

July 27, 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: TARK

Data Package Contains 7 Pages

Report No.: 66636

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.
WC0151	F15-027	B30RD0	J5G130422-1	M69FK1AA	9M69FK10	5203020
		B30RD0	J5G130422-1	M69FK1AD	M69FK1AD	5203020

Sample Date: 5/19/2015

Receipt Date: 6/11/2015

Data Deliverable: 7/27/2015

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: 2015.07.27 15:36:05  
-07'00

Project Manager

July 27, 2015



## Certificate of Analysis

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

July 27, 2015

Attention: Scot Fitzgerald

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SAF Number	:	F15-027
Date SDG Closed	:	July 6, 2015
Number of Samples	:	One (1)
Sample Type	:	Soil
SDG Number	:	WC0151
Data Deliverable	:	30- Day/ Summary

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### CASE NARRATIVE

#### **I. Introduction**

On June 11, 2015, one soil sample was received at TestAmerica (TARL). Upon receipt, the sample was assigned laboratory ID numbers to correspond with the CH2M specific IDs.

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

The sample was received in good condition and no anomalies were noted during check-in. This sample was originally logged in and analyzed as a part of SDG W07155. As per client request the sample was logged in for Hexavalent Chromium on July 6, 2015, and was logged in on the standard 30 day turnaround.

#### **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.

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.

July 27, 2015

## SAMPLE ISSUE RESOLUTION

SIR NUM	SIR15-340
REV NUM	0
DATE INITIATED	6/16/2015

### SAMPLE EVENT INFORMATION

SAF NUM(S) F15-027  
OPERABLE UNIT(S) 100-KR-2  
PROJECT(S) 100-KE FSB  
SAMPLE EVENT TITLE(S) Characterization Boreholes in UPR-100-K-1 and 1116-KE-3 Waste Sites  
LABORATORY TestAmerica Incorporated, Richland

### SAMPLING INFORMATION

NUMBER OF SAMPLES 1  
SAMPLE NUMBERS B30RD0  
SAMPLE MATRIX SOIL  
COLLECTION DATE 5/19/2015 - 5/19/2015  
SDG NUM W07155

### ISSUE BACKGROUND

CLASS Sample Management Issues  
TYPE Turnaround Time and Due Date Modification  
DESCRIPTION Sample B30RD0 was originally requested on a 7 day turn around. TARL had to divert the U isotopic analysis to TASL and the 7 day turn around was not achievable.

### DISPOSITION

DESCRIPTION Proposed Disposition: Extend the turn around time to 15 days (standard for soil) and report all analysis in a single data report.  
JUSTIFICATION Final Disposition: Accept proposed resolution  
SUBMITTED BY: Scot Fitzgerald DATE: 06/16/2015  
ACCEPTED BY: Whitney Ritari DATE: 06/16/2015

July 27, 2015

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F15-027-014	PAGE 1 OF 1
COLLECTOR B.W. Brotherton/CHPRC	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D	PRICE CODE COS J15 6/15	DATA TURNAROUND 45 Days + #5 Days 7 Days
SAMPLING LOCATION C8796, Interval 8 REQ	PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil	ACTUAL SAMPLE DEPTH 36.7-38.3	SAF NO. F15-027	AIR QUALITY <input type="checkbox"/>	METHOD OF SHIPMENT GOVERNMENT VEHICLE
ICE CHEST NO.	FIELD LOGBOOK NO. PWF# 645-3/4	OFFSITE PROPERTY NO. NIA	COA 303581	BILL OF LADING/AIR BILL NO. NIA	

MATRIX*	PRESERVATION	None
DL=Drum	HOLDING TIME	None
Liquids	TYPE OF CONTAINER	P
DS=Drum	NO. OF CONTAINER(S)	1
Solids	VOLUME	125mL
L=Liquid	SAMPLE ANALYSIS	SEE ITEM (U) IN SPECIAL INSTRUCTIONS
O=Oil	SAMPLE DATE	5-19-15
S=Soil	SAMPLE TIME	0853
SF=Sludgment	SPECIAL HANDLING AND/OR STORAGE	
T=Tissue	SAMPLE NO.	MATRIX*
V=Vegetation	B30RDD0	SOIL
W=Water		
WI=Wipe		
X=Other		

