

August 12, 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: 300-3517-1

TestAmerica Sample Delivery Group: WC1274

Client Project/Site: S16-007

For:

CH2M Hill Plateau Remediation Company

PO BOX 1600

Mail Stop R3-50

Richland, Washington 99352

Attn: CPP Sample Management



Authorized for release by:

8/12/2016 12:25:09 PM

Steven Campbell, Project Mgmt. Assistant

steven.campbell@testamericainc.com

Designee for

Whitney Ritari, Project Manager I

(509)375-3131 ext164

whitney.ritari@testamericainc.com

LINKS

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www.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.



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Qualifiers

HPLC/IC

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

General Chemistry

Qualifier	Qualifier Description
U	Analyzed for but not detected.

Glossary

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

August 12, 2016

Case Narrative

Client: CH2M Hill Plateau Remediation Company
Project/Site: S16-007

TestAmerica Job ID: 300-3517-1
SDG: WC1274

Job ID: 300-3517-1

Laboratory: TestAmerica Richland

Narrative

Job Narrative
300-3517-1

Comments

No additional comments.

Receipt

The samples were received on 7/19/2016 3:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.0° C.

HPLC/IC

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

General Chemistry

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

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CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
S16-007-170

Page 1 of 1

Collector	Dan Wooshie CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650			
SAF No.	S16-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071			
Project Title	SURV, JULY 2016	Logbook No.	HNF-N-506 <u>8214</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	SURV	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	Sample Analysis	Holding Time	Preservative
B35RR0	Y	7-19-16	1237	1x60-mL aG	7196_CR6: COMMON	7196_CR6: COMMON	24 Hours	Cool <=6C
B35RP9	N	7-19-16	1237	1x60-mL aG	7196_CR6: COMMON	7196_CR6: COMMON	24 Hours	Cool <=6C

3511
WSCI 2014



300-3517 COC

Relinquished By	Dan Wooshie CHPRC	Print Sign	Date/Time	Received By	Janelle Zunker CHPRC	Print Sign	Date/Time	Matrix *
Relinquished By	Janelle Zunker CHPRC	Print Sign	Date/Time	Received By	Janelle Zunker CHPRC	Print Sign	Date/Time	Matrix *
Relinquished By	Janelle Zunker CHPRC	Print Sign	Date/Time	Received By	Janelle Zunker CHPRC	Print Sign	Date/Time	Matrix *

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time
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CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
S16-007-169
Page 1 of 1

Collector	Dan Woehle CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	S16-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	SURV, JULY 2016	Logbook No.	HNF-N-506 <u>8714</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	SURV	Priority:	30 Days	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS		SPECIAL INSTRUCTIONS		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
*** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1		N/A Special Handling: N/A			

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B36RP6	N	W	7-19-16	1326	1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C
B36RP7	Y	W	7-19-16	1326	1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C

3511
w cyan

Relinquished By	Print Dan Woehle CHPRC	Sign <i>[Signature]</i>	Date/Time JUL 19 2016 1500	Received By	Print Janelle Zunker CHPRC	Sign <i>[Signature]</i>	Date/Time JUL 19 2016 1400	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	Print Janelle Zunker CHPRC	Sign <i>[Signature]</i>	Date/Time JUL 19 2016 1500	Received By	Print J. Bock, TARL	Sign <i>[Signature]</i>	Date/Time JUL 19 2016 1500	
Relinquished By				Received By				

Relinquished By	Date/Time	Received By	Date/Time	Disposed By	Date/Time

CH2M/Hill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #

S16-007-202

Page 1 of 1

Collector Dan Woehle CHPRC	Contact/Requestor Karen Waters-Husted	Telephone No. 509-376-4650
SAF No. S16-007	Sampling Origin Hanford Site	Purchase Order/Charge Code 300071
Project Title SURV, JULY 2016	Logbook No. HNF-N-506 8714	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 SURV	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

Sample No.	Filter	*	Date	Time	No./Type Container	Sample Analysis	Sample Analysis	Holding Time	Preservative
B35T35	Y	W	7-19-16	0844	1x60-mL aG	7196_CRG6: COMMON	7196_CRG6: COMMON	24 Hours	Cool <=6C
B35T33	N	W	7-19-16	0844	1x60-mL aG	7196_CRG6: COMMON	7196_CRG6: COMMON	24 Hours	Cool <=6C

351N
WCI2M4

Relinquished By Dan Woehle CHPRC	Sign <i>[Signature]</i>	Date/Time JUL 19 2016 11:25	Received By Janelle Zunker CHPRC	Sign <i>[Signature]</i>	Date/Time JUL 19 2016 11:25
Relinquished By Janelle Zunker CHPRC	Sign <i>[Signature]</i>	Date/Time JUL 19 2016 1500	Received By <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time JUL 19 2016 1500

