

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: 300-3436-1

TestAmerica Sample Delivery Group: WC1242

Client Project/Site: X16-043

Revision: 1

For:

CH2M Hill Plateau Remediation Company

PO BOX 1600

Mail Stop R3-50

Richland, Washington 99352

Attn: CPP Sample Management



Authorized for release by:

8/8/2016 10:57:46 AM

Steven Campbell, Project Mgmt. 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 less than five times the MDL.



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Definitions/Glossary

Client: CH2M Hill Plateau Remediation Company
Project/Site: X16-043

TestAmerica Job ID: 300-3436-1
SDG: WC1242

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
D	The reported value is from a dilution.
U	Analyzed for but not detected.
B	Estimated result. Result is less than the RL, but greater than MDL

General Chemistry

Qualifier	Qualifier Description
B	Estimated result. Result is less than the RL, but greater than MDL
U	Analyzed for but not detected.

Glossary

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

Case Narrative

Client: CH2M Hill Plateau Remediation Company
Project/Site: X16-043

TestAmerica Job ID: 300-3436-1
SDG: WC1242

Job ID: 300-3436-1

Laboratory: TestAmerica Richland

Narrative

Job Narrative 300-3436-1

Comments

This report has been revised because samples B35YX4, B35YX3, and B35YX2 were logged in as B36YX4, B36YX3, and B36YX2, respectively. Sample IDs have been corrected.

Receipt

The samples were received on 7/8/2016 3:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 8.9° 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.



CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X16-043-046 Page 1 of 1

Collector Chris Fulton CH2MRC	Contact/Requester WATERS-HUSTED, K	Telephone No. 376-4650
SAF No. X16-043	Sampling Origin Hanford Site	Purchase Order/Charge Code 304027
Project Title 100-KW Rebound Study, June 27, 2016	Logbook No. HNF-N-506 55 / 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 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/ATA 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	Sample Analysis	Holding Time	Preservative
B360J7	N	W JUL 08 2016	1009	1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C
B360J6	Y	W JUL 08 2016	1009	1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C

A 34336
WCI1212



300-3436 COC

Relinquished By Chris Fulton CH2MRC	Print Sign	Date/Time JUL 08 2016 1048	Received By Leah Hill CH2MRC	Print Sign	Date/Time JUL 08 2016 1048
Relinquished By Leah Hill CH2MRC	Print Sign	Date/Time JUL 08 2016 1510	Received By J. Bock TARL	Print Sign	Date/Time JUL 08 2016 1510
Relinquished By	Date/Time	Received By	Date/Time	Received By	Date/Time

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

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. # X16-043-006 Page 1 of 1

Collector	Chris Fujton CHPRC	Contact/Requester	WATERS-HUSTED, K	Telephone No.	376-4650
SAF No.	X16-043	Sampling Origin	Hanford Site	Purchase Order/Charge Code	304027
Project Title	100-KW Rebound Study, June 27, 2016	Logbook No.	HNF-N-506 857 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	CERCLA	Priority:	30 Days	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS			SPECIAL INSTRUCTIONS		
*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CER/LATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.			Hold Time		
			Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Sample No.	Filter	*	Date	Time	No./Type Container	Sample Analysis	Holding Time	Preservative
B36098	Y	W	JUL 28 2016	0904	1x60-ml aG	7196_CR6: COMMON	24 Hours	Cool <=6C
B36099	N	W	JUL 28 2016	0904	1x60-ml aG	7196_CR6: COMMON	24 Hours	Cool <=6C

3436
wciava

Relinquished By	Chris Fujton CHPRC	Print	Sign	Date/Time	10/18	Received By	Print	Sign	Date/Time	10/18
Relinquished By	<i>[Signature]</i>	Chris Fujton CHPRC	<i>[Signature]</i>	JUL 08 2016	15:0	Received By	J. Bock, TARL	<i>[Signature]</i>	JUL 08 2016	15:0
Relinquished By	<i>[Signature]</i>	Chris Fujton CHPRC	<i>[Signature]</i>	JUL 08 2016	15:0	Received By	<i>[Signature]</i>	<i>[Signature]</i>	JUL 08 2016	15:0

