

October 26, 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: 300-938-1
TestAmerica Sample Delivery Group: WC0404
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:
10/26/2015 3:20:45 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.



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

TestAmerica Job ID: 300-938-1
 SDG: WC0404

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)

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

TestAmerica Job ID: 300-938-1
SDG: WC0404

Job ID: 300-938-1

Laboratory: TestAmerica Richland

Narrative

**Job Narrative
300-938-1**

Comments

No additional comments.

Receipt

The samples were received on 10/2/2015 2:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 8.3° C.

HPLC/IC

Method 300.0: Reanalysis of the following samples was performed outside of the analytical holding time due to failing QC on initial analysis : B32TC4 (300-938-1), B32TY4 (300-938-2), B32TL7 (300-938-3), B32TX2 (300-938-4), B32T93 (300-938-5), B32TB7 (300-938-6), B32TJ1 (300-938-7), B32V24 (300-938-8), B32TM9 (300-938-9), B32V29 (300-938-10), B32TN4 (300-938-11), (300-938-A-6 DU) and (300-938-A-6 MS). For more information refer to the SIR that is attached to this report.

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



CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

CH2M/Hill Plateau Remediation Company

C.O.C. #

X16-001-096

Page 1 of 1

Collector	S.W. King/CH2M	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 /	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 CCP Sample Management		
Sample No.	B32TC4	Filter	N	Date	10-2-15
		* Date		Time	0836
		No/Type Container	1X500-ml P	Sample Analysis	300.0 ANIONS_IC: COMMON
		Sample No.		Sample Analysis	
		Filter		Holding Time	48 Hours
		Date		Preservative	Cool <=6C



300-938 COC

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w color

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
S.W. King/CH2M			OCT 02 2015	F.M. Hall/CH2M			OCT 02 2015	S = Soil
Relinquished By			OCT 02 2015	Received By			OCT 02 2015	SE = Sediment
F.M. Hall/CH2M			OCT 02 2015	J. Friesz, TARI			OCT 02 2015	SO = Solid
Relinquished By			OCT 02 2015	Received By			OCT 02 2015	SL = Sludge
Relinquished By			OCT 02 2015	Received By			OCT 02 2015	W = Water
Relinquished By			OCT 02 2015	Received By			OCT 02 2015	O = Oil
Relinquished By			OCT 02 2015	Received By			OCT 02 2015	A = Air
Relinquished By			OCT 02 2015	Received By			OCT 02 2015	DL = Drum Solids
Relinquished By			OCT 02 2015	Received By			OCT 02 2015	T = Tissue
Relinquished By			OCT 02 2015	Received By			OCT 02 2015	WL = Wipe
Relinquished By			OCT 02 2015	Received By			OCT 02 2015	L = Liquid
Relinquished By			OCT 02 2015	Received By			OCT 02 2015	V = Vegetation
Relinquished By			OCT 02 2015	Received By			OCT 02 2015	X = Other
FINAL SAMPLE DISPOSITION								Date/Time
Disposal Method (e.g., Return to customer, per lab procedure, used in process)								Date/Time

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

CH2M/Hill Plateau Remediation Company

C.O.C. #

X16-001-139

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/ 20-71	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 CCP Sample Management.		
Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			Hold Time		
Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis
B32TY4	N	10-2-15	1019	1x500-ml P	300.0 ANIONS_IC: COMMON
					Sample Analysis
					48 Hours
					Preservative
					Cool <=6C

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W60404

Relinquished By	Print J.R. Aguilar/CHPRC	Sign <i>[Signature]</i>	Date/Time OCT 02 2015 1105	Received By	Print F.M. HaulchPRC	Sign <i>[Signature]</i>	Date/Time OCT 02 2015 1105	Matrix *
Relinquished By	F.M. HaulchPRC	<i>[Signature]</i>	OCT 02 2015 1440	Received By	J. Friesz, TARI	<i>[Signature]</i>	OCT 02 2015	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 WT = 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)				Date/Time

