

September 30, 2015

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Richland
2800 George Washington Way
Richland, WA 99352
Tel: (509)375-3131

TestAmerica Job ID: 300-867-1
TestAmerica Sample Delivery Group: WC0369
Client Project/Site: CH2M Hill Chemical

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

Attn: CPP Sample Management



Authorized for release by:
9/30/2015 1:29:15 PM

Whitney Ritari, Project Manager I
(509)375-3131 ext164
whitney.ritari@testamericainc.com

LINKS

Review your project
results through
TotalAccess

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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 designee as verified by the attached signature.

The laboratory is accredited to EPA 7196A in Solid and Chemical Materials, per Washington State Department of Ecology this is approved for non-discharge water samples. The sample/ sample duplicate RPD agreement is not applicable if one or both results are elss than five times the MDL.



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Client: CH2M Hill Plateau Remediation Company
Project/Site: CH2M Hill ChemicalTestAmerica Job ID: 300-867-1
SDG: WC0369

Qualifiers

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)

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

TestAmerica Job ID: 300-867-1
SDG: WC0369

Job ID: 300-867-1

Laboratory: TestAmerica Richland

Narrative

**Job Narrative
300-867-1**

Comments

No additional comments.

Receipt

The samples were received on 9/24/2015 2:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 8.5° C.

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. #
X15-046-033

Page 1 of 1

Collector	S.W. King/CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	X15-046	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303269
Project Title	100-BC-5 RI, SEPTEMBER 2015	Logbook No.	HNF-N-506 <u>18</u> / <u>31</u>	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority:	30 Days	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS			SPECIAL INSTRUCTIONS		
*** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1			Hold Time		
			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
B32755	N		SEP 24 2015	0843	1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C
B32756	Y	W			1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C

September 30, 2015



300-867 COC

#867
W0369

Relinquished By	S.W. King/CHPRC	Print	Sign	Date/Time	SEP 24 2015	1100	Received By	R.A. Shepard/CHPRC	Print	Sign	Date/Time	SEP 24 2015	1100
Relinquished By	R.A. Shepard/CHPRC			Date/Time	SEP 24 2015		Received By	J. Fiestz, TARL			Date/Time	SEP 24 2015	
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

C.O.C. #
X15-046-034
Page 1 of 1

Collector	S.W. King/CHSRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	X15-046	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303269
Project Title	100-BC-5 RI, SEPTEMBER 2015	Logbook No.	HNF-N-506 <u>78 / 39</u>	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority:	30 Days	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS			SPECIAL INSTRUCTIONS		
*** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1			Hold Time		
			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
B32758	N		SEP 24 2015	2943	1x60-ml aG	7196_CR6: COMMON	24 Hours	Cool <=6C
B32759	Y	W			1x60-ml aG	7196_CR6: COMMON	24 Hours	Cool <=6C

September 30, 2015

#867
W10369

Relinquished By	S.W. King/CHSRC	Print	Sign	Date/Time	SEP 24 2015 1100	Received By	R.A. Shepard/CHSRC	Print	Sign	Date/Time	SEP 24 2015 1100
Relinquished By	RA Shepard/CHSRC			Date/Time	SEP 24 2015 1100	Received By	J. Fitesz, TARL			Date/Time	SEP 24 2015 1100
Relinquished By				Date/Time		Received By				Date/Time	
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



CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X15-046-035
Page 1 of 1

Collector	<i>S.W. King/CHPRC</i>	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	X15-046	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303269
Project Title	100-BC-5 RI, SEPTEMBER 2015	Logbook No.	HNF-N-506 <i>78/39</i>	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority:	30 Days	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS			SPECIAL INSTRUCTIONS		
*** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1			Hold Time		
			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
B32761	N	SEP 24 2015	1027	1x60-ml aG	7196_CR6: COMMON	24 Hours	Cool <=6C
B32762	Y	W	V	1x60-ml aG	7196_CR6: COMMON	24 Hours	Cool <=6C