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

Relinquished By	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. #
S16-007-188
Page 1 of 1

Collector	Dan Woehle CHPRG	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	S16-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	SURV, JULY 2016	Logbook No.	HNF-N-506 <u>8214</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	SURV	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		
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
B35RY2	N	W	7-19-16	0914	1x60-ml aG	7196_CR6: COMMON	24 Hours	Cool <=6C
B35RY3	Y	W	7-19-16	0914	1x60-ml aG	7196_CR6: COMMON	24 Hours	Cool <=6C

August 12, 2016

35111
WOLFRAY

Relinquished By	Dan Woehle CHPRG	Print <i>Dan Woehle</i>	Sign	Date/Time	1125 JUL 19 2016	Received By	Janelle Zunker CHPRC	Print <i>Janelle Zunker</i>	Sign	Date/Time	1125 JUL 19 2016	Matrix *
Relinquished By	Janelle Zunker CHPRC	Print <i>Janelle Zunker</i>	Sign	Date/Time	1500 JUL 19 2016	Received By	J. Bock JABR	Print <i>J. Bock</i>	Sign	Date/Time	1500 JUL 19 2016	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	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

CH2M/Hill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #

S16-007-174

Page 1 of 1

Collector Dan Woehle CHPRC	SAF No. S16-007	Project Title SURV, JULY 2016	Shipped To (Lab) TestAmerica Incorporated, Richland	Protocol SURV	Contact/Requester Karen Waters-Husted	Sampling Origin Hanford Site	Logbook No. HNF-N-506 <u>8214</u>	Method of Shipment GOVERNMENT VEHICLE	Priority: 30 Days	Telephone No. 509-376-4650	Purchase Order/Charge Code 300071	Ice Chest No. N/A	Bill of Lading/Air Bill No. N/A	Offsite Property No. N/A	Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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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
 N/A
 Special Handling: N/A

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B35RT0	Y	W	7-19-16	1113	1x60-ml aG	7196_CR6: COMMON	24 Hours	Cool <=6C
B35RR8	N	W	7-19-16	1113	1x60-ml aG	7196_CR6: COMMON	24 Hours	Cool <=6C

35119
WELAND

Relinquished By Dan Woehle CHPRC	Print <i>[Signature]</i>	Sign	Date/Time JUL 19 2016 1125	Received By Janelle Zunker CHPRC	Print <i>[Signature]</i>	Sign	Date/Time JUL 19 2016 1125	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 Janelle Zunker CHPRC	Print <i>[Signature]</i>	Sign	Date/Time JUL 19 2016 1500	Received By <i>[Signature]</i>	Print <i>[Signature]</i>	Sign	Date/Time JUL 19 2016 1500	

Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
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. #

S16-007-191

Page 1 of 1

Collector	Dan Woehle CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	S16-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	SURY, JULY 2016	Logbook No.	HNF-N-506 87/4	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	SURY	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	Holding Time	Preservative
B35T01	N	W	7-19-16	0948	1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C
B35T02	Y	W	7-19-16	0948	1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C

351N
WELAND

Relinquished By	Dan Woehle CHPRC	Date/Time	JUL 19 2016 1125	Received By	Janelle Zunker CHPRC	Date/Time	JUL 19 2016 1125
Relinquished By	Janelle Zunker CHPRC	Date/Time	JUL 19 2016 1500	Received By	J. Bock, TARL	Date/Time	JUL 19 2016 1500

1125 Rec. 7/19/16

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

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
S16-007-201
Page 1 of 1

Collector	Dan Woehle CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	S16-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	SURV, JULY 2016	Logbook No.	HNF-N-506 87/4	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	SURV	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		
			Hold Time		
			Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Sample No.	Filter	*	Date	Time	No/Type Container
B35T32	N	W	7/19/16	0844	1x500-mL P
			Sample Analysis		
			300.0 ANIONS_IC: COMMON; 300.0 ANIONS_IC: GW 02		
			Holding Time		
			48 Hours		
			Preservative		
			Cool <=6C		

#3511
Waters

Relinquished By	Dan Woehle CHPRC	Print	Sign	Date/Time	Received By	Janelle Zunker CHPRC	Print	Sign	Date/Time
Relinquished By	Janelle Zunker CHPRC			JUL 19 2016 1125	Received By	J. Bock, TARL			JUL 19 2016 1500
Relinquished By					Received By				
Relinquished By					Received By				