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
X16-001-114
Page 1 of 1

CH2M Hill Plateau Remediation Company

Collector	JR Aguilera/CHPRC	Contact/Requester	Karen Waters-Husted
SAF No.	X16-001	Sampling Origin	Hanford Site
Project Title	100-BC-5 RI, OCTOBER 2015	Logbook No.	HNF-N-506 <u>26/21</u>
Shipped To (Lab)	TestAmerica Incorporated, Richard	Method of Shipment	GOVERNMENT VEHICLE
Protocol	CERCLA	Priority:	30 Days PRIORITY
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	Time
B32TL7	N	10-2-15	1155
No./Type Container	1x500-mL P	Sample Analysis	300.0 ANIONS_IC: COMMON
Holding Time	48 Hours	Preservative	Cool <=6C

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Relinquished By	JR Aguilera/CHPRC	Print	Sign
Date/Time	OCT 02 2015	Date/Time	1235
Received By	L.D. Wall	Print	Sign
Date/Time	OCT 02 2015	Date/Time	1235
Relinquished By	L.D. Wall	Print	Sign
Date/Time	OCT 02 2015	Date/Time	1410
Received By	J. Friesz, TARL	Print	Sign
Date/Time	OCT 02 2015	Date/Time	1410
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

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. #
X16-001-135
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 RJ, OCTOBER 2015	Logbook No.	HNF-N-506 75189	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 ^CP Sample Management		
Sample No.	Filter	Date	No/Type Container	Sample Analysis	Holding Time
B32TX2	N	10-1-15	1x500-mL P	300.0_ANIONS_IC: COMMON	48 Hours
					Preservative
					Cool <=6C

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Relinquished By	S.W. King/CHPRC	Print	Sign	Date/Time	1250	Received By	J. Friesz, TARL	Print	Sign	Date/Time	1250	Matrix *
Relinquished By	L.D. Wall	CHPRC	CHPRC	OCT 02 2015	1410	Received By	J. Friesz, TARL	CHPRC	CHPRC	OCT 02 2015	1410	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)		Date/Time		Received By		Date/Time		Date/Time		

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #

X16-001-089

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 *** 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 Submit deliverables & invoices to ^CRP Sample Management		
Sample No.	B32T93	Filter	N	Date	10-2-15
		*	W	Time	1146
		No./Type Container	1x500-mL P	Sample Analysis	300.0_ANIONS_IC: COMMON
		Holding Time	48 Hours	Preservative	Cool <=6C

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Relinquished By	S.W. King/CHPRC	Print	Signature	Date/Time	1230	Received By	L.D. Wall	Print	Signature	Date/Time	1230
Relinquished By	L.D. Wall	Signature	Signature	Date/Time	1910	Received By	J. Friesz, TABL	Signature	Signature	Date/Time	1410
Relinquished By	CHPRC	Date/Time	Date/Time	Date/Time	1910	Received By		Date/Time	Date/Time	Date/Time	1410
Relinquished By		Date/Time	Date/Time	Date/Time		Received By		Date/Time	Date/Time	Date/Time	

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. #

X16-001-093

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		
*** 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.	B321B7	Filter	N	Date	10-2-15
		*	W	Time	1045
		No/Type Container	1x500-mL P	Sample Analysis	300.0_ANIONS_IC: COMMON
		Holding Time	48 Hours	Preservative	Cool <=6C

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Relinquished By	S.W. King/CHPRC	Print	Sign	Date/Time	1050	Received By	F.M. Haul/CHPRC	Print	Sign	Date/Time	1054	Matrix *	DS = Drum Solids
Relinquished By	F.M. Haul/CHPRC	Signature	Signature	Date/Time	1050	Received By	J. Friesz, TARI	Signature	Signature	Date/Time	1054	S = Soil	DL = Drum Liquids
Relinquished By				Date/Time	1050	Received By				Date/Time	1054	SE = Sediment	T = Tissue
Relinquished By				Date/Time	1050	Received By				Date/Time	1054	SO = Solid	WI = Wipe
Relinquished By				Date/Time	1050	Received By				Date/Time	1054	SL = Sludge	L = Liquid
Relinquished By				Date/Time	1050	Received By				Date/Time	1054	W = Water	V = Vegetation
Relinquished By				Date/Time	1050	Received By				Date/Time	1054	O = Oil	X = Other
Relinquished By				Date/Time	1050	Received By				Date/Time	1054	A = Air	
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)											

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #

X16-001-108

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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>75/69</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.		
			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
B321J1	N	W	10-2-15	1005	1x500-mL P	300.0 ANIONS_IC: COMMON	48 Hours	Cool <=6C

