

JULY 28, 2015

Analytical Data Package Prepared For  
**CH2M Hill Plateau Remediation**

Chemical Analysis By  
**TestAmerica Inc**

*2800 G.W. Way, Richland Wa, 99354, (509)-375-3131.*

Assigned Laboratory Code: TARL  
Data Package Contains 8 Pages

Report No.: 66672

Results in this report relate only to the sample(s) analyzed.

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
WC0175	X15-037	B31KC0	J5G210424-2	M7AWC1AA	M7AWC1AA	5202055
		B31KC1	J5G210424-1	M7AWA1AA	M7AWA1AA	5202055
		B31KC3	J5G210424-3	M7AWD1AA	M7AWD1AA	5202055
		B31KC4	J5G210424-4	M7AWE1AA	M7AWE1AA	5202055
		B31KC4 DUP	J5G210424-4	M7AWE1AC	M7AWE1AC	5202055

Sample Date: 7/21/2015

Receipt Date: 7/21/2015

Data Deliverable: 7/28/2015

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. 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 following signature.

Reviewed and Approved:



Digitally signed by Whitney  
Ritari  
Date: 2015.07.28 11:06:39  
-07'00

Project Manager

JULY 28, 2015



## Certificate of Analysis

CH2M Hill Plateau Remediation Company  
P.O. Box 1600  
Mail Stop – R3-60  
Richland, WA 99352

July 28, 2015

Attention: Scot Fitzgerald

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SAF Number	:	X15-037
Date SDG Closed	:	July 21, 2015
Number of Samples	:	Four (4)
Sample Type	:	Water
SDG Number	:	WC0175
Data Deliverable	:	7- Day/ Summary

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### CASE NARRATIVE

#### **I. Introduction**

On July 21, 2015, four samples were received at TestAmerica (TARL). Upon receipt, the samples were assigned laboratory ID numbers to correspond with the CH2M specific IDs.

#### **II. Sample Receipt**

The samples were received in good condition and no anomalies were noted during check-in.

#### **III. Analytical Results/Methodology**

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors.

The requested analyses were:

#### **Chemical Analysis**

Hexavalent Chromium by EPA method 7196A

#### **IV. Quality Control**

The analytical results for each analysis performed includes a minimum of one laboratory control sample (LCS), one method (reagent) blank, and one duplicate sample analysis. Any exceptions have been noted in the "Comments" section.

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CH2M Hill Plateau Remediation Company

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The sample/ sample duplicate RPD agreement is not applicable if one or both results are less than five times the MDL.

QC and sample results are reported in the same units.

**V. Comments**  
**Chemical Analysis**

Hexavalent Chromium by EPA method 7196A

No analytical or quality issues were noted. The sample results and associated batch QC results are within contractual requirements.

We certify that this data package is in compliance with the SOW, both technically and for completeness, including a full description of, explanation of, and corrective actions for, any and all deviations, from either the analyses requested or the case narrative requested. Release of the data contained in this hard copy data package has been authorized by the Laboratory Analytical Manager (or designee) and the laboratory's client services representative as verified by their signatures on this report.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #  
**X15-037-071**  
Page 1 of 1

Collector	s.w. King/CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	X15-037	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303269
Project Title	100-BC-5 RI, JULY 2015	Logbook No.	HNF-N-50613 / 85	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:	7 Days	Offsite Property No.	N/A

**POSSIBLE SAMPLE HAZARDS/REMARKS**  
 \*\*\* \*\* Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes  No

N/A

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B31KC1	Y		JUL 21 2015	1154	1x60-mL aG	COMMON	24 Hours	Cool <=6C
B31KC0	N				1x60-mL aG	COMMON	24 Hours	Cool <=6C

SS6210424  
WCOINS  
Due 7-28-15

JULY 28, 2015

Relinquished By s.w. King/CHPRC	Print <i>[Signature]</i>	Sign J. Bock, TARL	Received By <i>[Signature]</i>	Date/Time JUL 21 2015 1305	Date/Time JUL 21 2015 1305	Matrix *
Relinquished By	Print	Sign	Received By	Date/Time	Date/Time	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
Relinquished By	Print	Sign	Received By	Date/Time	Date/Time	
Relinquished By	Print	Sign	Received By	Date/Time	Date/Time	
<b>FINAL SAMPLE DISPOSITION</b>	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.#  
**X15-037-072**

Page 1 of 1

Collector	S.W. King/CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	X15-037	Sampling Origin	Hanford Site	Purchase Order/Charge Code	303269
Project Title	100-BC-5 RI, JULY 2015	Logbook No.	HNF-N-506 <b>73/85</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:	7 Days	Offsite Property No.	N/A

**POSSIBLE SAMPLE HAZARDS/REMARKS**  
 \*\*\* \*\* Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

SPECIAL INSTRUCTIONS: Hold Time: N/A  
 Total Activity Exemption: Yes  No

Sample No.	Filter	* Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B31KC3	N	<b>JUL 21 2015</b>	<b>1213</b>	1x60-mL aG	COMMON	24 Hours	Cool <=6C
B31KC4	Y	<b>↓</b>	<b>↓</b>	1x60-mL aG	COMMON	24 Hours	Cool <=6C