September 30, 2015

#9C7
W0369

Relinquished By	<i>S.W. King/CHPRC</i>	Sign	<i>[Signature]</i>	Date/Time	SEP 24 2015 1100	Received By	<i>RA. Shepard/CHPRC</i>	Sign	<i>[Signature]</i>	Date/Time	SEP 24 2015 1100	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	<i>RA. Shepard/CHPRC</i>	Sign	<i>[Signature]</i>	Date/Time	SEP 24 2015 1230	Received By	<i>J. Friesz, TAR</i>	Sign	<i>[Signature]</i>	Date/Time	SEP 24 2015 1230	
Relinquished By		Sign		Date/Time		Received By		Sign		Date/Time		
Relinquished By		Sign		Date/Time		Received By		Sign		Date/Time		

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. #
X15-046-036
Page 1 of 1

Collector	S.W. King/CHSRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	X15-046	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303269
Project Title	100-BC-5 RI, SEPTEMBER 2015	Logbook No.	HNF-N-506 <u>78 / 39</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			PRIORITY	SPECIAL INSTRUCTIONS	Hold Time
*** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1					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
B32765	Y	SEP 24 2015	1154	1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C
B32764	N	W	↓	1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C

September 30, 2015

JE 9/24/15
#87 #867
W60369

Relinquished By	S.W. King/CHSRC	Printed Sign	Date/Time	Received By	R.A. Shepard/CHSRC	Printed Sign	Date/Time	Matrix *
Relinquished By	R.A. Shepard/CHSRC	Printed Sign	SEP 24 2015 1330	Received By	R.A. Shepard/CHSRC	Printed Sign	SEP 24 2015 1330	S = Soil
Relinquished By		Printed Sign	SEP 24 2015 1154	Received By	R.A. Shepard/CHSRC	Printed Sign	SEP 24 2015 1154	SE = Sediment
Relinquished By		Printed Sign		Received By	R.A. Shepard/CHSRC	Printed Sign		SO = Solid
Relinquished By		Printed Sign		Received By	R.A. Shepard/CHSRC	Printed Sign		SL = Sludge
Relinquished By		Printed Sign		Received By	R.A. Shepard/CHSRC	Printed Sign		W = Water
Relinquished By		Printed Sign		Received By	R.A. Shepard/CHSRC	Printed Sign		O = Oil
Relinquished By		Printed Sign		Received By	R.A. Shepard/CHSRC	Printed Sign		A = Air
Relinquished By		Printed Sign		Received By	R.A. Shepard/CHSRC	Printed Sign		DS = Drum Solids
Relinquished By		Printed Sign		Received By	R.A. Shepard/CHSRC	Printed Sign		DL = Drum Liquids
Relinquished By		Printed Sign		Received By	R.A. Shepard/CHSRC	Printed Sign		T = Tissue
Relinquished By		Printed Sign		Received By	R.A. Shepard/CHSRC	Printed Sign		WL = Wipe
Relinquished By		Printed Sign		Received By	R.A. Shepard/CHSRC	Printed Sign		L = Liquid
Relinquished By		Printed Sign		Received By	R.A. Shepard/CHSRC	Printed Sign		V = Vegetation
Relinquished By		Printed Sign		Received By	R.A. Shepard/CHSRC	Printed Sign		X = Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time
PRINTED ON	7/29/2015	FSR ID = FSR2313	A-6004-842 (REV 2)



CH2M Hill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #

X15-046-044

Page 1 of 1

Collector: *S.W. King/CHSRC* Contract/Requester: Karen Waters-Husted Telephone No. 509-376-4650

SAF No. X15-046 Sampling Origin: Hanford Site Purchase Order/Charge Code: 303269

Project Title: 100-BC-5 RI, SEPTEMBER 2015 Logbook No. HNF-N-506 78 / 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 SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes No

*** 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	Holding Time	Preservative
B32788	Y	SEP 24 2015	1100	1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C
B32787	N	W	1100	1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C

September 30, 2015

WCC3E9 #867

Relinquished By	Print Sign	Date/Time	Received By	Print Sign	Date/Time	Matrix *
<i>S.W. King/CHSRC</i>	<i>[Signature]</i>	SEP 24 2015 1100	<i>RA Sheppard/CHSRC</i>	<i>[Signature]</i>	SEP 24 2015 1100	S = Soil DS = Drum Solids
Relinquished By: <i>RA Sheppard/CHSRC</i>		Date/Time: SEP 24 2015 1100	Received By: <i>J. Friesz, TARL</i>		Date/Time: SEP 24 2015 1100	SE = Sediment DL = Drum Liquids
Relinquished By:		Date/Time:	Received By:		Date/Time:	SO = Solid T = Tissue
						SL = Sludge WI = Wipe
						W = Water L = Liquid
						O = Oil V = Vegetation
						A = Air 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. #
X15-046-045
Page 1 of 1