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W60404

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Relinquished By	S.W. King/CHPRC	Print		Sign		Date/Time	10/2/15	Received By	F.M. Hall/CHPRC	Print		Sign		Date/Time	10/2/15	Matrix *	S = Soil	DS = Drum Solids
Relinquished By	F.M. Hall/CHPRC					Date/Time	10/2/15	Received By	J. Friesz, TARE					Date/Time	10/2/15	SE = Sediment	DL = Drum Liquids	
Relinquished By						Date/Time	10/2/15	Received By						Date/Time	10/2/15	SO = Solid	T = Tissue	
Relinquished By						Date/Time	10/2/15	Received By						Date/Time	10/2/15	SL = Sludge	WT = Wipe	
Relinquished By						Date/Time	10/2/15	Received By						Date/Time	10/2/15	W = Water	L = Liquid	
Relinquished By						Date/Time	10/2/15	Received By						Date/Time	10/2/15	O = Oil	V = Vegetation	
Relinquished By						Date/Time	10/2/15	Received By						Date/Time	10/2/15	A = Air	X = Other	
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. #

X16-001-149

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>76 / 70</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		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		Submit derivatives & 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
B32V24	N	W	10-2-15	0927	1x500-mL P
					Sample Analysis
					300.0_ANIONS_IC: COMMON
					Holding Time
					48 Hours
					Preservative
					Cool <=6C

October 26, 2015

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Relinquished By	J.R. Aguilar/CHPRC	Print	Sign	Date/Time	Received By	F.M. Hall/CHPRC	Print	Sign	Date/Time	Matrix *
Relinquished By	F.M. Hall/CHPRC			OCT 02 2015 1105	Received By	J. Friesz, TARL			OCT 02 2015 1410	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 WI = 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			

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #

X16-001-118

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Collector	J.R. Aguilar/CH2M	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>76/71</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	Time	No./Type Container
B321M9	N	W	10-2-15	1219	1x500-mL P
Sample Analysis			Holding Time		
300.0_ANIONS_IC: COMMON			48 Hours		
Preservative			Cool <=6C		

October 26, 2015

#938
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Relinquished By	J.R. Aguilar/CH2M	Print	Sign	Date/Time	Received By	J.D. Weil/CH2M	Print	Sign	Date/Time
				OCT 02 2015 1235					OCT 02 2015 1235
Relinquished By	L.D. Weil/CH2M	Print	Sign	Date/Time	Received By	J. Friesz, TARI	Print	Sign	Date/Time
				OCT 02 2015 1410					OCT 02 2015 1410
Relinquished By				Date/Time	Received By				Date/Time
FINAL SAMPLE DISPOSITION					Disposal Method (e.g., Return to customer, per lab procedure, used in process)				
Disposited By					Date/Time				

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

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
X16-001-151
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>76/70</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		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		Submit deliverables & invoices to \CP Sample Management.		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Sample No.	B32V29	Filter	*	Date	10-2-15
		Time			0954
		No/Type Container	1x500-mL P	Sample Analysis	300.0_ANIONS_IC: COMMON
		Holding Time	48 Hours	Preservative	Cool <=6C

October 26, 2015

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WC0404

Relinquished By	J.R. Aguilar/CHPRC	Print	Sign	Date/Time	OCT 02 2015	1105	Received By	F.M. Hall/CHPRC	Print	Sign	Date/Time	OCT 02 2015	1105	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	F.M. Hall/CHPRC	Print	Sign	Date/Time	OCT 02 2015	1410	Received By	J. Priesz, TABI	Print	Sign	Date/Time	OCT 02 2015	1410			
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														

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #

X16-001-119

Page 1 of 1

Collector	J.R. Aguirre	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 / 21	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
B32TN4	N	10-2-15	1049	1x500-mL P	300.0_ANIONS_IC: COMMON
					Holding Time
					48 Hours
					Preservative
					Cool <=6C

