

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: 300-878-1  
TestAmerica Sample Delivery Group: WC0375  
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 12:22:40 PM

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

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:  
[www.testamericainc.com](http://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 Chemical

TestAmerica Job ID: 300-878-1  
 SDG: WC0375

**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  
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TestAmerica Job ID: 300-878-1  
SDG: WC0375

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**Job ID: 300-878-1**

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**Laboratory: TestAmerica Richland**

**Narrative**

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**Job Narrative  
300-878-1**

**Comments**

No additional comments.

**Receipt**

The samples were received on 9/25/2015 2:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 6.0° 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. #  
**X15-046-037**

Page 1 of 1

Collector	<b>DL Floyd/CHPRC</b>	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 <b>78 / 41</b>	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
<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b>			<b>PRIORITY</b>		
*** 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			<b>SPECIAL INSTRUCTIONS</b>		
			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
B32768	Y		SEP 25 2015	08:42	1x60-ml aG	7196_CR6: COMMON	24 Hours	Cool <=6C
B32767	N		W		1x60-ml aG	7196_CR6: COMMON	24 Hours	Cool <=6C

September 30, 2015



300-878 COC

# 878  
WCC0375

Relinquished By	<b>DL Floyd/CHPRC</b>	Print	Sign	Date/Time	SEP 25 2015	1440	Received By	<b>J. Friesz, TARL</b>	Print	Sign	Date/Time	SEP 25 2015	1440	Matrix *
Relinquished By				Date/Time			Received By				Date/Time			S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By				Date/Time			Received By				Date/Time			DS = Drum Solids DL = Drum Liquids T = Tissue WT = Wipe L = Liquid V = Vegetation X = Other

<b>FINAL SAMPLE DISPOSITION</b>	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. #

**X15-046-038**

Page 1 of 1

Collector	<b>DL Floyd/CHPRC</b>	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 / 41</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
<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b>			<b>SPECIAL INSTRUCTIONS</b>		
*** 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 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
B32771	Y	SEP 25 2015	0641	1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C
B32770	N	W	V	1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C

September 30, 2015

#878  
W06375

Relinquished By	<b>DL Floyd/CHPRC</b>	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
Relinquished By	<i>[Signature]</i>			SEP 25 2015 1440	<i>[Signature]</i>	<b>J. Bock, TARL</b>		SEP 25 2015 1440	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	
Relinquished By				Date/Time	Received By			Date/Time	

<b>FINAL SAMPLE DISPOSITION</b>	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. #  
**X15-046-039**

Page 1 of 1

Collector	<b>DL Foydcjhrs</b>	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-50678 / 41	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
<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b>			<b>SPECIAL INSTRUCTIONS</b>		
*** 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
B32773	N	SEP 25 2015	0630	1x60-ml aG	7196_CR6: COMMON	24 Hours	Cool <=6C
B32775	Y	W	↓	1x60-ml aG	7196_CR6: COMMON	24 Hours	Cool <=6C

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#8719  
W C0375

Relinquished By	<b>DL Foydcjhrs</b>	Print	Sign	Date/Time	Received By	<b>J. Friesz, TARL</b>	Print	Sign	Date/Time	Matrix *
Relinquished By				SEP 25 2015 1440	Received By				SEP 25 2015 1440	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By					Received By					DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
Relinquished By					Received By					
<b>FINAL SAMPLE DISPOSITION</b>					Disposal Method (e.g., Return to customer, per lab procedure, used in process)					
PRINTED ON 7/29/2015					FSR ID = FSR2317					

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #  
**X15-046-040**

Collector	DL Floyd/CERC	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>18/41</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
<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b>			<b>SPECIAL INSTRUCTIONS</b>		
*** 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
B32776	Y	SEP 25 2015	1135	1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C
B32774	N			1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C