Collector	S.W. King/CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	X15-046	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303269
Project Title	100-BC-5 RI, SEPTEMBER 2015	Logbook No.	HNF-N-506 78 / 39	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority:	30 Days	Offsite Property No.	N/A
POSSIBLE SAMPLE HAZARDS/REMARKS			SPECIAL INSTRUCTIONS		
*** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1			Hold Time		
			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
B32792	Y	SEP 24 2015	1221	1x60-ml aG	7196_CRG: COMMON	24 Hours	Cool <=6C
B32790	N	W		1x60-ml aG	7196_CRG: COMMON	24 Hours	Cool <=6C

September 30, 2015

#867

W60369

Reinquished By	S.W. King/CHPRC	Date/Time	SEP 24 2015 1330	Received By	R.A. Sheparth/CHPRC	Date/Time	SEP 24 2015 1330
Reinquished By	R.A. Sheparth/CHPRC	Date/Time	SEP 24 2015 1430	Received By	J. Fitesz, TARR	Date/Time	SEP 24 2015 1430
Reinquished 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
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

C.O.C. # X15-046-046
Page 1 of 1

Collector	S.W. King/CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	X15-046	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303269
Project Title	100-BC-5 RI, SEPTEMBER 2015	Logbook No.	HNF-N-506 78 / 39	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			SPECIAL INSTRUCTIONS		
*** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1			Hold Time		
			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
B32791	N		SEP 24 2015	1201	1x60-ml aG	7196_CR6: COMMON	24 Hours	Cool <=6C
B32793	Y	W			1x60-ml aG	7196_CR6: COMMON	24 Hours	Cool <=6C

September 30, 2015

#867

WCO364

Relinquished By	S.W. King/CHPRC	Print	Signature	Date/Time	SEP 24 2015 1330	Received By	R.A. Shepard/CHPRC	Print	Signature	Date/Time	SEP 24 2015 1330	Matrix * S = Soil DS = Drum Solids SE = Sediment DL = Drum Liquids SO = Solid T = Tissue SL = Sludge WT = Wipe W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By	R.A. Shepard/CHPRC	Print	Signature	Date/Time	SEP 24 2015 1430	Received By	J. Friesz, TARL	Print	Signature	Date/Time	SEP 24 2015 1430	
Relinquished By		Print	Signature	Date/Time		Received By		Print	Signature	Date/Time		

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time
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September 30, 2015
Detection Summary

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

TestAmerica Job ID: 300-867-1
 SDG: WC0369

Client Sample ID: B32755

Lab Sample ID: 300-867-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.024		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B32756

Lab Sample ID: 300-867-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.024		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B32758

Lab Sample ID: 300-867-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.017		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B32759

Lab Sample ID: 300-867-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.017		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B32761

Lab Sample ID: 300-867-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.022		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B32762

Lab Sample ID: 300-867-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.023		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B32765

Lab Sample ID: 300-867-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.026		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B32764

Lab Sample ID: 300-867-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.025		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B32788

Lab Sample ID: 300-867-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.026		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B32787

Lab Sample ID: 300-867-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.025		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B32792

Lab Sample ID: 300-867-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.025		0.0040	0.0015	mg/L	1		7196A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Richland

September 30, 2015
Detection Summary

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

TestAmerica Job ID: 300-867-1
 SDG: WC0369

Client Sample ID: B32792 (Continued)

Lab Sample ID: 300-867-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.023		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B32790

Lab Sample ID: 300-867-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.028		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B32791

Lab Sample ID: 300-867-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.027		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B32793

Lab Sample ID: 300-867-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.0088		0.0040	0.0015	mg/L	1		7196A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Richland



September 30, 2015
Client Sample Results

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

TestAmerica Job ID: 300-867-1
SDG: WC0369

Client Sample ID: B32755
Date Collected: 09/24/15 08:43
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-1
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.024		0.0040	0.0015	mg/L			09/24/15 21:20	1

Client Sample ID: B32756
Date Collected: 09/24/15 08:43
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-2
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.024		0.0040	0.0015	mg/L			09/24/15 21:23	1