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

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

CH2M/Hill Plateau Remediation Company

C.O.C. # X16-043-007
Page 1 of 1

Collector <i>Chris Fulton CHPRC</i>	Contact/Requester WATERS-HUSTED, K	Telephone No. 376-4650
SAF No. X16-043	Sampling Origin Hanford Site	Purchase Order/Charge Code 304027
Project Title 100-KW Rebound Study, June 27, 2016	Logbook No. HNF-N-506 857 27	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 be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.		SPECIAL INSTRUCTIONS PRIORITY
Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Hold Time

Sample No.	Filter	*Date <i>Sul - 08/08/2016</i>	Time	No./Type Container	Sample Analysis	Holding Time	Preservative
B360B0	Y	<i>W</i>	<i>0728</i>	1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C
B360B1	N	<i>W</i>	<i>0720</i>	1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C

*3434
US 21342*

Relinquished By <i>Chris Fulton CHPRC</i>	Print <i>Chris Fulton</i>	Sign <i>[Signature]</i>	Date/Time <i>JUL 08 2016 1048</i>	Received By <i>Lesly West CHPRC</i>	Print <i>Lesly West</i>	Sign <i>[Signature]</i>	Date/Time <i>JUL 08 2016 1048</i>
Relinquished By <i>Lesly West CHPRC</i>	Print <i>Lesly West</i>	Sign <i>[Signature]</i>	Date/Time <i>JUL 08 2016 1510</i>	Received By <i>J. Bock, TARL</i>	Print <i>J. Bock, TARL</i>	Sign <i>[Signature]</i>	Date/Time <i>JUL 08 2016 1510</i>
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time
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CH2M/Hill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.# X16-043-004

Page 1 of 1

Collector	Chris Fulton CHPRC	Contact/Requester	WATERS-HUSTED, K	Telephone No.	376-4650
SAF No.	X16-043	Sampling Origin	Hanford Site	Purchase Order/Charge Code	304027
Project Title	100-KW Rebound Study, June 27, 2016	Logbook No.	HNF-N-506 85/87	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	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/ATA Dangerous Goods Regulations but are not releasable per DOE Order 438.1.			Hold Time		
			Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B35YX4	N	JUL 08 2016	1849	1x60-ml aG	7196_CR6: COMMON	24 Hours	Cool <=6C
B35YX3	Y	JUL 08 2016	1849	1x60-ml aG	7196_CR6: COMMON	24 Hours	Cool <=6C

3434
wclara

Relinquished By	Chris Fulton CHPRC	Print	Sign	Date/Time	Received By	Chris Fulton CHPRC	Print	Sign	Date/Time
Relinquished By	Lesly West CHPRC	Print	Sign	JUL 08 2016 1300	Received By	Lesly West CHPRC	Print	Sign	JUL 08 2016 1300
Relinquished By	Lesly West CHPRC	Print	Sign	JUL 08 2016 1510	Received By	J. Bock, TARL	Print	Sign	JUL 08 2016 1510
Relinquished By		Date/Time			Received By		Date/Time		

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

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. #

X16-043-030

Page 1 of 1

Collector	Chris Fulton CHPRC	Contact/Requester	WATERS-HUSTED, K	Telephone No.	376-4650
SAP No.	X16-043	Sampling Origin	Hanford Site	Purchase Order/Charge Code	304027
Project Title	100-KW Rebound Study, June 27, 2016	Logbook No.	HNF-N-506 857 / 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	CERCLA	Priority:	30 Days	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS			SPECIAL INSTRUCTIONS	Hold Time	Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CER/LATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.					

Sample No.	Filter	* Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B360F2	N	W JUL 08 2016	1130	1x60-ml aG	7196_CR6: COMMON	24 Hours	Cool <=6C
B360F1	Y	W JUL 08 2016	1130	1x60-ml aG	7196_CR6: COMMON	24 Hours	Cool <=6C

3432
WATER

Relinquished By	Chris Fulton CHPRC	Print Sign	Date/Time	JUL 08 2016 1300	Received By	Lesly West CHPRC	Print Sign	Date/Time	JUL 08 2016 1300
Relinquished By	Lesly West	Print Sign	Date/Time	JUL 08 2016 1510	Received By	J. Beck, TABL	Print Sign	Date/Time	JUL 08 2016 1510
Relinquished By		Date/Time			Received By		Date/Time		

