July 29, 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: 300-3388-1
TestAmerica Sample Delivery Group: WC1216
Client Project/Site: X16-037

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

Attn: CPP Sample Management

Authorized for release by:
7/29/2016 4:52:48 PM
Steven Campbell, Project Mgmt. Assistant
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Designee for

Whitney Ritari, Project Manager I
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LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: 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 desingee 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.
¤	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)

Job ID: 300-3388-1

Laboratory: TestAmerica Richland

Narrative

Job Narrative
300-3388-1

Comments
No additional comments.

Receipt
The samples were received on 6/29/2016 2:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 6.6º 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. # **X16-037-124**

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Collector	Ed Kauer CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	X16-037	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	304027
Project Title	100-KW Rebound Study, May 31, 2016	**Logbook No.**	HNF-N-506 86/351	**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** **PRIORITY**	**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 **Hold Time** Total Activity Exemption: Yes ☑ No ☐

N/A
Special Handling:N/A

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B35MB2	N	W	JUN 2 9 2016	1225	1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C
B35MB4	Y	W	↓	↓	1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C

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300-3388 COC

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Ed Kauer CHPRC			JUN 2 9 2016 1245	Christina Aguilar /CHPRC			JUN 2 9 2016 1245
Christina Aguilar /CHPRC			JUN 2 9 2016 1430	J. Bock, TARL			JUN 2 9 2016 1430

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. # X16-037-096 Page 1 of 1

Collector	Ed Kauer CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	X16-037	Sampling Origin	Hanford Site	Purchase Order/Charge Code	304027
Project Title	100-KW Rebound Study, May 31, 2016	Logbook No.	HNF-N-506 86/37	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 **PRIORITY**	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 **Hold Time** Total Activity Exemption: Yes ☑ No ☐
N/A
Special Handling:N/A

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B35M12	N	W	JUN 2 9 2016	1142	1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C
B35M14	Y	W	↓	↓	1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C

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Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Ed Kauer CHPRC			JUN 2 9 2016 1245	Christina Aguilar CHPRC			JUN 2 9 2016 1245
Christina Aguilar CHPRC			JUN 2 9 2016 1430	J. Bock, TARL			JUN 2 9 2016 1430

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

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X16-037-182 Page 1 of 1

Collector	Ed Kauer CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	X16-037	Sampling Origin	Hanford Site	Purchase Order/Charge Code	304027
Project Title	100-KW Rebound Study, May 31, 2016	Logbook No.	HNF-N-506 86/37	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 **PRIORITY**	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 **Hold Time** Total Activity Exemption: Yes ☑ No ☐

N/A

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B35VK4	N	W	JUN 2 9 2016	1142	1x500-mL P	300.0_ANIONS_IC: COMMON	48 Hours	Cool <=6C

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Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Ed Kauer CHPRC			JUN 2 9 2016 1245	Christina Aguilar /CHPRC			JUN 2 9 2016 1245
Christina Aguilar /CHPRC			JUN 2 9 2016 1430		J. Bock, TARL		JUN 2 9 2016 1430

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

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X16-037-123 Page 1 of 1

Collector	Ed Kauer CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	X16-037	Sampling Origin	Hanford Site	Purchase Order/Charge Code	304027
Project Title	100-KW Rebound Study, May 31, 2016	Logbook No.	HNF-N-506 8le/31	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	PRIORITY	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 **Hold Time** Total Activity Exemption: Yes ☑ No ☐

N/A
Special Handling:N/A

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B35MB1	N	W	JUN 2 9 2016	1225	1x500-mL P	300.0_ANIONS_IC: COMMON	48 Hours	Cool <=6C

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Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Ed Kauer CHPRC			JUN 2 9 2016 1245	Christina Aguilar ACHPRC			JUN 2 9 2016 1245
Christina Aguilar ACHPRC			JUN 2 9 2016 1430	J. Bock, TARL			JUN 2 9 2016 1430

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

Detection Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: X16-037

TestAmerica Job ID: 300-3388-1
SDG: WC1216

Client Sample ID: B35MB2 — Lab Sample ID: 300-3388-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.0075		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B35MB4 — Lab Sample ID: 300-3388-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.0075		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B35M12 — Lab Sample ID: 300-3388-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.0097		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B35M14 — Lab Sample ID: 300-3388-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.010		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B35VK4 — Lab Sample ID: 300-3388-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	14	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	6.2	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.21	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	83	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B35MB1 — Lab Sample ID: 300-3388-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	15	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	4.7	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.21	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	70	D	0.50	0.25	mg/L	2		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client: CH2M Hill Plateau Remediation Company
Project/Site: X16-037

TestAmerica Job ID: 300-3388-1
SDG: WC1216

Client Sample ID: B35MB2
Lab Sample ID: 300-3388-1
Date Collected: 06/29/16 12:25
Matrix: Water
Date Received: 06/29/16 14:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0075		0.0040	0.0015	mg/L			06/30/16 07:43	1

Client Sample ID: B35MB4
Lab Sample ID: 300-3388-2
Date Collected: 06/29/16 12:25
Matrix: Water
Date Received: 06/29/16 14:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0075		0.0040	0.0015	mg/L			06/30/16 07:43	1