Matrix *

S	= Soil	DS	= Drumm Solids
SE	= Sediment	DL	= Drumm Liquids
SO	= Solid	T	= Tissue
SL	= Sludge	WT	= 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. #

S16-007-291

Page 1 of 1

Collector Will Wise CHPRC	Will Wise CHPRC	Contact/Requester Karen Waters-Husted	Telephone No. 509-376-4650
SAF No. S16-007	S16-007	Sampling Origin Hanford Site	Purchase Order/Charge Code 300071
Project Title SURY, JULY 2016	SURY, JULY 2016	Logbook No. HNF-N-506 <u>827 89</u>	Ice Chest No. N/A
Shipped To (Lab) TestAmerica Incorporated, Richland	TestAmerica Incorporated, Richland	Method of Shipment GOVERNMENT VEHICLE	Bill of Lading/Air Bill No. N/A
Protocol SURY	SURY	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 N/A Special Handling: N/A	
Sample No. B35V18	Filter N	* W	Date 7-19-16
		Time 1113	No./Type Container 1x500-mL P
			Sample Analysis 300.0_ANIONS_JC: COMMON
			Holding Time 48 Hours
			Preservative Cool <=6C
		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

351N
w/ errand

1280

Relinquished By Will Wise CHPRC	Print Will Wise	Sign [Signature]	Date/Time JUL 19 2016	Received By Janelle Zunker CHPRC	Print Janelle Zunker	Sign [Signature]	Date/Time JUL 19 2016	Matrix *
Relinquished By Janelle Zunker CHPRC	Print Janelle Zunker	Sign [Signature]	Date/Time JUL 19 2016 1500	Received By J. Bock, TARI	Print J. Bock, TARI	Sign [Signature]	Date/Time JUL 19 2016 1500	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			Date/Time	Received By			Date/Time	
FINAL SAMPLE DISPOSITION				Disposal Method (e.g., Return to customer, per lab procedure, used in process)				Date/Time

August 12, 2016

CH2M/Hill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #

S16-007-295

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Collector Will Wise CHPRC	Contact/Requester Karen Waters-Husted	Telephone No. 509-376-4650
SAF No. S16-007	Sampling Origin Hanford Site	Purchase Order/Charge Code 300071
Project Title SURV, JULY 2016	Logbook No. HNF-N-506 82/87	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 SURV	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 N/A Special Handling: N/A
Sample No. B35V34	Filter N	* Date 7-19-16
	Time 1221	No./Type Container 1X500-ml P
	Sample Analysis 300.0_ANIONS_IC: COMMON	Holding Time 48 Hours
		Preservative Cool <=6C
Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

3511
w/element

Reinquished By Will Wise CHPRC	Print <i>[Signature]</i>	Sign	Date/Time JUL 19 2016	Received By Janelle Zunker CHPRC	Print <i>[Signature]</i>	Sign	Date/Time JUL 19 2016	Matrix *
Reinquished By Janelle Zunker CHPRC	Print <i>[Signature]</i>	Sign	Date/Time JUL 19 2016 1500	Received By J. Bock, TARB	Print <i>[Signature]</i>	Sign	Date/Time JUL 19 2016 1500	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

P20

1300

Reinquished 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

August 12, 2016

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
S16-007-173
Page 1 of 1

Collector Dan Woehle CHPRC	Contact/Requester Karen Waters-Husted	Telephone No. 509-376-4650
SAP No. S16-007	Sampling Origin Hanford Site	Purchase Order/Charge Code 300071
Project Title SURY, JULY 2016	Logbook No. HNF-N-506 <u>871</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 SURY	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		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Sample No. B35RR7	Filter N	* Date W 7.19.16
		Time 1113
	No./Type Container 1x500-mL P	Sample Analysis 300_0_ANIONS_IC: COMMON
		Holding Time 48 Hours
		Preservative Cool <=6C

3514
weirah

Relinquished By Dan Woehle CHPRC	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time JUL 19 2016 1123	Received By Janelle Zunker CHPRC	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time JUL 19 2016 1123	Matrix *
Relinquished By Janelle Zunker CHPRC	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time JUL 19 2016 1500	Received By J. Bock, TARL	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time JUL 19 2016 1500	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	Date/Time	Received By	Date/Time
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

August 12, 2016 Detection Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: S16-007

TestAmerica Job ID: 300-3517-1
SDG: WC1274

Client Sample ID: B35RR0

Lab Sample ID: 300-3517-1

No Detections.

Client Sample ID: B35RP9

Lab Sample ID: 300-3517-2

No Detections.

Client Sample ID: B35RP6

Lab Sample ID: 300-3517-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.062		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B35RP7

Lab Sample ID: 300-3517-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.062		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B35T35

Lab Sample ID: 300-3517-5

No Detections.