October 26, 2015

938
W 6404

Relinquished By	J.R. Aguirre	Print	Sign	OCT 02 2015	Date/Time	1105	Received By	F.M. Hall	Print	Sign	OCT 02 2015	Date/Time	1105	Matrix *
Relinquished By	F.M. Hall	Print	Sign	OCT 02 2015	Date/Time	1410	Received By	J. Fitesz, TARL	Print	Sign	OCT 02 2015	Date/Time	1410	S = Soil
Relinquished By							Received By						DS = Drum Solids	
Relinquished By							Received By						SB = Sediment	
Relinquished By							Received By						SO = Solid	
Relinquished By							Received By						SL = Sludge	
Relinquished By							Received By						T = Tissue	
Relinquished By							Received By						WL = Wipe	
Relinquished By							Received By						L = Liquid	
Relinquished By							Received By						O = Oil	
Relinquished By							Received By						V = Vegetation	
Relinquished By							Received By						A = Air	
Relinquished By							Received By						X = Other	
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)											Date/Time		

SAMPLE ISSUE RESOLUTION	SIR NUM	SIR16-033
	REV NUM	0
	DATE INITIATED	10/15/2015

SAMPLE EVENT INFORMATION

SAF NUM(S) X16-001
OPERABLE UNIT(S) 100-BC-5
PROJECT(S) CERC16
SAMPLE EVENT TITLE(S) CERC16
LABORATORY TestAmerica Incorporated, Richland

SAMPLING INFORMATION

NUMBER OF SAMPLES 1
SAMPLE NUMBERS B32TC4
SAMPLE MATRIX WATER
COLLECTION DATE 10/2/2015 - 10/2/2015
SDG NUM WC0404

ISSUE BACKGROUND

CLASS Chain of Custody Issue (Field)
TYPE No Logbook Number
DESCRIPTION Upon chain of custody data entry for SDG WC0404, COC #X16-001-096 (Sample #B32TC4), the "Logbook No." information is missing.

DISPOSITION

DESCRIPTION DOCUMENT AND CLOSE.
JUSTIFICATION DOCUMENT AND CLOSE.

SUBMITTED BY: Gayelyn Gibson DATE: 10/6/2015
ACCEPTED BY: Scot Fitzgerald DATE: 10/15/2015

SAMPLE ISSUE RESOLUTION

SIR NUM SIR16-055
REV NUM 0
DATE INITIATED 10/23/2015



SAMPLE EVENT INFORMATION

SAF NUM(S) X16-001
OPERABLE UNIT(S) 100-BC-5
PROJECT(S) CERC16
SAMPLE EVENT TITLE(S) CERC16
LABORATORY TestAmerica Incorporated, Richland

SAMPLING INFORMATION

NUMBER OF SAMPLES 11
SAMPLE NUMBERS B32T93, B32TB7, B32TC4, B32TJ1, B32TL7, B32TM9, B32TN4, B32TX2, B32TY4, B32V24, B32V29
SAMPLE MATRIX WATER
COLLECTION DATE 10/2/2015 - 10/2/2015
SDG NUM WC0404

ISSUE BACKGROUND

CLASS Laboratory Issue
TYPE Analysis Holding Time Exceeded
DESCRIPTION Samples were initially run within hold time. Due to QC failures the samples needed to be reanalyzed. The reanalysis was outside of hold time.

DISPOSITION

DESCRIPTION PROPOSED DISPOSITION: Initiate SIR, report results and include comments in the case narrative.

JUSTIFICATION ACCEPTED RESOLUTION: Accept proposed resolution.

SUBMITTED BY: Whitney Ritari/TARL DATE: 10/23/15
ACCEPTED BY: Karen Waters Husted/CHPRC DATE: 10/26/15

October 26, 2015
Detection Summary

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

TestAmerica Job ID: 300-938-1
SDG: WC0404

Client Sample ID: B32TC4

Lab Sample ID: 300-938-1

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	3.5	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.16	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	52	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B32TY4

Lab Sample ID: 300-938-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	5.5	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	0.94	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.35	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	28	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B32TL7

Lab Sample ID: 300-938-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.1	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	0.21	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	41	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B32TX2

Lab Sample ID: 300-938-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	3.4	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	0.76	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.23	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	24	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B32T93

Lab Sample ID: 300-938-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	6.6	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	1.5	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.21	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	32	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B32TB7

Lab Sample ID: 300-938-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.3	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	1.9	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.19	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	36	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B32TJ1

Lab Sample ID: 300-938-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1.6	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	0.29	D	0.056	0.028	mg/L	2		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Richland

October 26, 2015
Detection Summary

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

TestAmerica Job ID: 300-938-1
SDG: WC0404

Client Sample ID: B32TJ1 (Continued)

Lab Sample ID: 300-938-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.39	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	16	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B32V24