Client Sample ID: B32758
Date Collected: 09/24/15 09:43
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-3
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.017		0.0040	0.0015	mg/L			09/24/15 21:23	1

Client Sample ID: B32759
Date Collected: 09/24/15 09:43
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-4
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.017		0.0040	0.0015	mg/L			09/24/15 21:23	1

Client Sample ID: B32761
Date Collected: 09/24/15 10:27
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-5
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.022		0.0040	0.0015	mg/L			09/24/15 21:24	1

Client Sample ID: B32762
Date Collected: 09/24/15 10:27
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-6
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.023		0.0040	0.0015	mg/L			09/24/15 21:25	1

Client Sample ID: B32765
Date Collected: 09/24/15 11:54
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-7
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.026		0.0040	0.0015	mg/L			09/24/15 21:25	1

TestAmerica Richland

September 30, 2015
Client Sample Results

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

TestAmerica Job ID: 300-867-1
SDG: WC0369

Client Sample ID: B32764
Date Collected: 09/24/15 11:54
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-8
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.025		0.0040	0.0015	mg/L			09/24/15 21:28	1

Client Sample ID: B32788
Date Collected: 09/24/15 09:02
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-9
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.026		0.0040	0.0015	mg/L			09/24/15 21:28	1

Client Sample ID: B32787
Date Collected: 09/24/15 09:02
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-10
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.025		0.0040	0.0015	mg/L			09/24/15 21:28	1

Client Sample ID: B32792
Date Collected: 09/24/15 12:21
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-11
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.023		0.0040	0.0015	mg/L			09/24/15 21:29	1

Client Sample ID: B32790
Date Collected: 09/24/15 12:21
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-12
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.028		0.0040	0.0015	mg/L			09/24/15 21:29	1

Client Sample ID: B32791
Date Collected: 09/24/15 12:21
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-13
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.027		0.0040	0.0015	mg/L			09/24/15 21:29	1

Client Sample ID: B32793
Date Collected: 09/24/15 12:21
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-14
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0088		0.0040	0.0015	mg/L			09/24/15 21:29	1

TestAmerica Richland

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

TestAmerica Job ID: 300-867-1
 SDG: WC0369

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 300-1237/17
Matrix: Water
Analysis Batch: 1237

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	-		09/24/15 21:19	1

Lab Sample ID: LCS 300-1237/18
Matrix: Water
Analysis Batch: 1237

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	0.264		mg/L	-	106	80 - 120

Lab Sample ID: 300-867-1 MS
Matrix: Water
Analysis Batch: 1237

Client Sample ID: B32755
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.024		0.0499	0.0765		mg/L	-	105	85 - 115

Lab Sample ID: 300-867-1 DU
Matrix: Water
Analysis Batch: 1237

Client Sample ID: B32755
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cr (VI)	0.024		0.0237		mg/L	-	1	20

September 30, 2015
QC Association Summary

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

TestAmerica Job ID: 300-867-1
SDG: WC0369

General Chemistry

Analysis Batch: 1237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-867-1	B32755	Total/NA	Water	7196A	
300-867-1 DU	B32755	Total/NA	Water	7196A	
300-867-1 MS	B32755	Total/NA	Water	7196A	
300-867-2	B32756	Total/NA	Water	7196A	
300-867-3	B32758	Total/NA	Water	7196A	
300-867-4	B32759	Total/NA	Water	7196A	
300-867-5	B32761	Total/NA	Water	7196A	
300-867-6	B32762	Total/NA	Water	7196A	
300-867-7	B32765	Total/NA	Water	7196A	
300-867-8	B32764	Total/NA	Water	7196A	
300-867-9	B32788	Total/NA	Water	7196A	
300-867-10	B32787	Total/NA	Water	7196A	
300-867-11	B32792	Total/NA	Water	7196A	
300-867-12	B32790	Total/NA	Water	7196A	
300-867-13	B32791	Total/NA	Water	7196A	
300-867-14	B32793	Total/NA	Water	7196A	
LCS 300-1237/18	Lab Control Sample	Total/NA	Water	7196A	
MB 300-1237/17	Method Blank	Total/NA	Water	7196A	

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

TestAmerica Job ID: 300-867-1
SDG: WC0369

Client Sample ID: B32755
Date Collected: 09/24/15 08:43
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-1
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			1237	09/24/15 21:20	AMC	TAL RCH