Client Sample ID: B35T33

Lab Sample ID: 300-3517-6

No Detections.

Client Sample ID: B35RY2

Lab Sample ID: 300-3517-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.047		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B35RY3

Lab Sample ID: 300-3517-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.046		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B35RT0

Lab Sample ID: 300-3517-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.011		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B35RR8

Lab Sample ID: 300-3517-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.0099		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B35T01

Lab Sample ID: 300-3517-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.0098		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B35T02

Lab Sample ID: 300-3517-12

This Detection Summary does not include radiochemical test results.

TestAmerica Richland

August 12, 2016 Detection Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: S16-007

TestAmerica Job ID: 300-3517-1
SDG: WC1274

Client Sample ID: B35T02 (Continued)

Lab Sample ID: 300-3517-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.0098		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B35T32

Lab Sample ID: 300-3517-13

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	0.52	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.15	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	18	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B35V18

Lab Sample ID: 300-3517-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	73	D	10	5.0	mg/L	50		300.0	Total/NA
Nitrate as N	18	D	1.4	0.70	mg/L	50		300.0	Total/NA
Fluoride	0.28	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	240	D	13	6.3	mg/L	50		300.0	Total/NA

Client Sample ID: B35V34

Lab Sample ID: 300-3517-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	30	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	11	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.18	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	70	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B35RR7

Lab Sample ID: 300-3517-16

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	2.7	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	41	D	0.50	0.25	mg/L	2		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Richland

August 12, 2016

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
 Project/Site: S16-007

TestAmerica Job ID: 300-3517-1
 SDG: WC1274

Client Sample ID: B35RR0

Lab Sample ID: 300-3517-1

Date Collected: 07/19/16 12:37

Matrix: Water

Date Received: 07/19/16 15:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0015	U	0.0040	0.0015	mg/L			07/19/16 17:17	1

Client Sample ID: B35RP9

Lab Sample ID: 300-3517-2

Date Collected: 07/19/16 12:37

Matrix: Water

Date Received: 07/19/16 15:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0015	U	0.0040	0.0015	mg/L			07/19/16 17:18	1

Client Sample ID: B35RP6

Lab Sample ID: 300-3517-3

Date Collected: 07/19/16 13:26

Matrix: Water

Date Received: 07/19/16 15:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.062		0.0040	0.0015	mg/L			07/19/16 17:18	1

Client Sample ID: B35RP7

Lab Sample ID: 300-3517-4

Date Collected: 07/19/16 13:26

Matrix: Water

Date Received: 07/19/16 15:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.062		0.0040	0.0015	mg/L			07/19/16 17:18	1

Client Sample ID: B35T35

Lab Sample ID: 300-3517-5

Date Collected: 07/19/16 08:44

Matrix: Water

Date Received: 07/19/16 15:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0015	U	0.0040	0.0015	mg/L			07/19/16 17:19	1

Client Sample ID: B35T33

Lab Sample ID: 300-3517-6

Date Collected: 07/19/16 08:44

Matrix: Water

Date Received: 07/19/16 15:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0015	U	0.0040	0.0015	mg/L			07/19/16 17:19	1

Client Sample ID: B35RY2

Lab Sample ID: 300-3517-7

Date Collected: 07/19/16 09:14

Matrix: Water

Date Received: 07/19/16 15:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.047		0.0040	0.0015	mg/L			07/19/16 17:22	1

TestAmerica Richland

August 12, 2016

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: S16-007

TestAmerica Job ID: 300-3517-1
SDG: WC1274

Client Sample ID: B35RY3

Lab Sample ID: 300-3517-8

Date Collected: 07/19/16 09:14

Matrix: Water

Date Received: 07/19/16 15:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.046		0.0040	0.0015	mg/L			07/19/16 17:22	1

Client Sample ID: B35RT0

Lab Sample ID: 300-3517-9

Date Collected: 07/19/16 11:13

Matrix: Water

Date Received: 07/19/16 15:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.011		0.0040	0.0015	mg/L			07/19/16 17:23	1

Client Sample ID: B35RR8

Lab Sample ID: 300-3517-10

Date Collected: 07/19/16 11:13

Matrix: Water

Date Received: 07/19/16 15:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0099		0.0040	0.0015	mg/L			07/19/16 17:23	1

Client Sample ID: B35T01

Lab Sample ID: 300-3517-11

Date Collected: 07/19/16 09:48

Matrix: Water

Date Received: 07/19/16 15:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0098		0.0040	0.0015	mg/L			07/19/16 17:23	1