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

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

CH2M Hill Plateau Remediation Company

C.O.C. #
X16-043-011
Page 1 of 1

Collector Chris Fulton CHPRC	Contact/Requester WATERS-HUSTED, K	Telephone No. 376-4650
SAF No. X16-043	Sampling Origin Hanford Site	Purchase Order/Charge Code 304027
Project Title 100-KW Rebound Study, June 27, 2016	Logbook No. HNF-N-506 857 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 CERCLA	Priority: 30 Days	Offsite Property No. N/A
POSSIBLE SAMPLE HAZARDS/REMARKS		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
*Contains Radioactive Material at concentrations that are not be 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	Holding Time	Preservative
B360B7	N	JUL 08 2016	1212	1x60-ml aG	7196_CR6: COMMON	24 Hours	Cool <=6C
B360B6	Y	JUL 08 2016	1212	1x60-ml aG	7196_CR6: COMMON	24 Hours	Cool <=6C

3434
W&E 1212

Relinquished By Chris Fulton CHPRC	Print <i>[Signature]</i>	Sign	Date/Time JUL 08 2016 1300	Received By Chris Fulton CHPRC	Print <i>[Signature]</i>	Sign	Date/Time JUL 08 2016 1300	Matrix *
Relinquished By Leah York CHPRC	Print <i>[Signature]</i>	Sign	Date/Time JUL 08 2016 1510	Received By Leah York CHPRC	Print <i>[Signature]</i>	Sign	Date/Time JUL 08 2016 1510	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	Disposed 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. #
X16-043-045
Page 1 of 1

Collector Chris Fulton CHPRC	Contact/Requester WATERS-HUSTED, K	Telephone No. 376-4650
SAF No. X16-043	Sampling Origin Hanford Site	Purchase Order/Charge Code 304027
Project Title 100-KW Rebound Study, June 27, 2016	Logbook No. HNF-N-506 <u>§5/§7</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 *Contains Radioactive Material at concentrations that are not be 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. B360J5	Filter N	Date W JUL 08 2016
	* W	Time 1009
	No./Type Container 1x500-ml P	Sample Analysis 300.0 ANIONS_IC: COMMON
	Holding Time 48 Hours	Preservative Cool <=6C

3434
wslrara

Relinquished By Chris Fulton CHPRC	Sign 	Date/Time JUL 08 2016 1048	Received By Lesly West CHPRC	Print 	Date/Time JUL 08 2016 1048	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 Lesly West CHPRC	Sign 	Date/Time JUL 08 2016 1510	Received By Lesly West CHPRC	Print 	Date/Time JUL 08 2016 1510	
Relinquished By	Sign	Date/Time	Received By	Print	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.# X16-043-003
Page 1 of 1

Collector	Chris Fulton CHPRC	Contact/Requester	WATERS-HUSTED, K	Telephone No.	376-4650
SAF No.	X16-043	Sampling Origin	Hanford Site	Purchase Order/Charge Code	304027
Project Title	100-KW Rebound Study, June 27, 2016	Logbook No.	HNF-N-506 857 / 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	CERCLA	Priority:	30 Days	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS			SPECIAL INSTRUCTIONS		
*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/ATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.			Hold Time		
			Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis
B35YX2	N	W JUL 08 2016	10:49	1x500-ml P	300.0_ANIONS_IC: COMMON
					Holding Time
					48 Hours
					Preservative
					Cool <=6C

3434
use 1242

Reinquished By	Chris Fulton CHPRC	Sign		Date/Time	JUL 08 2016 13:00	Received By	Lesly West KCHPRC	Print		Date/Time	JUL 08 2016 13:00	Matrix *	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air	DS = Drum Solids DL = Drum Liquids T = Tissue WT = Wipe L = Liquid V = Vegetation X = Other
Reinquished By	Lesly West KCHPRC	Sign		Date/Time	JUL 08 2016 15:10	Received By	J. Bock, TARL	Print		Date/Time	JUL 08 2016 15:10			
Reinquished By		Sign		Date/Time		Received By		Print		Date/Time				
FINAL SAMPLE DISPOSITION													Disposed By	
Disposal Method (e.g., Return to customer, per lab procedure, used in process)													Date/Time	