Client Sample ID: B35M12
Lab Sample ID: 300-3388-3
Date Collected: 06/29/16 11:42
Matrix: Water
Date Received: 06/29/16 14:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0097		0.0040	0.0015	mg/L			06/30/16 07:46	1

Client Sample ID: B35M14
Lab Sample ID: 300-3388-4
Date Collected: 06/29/16 11:42
Matrix: Water
Date Received: 06/29/16 14:30

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.010		0.0040	0.0015	mg/L			06/30/16 07:47	1

Client Sample ID: B35VK4
Lab Sample ID: 300-3388-5
Date Collected: 06/29/16 11:42
Matrix: Water
Date Received: 06/29/16 14:30

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14	D	0.40	0.20	mg/L			06/30/16 14:31	2
Nitrate as N	6.2	D	0.056	0.028	mg/L			06/30/16 14:31	2
Fluoride	0.21	D	0.10	0.050	mg/L			06/30/16 14:31	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			06/30/16 14:31	2
Sulfate	83	D	0.50	0.25	mg/L			06/30/16 14:31	2

Client Sample ID: B35MB1
Lab Sample ID: 300-3388-6
Date Collected: 06/29/16 12:25
Matrix: Water
Date Received: 06/29/16 14:30

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15	D	0.40	0.20	mg/L			06/30/16 14:46	2
Nitrate as N	4.7	D	0.056	0.028	mg/L			06/30/16 14:46	2
Fluoride	0.21	D	0.10	0.050	mg/L			06/30/16 14:46	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			06/30/16 14:46	2
Sulfate	70	D	0.50	0.25	mg/L			06/30/16 14:46	2

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 300-4747/5 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 4747

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			06/30/16 13:00	1
Nitrite as N	0.019	U	0.038	0.019	mg/L			06/30/16 13:00	1

Lab Sample ID: LCS 300-4747/6 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 4747

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	2.26	2.36		mg/L		104	80 - 120
Nitrite as N	3.04	3.15		mg/L		104	80 - 120

Lab Sample ID: 300-3387-A-5 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 4747

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	3.2	D	0.452	3.64	D	mg/L		107	75 - 125
Nitrite as N	0.038	U D	0.609	0.539	D	mg/L		88	75 - 125

Lab Sample ID: 300-3387-A-5 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 4747

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate as N	3.2	D	3.18	D	mg/L		0.8	20
Nitrite as N	0.038	U D	0.038	U D	mg/L		NC	20

Lab Sample ID: MB 300-4748/5 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 4748

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.10	U	0.20	0.10	mg/L			06/30/16 13:00	1
Fluoride	0.025	U	0.050	0.025	mg/L			06/30/16 13:00	1
Sulfate	0.13	U	0.25	0.13	mg/L			06/30/16 13:00	1

Lab Sample ID: LCS 300-4748/6 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 4748

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	16.0	16.4		mg/L		102	80 - 120
Fluoride	4.00	4.10		mg/L		103	80 - 120
Sulfate	20.0	20.6		mg/L		103	80 - 120

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 300-3387-A-5 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 4748

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	11	D	3.20	14.1	D	mg/L		103	75 - 125		
Fluoride	0.41	D	0.800	1.19	D	mg/L		98	75 - 125		
Sulfate	55	D	4.00	59.2	D	mg/L		104	75 - 125		

Lab Sample ID: 300-3387-A-5 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 4748

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chloride	11	D		10.9	D	mg/L				0.8	20
Fluoride	0.41	D		0.409	D	mg/L				1	20
Sulfate	55	D		55.4	D	mg/L				0.6	20

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 300-4749/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 4749

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0015	U	0.0040	0.0015	mg/L			06/30/16 07:38	1

Lab Sample ID: LCS 300-4749/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 4749

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: 300-3387-A-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 4749

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cr (VI)	0.012		0.0499	0.0636		mg/L		104	75 - 125		

Lab Sample ID: 300-3387-A-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 4749

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Cr (VI)	0.012			0.0120		mg/L				2	20

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: X16-037

TestAmerica Job ID: 300-3388-1
SDG: WC1216

HPLC/IC

Analysis Batch: 4747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-3388-5	B35VK4	Total/NA	Water	300.0	
300-3388-6	B35MB1	Total/NA	Water	300.0	
MB 300-4747/5	Method Blank	Total/NA	Water	300.0	
LCS 300-4747/6	Lab Control Sample	Total/NA	Water	300.0	
300-3387-A-5 MS	Matrix Spike	Total/NA	Water	300.0	
300-3387-A-5 DU	Duplicate	Total/NA	Water	300.0	

Analysis Batch: 4748

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-3388-5	B35VK4	Total/NA	Water	300.0	
300-3388-6	B35MB1	Total/NA	Water	300.0	
MB 300-4748/5	Method Blank	Total/NA	Water	300.0	
LCS 300-4748/6	Lab Control Sample	Total/NA	Water	300.0	
300-3387-A-5 MS	Matrix Spike	Total/NA	Water	300.0	
300-3387-A-5 DU	Duplicate	Total/NA	Water	300.0	