Client Sample ID: B35T02

Lab Sample ID: 300-3517-12

Date Collected: 07/19/16 09:48

Matrix: Water

Date Received: 07/19/16 15:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0098		0.0040	0.0015	mg/L			07/19/16 17:24	1

Client Sample ID: B35T32

Lab Sample ID: 300-3517-13

Date Collected: 07/19/16 08:44

Matrix: Water

Date Received: 07/19/16 15:00

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			07/19/16 17:26	2
Nitrate as N	0.52	D	0.056	0.028	mg/L			07/19/16 17:26	2
Fluoride	0.15	D	0.10	0.050	mg/L			07/19/16 17:26	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			07/19/16 17:26	2
Orthophosphate as P	0.082	U D	0.16	0.082	mg/L			07/19/16 17:26	2
Sulfate	18	D	0.50	0.25	mg/L			07/19/16 17:26	2
Bromide	0.13	U D	0.25	0.13	mg/L			07/19/16 17:26	2

TestAmerica Richland

August 12, 2016

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: S16-007

TestAmerica Job ID: 300-3517-1
SDG: WC1274

Client Sample ID: B35V18

Lab Sample ID: 300-3517-14

Date Collected: 07/19/16 11:13

Matrix: Water

Date Received: 07/19/16 15:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	73	D	10	5.0	mg/L			07/19/16 20:12	50
Nitrate as N	18	D	1.4	0.70	mg/L			07/19/16 20:12	50
Fluoride	0.28	D	0.10	0.050	mg/L			07/19/16 18:11	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			07/19/16 18:11	2
Sulfate	240	D	13	6.3	mg/L			07/19/16 20:12	50

Client Sample ID: B35V34

Lab Sample ID: 300-3517-15

Date Collected: 07/19/16 12:21

Matrix: Water

Date Received: 07/19/16 15:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	30	D	0.40	0.20	mg/L			07/19/16 18:27	2
Nitrate as N	11	D	0.056	0.028	mg/L			07/19/16 18:27	2
Fluoride	0.18	D	0.10	0.050	mg/L			07/19/16 18:27	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			07/19/16 18:27	2
Sulfate	70	D	0.50	0.25	mg/L			07/19/16 18:27	2

Client Sample ID: B35RR7

Lab Sample ID: 300-3517-16

Date Collected: 07/19/16 11:13

Matrix: Water

Date Received: 07/19/16 15:00

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			07/19/16 18:42	2
Nitrate as N	2.7	D	0.056	0.028	mg/L			07/19/16 18:42	2
Fluoride	0.22	D	0.10	0.050	mg/L			07/19/16 18:42	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			07/19/16 18:42	2
Sulfate	41	D	0.50	0.25	mg/L			07/19/16 18:42	2

August 12, 2016

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: S16-007

TestAmerica Job ID: 300-3517-1
SDG: WC1274

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 300-4946/5
Matrix: Water
Analysis Batch: 4946

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			07/19/16 16:56	1
Nitrite as N	0.019	U	0.038	0.019	mg/L			07/19/16 16:56	1
Orthophosphate as P	0.041	U	0.082	0.041	mg/L			07/19/16 16:56	1

Lab Sample ID: LCS 300-4946/6
Matrix: Water
Analysis Batch: 4946

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	2.25		mg/L		100	80 - 120
Nitrite as N	3.04	3.06		mg/L		100	80 - 120
Orthophosphate as P	6.53	6.43		mg/L		98	80 - 120

Lab Sample ID: 300-3517-13 MS
Matrix: Water
Analysis Batch: 4946

Client Sample ID: B35T32
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.52	D	0.452	0.953	D	mg/L		95	75 - 125
Nitrite as N	0.038	U D	0.609	0.530	D	mg/L		87	75 - 125
Orthophosphate as P	0.082	U D	1.31	1.09	D	mg/L		84	75 - 125

Lab Sample ID: 300-3517-13 DU
Matrix: Water
Analysis Batch: 4946

Client Sample ID: B35T32
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate as N	0.52	D	0.524	D	mg/L		0.2	20
Nitrite as N	0.038	U D	0.038	U D	mg/L		NC	20
Orthophosphate as P	0.082	U D	0.082	U D	mg/L		NC	20

Lab Sample ID: MB 300-4947/5
Matrix: Water
Analysis Batch: 4947

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			07/19/16 16:56	1
Fluoride	0.025	U	0.050	0.025	mg/L			07/19/16 16:56	1
Sulfate	0.13	U	0.25	0.13	mg/L			07/19/16 16:56	1
Bromide	0.063	U	0.13	0.063	mg/L			07/19/16 16:56	1