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
X16-043-029
Page 1 of 1

Collector Chris Fulton CHPRC	Contact/Requester WATERS-HUSTED, K	Telephone No. 376-4650
SAF No. X16-043	Sampling Origin Hanford Site	Purchase Order/Charge Code 304027
Project Title 100-KW Rebound Study, June 27, 2016	Logbook No. HNF-N-506 85 / 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 CERCLA	Priority: 30 Days	Offsite Property No. N/A
POSSIBLE SAMPLE HAZARDS/REMARKS *Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/171A 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. B360F0	Filter N	* Date JUL 08 2016
	Date JUL 08 2016	Time 11:30
	No/Type Container 1x500-ml P	Sample Analysis 300.0_ANIONS_IC: COMMON
	Holding Time 48 Hours	Preservative Cool <=6C

3434
W CLARA

Relinquished By Chris Fulton CHPRC	Print 	Sign 	Date/Time JUL 08 2016 13:00	Received By Lesly West ACPRC	Print 	Sign 	Date/Time JUL 08 2016 13:00	Matrix *
Relinquished By Lesly West ACPRC			Date/Time JUL 08 2016 15:10	Received By Bock			Date/Time JUL 08 2016 15:10	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

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X16-043-012
Page 1 of 1

Collector	Chris Fulton CHPRC	Contact/Requester	WATERS-HUSTED, K	Telephone No.	376-4650
SAF No.	X16-043	Sampling Origin	Hanford Site	Purchase Order/Charge Code	304027
Project Title	100-KW Rebound Study, June 27, 2016	Logbook No.	HNF-N-50685 / 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	CERCLA	Priority:	30 Days	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS			SPECIAL INSTRUCTIONS		
*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/ATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.			Hold Time		
Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis
B360B5	N	JUL 08 2016	12:12	1x500-mL P	300.0_ANIONS_IC: COMMON
					Holding Time
					48 Hours
					Preservative
					Cool <=6C
			Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		

3436
wcl242

Relinquished By	Chris Fulton CHPRC	Print	Sign	Date/Time	1300	Received By	Lesly Weal CHPRC	Print	Sign	Date/Time	1300	Matrix *
Relinquished By	Lesly Weal CHPRC	Print	Sign	Date/Time	1510	Received By	J. Bock, TANK	Print	Sign	Date/Time	1510	S = Soil
Relinquished By				Date/Time		Received By				Date/Time		SE = Sediment
Relinquished By				Date/Time		Received By				Date/Time		SO = Solid
Relinquished By				Date/Time		Received By				Date/Time		SL = Sludge
Relinquished By				Date/Time		Received By				Date/Time		W = Water
Relinquished By				Date/Time		Received By				Date/Time		O = Oil
Relinquished By				Date/Time		Received By				Date/Time		A = Air
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)		Date/Time		Disposed By		Date/Time				

Detection Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: X16-043

TestAmerica Job ID: 300-3436-1
SDG: WC1242

Client Sample ID: B360J7

Lab Sample ID: 300-3436-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.0049		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B360J6

Lab Sample ID: 300-3436-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.0056		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B36098

Lab Sample ID: 300-3436-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.0077		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B36099

Lab Sample ID: 300-3436-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.0056		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B360B0

Lab Sample ID: 300-3436-5

No Detections.

Client Sample ID: B360B1

Lab Sample ID: 300-3436-6

No Detections.

Client Sample ID: B35YX4

Lab Sample ID: 300-3436-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.0028	B	0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B35YX3

Lab Sample ID: 300-3436-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.0043		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B360F2

Lab Sample ID: 300-3436-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.0036	B	0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B360F1

Lab Sample ID: 300-3436-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.0036	B	0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B360B7

Lab Sample ID: 300-3436-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.014		0.0040	0.0015	mg/L	1		7196A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Richland

Detection Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: X16-043

TestAmerica Job ID: 300-3436-1
SDG: WC1242

Client Sample ID: B360B6

Lab Sample ID: 300-3436-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.015		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B360J5

Lab Sample ID: 300-3436-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	16	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	6.6	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	78	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B35YX2

Lab Sample ID: 300-3436-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	66	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	0.26	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: B360F0

Lab Sample ID: 300-3436-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	24	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	9.4	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.24	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	31	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B360B5

Lab Sample ID: 300-3436-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	17	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	9.2	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.17	D	0.10	0.050	mg/L	2		300.0	Total/NA
Nitrite as N	0.056	B D	0.076	0.038	mg/L	2		300.0	Total/NA
Sulfate	76	D	0.50	0.25	mg/L	2		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Richland