Lab Sample ID: 300-938-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.8	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	0.28	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	39	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B32TM9

Lab Sample ID: 300-938-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.9	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	1.9	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.25	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	42	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B32V29

Lab Sample ID: 300-938-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	7.9	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	1.5	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.28	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	36	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B32TN4

Lab Sample ID: 300-938-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.6	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	1.9	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.24	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	41	D	0.50	0.25	mg/L	2		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Richland

October 26, 2015
Client Sample Results

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

TestAmerica Job ID: 300-938-1
SDG: WC0404

Client Sample ID: B32TC4
Date Collected: 10/02/15 09:36
Date Received: 10/02/15 14:10

Lab Sample ID: 300-938-1
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			10/06/15 18:24	2
Nitrate as N	3.5	D	0.056	0.028	mg/L			10/06/15 18:24	2
Fluoride	0.16	D	0.10	0.050	mg/L			10/06/15 18:24	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			10/06/15 18:24	2
Sulfate	52	D	0.50	0.25	mg/L			10/06/15 18:24	2

Client Sample ID: B32TY4
Date Collected: 10/02/15 10:19
Date Received: 10/02/15 14:10

Lab Sample ID: 300-938-2
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.5	D	0.40	0.20	mg/L			10/06/15 19:09	2
Nitrate as N	0.94	D	0.056	0.028	mg/L			10/06/15 19:09	2
Fluoride	0.35	D	0.10	0.050	mg/L			10/06/15 19:09	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			10/06/15 19:09	2
Sulfate	28	D	0.50	0.25	mg/L			10/06/15 19:09	2

Client Sample ID: B32TL7
Date Collected: 10/02/15 11:55
Date Received: 10/02/15 14:10

Lab Sample ID: 300-938-3
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.1	D	0.40	0.20	mg/L			10/06/15 19:24	2
Nitrate as N	1.8	D	0.056	0.028	mg/L			10/06/15 19:24	2
Fluoride	0.21	D	0.10	0.050	mg/L			10/06/15 19:24	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			10/06/15 19:24	2
Sulfate	41	D	0.50	0.25	mg/L			10/06/15 19:24	2

Client Sample ID: B32TX2
Date Collected: 10/02/15 11:15
Date Received: 10/02/15 14:10

Lab Sample ID: 300-938-4
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3.4	D	0.40	0.20	mg/L			10/06/15 19:39	2
Nitrate as N	0.76	D	0.056	0.028	mg/L			10/06/15 19:39	2
Fluoride	0.23	D	0.10	0.050	mg/L			10/06/15 19:39	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			10/06/15 19:39	2
Sulfate	24	D	0.50	0.25	mg/L			10/06/15 19:39	2

Client Sample ID: B32T93
Date Collected: 10/02/15 11:46
Date Received: 10/02/15 14:10

Lab Sample ID: 300-938-5
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.6	D	0.40	0.20	mg/L			10/06/15 19:54	2
Nitrate as N	1.5	D	0.056	0.028	mg/L			10/06/15 19:54	2

TestAmerica Richland

October 26, 2015
Client Sample Results

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

TestAmerica Job ID: 300-938-1
 SDG: WC0404

Client Sample ID: B32T93
Date Collected: 10/02/15 11:46
Date Received: 10/02/15 14:10

Lab Sample ID: 300-938-5
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.21	D	0.10	0.050	mg/L			10/06/15 19:54	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			10/06/15 19:54	2
Sulfate	32	D	0.50	0.25	mg/L			10/06/15 19:54	2

Client Sample ID: B32TB7
Date Collected: 10/02/15 10:45
Date Received: 10/02/15 14:10

Lab Sample ID: 300-938-6
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.3	D	0.40	0.20	mg/L			10/06/15 20:09	2
Nitrate as N	1.9	D	0.056	0.028	mg/L			10/06/15 20:09	2
Fluoride	0.19	D	0.10	0.050	mg/L			10/06/15 20:09	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			10/06/15 20:09	2
Sulfate	36	D	0.50	0.25	mg/L			10/06/15 20:09	2

Client Sample ID: B32TJ1
Date Collected: 10/02/15 10:05
Date Received: 10/02/15 14:10