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#1878  
W00375

Relinquished By	Print Sign	Date/Time	Received By	Print Sign	Date/Time	<b>Matrix *</b> 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>[Signature]</i>	SEP 25 2015	Received By	J. Bock, TARL	SEP 25 2015	
Relinquished By			Received By			
Relinquished By			Received By			
<b>FINAL SAMPLE DISPOSITION</b> 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. #  
**X15-046-041**  
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Collector	DL Floyd/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>178/41</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
<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b>			<b>SPECIAL INSTRUCTIONS</b>		
*** 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
B32779	Y	SEP 25 2015	1235	1x60-ml aG	7196_CR6: COMMON	24 Hours	Cool <=6C
B32778	N	W	↓	1x60-ml aG	7196_CR6: COMMON	24 Hours	Cool <=6C

September 30, 2015

#878  
W0375

Relinquished By	Print DL Floyd/CHPRC	Sign 	Date/Time SEP 25 2015 1440	Received By	Print J. Bock, TARL	Sign 	Date/Time SEP 25 2015 1440	<b>Matrix *</b> 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			Date/Time	Received By				
Relinquished By			Date/Time	Received By				
Relinquished By			Date/Time	Received By				
<b>FINAL SAMPLE DISPOSITION</b>		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. #  
**X15-046-047**  
Page 1 of 1

Collector	<b>DL Floyd/CHPRC</b>	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 <b>78/41</b>	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
<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b>			<b>SPECIAL INSTRUCTIONS</b>		
*** 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
B32795	N	SEP 25 2015	1210	1x60-ml aG	7196_CRG: COMMON	24 Hours	Cool <=6C
B32796	Y	W	1210	1x60-ml aG	7196_CRG: COMMON	24 Hours	Cool <=6C

September 30, 2015

#878  
W6375

Relinquished By	Print <i>[Signature]</i>	Sign	Date/Time SEP 25 2015 1440	Received By	Print <i>[Signature]</i>	Sign	Date/Time SEP 25 2015 1440	Matrix *
Relinquished By	<b>DL Floyd/CHPRC</b>			Received By	<b>J. Bock, TARL</b>			S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By				Received By				DS = Drum Solids DL = Drum Liquids T = Tissue WT = Wipe L = Liquid V = Vegetation X = Other
Relinquished By				Received By				
FINAL SAMPLE DISPOSITION				Disposal Method (e.g., Return to customer, per lab procedure, used in process)				Date/Time

Collector	DL Foye/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 <i>RB/41</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 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
B32798	N		SEP 25 2015	1303	1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C
B32799	Y	W			1x60-mL aG	7196_CR6: COMMON	24 Hours	Cool <=6C

September 30, 2015

#878  
WC0375

Relinquished By	DL Foye/CHPRC	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	Matrix *
Relinquished By				SEP 25 2015 1440	<i>Jack</i>	J. Bock, TARL		SEP 25 2015 1440	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By					Received By				DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
Relinquished By					Received By				
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By		Date/Time		

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

TestAmerica Job ID: 300-878-1  
 SDG: WC0375

**Client Sample ID: B32768**

**Lab Sample ID: 300-878-1**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.021		0.0040	0.0015	mg/L	1		7196A	Total/NA

**Client Sample ID: B32767**

**Lab Sample ID: 300-878-2**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.021		0.0040	0.0015	mg/L	1		7196A	Total/NA

**Client Sample ID: B32771**

**Lab Sample ID: 300-878-3**

No Detections.

**Client Sample ID: B32770**

**Lab Sample ID: 300-878-4**

No Detections.

**Client Sample ID: B32773**

**Lab Sample ID: 300-878-5**

No Detections.

**Client Sample ID: B32775**

**Lab Sample ID: 300-878-6**

No Detections.

**Client Sample ID: B32776**

**Lab Sample ID: 300-878-7**

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: B32774**

**Lab Sample ID: 300-878-8**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.018		0.0040	0.0015	mg/L	1		7196A	Total/NA

**Client Sample ID: B32779**

**Lab Sample ID: 300-878-9**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.018		0.0040	0.0015	mg/L	1		7196A	Total/NA

**Client Sample ID: B32778**

**Lab Sample ID: 300-878-10**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.018		0.0040	0.0015	mg/L	1		7196A	Total/NA

**Client Sample ID: B32795**

**Lab Sample ID: 300-878-11**

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

**Client Sample ID: B32796**

**Lab Sample ID: 300-878-12**

No Detections.