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X16-043

TestAmerica Job ID: 300-3436-1
SDG: WC1242

Client Sample ID: B360J7
Date Collected: 07/08/16 10:09
Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-1
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0049		0.0040	0.0015	mg/L			07/08/16 17:39	1

Client Sample ID: B360J6
Date Collected: 07/08/16 10:09
Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-2
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0056		0.0040	0.0015	mg/L			07/08/16 17:40	1

Client Sample ID: B36098
Date Collected: 07/08/16 09:06
Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-3
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0077		0.0040	0.0015	mg/L			07/08/16 17:40	1

Client Sample ID: B36099
Date Collected: 07/08/16 09:06
Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-4
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0056		0.0040	0.0015	mg/L			07/08/16 17:40	1

Client Sample ID: B360B0
Date Collected: 07/08/16 07:20
Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-5
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0015	U	0.0040	0.0015	mg/L			07/08/16 17:43	1

Client Sample ID: B360B1
Date Collected: 07/08/16 07:20
Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-6
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0015	U	0.0040	0.0015	mg/L			07/08/16 17:44	1

Client Sample ID: B35YX4
Date Collected: 07/08/16 10:49
Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-7
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0028	B	0.0040	0.0015	mg/L			07/08/16 17:44	1

TestAmerica Richland

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X16-043

TestAmerica Job ID: 300-3436-1
SDG: WC1242

Client Sample ID: B35YX3

Date Collected: 07/08/16 10:49

Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-8

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0043		0.0040	0.0015	mg/L			07/08/16 17:44	1

Client Sample ID: B360F2

Date Collected: 07/08/16 11:30

Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-9

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0036	B	0.0040	0.0015	mg/L			07/08/16 17:45	1

Client Sample ID: B360F1

Date Collected: 07/08/16 11:30

Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-10

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0036	B	0.0040	0.0015	mg/L			07/08/16 17:45	1

Client Sample ID: B360B7

Date Collected: 07/08/16 12:12

Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-11

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.014		0.0040	0.0015	mg/L			07/08/16 17:45	1

Client Sample ID: B360B6

Date Collected: 07/08/16 12:12

Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-12

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.015		0.0040	0.0015	mg/L			07/08/16 17:48	1

Client Sample ID: B360J5

Date Collected: 07/08/16 10:09

Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-13

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	16	D	0.40	0.20	mg/L			07/08/16 18:24	2
Nitrate as N	6.6	D	0.056	0.028	mg/L			07/08/16 18:24	2
Fluoride	0.28	D	0.10	0.050	mg/L			07/08/16 18:24	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			07/08/16 18:24	2
Sulfate	78	D	0.50	0.25	mg/L			07/08/16 18:24	2

TestAmerica Richland

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X16-043

TestAmerica Job ID: 300-3436-1
SDG: WC1242

Client Sample ID: B35YX2

Date Collected: 07/08/16 10:49

Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-14

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	66	D	0.40	0.20	mg/L			07/08/16 19:09	2
Nitrate as N	11	D	0.056	0.028	mg/L			07/08/16 19:09	2
Fluoride	0.26	D	0.10	0.050	mg/L			07/08/16 19:09	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			07/08/16 19:09	2
Sulfate	16	D	0.50	0.25	mg/L			07/08/16 19:09	2

Client Sample ID: B360F0

Date Collected: 07/08/16 11:30

Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-15

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24	D	0.40	0.20	mg/L			07/08/16 19:24	2
Nitrate as N	9.4	D	0.056	0.028	mg/L			07/08/16 19:24	2
Fluoride	0.24	D	0.10	0.050	mg/L			07/08/16 19:24	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			07/08/16 19:24	2
Sulfate	31	D	0.50	0.25	mg/L			07/08/16 19:24	2

Client Sample ID: B360B5

Date Collected: 07/08/16 12:12

Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-16

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17	D	0.40	0.20	mg/L			07/08/16 19:39	2
Nitrate as N	9.2	D	0.056	0.028	mg/L			07/08/16 19:39	2
Fluoride	0.17	D	0.10	0.050	mg/L			07/08/16 19:39	2
Nitrite as N	0.056	B D	0.076	0.038	mg/L			07/08/16 19:39	2
Sulfate	76	D	0.50	0.25	mg/L			07/08/16 19:39	2

