

May 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 9 Pages

Report No.: 65898

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.
WC0065	F15-015	B30JL7	J5D290403-2	M6PPL1AA	M6PPL1AA	5119029
		B30JL7 DUP	J5D290403-2	M6PPL1AC	M6PPL1AC	5119029
		B30JL8	J5D290403-3	M6PPM1AA	M6PPM1AA	5119030
		B30JL8 DUP	J5D290403-3	M6PPM1AD	M6PPM1AD	5119030
		B30JM1	J5D290403-1	M6PPK1AA	M6PPK1AA	5119029

Sample Date: 4/28/2015

Receipt Date: 4/29/2015

Data Deliverable: 5/27/2015

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: 2015.05.27 17:20:08 -07'00'

Project Manager

May 27, 2015



Certificate of Analysis

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

May 27, 2015

Attention: Scot Fitzgerald

SAF Number	:	F15-015
Date SDG Closed	:	April 29, 2015
Number of Samples	:	Three (3)
Sample Type	:	Water
SDG Number	:	WC0065
Data Deliverable	:	30- Day/ Summary

CASE NARRATIVE

I. Introduction

April 29, 2015, three 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 sample was 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

Anions, Ion Chromatography by EPA method 300.0

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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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.

Anions, Ion Chromatography by EPA method 300.0

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.

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CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F15-015-069	PAGE 1 OF 1
COLLECTOR <i>J. Aguilar</i>	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 7H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C8950, I-003, screened interval	PROJECT DESIGNATION FY15 100-HR-3 Drilling - Water		SAF NO. F15-015	AIR QUALITY	
ICE CHEST NO.	FIELD LOGBOOK NO. <i>HMF-N-6452 / Pg 28</i>	ACTUAL SAMPLE DEPTH <i>38.32'</i>	COA 300115	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO TestAmerica Incorporated, Richland	OFFSITE PROPERTY NO.		BILL OF LADING/AIR BILL NO.		

MATRIX*	PRESERVATION	Cool <=6C
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.	HOLDING TIME	24 Hours
	TYPE OF CONTAINER	ag
	NO. OF CONTAINER(S)	1
	VOLUME	60mL
	SAMPLE ANALYSIS	7196.CRG: COMMON;
SPECIAL HANDLING AND/OR STORAGE		

J5D290403
SOG# WCO065



m6ppk

FILTER

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>J. Aguilar</i>	DATE/TIME 4-28-15 1455	RECEIVED BY/STORED IN <i>SSU #1</i>	DATE/TIME 4-28-15 1455	** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. ** All requests for Geotechnical Parameters will be given a unique HEIS sample number and be assigned to a separate COC. In addition, all split spoon sleeves will be properly stored until authorized for shipment. TRVL-15-030	
RELINQUISHED BY/REMOVED FROM <i>SSU-1</i>	DATE/TIME APR 29 2015	RECEIVED BY/STORED IN F.M. HAINCHPRC	DATE/TIME APR 29 2015	FILTER	
RELINQUISHED BY/REMOVED FROM <i>J. HAINCHPRC</i>	DATE/TIME APR 29 2015	RECEIVED BY/STORED IN J. FIEBEL, HAINCH	DATE/TIME APR 29 2015	TRVL-15-030	
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		DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	

May 27, 2015

J5D290403
WC0065

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F15-015-065	PAGE 1 OF 1
COLLECTOR J. Aguilar	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 7H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C8950, I-003, screened interval	PROJECT DESIGNATION FY15 100-HR-3 Drilling - Water	FIELD LOGBOOK NO. HNF-N-645-2 / Pg 28	SAF NO. F15-015	AIR QUALITY	<input type="checkbox"/>
ICE CHEST NO.	ACTUAL SAMPLE DEPTH 38.32"	OFFSITE PROPERTY NO.	COA 300115	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO TestAmerica Incorporated, Richland	BILL OF LADING/AIR BILL NO.				

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WF=Wipe X=Other	PRESERVATION Cool <=6C	HOLDING TIME 24 Hours	TYPE OF CONTAINER aG	NO. OF CONTAINER(S) 1	VOLUME 60mL	SAMPLE ANALYSIS 7196_C86: COMMON;
POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.						
SPECIAL HANDLING AND/OR STORAGE						
SAMPLE NO. B30JL7	MATRIX* WATER	SAMPLE DATE 4-28-15	SAMPLE TIME 1355			

M6PPL



CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM J. Aguilar	DATE/TIME 4-28-15 1455	RECEIVED BY/STORED IN SSU #1	DATE/TIME 4-28-15 1455	** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. ** All requests for Geotechnical Parameters will be given a unique HEIS sample number and be assigned to a separate COC. In addition, all split spoon sleeves will be properly stored until authorized for shipment. TRVL-15-030	
RELINQUISHED BY/REMOVED FROM SSU-1	DATE/TIME APR 29 2015	RECEIVED BY/STORED IN F.M. Hall/CHPRC	DATE/TIME APR 29 2015		
RELINQUISHED BY/REMOVED FROM F.M. Hall/CHPRC	DATE/TIME APR 29 2015	RECEIVED BY/STORED IN J. Friesz, TARL	DATE/TIME APR 29 2015		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	TRVL-15-030	
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	DATE/TIME		
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME		

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J50270403
WC0065

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F15-015-066	PAGE 1 OF 1
COLLECTOR <i>J. Aguilar</i>	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 7H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C9950, I-003, screened interval	PROJECT DESIGNATION FY15 100-HR-3 Drilling - Water		SAF NO. F15-015	AIR QUALITY	<input type="checkbox"/>
ICE CHEST NO.	FIELD LOGBOOK NO. <i>6452/Pg 28</i>	ACTUAL SAMPLE DEPTH <i>38.32'</i>	COA 300115	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO TestAmerica Incorporated, Richland	OFFSITE PROPERTY NO.		BILL OF LADING/AIR BILL NO.		