This Detection Summary does not include radiochemical test results.

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

TestAmerica Job ID: 300-878-1  
 SDG: WC0375

**Client Sample ID: B32798**

**Lab Sample ID: 300-878-13**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.020		0.0040	0.0015	mg/L	1		7196A	Total/NA

**Client Sample ID: B32799**

**Lab Sample ID: 300-878-14**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.019		0.0040	0.0015	mg/L	1		7196A	Total/NA

This Detection Summary does not include radiochemical test results.



September 30, 2015  
Client Sample Results

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

TestAmerica Job ID: 300-878-1  
SDG: WC0375

**Client Sample ID: B32768**  
Date Collected: 09/25/15 08:42  
Date Received: 09/25/15 14:40

**Lab Sample ID: 300-878-1**  
Matrix: Water

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.021		0.0040	0.0015	mg/L			09/25/15 16:42	1

**Client Sample ID: B32767**  
Date Collected: 09/25/15 08:42  
Date Received: 09/25/15 14:40

**Lab Sample ID: 300-878-2**  
Matrix: Water

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.021		0.0040	0.0015	mg/L			09/25/15 16:42	1

**Client Sample ID: B32771**  
Date Collected: 09/25/15 09:41  
Date Received: 09/25/15 14:40

**Lab Sample ID: 300-878-3**  
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			09/25/15 16:42	1

**Client Sample ID: B32770**  
Date Collected: 09/25/15 09:41  
Date Received: 09/25/15 14:40

**Lab Sample ID: 300-878-4**  
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			09/25/15 16:43	1

**Client Sample ID: B32773**  
Date Collected: 09/25/15 06:30  
Date Received: 09/25/15 14:40

**Lab Sample ID: 300-878-5**  
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			09/25/15 16:43	1

**Client Sample ID: B32775**  
Date Collected: 09/25/15 06:30  
Date Received: 09/25/15 14:40

**Lab Sample ID: 300-878-6**  
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			09/25/15 16:43	1

**Client Sample ID: B32776**  
Date Collected: 09/25/15 11:35  
Date Received: 09/25/15 14:40

**Lab Sample ID: 300-878-7**  
Matrix: Water

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.010		0.0040	0.0015	mg/L			09/25/15 16:47	1

TestAmerica Richland

September 30, 2015  
Client Sample Results

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

TestAmerica Job ID: 300-878-1  
SDG: WC0375

**Client Sample ID: B32774**  
Date Collected: 09/25/15 11:35  
Date Received: 09/25/15 14:40

**Lab Sample ID: 300-878-8**  
Matrix: Water

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.018		0.0040	0.0015	mg/L	-		09/25/15 16:47	1

**Client Sample ID: B32779**  
Date Collected: 09/25/15 12:35  
Date Received: 09/25/15 14:40

**Lab Sample ID: 300-878-9**  
Matrix: Water

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.018		0.0040	0.0015	mg/L	-		09/25/15 16:47	1

**Client Sample ID: B32778**  
Date Collected: 09/25/15 12:35  
Date Received: 09/25/15 14:40

**Lab Sample ID: 300-878-10**  
Matrix: Water

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.018		0.0040	0.0015	mg/L	-		09/25/15 16:48	1

**Client Sample ID: B32795**  
Date Collected: 09/25/15 10:16  
Date Received: 09/25/15 14:40

**Lab Sample ID: 300-878-11**  
Matrix: Water

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.011		0.0040	0.0015	mg/L	-		09/25/15 16:48	1

**Client Sample ID: B32796**  
Date Collected: 09/25/15 10:16  
Date Received: 09/25/15 14:40

**Lab Sample ID: 300-878-12**  
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	-		09/25/15 16:48	1

**Client Sample ID: B32798**  
Date Collected: 09/25/15 13:03  
Date Received: 09/25/15 14:40

**Lab Sample ID: 300-878-13**  
Matrix: Water

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.020		0.0040	0.0015	mg/L	-		09/25/15 16:48	1