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
 Project/Site: X16-043

TestAmerica Job ID: 300-3436-1
 SDG: WC1242

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 300-4813/5
 Matrix: Water
 Analysis Batch: 4813

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			07/08/16 17:54	1
Nitrite as N	0.019	U	0.038	0.019	mg/L			07/08/16 17:54	1

Lab Sample ID: LCS 300-4813/6
 Matrix: Water
 Analysis Batch: 4813

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	2.27		mg/L		101	80 - 120
Nitrite as N	3.04	3.04		mg/L		100	80 - 120

Lab Sample ID: 300-3436-13 MS
 Matrix: Water
 Analysis Batch: 4813

Client Sample ID: B360J5
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	6.6	D	0.452	6.95	D	mg/L		83	75 - 125
Nitrite as N	0.038	U D	0.609	0.512	D	mg/L		84	75 - 125

Lab Sample ID: 300-3436-13 DU
 Matrix: Water
 Analysis Batch: 4813

Client Sample ID: B360J5
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Nitrate as N	6.6	D	6.61	D	mg/L		0.6	20
Nitrite as N	0.038	U D	0.038	U D	mg/L		NC	20

Lab Sample ID: MB 300-4814/5
 Matrix: Water
 Analysis Batch: 4814

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			07/08/16 17:54	1
Fluoride	0.025	U	0.050	0.025	mg/L			07/08/16 17:54	1
Sulfate	0.13	U	0.25	0.13	mg/L			07/08/16 17:54	1

Lab Sample ID: LCS 300-4814/6
 Matrix: Water
 Analysis Batch: 4814

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	15.8		mg/L		99	80 - 120
Fluoride	4.00	3.97		mg/L		99	80 - 120
Sulfate	20.0	19.9		mg/L		99	80 - 120

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X16-043

TestAmerica Job ID: 300-3436-1
SDG: WC1242

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 300-3436-13 MS
Matrix: Water
Analysis Batch: 4814

Client Sample ID: B360J5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	16	D	3.20	19.1	D	mg/L		93	75 - 125
Fluoride	0.28	D	0.800	1.01	D	mg/L		91	75 - 125
Sulfate	78	D	4.00	81.1	D	mg/L		75	75 - 125

Lab Sample ID: 300-3436-13 DU
Matrix: Water
Analysis Batch: 4814

Client Sample ID: B360J5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	16	D	16.2	D	mg/L		0.6	20
Fluoride	0.28	D	0.280	D	mg/L		0.5	20
Sulfate	78	D	78.7	D	mg/L		0.8	20

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 300-4819/3
Matrix: Water
Analysis Batch: 4819

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			07/08/16 17:35	1

Lab Sample ID: LCS 300-4819/4
Matrix: Water
Analysis Batch: 4819

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	0.254		mg/L		102	80 - 120

Lab Sample ID: 300-3434-A-1 MS
Matrix: Water
Analysis Batch: 4819

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.0038	B	0.0500	0.0525		mg/L		97	75 - 125

Lab Sample ID: 300-3434-A-1 DU
Matrix: Water
Analysis Batch: 4819

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cr (VI)	0.0038	B	0.00410		mg/L		8	20

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
 Project/Site: X16-043

TestAmerica Job ID: 300-3436-1
 SDG: WC1242

HPLC/IC

Analysis Batch: 4813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-3436-13	B360J5	Total/NA	Water	300.0	
300-3436-14	B35YX2	Total/NA	Water	300.0	
300-3436-15	B360F0	Total/NA	Water	300.0	
300-3436-16	B360B5	Total/NA	Water	300.0	
MB 300-4813/5	Method Blank	Total/NA	Water	300.0	
LCS 300-4813/6	Lab Control Sample	Total/NA	Water	300.0	
300-3436-13 MS	B360J5	Total/NA	Water	300.0	
300-3436-13 DU	B360J5	Total/NA	Water	300.0	

Analysis Batch: 4814

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-3436-13	B360J5	Total/NA	Water	300.0	
300-3436-14	B35YX2	Total/NA	Water	300.0	
300-3436-15	B360F0	Total/NA	Water	300.0	
300-3436-16	B360B5	Total/NA	Water	300.0	
MB 300-4814/5	Method Blank	Total/NA	Water	300.0	
LCS 300-4814/6	Lab Control Sample	Total/NA	Water	300.0	
300-3436-13 MS	B360J5	Total/NA	Water	300.0	
300-3436-13 DU	B360J5	Total/NA	Water	300.0	