Lab Sample ID: 300-938-7
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.6	D	0.40	0.20	mg/L			10/06/15 20:54	2
Nitrate as N	0.29	D	0.056	0.028	mg/L			10/06/15 20:54	2
Fluoride	0.39	D	0.10	0.050	mg/L			10/06/15 20:54	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			10/06/15 20:54	2
Sulfate	16	D	0.50	0.25	mg/L			10/06/15 20:54	2

Client Sample ID: B32V24
Date Collected: 10/02/15 09:27
Date Received: 10/02/15 14:10

Lab Sample ID: 300-938-8
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.8	D	0.40	0.20	mg/L			10/06/15 21:09	2
Nitrate as N	1.8	D	0.056	0.028	mg/L			10/06/15 21:09	2
Fluoride	0.28	D	0.10	0.050	mg/L			10/06/15 21:09	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			10/06/15 21:09	2
Sulfate	39	D	0.50	0.25	mg/L			10/06/15 21:09	2

Client Sample ID: B32TM9
Date Collected: 10/02/15 12:19
Date Received: 10/02/15 14:10

Lab Sample ID: 300-938-9
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.9	D	0.40	0.20	mg/L			10/06/15 21:24	2
Nitrate as N	1.9	D	0.056	0.028	mg/L			10/06/15 21:24	2
Fluoride	0.25	D	0.10	0.050	mg/L			10/06/15 21:24	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			10/06/15 21:24	2

TestAmerica Richland

October 26, 2015
Client Sample Results

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

TestAmerica Job ID: 300-938-1
 SDG: WC0404

Client Sample ID: B32TM9
Date Collected: 10/02/15 12:19
Date Received: 10/02/15 14:10

Lab Sample ID: 300-938-9
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	42	D	0.50	0.25	mg/L			10/06/15 21:24	2

Client Sample ID: B32V29
Date Collected: 10/02/15 09:54
Date Received: 10/02/15 14:10

Lab Sample ID: 300-938-10
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.9	D	0.40	0.20	mg/L			10/06/15 22:09	2
Nitrate as N	1.5	D	0.056	0.028	mg/L			10/06/15 22:09	2
Fluoride	0.28	D	0.10	0.050	mg/L			10/06/15 22:09	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			10/06/15 22:09	2
Sulfate	36	D	0.50	0.25	mg/L			10/06/15 22:09	2

Client Sample ID: B32TN4
Date Collected: 10/02/15 10:49
Date Received: 10/02/15 14:10

Lab Sample ID: 300-938-11
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.6	D	0.40	0.20	mg/L			10/06/15 22:24	2
Nitrate as N	1.9	D	0.056	0.028	mg/L			10/06/15 22:24	2
Fluoride	0.24	D	0.10	0.050	mg/L			10/06/15 22:24	2
Nitrite as N	0.038	U	0.076	0.038	mg/L			10/06/15 22:24	2
Sulfate	41	D	0.50	0.25	mg/L			10/06/15 22:24	2

October 26, 2015
QC Sample Results

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

TestAmerica Job ID: 300-938-1
SDG: WC0404

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 300-1316/29
Matrix: Water
Analysis Batch: 1316

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			10/06/15 16:08	1
Nitrite as N	0.019	U	0.038	0.019	mg/L			10/06/15 16:08	1

Lab Sample ID: LCS 300-1316/30
Matrix: Water
Analysis Batch: 1316

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: 300-938-6 MS
Matrix: Water
Analysis Batch: 1316

Client Sample ID: B32TB7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	1.9	D	0.452	2.41	D	mg/L		107	75 - 125
Nitrite as N	0.038	U	0.609	0.560	D	mg/L		92	75 - 125

Lab Sample ID: 300-938-6 DU
Matrix: Water
Analysis Batch: 1316

Client Sample ID: B32TB7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate as N	1.9	D	1.93	D	mg/L		0.1	20
Nitrite as N	0.038	U	0.038	U	mg/L		NC	20

Lab Sample ID: MB 300-1317/29
Matrix: Water
Analysis Batch: 1317

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			10/06/15 16:08	1
Fluoride	0.025	U	0.050	0.025	mg/L			10/06/15 16:08	1
Sulfate	0.13	U	0.25	0.13	mg/L			10/06/15 16:08	1

Lab Sample ID: LCS 300-1317/30
Matrix: Water
Analysis Batch: 1317

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	20.7		mg/L		104	80 - 120

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

TestAmerica Job ID: 300-938-1
 SDG: WC0404

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 300-938-6 MS
Matrix: Water
Analysis Batch: 1317