JSG130422 WMR 7/13/15  
 W00155 W C0151 WMR 7/13/15  
 Due to 8-0-15 WMR 7/13/15

MARJIE MURFK WMR 7/13/15  
 JSG130422 WMR 7/13/15



SPECIAL INSTRUCTIONS		RADSCREEN ALIQUOT TO BE SUB-SAMPLED BY LAB AND IS ON 24 HOUR TURN; ** The GKI associated with this SAF shall be provided to 222-S laboratory prior to sample receipt. TRVL-15-037	
RECEIVED BY / STORED IN		TRVL-15-037	
RELINQUISHED BY / REMOVED FROM D.W. Brotherton/CHPRC	DATE/TIME 6-11-15 0930	RECEIVED BY / STORED IN	DATE/TIME 6-11-15 1006
RELINQUISHED BY / REMOVED FROM SSU #2	DATE/TIME 6-11-15 0100	RECEIVED BY / STORED IN	DATE/TIME JUN 11 2015 1340
RELINQUISHED BY / REMOVED FROM E.L. Kainer/CHPRC	DATE/TIME JUN 11 2015 1400	RECEIVED BY / STORED IN	DATE/TIME JUN 11 2015 1345
RELINQUISHED BY / REMOVED FROM B.E. Briggs	DATE/TIME JUN 11 2015 1345	RECEIVED BY / STORED IN	DATE/TIME JUN 11 2015 1345
RELINQUISHED BY / REMOVED FROM	DATE/TIME	RECEIVED BY / STORED IN	DATE/TIME
RELINQUISHED BY / REMOVED FROM	DATE/TIME	RECEIVED BY / STORED IN	DATE/TIME
RELINQUISHED BY / REMOVED FROM	DATE/TIME	RECEIVED BY / STORED IN	DATE/TIME
RELINQUISHED BY / REMOVED FROM	DATE/TIME	RECEIVED BY / STORED IN	DATE/TIME
LABORATORY SECTION	RECEIVED BY	TITLE	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	
PRINTED ON 5/11/2015		A-6003-618 (REV 2)	

THE LEADER IN ENVIRONMENTAL TESTING  
Date/Time Received: 7-15-15 / 1500 Container GM Screen Result: (Airlock) N/A already in house cpm Initials BS  
7-13-15 Sample GM Screen Result (Sample Receiving) N/A cpm Initials BS

Client: FLH SDG #: WCO151 SAF #: F15-027 NA [ ]

Lot Number: J5G130422, Sample Id - m69FK

Chain of Custody # F15-027-014

Shipping Container ID or Air Bill Number : \_\_\_\_\_ NA BS

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

- 1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal WMR
- 2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal WMR
- 3. Cooler temperature: 3.4 °C on ice NA [ ]
- 4. Vermiculite/packing materials is NA Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

- 5. Chain of Custody record present? Yes WMR No [ ]
- 6. Number of samples received (Each sample may contain multiple bottles): 1
- 7. Containers received: 1 x 125 mL

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

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

- 12. Sample pH appropriate for analysis requested Yes [ ] No [ ] NA BS [ ]  
(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 BS [ ]
- 14. Description of anomalies (include sample numbers): NA BS [ ] \_\_\_\_\_

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

16. Additional Information: already in house, Client requested additional analysis, to be logged in a Chemical SDG.

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

Sample Check-in List completed by Sample Custodian:

Signature: Juan Carlos Date: 7-13-15

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

[ ] No action necessary; process as is

Project Manager Whitney Whitson Date 7/13/15



J5G130422

July 27, 2015

Sample Results Summary

Date: 27-Jul-15

TestAmerica Inc TARL

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

Report No. : 66636

SDG No: WC0151

Batch Client ID	Date Sampled	Work Order No.	Parameter	Result	Qual	Units	MDL	RL	Date Analyzed	Dil Fct
5203020 7196_CR6 ,SOIL										
B30RD0	05/19/15 8:53	M69FK1AA	HEXCHROME	0.603		mg/kg	0.155	0.155	07/23/15 12:58	

No. of Results: 1

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

Date: 27-Jul-15

Report No. : 66636

SDG No.: WC0151

Batch	Work Work No.	Parameter	Result	Qual	Units	LCS Recovery	MDL	RL	RPD	Dil Fct
<b>7196_CR6</b>										
5203020 DUP, B30RD0	M69FK1AD	HEXCHROME	0.603		mg/kg		0.155	0.155	0.0	
5203020 MS, B30RD0	M69FK1AC	HEXCHROME	30.1		mg/kg	93%	0.155	0.155		
5203020 LCS,	M7A2C1AC	HEXCHROME	18.7		mg/kg	94%	0.155	0.155		
5203020 BLANK,	M7A2C1AA	HEXCHROME	<0.155		mg/kg		0.155	0.155		

No. of Results: 4