Client Sample ID: B32756
Date Collected: 09/24/15 08:43
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-2
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			1237	09/24/15 21:23	AMC	TAL RCH

Client Sample ID: B32758
Date Collected: 09/24/15 09:43
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-3
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			1237	09/24/15 21:23	AMC	TAL RCH

Client Sample ID: B32759
Date Collected: 09/24/15 09:43
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-4
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			1237	09/24/15 21:23	AMC	TAL RCH

Client Sample ID: B32761
Date Collected: 09/24/15 10:27
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-5
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			1237	09/24/15 21:24	AMC	TAL RCH

Client Sample ID: B32762
Date Collected: 09/24/15 10:27
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-6
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			1237	09/24/15 21:25	AMC	TAL RCH

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

TestAmerica Job ID: 300-867-1
 SDG: WC0369

Client Sample ID: B32765
Date Collected: 09/24/15 11:54
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-7
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			1237	09/24/15 21:25	AMC	TAL RCH

Client Sample ID: B32764
Date Collected: 09/24/15 11:54
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-8
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			1237	09/24/15 21:28	AMC	TAL RCH

Client Sample ID: B32788
Date Collected: 09/24/15 09:02
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-9
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			1237	09/24/15 21:28	AMC	TAL RCH

Client Sample ID: B32787
Date Collected: 09/24/15 09:02
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-10
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			1237	09/24/15 21:28	AMC	TAL RCH

Client Sample ID: B32792
Date Collected: 09/24/15 12:21
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-11
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			1237	09/24/15 21:29	AMC	TAL RCH

Client Sample ID: B32790
Date Collected: 09/24/15 12:21
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-12
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			1237	09/24/15 21:29	AMC	TAL RCH

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

TestAmerica Job ID: 300-867-1
SDG: WC0369

Client Sample ID: B32791
Date Collected: 09/24/15 12:21
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-13
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			1237	09/24/15 21:29	AMC	TAL RCH

Client Sample ID: B32793
Date Collected: 09/24/15 12:21
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-14
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			1237	09/24/15 21:29	AMC	TAL RCH

Client Sample ID: B32755
Date Collected: 09/24/15 08:43
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-1 DU
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1			1237	09/24/15 21:20	AMC	TAL RCH

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

Lab Sample ID: LCS 300-1237/18
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			1237	09/24/15 21:19	AMC	TAL RCH

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

Lab Sample ID: MB 300-1237/17
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			1237	09/24/15 21:19	AMC	TAL RCH

Client Sample ID: B32755
Date Collected: 09/24/15 08:43
Date Received: 09/24/15 14:30

Lab Sample ID: 300-867-1 MS
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1		3.0 mL	1237	09/24/15 21:20	AMC	TAL RCH

Laboratory References:

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

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

TestAmerica Job ID: 300-867-1
SDG: WC0369

Method	Method Description	Protocol	Laboratory
7196A	Chromium, Hexavalent	SW846	TAL RCH

Protocol References:

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



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

TestAmerica Job ID: 300-867-1
 SDG: WC0369

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-867-1	B32755	Water	09/24/15 08:43	09/24/15 14:30
300-867-2	B32756	Water	09/24/15 08:43	09/24/15 14:30
300-867-3	B32758	Water	09/24/15 09:43	09/24/15 14:30
300-867-4	B32759	Water	09/24/15 09:43	09/24/15 14:30
300-867-5	B32761	Water	09/24/15 10:27	09/24/15 14:30
300-867-6	B32762	Water	09/24/15 10:27	09/24/15 14:30
300-867-7	B32765	Water	09/24/15 11:54	09/24/15 14:30
300-867-8	B32764	Water	09/24/15 11:54	09/24/15 14:30
300-867-9	B32788	Water	09/24/15 09:02	09/24/15 14:30
300-867-10	B32787	Water	09/24/15 09:02	09/24/15 14:30
300-867-11	B32792	Water	09/24/15 12:21	09/24/15 14:30
300-867-12	B32790	Water	09/24/15 12:21	09/24/15 14:30
300-867-13	B32791	Water	09/24/15 12:21	09/24/15 14:30
300-867-14	B32793	Water	09/24/15 12:21	09/24/15 14:30



Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 300-867-1

SDG Number: WC0369

Login Number: 867

List Number: 1

Creator: Friesz, Jordan D

List Source: TestAmerica Richland

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