Lab Sample ID: LCS 300-4947/6
Matrix: Water
Analysis Batch: 4947

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	16.0	15.7		mg/L		98	80 - 120
Fluoride	4.00	3.93		mg/L		98	80 - 120
Sulfate	20.0	19.8		mg/L		99	80 - 120

TestAmerica Richland

August 12, 2016

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
 Project/Site: S16-007

TestAmerica Job ID: 300-3517-1
 SDG: WC1274

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 300-4947/6
 Matrix: Water
 Analysis Batch: 4947

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	10.0	9.95		mg/L		100	80 - 120

Lab Sample ID: 300-3517-13 MS
 Matrix: Water
 Analysis Batch: 4947

Client Sample ID: B35T32
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1.5	D	3.20	4.52	D	mg/L		94	75 - 125
Fluoride	0.15	D	0.800	0.853	D	mg/L		88	75 - 125
Sulfate	18	D	4.00	21.5	D	mg/L		94	75 - 125
Bromide	0.13	U D	2.00	1.75	D	mg/L		88	75 - 125

Lab Sample ID: 300-3517-13 DU
 Matrix: Water
 Analysis Batch: 4947

Client Sample ID: B35T32
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Chloride	1.5	D	1.49	D	mg/L		0.06	20
Fluoride	0.15	D	0.150	D	mg/L		0.2	20
Sulfate	18	D	17.8	D	mg/L		0.3	20
Bromide	0.13	U D	0.13	U D	mg/L		NC	20

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 300-5011/3
 Matrix: Water
 Analysis Batch: 5011

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0015	U	0.0040	0.0015	mg/L			07/19/16 17:14	1

Lab Sample ID: LCS 300-5011/4
 Matrix: Water
 Analysis Batch: 5011

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.250	0.255		mg/L		102	80 - 120

Lab Sample ID: 300-3517-1 MS
 Matrix: Water
 Analysis Batch: 5011

Client Sample ID: B35RR0
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.0015	U	0.0500	0.0526		mg/L		105	75 - 125

TestAmerica Richland

August 12, 2016

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
 Project/Site: S16-007

TestAmerica Job ID: 300-3517-1
 SDG: WC1274

Method: 7196A - Chromium, Hexavalent (Continued)

Lab Sample ID: 300-3517-1 DU
 Matrix: Water
 Analysis Batch: 5011

Client Sample ID: B35RR0
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cr (VI)	0.0015	U	0.0015	U	mg/L	--	NC	20

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

August 12, 2016

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
 Project/Site: S16-007

TestAmerica Job ID: 300-3517-1
 SDG: WC1274

HPLC/IC

Analysis Batch: 4946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-3517-13	B35T32	Total/NA	Water	300.0	
300-3517-14	B35V18	Total/NA	Water	300.0	
300-3517-14	B35V18	Total/NA	Water	300.0	
300-3517-15	B35V34	Total/NA	Water	300.0	
300-3517-16	B35RR7	Total/NA	Water	300.0	
MB 300-4946/5	Method Blank	Total/NA	Water	300.0	
LCS 300-4946/6	Lab Control Sample	Total/NA	Water	300.0	
300-3517-13 MS	B35T32	Total/NA	Water	300.0	
300-3517-13 DU	B35T32	Total/NA	Water	300.0	

Analysis Batch: 4947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-3517-13	B35T32	Total/NA	Water	300.0	
300-3517-14	B35V18	Total/NA	Water	300.0	
300-3517-14	B35V18	Total/NA	Water	300.0	
300-3517-15	B35V34	Total/NA	Water	300.0	
300-3517-16	B35RR7	Total/NA	Water	300.0	
MB 300-4947/5	Method Blank	Total/NA	Water	300.0	
LCS 300-4947/6	Lab Control Sample	Total/NA	Water	300.0	
300-3517-13 MS	B35T32	Total/NA	Water	300.0	
300-3517-13 DU	B35T32	Total/NA	Water	300.0	

General Chemistry

Analysis Batch: 5011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-3517-1	B35RR0	Total/NA	Water	7196A	
300-3517-2	B35RP9	Total/NA	Water	7196A	
300-3517-3	B35RP6	Total/NA	Water	7196A	
300-3517-4	B35RP7	Total/NA	Water	7196A	
300-3517-5	B35T35	Total/NA	Water	7196A	
300-3517-6	B35T33	Total/NA	Water	7196A	
300-3517-7	B35RY2	Total/NA	Water	7196A	
300-3517-8	B35RY3	Total/NA	Water	7196A	
300-3517-9	B35RT0	Total/NA	Water	7196A	
300-3517-10	B35RR8	Total/NA	Water	7196A	
300-3517-11	B35T01	Total/NA	Water	7196A	
300-3517-12	B35T02	Total/NA	Water	7196A	
MB 300-5011/3	Method Blank	Total/NA	Water	7196A	
LCS 300-5011/4	Lab Control Sample	Total/NA	Water	7196A	
300-3517-1 MS	B35RR0	Total/NA	Water	7196A	
300-3517-1 DU	B35RR0	Total/NA	Water	7196A	