**Client Sample ID: B32799**  
Date Collected: 09/25/15 13:03  
Date Received: 09/25/15 14:40

**Lab Sample ID: 300-878-14**  
Matrix: Water

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.019		0.0040	0.0015	mg/L	-		09/25/15 16:51	1

TestAmerica Richland

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

TestAmerica Job ID: 300-878-1  
 SDG: WC0375

**Method: 7196A - Chromium, Hexavalent**

**Lab Sample ID: MB 300-1242/3**  
**Matrix: Water**  
**Analysis Batch: 1242**

**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	-		09/25/15 16:38	1

**Lab Sample ID: LCS 300-1242/4**  
**Matrix: Water**  
**Analysis Batch: 1242**

**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	0.246		mg/L	-	98	80 - 120

**Lab Sample ID: 300-878-1 MS**  
**Matrix: Water**  
**Analysis Batch: 1242**

**Client Sample ID: B32768**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.021		0.0499	0.0697		mg/L	-	98	85 - 115

**Lab Sample ID: 300-878-1 DU**  
**Matrix: Water**  
**Analysis Batch: 1242**

**Client Sample ID: B32768**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cr (VI)	0.021		0.0208		mg/L	-	1	20

September 30, 2015  
**QC Association Summary**

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

TestAmerica Job ID: 300-878-1  
SDG: WC0375

**General Chemistry**

**Analysis Batch: 1242**

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-878-1	B32768	Total/NA	Water	7196A	
300-878-1 DU	B32768	Total/NA	Water	7196A	
300-878-1 MS	B32768	Total/NA	Water	7196A	
300-878-2	B32767	Total/NA	Water	7196A	
300-878-3	B32771	Total/NA	Water	7196A	
300-878-4	B32770	Total/NA	Water	7196A	
300-878-5	B32773	Total/NA	Water	7196A	
300-878-6	B32775	Total/NA	Water	7196A	
300-878-7	B32776	Total/NA	Water	7196A	
300-878-8	B32774	Total/NA	Water	7196A	
300-878-9	B32779	Total/NA	Water	7196A	
300-878-10	B32778	Total/NA	Water	7196A	
300-878-11	B32795	Total/NA	Water	7196A	
300-878-12	B32796	Total/NA	Water	7196A	
300-878-13	B32798	Total/NA	Water	7196A	
300-878-14	B32799	Total/NA	Water	7196A	
LCS 300-1242/4	Lab Control Sample	Total/NA	Water	7196A	
MB 300-1242/3	Method Blank	Total/NA	Water	7196A	