Client Sample ID: B32TB7
Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS MS		Unit	D	%Rec	%Rec.
	Result	Qualifier		Result	Qualifier				
Chloride	7.3	D	3.20	10.6	D	mg/L		103	75 - 125
Fluoride	0.19	D	0.800	0.950	D	mg/L		95	75 - 125
Sulfate	36	D	4.00	40.3	D	mg/L		104	75 - 125

Lab Sample ID: 300-938-6 DU
Matrix: Water
Analysis Batch: 1317

Client Sample ID: B32TB7
Prep Type: Total/NA

Analyte	Sample	Sample	DU DU		Unit	D	RPD	RPD	Limit
	Result	Qualifier	Result	Qualifier					
Chloride	7.3	D	7.29	D	mg/L		0.1	20	
Fluoride	0.19	D	0.190	D	mg/L		0.06	20	
Sulfate	36	D	36.2	D	mg/L		0.2	20	

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October 26, 2015
QC Association Summary

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

TestAmerica Job ID: 300-938-1
 SDG: WC0404

HPLC/IC

Analysis Batch: 1316

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-938-1	B32TC4	Total/NA	Water	300.0	
300-938-2	B32TY4	Total/NA	Water	300.0	
300-938-3	B32TL7	Total/NA	Water	300.0	
300-938-4	B32TX2	Total/NA	Water	300.0	
300-938-5	B32T93	Total/NA	Water	300.0	
300-938-6	B32TB7	Total/NA	Water	300.0	
300-938-6 DU	B32TB7	Total/NA	Water	300.0	
300-938-6 MS	B32TB7	Total/NA	Water	300.0	
300-938-7	B32TJ1	Total/NA	Water	300.0	
300-938-8	B32V24	Total/NA	Water	300.0	
300-938-9	B32TM9	Total/NA	Water	300.0	
300-938-10	B32V29	Total/NA	Water	300.0	
300-938-11	B32TN4	Total/NA	Water	300.0	
LCS 300-1316/30	Lab Control Sample	Total/NA	Water	300.0	
MB 300-1316/29	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 1317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-938-1	B32TC4	Total/NA	Water	300.0	
300-938-2	B32TY4	Total/NA	Water	300.0	
300-938-3	B32TL7	Total/NA	Water	300.0	
300-938-4	B32TX2	Total/NA	Water	300.0	
300-938-5	B32T93	Total/NA	Water	300.0	
300-938-6	B32TB7	Total/NA	Water	300.0	
300-938-6 DU	B32TB7	Total/NA	Water	300.0	
300-938-6 MS	B32TB7	Total/NA	Water	300.0	
300-938-7	B32TJ1	Total/NA	Water	300.0	
300-938-8	B32V24	Total/NA	Water	300.0	
300-938-9	B32TM9	Total/NA	Water	300.0	
300-938-10	B32V29	Total/NA	Water	300.0	
300-938-11	B32TN4	Total/NA	Water	300.0	
LCS 300-1317/30	Lab Control Sample	Total/NA	Water	300.0	
MB 300-1317/29	Method Blank	Total/NA	Water	300.0	

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

TestAmerica Job ID: 300-938-1
 SDG: WC0404

Client Sample ID: B32TC4
Date Collected: 10/02/15 09:36
Date Received: 10/02/15 14:10

Lab Sample ID: 300-938-1
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		1316	10/06/15 18:24	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		1317	10/06/15 18:24	CPM	TAL RCH

Client Sample ID: B32TY4
Date Collected: 10/02/15 10:19
Date Received: 10/02/15 14:10

Lab Sample ID: 300-938-2
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		1316	10/06/15 19:09	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		1317	10/06/15 19:09	CPM	TAL RCH

Client Sample ID: B32TL7
Date Collected: 10/02/15 11:55
Date Received: 10/02/15 14:10

Lab Sample ID: 300-938-3
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		1316	10/06/15 19:24	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		1317	10/06/15 19:24	CPM	TAL RCH

Client Sample ID: B32TX2
Date Collected: 10/02/15 11:15
Date Received: 10/02/15 14:10

Lab Sample ID: 300-938-4
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		1316	10/06/15 19:39	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		1317	10/06/15 19:39	CPM	TAL RCH