General Chemistry

Analysis Batch: 4819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-3436-1	B360J7	Total/NA	Water	7196A	
300-3436-2	B360J6	Total/NA	Water	7196A	
300-3436-3	B36098	Total/NA	Water	7196A	
300-3436-4	B36099	Total/NA	Water	7196A	
300-3436-5	B360B0	Total/NA	Water	7196A	
300-3436-6	B360B1	Total/NA	Water	7196A	
300-3436-7	B35YX4	Total/NA	Water	7196A	
300-3436-8	B35YX3	Total/NA	Water	7196A	
300-3436-9	B360F2	Total/NA	Water	7196A	
300-3436-10	B360F1	Total/NA	Water	7196A	
300-3436-11	B360B7	Total/NA	Water	7196A	
300-3436-12	B360B6	Total/NA	Water	7196A	
MB 300-4819/3	Method Blank	Total/NA	Water	7196A	
LCS 300-4819/4	Lab Control Sample	Total/NA	Water	7196A	
300-3434-A-1 MS	Matrix Spike	Total/NA	Water	7196A	
300-3434-A-1 DU	Duplicate	Total/NA	Water	7196A	

Lab Chronicle

Client: CH2M Hill Plateau Remediation Company
Project/Site: X16-043

TestAmerica Job ID: 300-3436-1
SDG: WC1242

Client Sample ID: B360J7

Date Collected: 07/08/16 10:09

Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-1

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			4819	07/08/16 17:39	RLC	TAL RCH

Client Sample ID: B360J6

Date Collected: 07/08/16 10:09

Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-2

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			4819	07/08/16 17:40	RLC	TAL RCH

Client Sample ID: B36098

Date Collected: 07/08/16 09:06

Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-3

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			4819	07/08/16 17:40	RLC	TAL RCH

Client Sample ID: B36099

Date Collected: 07/08/16 09:06

Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-4

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			4819	07/08/16 17:40	RLC	TAL RCH

Client Sample ID: B360B0

Date Collected: 07/08/16 07:20

Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-5

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			4819	07/08/16 17:43	RLC	TAL RCH

Client Sample ID: B360B1

Date Collected: 07/08/16 07:20

Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-6

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			4819	07/08/16 17:44	RLC	TAL RCH

TestAmerica Richland

Lab Chronicle

Client: CH2M Hill Plateau Remediation Company
Project/Site: X16-043

TestAmerica Job ID: 300-3436-1
SDG: WC1242

Client Sample ID: B35YX4

Date Collected: 07/08/16 10:49

Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-7

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			4819	07/08/16 17:44	RLC	TAL RCH

Client Sample ID: B35YX3

Date Collected: 07/08/16 10:49

Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-8

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			4819	07/08/16 17:44	RLC	TAL RCH

Client Sample ID: B360F2

Date Collected: 07/08/16 11:30

Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-9

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			4819	07/08/16 17:45	RLC	TAL RCH

Client Sample ID: B360F1

Date Collected: 07/08/16 11:30

Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-10

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			4819	07/08/16 17:45	RLC	TAL RCH

Client Sample ID: B360B7

Date Collected: 07/08/16 12:12

Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-11

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			4819	07/08/16 17:45	RLC	TAL RCH

Client Sample ID: B360B6

Date Collected: 07/08/16 12:12

Date Received: 07/08/16 15:10

Lab Sample ID: 300-3436-12

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			4819	07/08/16 17:48	RLC	TAL RCH

TestAmerica Richland

Lab Chronicle

Client: CH2M Hill Plateau Remediation Company
Project/Site: X16-043

TestAmerica Job ID: 300-3436-1
SDG: WC1242

Client Sample ID: B360J5

Lab Sample ID: 300-3436-13

Date Collected: 07/08/16 10:09

Matrix: Water

Date Received: 07/08/16 15:10

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			4813	07/08/16 18:24	CPM	TAL RCH
Total/NA	Analysis	300.0		2			4814	07/08/16 18:24	CPM	TAL RCH

Client Sample ID: B35YX2

Lab Sample ID: 300-3436-14

Date Collected: 07/08/16 10:49

Matrix: Water

Date Received: 07/08/16 15:10

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			4813	07/08/16 19:09	CPM	TAL RCH
Total/NA	Analysis	300.0		2			4814	07/08/16 19:09	CPM	TAL RCH