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	PRESERVATION Cool <=6C	HOLDING TIME 48 Hours	TYPE OF CONTAINER P	NO. OF CONTAINER(S) 1	VOLUME 500ml	SAMPLE ANALYSIS SEE ITEM (3) IN SPECIAL INSTRUCTIONS
POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.						
SPECIAL HANDLING AND/OR STORAGE						

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m6ppm

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>J. Aguilar</i>	DATE/TIME <i>4-28-15 1455</i>	RECEIVED BY/STORED IN SSU # 1	DATE/TIME <i>4-28-15 1455</i>	** The 100 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. ** All requests for Geotechnical Parameters will be given a unique HEIS sample number and be assigned to a separate COC. In addition, all split spoon sleeves will be properly stored until authorized for shipment. TRVL-15-030	
RELINQUISHED BY/REMOVED FROM F.M. HALL/CHPRC	DATE/TIME <i>APR 29 2015</i>	RECEIVED BY/STORED IN F.M. HALL/CHPRC	DATE/TIME <i>APR 29 2015</i>	(I) 300.0_ANIONS_IC: COMMON {Nitrogen in Nitrate, Sulfate};	
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		DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	

TRVL-15-030

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THE LEADER IN ENVIRONMENTAL TESTING

Date/Time Received: 4/29/15 0820 Container GM Screen Result: (Airlock) 60 cpm Initials [J]
Sample GM Screen Result (Sample Receiving) 20 cpm Initials [J]

Client: FLH SDG #: WC 0065 SAF #: F15-015 NA []

Lot Number: J50290403

Chain of Custody # F15-015-069; 065; 066

Shipping Container ID or Air Bill Number : NA [J]

Samples received inside shipping container/cooler/box Yes [J] 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 [J]
2. Custody Seals dated and signed? Yes [] No [] No Custody Seal [J]
3. Cooler temperature: 34 °C WJCE NA []
4. Vermiculite/packing materials is NA [J] Wet [] Dry []

Item 5 through 16 for samples. Initial appropriate response.

- 5. Chain of Custody record present? Yes [J] No []
6. Number of samples received (Each sample may contain multiple bottles): 3
7. Containers received: 2 x 60ml eq, 1 x 500ml eq

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

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

- 12. Sample pH appropriate for analysis requested Yes [J] No [] NA []
13. Were any anomalies identified in sample receipt? Yes [] No [J]
14. Description of anomalies (include sample numbers): NA [J]

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

16. Additional Information: N/A

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

Sample Check-in List completed by Sample Custodian:
Signature: [Signature] Date: 4/29/15

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

[X] No action necessary; process as is
Project Manager Erica Jord Date 4/29/15

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Sample Results Summary

Date: 27-May-15

TestAmerica Inc TARL

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

Report No. : 65898

SDG No: WC0065

Batch Client ID	Date Sampled	Work Order No.	Parameter	Result	Qual	Units	MDL	RL	Date Analyzed	Dil Fct
5119029 7196_CR6 ,WATER										
B30JL7	04/28/15 13:55	M6PPL1AA	HEXCHROME	0.0099		mg/L	0.0015	0.004	04/29/15 9:56	1
B30JM1	04/28/15 13:55	M6PPK1AA	HEXCHROME	0.00890		mg/L	0.0015	0.004	04/29/15 9:53	1
5119030 300.0_ANIONS_IC ,WATER										
B30JL8	04/28/15 13:55	M6PPM1AA	Nitrate as N	3.80 D		mg/L	0.028	0.056	04/29/15 12:11	2
			Sulfate	115.0 D		mg/L	0.625	1.25	04/29/15 12:56	5

No. of Results: 4

TestAmerica Inc D Qual - The reported value is from a dilution

rptTALRchSample
SumC2 V5.3.6.8
A2002

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

Date: 27-May-15

Report No. : 65898

SDG No.: WC0065

Batch	Work Work No.	Parameter	Result	Qual	Units	LCS Recovery	MDL	RL	RPD	Dil Fct	
7196_CR6											
5119029	DUP, B30JL7 DUP	M6PPL1AC	HEXCHROME		0.0101	mg/L		0.0015	0.004	2.0	1
5119029	MS, B30JM1	M6PPK1AC	HEXCHROME		0.0493	mg/L	99%	0.0015	0.004		1
5119029	BLANK,	M6PPP1AA	HEXCHROME		<0.00150 U	mg/L		0.0015	0.004		1
5119029	LCS,	M6PPP1AC	HEXCHROME		0.262	mg/L	105%	0.0015	0.004		1
300.0_ANIONS_IC											
5119030	MS, B30JL8	M6PPM1AC	Nitrate as N		1.76	mg/L	100%	0.014	0.028		1
			Sulfate		21.2	mg/L	100%	0.125	0.25		1
5119030	DUP, B30JL8 DUP	M6PPM1AD	Nitrate as N		3.80 D	mg/L		0.028	0.056	0.1	2
			Sulfate		115.0 D	mg/L		0.625	1.25	0.0	5
5119030	BLANK,	M6PQA1AA	Nitrate as N		<0.0140 U	mg/L		0.014	0.028		1
			Sulfate		<0.125 U	mg/L		0.125	0.25		1
5119030	LCS,	M6PQA1AC	Nitrate as N		0.535	mg/L	95%	0.014	0.028		1
			Sulfate		4.90	mg/L	98%	0.125	0.25		1

No. of Results: 12