August 12, 2016 Lab Chronicle

Client: CH2M Hill Plateau Remediation Company
Project/Site: S16-007

TestAmerica Job ID: 300-3517-1
SDG: WC1274

Client Sample ID: B35RR0
Date Collected: 07/19/16 12:37
Date Received: 07/19/16 15:00

Lab Sample ID: 300-3517-1
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	7196A		1			5011	07/19/16 17:17	RLC	TAL RCH

Client Sample ID: B35RP9
Date Collected: 07/19/16 12:37
Date Received: 07/19/16 15:00

Lab Sample ID: 300-3517-2
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	7196A		1			5011	07/19/16 17:18	RLC	TAL RCH

Client Sample ID: B35RP6
Date Collected: 07/19/16 13:26
Date Received: 07/19/16 15:00

Lab Sample ID: 300-3517-3
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	7196A		1			5011	07/19/16 17:18	RLC	TAL RCH

Client Sample ID: B35RP7
Date Collected: 07/19/16 13:26
Date Received: 07/19/16 15:00

Lab Sample ID: 300-3517-4
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	7196A		1			5011	07/19/16 17:18	RLC	TAL RCH

Client Sample ID: B35T35
Date Collected: 07/19/16 08:44
Date Received: 07/19/16 15:00

Lab Sample ID: 300-3517-5
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	7196A		1			5011	07/19/16 17:19	RLC	TAL RCH

Client Sample ID: B35T33
Date Collected: 07/19/16 08:44
Date Received: 07/19/16 15:00

Lab Sample ID: 300-3517-6
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	7196A		1			5011	07/19/16 17:19	RLC	TAL RCH

August 12, 2016 Lab Chronicle

Client: CH2M Hill Plateau Remediation Company
Project/Site: S16-007

TestAmerica Job ID: 300-3517-1
SDG: WC1274

Client Sample ID: B35RY2

Date Collected: 07/19/16 09:14

Date Received: 07/19/16 15:00

Lab Sample ID: 300-3517-7

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	7196A		1			5011	07/19/16 17:22	RLC	TAL RCH

Client Sample ID: B35RY3

Date Collected: 07/19/16 09:14

Date Received: 07/19/16 15:00

Lab Sample ID: 300-3517-8

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	7196A		1			5011	07/19/16 17:22	RLC	TAL RCH

Client Sample ID: B35RT0

Date Collected: 07/19/16 11:13

Date Received: 07/19/16 15:00

Lab Sample ID: 300-3517-9

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	7196A		1			5011	07/19/16 17:23	RLC	TAL RCH

Client Sample ID: B35RR8

Date Collected: 07/19/16 11:13

Date Received: 07/19/16 15:00

Lab Sample ID: 300-3517-10

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	7196A		1			5011	07/19/16 17:23	RLC	TAL RCH

Client Sample ID: B35T01

Date Collected: 07/19/16 09:48

Date Received: 07/19/16 15:00

Lab Sample ID: 300-3517-11

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	7196A		1			5011	07/19/16 17:23	RLC	TAL RCH

Client Sample ID: B35T02

Date Collected: 07/19/16 09:48

Date Received: 07/19/16 15:00

Lab Sample ID: 300-3517-12

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	7196A		1			5011	07/19/16 17:24	RLC	TAL RCH

August 12, 2016 Lab Chronicle

Client: CH2M Hill Plateau Remediation Company
Project/Site: S16-007

TestAmerica Job ID: 300-3517-1
SDG: WC1274

Client Sample ID: B35T32

Lab Sample ID: 300-3517-13

Date Collected: 07/19/16 08:44

Matrix: Water

Date Received: 07/19/16 15:00

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			4946	07/19/16 17:26	RLC	TAL RCH
Total/NA	Analysis	300.0		2			4947	07/19/16 17:26	RLC	TAL RCH

Client Sample ID: B35V18

Lab Sample ID: 300-3517-14

Date Collected: 07/19/16 11:13

Matrix: Water

Date Received: 07/19/16 15:00

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			4946	07/19/16 18:11	RLC	TAL RCH
Total/NA	Analysis	300.0		2			4947	07/19/16 18:11	RLC	TAL RCH
Total/NA	Analysis	300.0		50			4946	07/19/16 20:12	RLC	TAL RCH
Total/NA	Analysis	300.0		50			4947	07/19/16 20:12	RLC	TAL RCH