General Chemistry

Analysis Batch: 4749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-3388-1	B35MB2	Total/NA	Water	7196A	
300-3388-2	B35MB4	Total/NA	Water	7196A	
300-3388-3	B35M12	Total/NA	Water	7196A	
300-3388-4	B35M14	Total/NA	Water	7196A	
MB 300-4749/3	Method Blank	Total/NA	Water	7196A	
LCS 300-4749/4	Lab Control Sample	Total/NA	Water	7196A	
300-3387-A-1 MS	Matrix Spike	Total/NA	Water	7196A	
300-3387-A-1 DU	Duplicate	Total/NA	Water	7196A	

Lab Chronicle

Client: CH2M Hill Plateau Remediation Company
Project/Site: X16-037

TestAmerica Job ID: 300-3388-1
SDG: WC1216

Client Sample ID: B35MB2 — Lab Sample ID: 300-3388-1

Date Collected: 06/29/16 12:25 — **Matrix: Water**
Date Received: 06/29/16 14:30

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			4749	06/30/16 07:43	RLC	TAL RCH

Client Sample ID: B35MB4 — Lab Sample ID: 300-3388-2

Date Collected: 06/29/16 12:25 — **Matrix: Water**
Date Received: 06/29/16 14:30

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			4749	06/30/16 07:43	RLC	TAL RCH

Client Sample ID: B35M12 — Lab Sample ID: 300-3388-3

Date Collected: 06/29/16 11:42 — **Matrix: Water**
Date Received: 06/29/16 14:30

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			4749	06/30/16 07:46	RLC	TAL RCH

Client Sample ID: B35M14 — Lab Sample ID: 300-3388-4

Date Collected: 06/29/16 11:42 — **Matrix: Water**
Date Received: 06/29/16 14:30

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			4749	06/30/16 07:47	RLC	TAL RCH

Client Sample ID: B35VK4 — Lab Sample ID: 300-3388-5

Date Collected: 06/29/16 11:42 — **Matrix: Water**
Date Received: 06/29/16 14:30

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			4747	06/30/16 14:31	CPM	TAL RCH
Total/NA	Analysis	300.0		2			4748	06/30/16 14:31	CPM	TAL RCH

Client Sample ID: B35MB1 — Lab Sample ID: 300-3388-6

Date Collected: 06/29/16 12:25 — **Matrix: Water**
Date Received: 06/29/16 14:30

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			4747	06/30/16 14:46	CPM	TAL RCH
Total/NA	Analysis	300.0		2			4748	06/30/16 14:46	CPM	TAL RCH

Client Sample ID: Method Blank — Lab Sample ID: MB 300-4747/5

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			4747	06/30/16 13:00	CPM	TAL RCH

Client Sample ID: Method Blank — Lab Sample ID: MB 300-4748/5

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			4748	06/30/16 13:00	CPM	TAL RCH

Client Sample ID: Method Blank — Lab Sample ID: MB 300-4749/3

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			4749	06/30/16 07:38	RLC	TAL RCH

Client Sample ID: Lab Control Sample — Lab Sample ID: LCS 300-4747/6

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			4747	06/30/16 13:15	CPM	TAL RCH

Client Sample ID: Lab Control Sample — Lab Sample ID: LCS 300-4748/6

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			4748	06/30/16 13:15	CPM	TAL RCH

Client Sample ID: Lab Control Sample — Lab Sample ID: LCS 300-4749/4

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			4749	06/30/16 07:38	RLC	TAL RCH

Client: CH2M Hill Plateau Remediation Company
Project/Site: X16-037

TestAmerica Job ID: 300-3388-1
SDG: WC1216

Client Sample ID: Matrix Spike
Lab Sample ID: 300-3387-A-1 MS

Date Collected: 06/29/16 09:58
Matrix: Water
Date Received: 06/29/16 14:30

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			4749	06/30/16 07:38	RLC	TAL RCH

Client Sample ID: Matrix Spike
Lab Sample ID: 300-3387-A-5 MS

Date Collected: 06/29/16 09:58
Matrix: Water
Date Received: 06/29/16 14:30

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			4747	06/30/16 13:46	CPM	TAL RCH
Total/NA	Analysis	300.0		2			4748	06/30/16 13:46	CPM	TAL RCH

Laboratory References:

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

Method Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: X16-037

TestAmerica Job ID: 300-3388-1
SDG: WC1216

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: X16-037

TestAmerica Job ID: 300-3388-1
SDG: WC1216

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-3388-1	B35MB2	Water	06/29/16 12:25	06/29/16 14:30
300-3388-2	B35MB4	Water	06/29/16 12:25	06/29/16 14:30
300-3388-3	B35M12	Water	06/29/16 11:42	06/29/16 14:30
300-3388-4	B35M14	Water	06/29/16 11:42	06/29/16 14:30
300-3388-5	B35VK4	Water	06/29/16 11:42	06/29/16 14:30
300-3388-6	B35MB1	Water	06/29/16 12:25	06/29/16 14:30

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 300-3388-1
SDG Number: WC1216

Login Number: 3388
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	