date Collected: 10/02/15 07:15
Date Received: 10/02/15 11:00

Lab Sample ID: 300-933-1 DU
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2	10 mL		1276	10/02/15 18:35	RLC	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		1277	10/02/15 18:35	RLC	TAL RCH

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

Lab Sample ID: LCS 300-1276/42
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		1276	10/02/15 17:50	RLC	TAL RCH

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

Lab Sample ID: LCS 300-1277/42
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		1277	10/02/15 17:50	RLC	TAL RCH

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

Lab Sample ID: MB 300-1276/41
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		1276	10/02/15 17:35	RLC	TAL RCH

Client: CH2M Hill Plateau Remediation Company
 Project/Site: CH2M Hill Chemical

TestAmerica Job ID: 300-933-1
 SDG: WC0399

Client Sample ID: Method Blank

Lab Sample ID: MB 300-1277/41

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		1277	10/02/15 17:35	RLC	TAL RCH

Client Sample ID: B32TT4

Lab Sample ID: 300-933-1 MS

Date Collected: 10/02/15 07:15

Matrix: Water

Date Received: 10/02/15 11:00

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		1276	10/02/15 18:20	RLC	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		1277	10/02/15 18:20	RLC	TAL RCH

Laboratory References:

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



Client: CH2M Hill Plateau Remediation Company
Project/Site: CH2M Hill Chemical

TestAmerica Job ID: 300-933-1
SDG: WC0399

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



Client: CH2M Hill Plateau Remediation Company
Project/Site: CH2M Hill Chemical

TestAmerica Job ID: 300-933-1
SDG: WC0399

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-933-1	B32TT4	Water	10/02/15 07:15	10/02/15 11:00
300-933-2	B32TT5	Water	10/02/15 08:06	10/02/15 11:00
300-933-3	B32TR6	Water	10/02/15 08:49	10/02/15 11:00
300-933-4	B32TH4	Water	10/02/15 08:19	10/02/15 11:00
300-933-5	B32TD0	Water	10/02/15 07:15	10/02/15 11:00
300-933-6	B32TD1	Water	10/02/15 08:48	10/02/15 11:00
300-933-7	B32TR5	Water	10/02/15 08:49	10/02/15 11:00

- 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: 300-933-1
SDG Number: WC0399

Login Number: 933
List Number: 1
Creator: Friesz, Jordan D

List Source: TestAmerica Richland

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