*SS610404  
WCDINS  
Dm 7-24-15*

**JULY 28, 2015**

Relinquished By	S.W. King/CHPRC	Print	<i>[Signature]</i>	Sign		Received By	<i>[Signature]</i>	Sign		Date/Time	<b>JUL 21 2015</b>	Date/Time	<b>JUL 21 2015</b>	Matrix *
Relinquished By						Received By				Date/Time		Date/Time		
Relinquished By						Received By				Date/Time		Date/Time		
Relinquished By						Received By				Date/Time		Date/Time		

**FINAL SAMPLE DISPOSITION**

Disposal Method (e.g., Return to customer, per lab procedure, used in process)

Disposed By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

THE LEADER IN ENVIRONMENTAL TESTING

Date/Time Received: 7-21-15 / 1325 Container GM Screen Result: (Airlock) 0 cpm Initials [B]  
Sample GM Screen Result (Sample Receiving) 0 cpm Initials [B]

Client: Qkw SDG #: WCD175 SAF #: X15-037 NA [ ]

Lot Number: J56210424

Chain of Custody # X15-037-071, 072

Shipping Container ID or Air Bill Number : \_\_\_\_\_ NA [B]

Samples received inside shipping container/cooler/box Yes [B] ] Continue with 1 through 4. Initial appropriate response.  
No [ ] ] Go to 5, add comment to #16.

- 1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [B]
- 2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [B]
- 3. Cooler temperature: 9.11 °C Ice NA [ ]
- 4. Vermiculite/packing materials is NA [B] ] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

- 5. Chain of Custody record present? Yes [B] ] No [ ]
- 6. Number of samples received (Each sample may contain multiple bottles): 4
- 7. Containers received: 4x 60ml AB

- 8. Sample holding times exceeded? NA [ ] Yes [ ] No [B] ]
- 9. Samples have: \_\_\_\_\_ tape \_\_\_\_\_ hazard labels [B] custody seals [B] appropriate sample labels [B]
- 10. Matrix: \_\_\_\_\_ A (FLT, Wipe, Solid, Soil) [B] I (Water) \_\_\_\_\_ S (Air, Niosh 7400) \_\_\_\_\_ T (Biological, Ni-63)

11. Samples:  
[B] are in good condition \_\_\_\_\_ are leaking \_\_\_\_\_ are broken  
[B] have air bubbles (Only for samples requiring no head space) \_\_\_\_\_ Other \_\_\_\_\_

12. Sample pH appropriate for analysis requested Yes [B] ] No [ ] NA [ ]  
(If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO<sub>3</sub> added and pH after addition on table)

13. Were any anomalies identified in sample receipt? Yes [ ] No [B] ]

14. Description of anomalies (include sample numbers): NA [B] ] \_\_\_\_\_

15. Sample Location, Sample Collector Listed on COC? \* Yes [B] ] No [ ]  
\*For documentation only. No corrective action needed.

16. Additional Information: w/A

[ ] Client/Courier denied temperature check. [ ] Client/Courier unpack cooler.

Sample Check-in List completed by Sample Custodian:

Signature: [Signature] Date: 7-21-15

Client Notification needed? Yes [ ] No [B] Date: \_\_\_\_\_  
By: \_\_\_\_\_  
Person contacted: \_\_\_\_\_

[B] No action necessary; process as is

Project Manager [Signature] Date 7/22/15

**JULY 28, 2015**

**Sample Results Summary**

**Date:** 28-Jul-15

**TestAmerica Inc TARL**

Ordered by Method, Batch No., Client Sample ID.

**Report No. :** 66672

**SDG No:** WC0175

Batch Client ID	Date Sampled	Work Order No.	Parameter	Result	Qual	Units	MDL	RL	Date Analyzed	Dil Fct
<b>5202055 7196_CR6 ,WATER</b>										
B31KC0	07/21/15 11:54	M7AWC1AA	HEXCHROME	<b>0.0171</b>		mg/L	0.0015	0.004	07/21/15 19:29	1
B31KC1	07/21/15 11:54	M7AWA1AA	HEXCHROME	<b>0.0166</b>		mg/L	0.0015	0.004	07/21/15 19:26	1
B31KC3	07/21/15 12:13	M7AWD1AA	HEXCHROME	<b>0.0209</b>		mg/L	0.0015	0.004	07/21/15 19:29	1
B31KC4	07/21/15 12:13	M7AWE1AA	HEXCHROME	<b>0.0212</b>		mg/L	0.0015	0.004	07/21/15 19:30	1

No. of Results: 4

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QC Results Summary  
TestAmerica Inc TARL  
Ordered by Method, Batch No, QC Type,.

Date: 28-Jul-15

Report No. : 66672

SDG No.: WC0175

Batch	Work Work No.	Parameter	Result	Qual	Units	LCS Recovery	MDL	RL	RPD	Dil Fct
<b>7196_CR6</b>										
5202055 MS, B31KC1	M7AWA1AC	HEXCHROME	0.0525		mg/L	105%	0.0015	0.004		1
5202055 DUP, B31KC4 DUP	M7AWE1AC	HEXCHROME	0.0213		mg/L		0.0015	0.004	0.5	1
5202055 BLANK,	M7AWV1AA	HEXCHROME	<0.00150 U		mg/L		0.0015	0.004		1
5202055 LCS,	M7AWV1AC	HEXCHROME	0.251		mg/L	100%	0.0015	0.004		1
No. of Results: 4										