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

TestAmerica Job ID: 300-878-1  
SDG: WC0375

**Client Sample ID: B32768**  
**Date Collected: 09/25/15 08:42**  
**Date Received: 09/25/15 14:40**

**Lab Sample ID: 300-878-1**  
**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			1242	09/25/15 16:42	AMC	TAL RCH

**Client Sample ID: B32767**  
**Date Collected: 09/25/15 08:42**  
**Date Received: 09/25/15 14:40**

**Lab Sample ID: 300-878-2**  
**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			1242	09/25/15 16:42	AMC	TAL RCH

**Client Sample ID: B32771**  
**Date Collected: 09/25/15 09:41**  
**Date Received: 09/25/15 14:40**

**Lab Sample ID: 300-878-3**  
**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			1242	09/25/15 16:42	AMC	TAL RCH

**Client Sample ID: B32770**  
**Date Collected: 09/25/15 09:41**  
**Date Received: 09/25/15 14:40**

**Lab Sample ID: 300-878-4**  
**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			1242	09/25/15 16:43	AMC	TAL RCH

**Client Sample ID: B32773**  
**Date Collected: 09/25/15 06:30**  
**Date Received: 09/25/15 14:40**

**Lab Sample ID: 300-878-5**  
**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			1242	09/25/15 16:43	AMC	TAL RCH

**Client Sample ID: B32775**  
**Date Collected: 09/25/15 06:30**  
**Date Received: 09/25/15 14:40**

**Lab Sample ID: 300-878-6**  
**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			1242	09/25/15 16:43	AMC	TAL RCH

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

TestAmerica Job ID: 300-878-1  
SDG: WC0375

**Client Sample ID: B32776**  
**Date Collected: 09/25/15 11:35**  
**Date Received: 09/25/15 14:40**

**Lab Sample ID: 300-878-7**  
**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			1242	09/25/15 16:47	AMC	TAL RCH

**Client Sample ID: B32774**  
**Date Collected: 09/25/15 11:35**  
**Date Received: 09/25/15 14:40**

**Lab Sample ID: 300-878-8**  
**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			1242	09/25/15 16:47	AMC	TAL RCH

**Client Sample ID: B32779**  
**Date Collected: 09/25/15 12:35**  
**Date Received: 09/25/15 14:40**

**Lab Sample ID: 300-878-9**  
**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			1242	09/25/15 16:47	AMC	TAL RCH

**Client Sample ID: B32778**  
**Date Collected: 09/25/15 12:35**  
**Date Received: 09/25/15 14:40**

**Lab Sample ID: 300-878-10**  
**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			1242	09/25/15 16:48	AMC	TAL RCH

**Client Sample ID: B32795**  
**Date Collected: 09/25/15 10:16**  
**Date Received: 09/25/15 14:40**

**Lab Sample ID: 300-878-11**  
**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			1242	09/25/15 16:48	AMC	TAL RCH

**Client Sample ID: B32796**  
**Date Collected: 09/25/15 10:16**  
**Date Received: 09/25/15 14:40**

**Lab Sample ID: 300-878-12**  
**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			1242	09/25/15 16:48	AMC	TAL RCH

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

TestAmerica Job ID: 300-878-1  
SDG: WC0375

**Client Sample ID: B32798**  
**Date Collected: 09/25/15 13:03**  
**Date Received: 09/25/15 14:40**

**Lab Sample ID: 300-878-13**  
**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			1242	09/25/15 16:48	AMC	TAL RCH

**Client Sample ID: B32799**  
**Date Collected: 09/25/15 13:03**  
**Date Received: 09/25/15 14:40**

**Lab Sample ID: 300-878-14**  
**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			1242	09/25/15 16:51	AMC	TAL RCH

**Client Sample ID: B32768**  
**Date Collected: 09/25/15 08:42**  
**Date Received: 09/25/15 14:40**

**Lab Sample ID: 300-878-1 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			1242	09/25/15 16:42	AMC	TAL RCH

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

**Lab Sample ID: LCS 300-1242/4**  
**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			1242	09/25/15 16:39	AMC	TAL RCH

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

**Lab Sample ID: MB 300-1242/3**  
**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			1242	09/25/15 16:38	AMC	TAL RCH

**Client Sample ID: B32768**  
**Date Collected: 09/25/15 08:42**  
**Date Received: 09/25/15 14:40**

**Lab Sample ID: 300-878-1 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	1242	09/25/15 16:39	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: 300-878-1  
SDG: WC0375

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

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**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: 300-878-1  
 SDG: WC0375

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-878-1	B32768	Water	09/25/15 08:42	09/25/15 14:40
300-878-2	B32767	Water	09/25/15 08:42	09/25/15 14:40
300-878-3	B32771	Water	09/25/15 09:41	09/25/15 14:40
300-878-4	B32770	Water	09/25/15 09:41	09/25/15 14:40
300-878-5	B32773	Water	09/25/15 06:30	09/25/15 14:40
300-878-6	B32775	Water	09/25/15 06:30	09/25/15 14:40
300-878-7	B32776	Water	09/25/15 11:35	09/25/15 14:40
300-878-8	B32774	Water	09/25/15 11:35	09/25/15 14:40
300-878-9	B32779	Water	09/25/15 12:35	09/25/15 14:40
300-878-10	B32778	Water	09/25/15 12:35	09/25/15 14:40
300-878-11	B32795	Water	09/25/15 10:16	09/25/15 14:40
300-878-12	B32796	Water	09/25/15 10:16	09/25/15 14:40
300-878-13	B32798	Water	09/25/15 13:03	09/25/15 14:40
300-878-14	B32799	Water	09/25/15 13:03	09/25/15 14:40



Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 300-878-1  
SDG Number: WC0375

**Login Number: 878**  
**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	