Client Sample ID: B360F0

Lab Sample ID: 300-3436-15

Date Collected: 07/08/16 11:30

Matrix: Water

Date Received: 07/08/16 15:10

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			4813	07/08/16 19:24	CPM	TAL RCH
Total/NA	Analysis	300.0		2			4814	07/08/16 19:24	CPM	TAL RCH

Client Sample ID: B360B5

Lab Sample ID: 300-3436-16

Date Collected: 07/08/16 12:12

Matrix: Water

Date Received: 07/08/16 15:10

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			4813	07/08/16 19:39	CPM	TAL RCH
Total/NA	Analysis	300.0		2			4814	07/08/16 19:39	CPM	TAL RCH

Client Sample ID: Method Blank

Lab Sample ID: MB 300-4813/5

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			4813	07/08/16 17:54	CPM	TAL RCH

Client Sample ID: Method Blank

Lab Sample ID: MB 300-4814/5

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			4814	07/08/16 17:54	CPM	TAL RCH

Lab Chronicle

Client: CH2M Hill Plateau Remediation Company
Project/Site: X16-043

TestAmerica Job ID: 300-3436-1
SDG: WC1242

Client Sample ID: Method Blank**Lab Sample ID: MB 300-4819/3**

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			4819	07/08/16 17:35	RLC	TAL RCH

Client Sample ID: Lab Control Sample**Lab Sample ID: LCS 300-4813/6**

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			4813	07/08/16 18:09	CPM	TAL RCH

Client Sample ID: Lab Control Sample**Lab Sample ID: LCS 300-4814/6**

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			4814	07/08/16 18:09	CPM	TAL RCH

Client Sample ID: Lab Control Sample**Lab Sample ID: LCS 300-4819/4**

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			4819	07/08/16 17:35	RLC	TAL RCH

Client Sample ID: Matrix Spike**Lab Sample ID: 300-3434-A-1 MS**

Date Collected: 07/08/16 08:48

Matrix: Water

Date Received: 07/08/16 15:10

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			4819	07/08/16 17:36	RLC	TAL RCH

Client Sample ID: B360J5**Lab Sample ID: 300-3436-13 MS**

Date Collected: 07/08/16 10:09

Matrix: Water

Date Received: 07/08/16 15:10

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			4813	07/08/16 18:39	CPM	TAL RCH
Total/NA	Analysis	300.0		2			4814	07/08/16 18:39	CPM	TAL RCH

Laboratory References:

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

TestAmerica Richland

Method Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: X16-043

TestAmerica Job ID: 300-3436-1
SDG: WC1242

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

Sample Summary

Client: CH2M Hill Plateau Remediation Company
 Project/Site: X16-043

TestAmerica Job ID: 300-3436-1
 SDG: WC1242

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-3436-1	B360J7	Water	07/08/16 10:09	07/08/16 15:10
300-3436-2	B360J6	Water	07/08/16 10:09	07/08/16 15:10
300-3436-3	B36098	Water	07/08/16 09:06	07/08/16 15:10
300-3436-4	B36099	Water	07/08/16 09:06	07/08/16 15:10
300-3436-5	B360B0	Water	07/08/16 07:20	07/08/16 15:10
300-3436-6	B360B1	Water	07/08/16 07:20	07/08/16 15:10
300-3436-7	B35YX4	Water	07/08/16 10:49	07/08/16 15:10
300-3436-8	B35YX3	Water	07/08/16 10:49	07/08/16 15:10
300-3436-9	B360F2	Water	07/08/16 11:30	07/08/16 15:10
300-3436-10	B360F1	Water	07/08/16 11:30	07/08/16 15:10
300-3436-11	B360B7	Water	07/08/16 12:12	07/08/16 15:10
300-3436-12	B360B6	Water	07/08/16 12:12	07/08/16 15:10
300-3436-13	B360J5	Water	07/08/16 10:09	07/08/16 15:10
300-3436-14	B35YX2	Water	07/08/16 10:49	07/08/16 15:10
300-3436-15	B360F0	Water	07/08/16 11:30	07/08/16 15:10
300-3436-16	B360B5	Water	07/08/16 12:12	07/08/16 15:10

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 300-3436-1

SDG Number: WC1242

Login Number: 3436**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	