Client Sample ID: B32T93
Date Collected: 10/02/15 11:46
Date Received: 10/02/15 14:10

Lab Sample ID: 300-938-5
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		1316	10/06/15 19:54	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		1317	10/06/15 19:54	CPM	TAL RCH

Client Sample ID: B32TB7
Date Collected: 10/02/15 10:45
Date Received: 10/02/15 14:10

Lab Sample ID: 300-938-6
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		1316	10/06/15 20:09	CPM	TAL RCH

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

TestAmerica Job ID: 300-938-1
 SDG: WC0404

Client Sample ID: B32TB7
Date Collected: 10/02/15 10:45
Date Received: 10/02/15 14:10

Lab Sample ID: 300-938-6
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		1317	10/06/15 20:09	CPM	TAL RCH

Client Sample ID: B32TJ1
Date Collected: 10/02/15 10:05
Date Received: 10/02/15 14:10

Lab Sample ID: 300-938-7
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		1316	10/06/15 20:54	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		1317	10/06/15 20:54	CPM	TAL RCH

Client Sample ID: B32V24
Date Collected: 10/02/15 09:27
Date Received: 10/02/15 14:10

Lab Sample ID: 300-938-8
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		1316	10/06/15 21:09	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		1317	10/06/15 21:09	CPM	TAL RCH

Client Sample ID: B32TM9
Date Collected: 10/02/15 12:19
Date Received: 10/02/15 14:10

Lab Sample ID: 300-938-9
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		1316	10/06/15 21:24	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		1317	10/06/15 21:24	CPM	TAL RCH

Client Sample ID: B32V29
Date Collected: 10/02/15 09:54
Date Received: 10/02/15 14:10

Lab Sample ID: 300-938-10
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		1316	10/06/15 22:09	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		1317	10/06/15 22:09	CPM	TAL RCH

Client Sample ID: B32TN4
Date Collected: 10/02/15 10:49
Date Received: 10/02/15 14:10

Lab Sample ID: 300-938-11
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		1316	10/06/15 22:24	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		1317	10/06/15 22:24	CPM	TAL RCH

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

TestAmerica Job ID: 300-938-1
 SDG: WC0404

Client Sample ID: B32TB7
Date Collected: 10/02/15 10:45
Date Received: 10/02/15 14:10

Lab Sample ID: 300-938-6 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		1316	10/06/15 20:39	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		1317	10/06/15 20:39	CPM	TAL RCH

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

Lab Sample ID: LCS 300-1316/30
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		1316	10/06/15 16:23	CPM	TAL RCH

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

Lab Sample ID: LCS 300-1317/30
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		1317	10/06/15 16:23	CPM	TAL RCH

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

Lab Sample ID: MB 300-1316/29
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		1316	10/06/15 16:08	CPM	TAL RCH

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

Lab Sample ID: MB 300-1317/29
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		1317	10/06/15 16:08	CPM	TAL RCH

Client Sample ID: B32TB7
Date Collected: 10/02/15 10:45
Date Received: 10/02/15 14:10

Lab Sample ID: 300-938-6 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	10 mL		1316	10/06/15 20:24	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		1317	10/06/15 20:24	CPM	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: 300-938-1
SDG: WC0404

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: 300-938-1
SDG: WC0404

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-938-1	B32TC4	Water	10/02/15 09:36	10/02/15 14:10
300-938-2	B32TY4	Water	10/02/15 10:19	10/02/15 14:10
300-938-3	B32TL7	Water	10/02/15 11:55	10/02/15 14:10
300-938-4	B32TX2	Water	10/02/15 11:15	10/02/15 14:10
300-938-5	B32T93	Water	10/02/15 11:46	10/02/15 14:10
300-938-6	B32TB7	Water	10/02/15 10:45	10/02/15 14:10
300-938-7	B32TJ1	Water	10/02/15 10:05	10/02/15 14:10
300-938-8	B32V24	Water	10/02/15 09:27	10/02/15 14:10
300-938-9	B32TM9	Water	10/02/15 12:19	10/02/15 14:10
300-938-10	B32V29	Water	10/02/15 09:54	10/02/15 14:10
300-938-11	B32TN4	Water	10/02/15 10:49	10/02/15 14:10



Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 300-938-1
SDG Number: WC0404

Login Number: 938
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	