Client Sample ID: B35V34

Lab Sample ID: 300-3517-15

Date Collected: 07/19/16 12:21

Matrix: Water

Date Received: 07/19/16 15:00

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			4946	07/19/16 18:27	RLC	TAL RCH
Total/NA	Analysis	300.0		2			4947	07/19/16 18:27	RLC	TAL RCH

Client Sample ID: B35RR7

Lab Sample ID: 300-3517-16

Date Collected: 07/19/16 11:13

Matrix: Water

Date Received: 07/19/16 15:00

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			4946	07/19/16 18:42	RLC	TAL RCH
Total/NA	Analysis	300.0		2			4947	07/19/16 18:42	RLC	TAL RCH

Client Sample ID: Method Blank

Lab Sample ID: MB 300-4946/5

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			4946	07/19/16 16:56	RLC	TAL RCH

August 12, 2016 Lab Chronicle

Client: CH2M Hill Plateau Remediation Company
Project/Site: S16-007

TestAmerica Job ID: 300-3517-1
SDG: WC1274

Client Sample ID: Method Blank

Lab Sample ID: MB 300-4947/5

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			4947	07/19/16 16:56	RLC	TAL RCH

Client Sample ID: Method Blank

Lab Sample ID: MB 300-5011/3

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	7196A		1			5011	07/19/16 17:14	RLC	TAL RCH

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-4946/6

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			4946	07/19/16 17:11	RLC	TAL RCH

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-4947/6

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			4947	07/19/16 17:11	RLC	TAL RCH

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-5011/4

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	7196A		1			5011	07/19/16 17:14	RLC	TAL RCH

Client Sample ID: B35RR0

Lab Sample ID: 300-3517-1 MS

Date Collected: 07/19/16 12:37

Matrix: Water

Date Received: 07/19/16 15:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1			5011	07/19/16 17:14	RLC	TAL RCH

August 12, 2016 Lab Chronicle

Client: CH2M Hill Plateau Remediation Company
Project/Site: S16-007

TestAmerica Job ID: 300-3517-1
SDG: WC1274

Client Sample ID: B35T32

Lab Sample ID: 300-3517-13 MS

Date Collected: 07/19/16 08:44

Matrix: Water

Date Received: 07/19/16 15:00

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			4946	07/19/16 17:41	RLC	TAL RCH
Total/NA	Analysis	300.0		2			4947	07/19/16 17:41	RLC	TAL RCH

Laboratory References:

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

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August 12, 2016

Method Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: S16-007

TestAmerica Job ID: 300-3517-1
SDG: WC1274

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL RCH
7196A	Chromium, Hexavalent	SW846	TAL RCH

Protocol References:

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

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

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

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August 12, 2016

Sample Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: S16-007

TestAmerica Job ID: 300-3517-1
SDG: WC1274

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-3517-1	B35RR0	Water	07/19/16 12:37	07/19/16 15:00
300-3517-2	B35RP9	Water	07/19/16 12:37	07/19/16 15:00
300-3517-3	B35RP6	Water	07/19/16 13:26	07/19/16 15:00
300-3517-4	B35RP7	Water	07/19/16 13:26	07/19/16 15:00
300-3517-5	B35T35	Water	07/19/16 08:44	07/19/16 15:00
300-3517-6	B35T33	Water	07/19/16 08:44	07/19/16 15:00
300-3517-7	B35RY2	Water	07/19/16 09:14	07/19/16 15:00
300-3517-8	B35RY3	Water	07/19/16 09:14	07/19/16 15:00
300-3517-9	B35RT0	Water	07/19/16 11:13	07/19/16 15:00
300-3517-10	B35RR8	Water	07/19/16 11:13	07/19/16 15:00
300-3517-11	B35T01	Water	07/19/16 09:48	07/19/16 15:00
300-3517-12	B35T02	Water	07/19/16 09:48	07/19/16 15:00
300-3517-13	B35T32	Water	07/19/16 08:44	07/19/16 15:00
300-3517-14	B35V18	Water	07/19/16 11:13	07/19/16 15:00
300-3517-15	B35V34	Water	07/19/16 12:21	07/19/16 15:00
300-3517-16	B35RR7	Water	07/19/16 11:13	07/19/16 15:00

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 300-3517-1

SDG Number: WC1274

Login Number: 3517

List Number: 1

Creator: Bock, Julie A

List Source: TestAmerica Richland

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

