

April 5, 2015

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

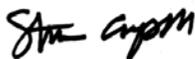
ANALYTICAL REPORT

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

TestAmerica Job ID: 300-2740-1
TestAmerica Sample Delivery Group: WC0957
Client Project/Site: F16-029

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

Attn: CPP Sample Management



Authorized for release by:
4/5/2016 10:28:31 AM
Steven Campbell, Quality Assurance Assistant
steven.campbell@testamericainc.com

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

LINKS

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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 less than five times the MDL.

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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: F16-029

TestAmerica Job ID: 300-2740-1
SDG: WC0957

Job ID: 300-2740-1

Laboratory: TestAmerica Richland

Narrative

**Job Narrative
300-2740-1**

Comments

No additional comments.

Receipt

The samples were received on 4/4/2016 11:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 10.4° C.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

FL6-029-028 PAGE 1 OF 1

COLLECTOR K.C. Patterson/CHPRC	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC	PRICE CODE C09	DATA TURNAROUND 24 Hours / 3 Days
SAMPLING LOCATION 100-DX, Train Valve V-M428F - DUP	PROJECT DESIGNATION 100-DX P&T Resin Reconditioning	FIELD LOGBOOK NO. HNF-N-149115	SAF NO. F16-029	AIR QUALITY <input type="checkbox"/>	METHOD OF SHIPMENT GOVERNMENT VEHICLE
ICE CHEST NO. N/A	FIELD LOGBOOK NO. HNF-N-149115	ACTUAL SAMPLE DEPTH N/A	COA 302841	ORIGINAL	
SHIPPED TO TestAmerica Incorporated, Richland	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WF=Pipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/JATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1. NA	PRESERVATION Cool <=6C	HOLDING TIME 24 Hours	NO. OF CONTAINERS(S) 1	VOLUME 60ml	SAMPLE ANALYSIS 736, GR6: COMMON		
		SPECIAL HANDLING AND/OR STORAGE						
		SAMPLE NO. B353X5	MATRIX* WATER	SAMPLE DATE APR 04 2016	SAMPLE TIME 0900			

2740
2758/34411
200957

April 5 2015

300-2740 CO



CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS TEST 2
RELINQUISHED BY/REMOVED FROM K.C. Patterson/CHPRC	RECEIVED BY/STORED IN Roy Shepard CHPRC	DATE/TIME APR 04 2016 1010
RELINQUISHED BY/REMOVED FROM Roy Shepard CHPRC	RECEIVED BY/STORED IN J. Bock, TARAPR 04 2016	DATE/TIME APR 04 2016 1115
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FIG-029-026	PAGE 1 OF 1
COLLECTOR K.C. Patterson/CHPRC	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC	PRICE CODE C09	DATA TURNAROUND 24 Hours / 3 Days
SAMPLING LOCATION 100-DX, Train F valve V-M428F	PROJECT DESIGNATION 100-DX P&T Resin Reconditioning	FIELD LOGBOOK NO. HNF-N-49115	ACTUAL SAMPLE DEPTH N/A	SAF NO. F16-029	AIR QUALITY <input type="checkbox"/>
ICE CHEST NO. N/A	OFFSITE PROPERTY NO. N/A	COA 302841	BILL OF LADING/AIR BILL NO. N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE ORIGINAL	
SHIPPED TO TestAmerica Incorporated, Richland					

MATRIX*	SPECIAL HANDLING AND/OR STORAGE	PRESERVATION		HOLDING TIME	TYPE OF CONTAINER	NO. OF CONTAINERS(S)	VOLUME	SAMPLE ANALYSIS
		COOL <=6C	7196, CR6, COMMON;					
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				24 Hours	ag	1	60ml	
*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/JATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1. NA								
B353X3	WATER			APR 04 2016	0900			

April 5, 2015

Handwritten notes: 22140, #2235, #4410, WCOAS7

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM K.C. Patterson/CHPRC	APR 04 2016 ROY SHEPARD	TEST 2
RELINQUISHED BY/REMOVED FROM Roy Shepard CHPRC	APR 04 2016 J. Bock, TARI	
RELINQUISHED BY/REMOVED FROM	APR 04 2016	
RELINQUISHED BY/REMOVED FROM	APR 04 2016	
RELINQUISHED BY/REMOVED FROM	APR 04 2016	
RELINQUISHED BY/REMOVED FROM	APR 04 2016	
RELINQUISHED BY/REMOVED FROM	APR 04 2016	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F16-029-024	PAGE 1 OF 1
COLLECTOR	KC. Patterson/CHPRC	COMPANY CONTACT	SUMNER, LC	TELEPHONE NO.	376-3922
SAMPLING LOCATION	100-DX, Train F valve V-M328F	PROJECT DESIGNATION	100-DX P&T Resin Reconditioning	PROJECT COORDINATOR	SUMNER, LC
ICE CHEST NO.	N/A	FIELD LOGBOOK NO.	INF-N-491/15	PRICE CODE	C09
SHIPPED TO	TestAmerica Incorporated, Richland	ACTUAL SAMPLE DEPTH	N/A	AIR QUALITY	<input type="checkbox"/> 24 Hours / 3 Days
		OFFSITE PROPERTY NO.	N/A	METHOD OF SHIPMENT	ORIGINAL
		BILL OF LADING/AIR BILL NO.	N/A	GOVERNMENT VEHICLE	

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WT=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/DATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1. NA	PRESERVATION	Cool <=6C
		HOLDING TIME	24 Hours
		TYPE OF CONTAINER	3G
		NO. OF CONTAINER(S)	1
		VOLUME	60ml
		SAMPLE ANALYSIS	7196 CR6; COMMON;
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B353X1	WATER	APR 04 2016	0858

4 2140
#2935/Pu.41V
WCC095N

April 5 2015

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	TEST 2	
KC. Patterson/CHPRC	APR 04 2016 1010	Roy Shepard	APR 04 2016 1010		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
Roy Shepard	APR 04 2016 1010	J. Bock, TARL	APR 04 2016 1115		
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

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F16-029-022	PAGE 1 OF 1
COLLECTOR K.C. Patterson/CH2PRC	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC	PRICE CODE C09	DATA TURNAROUND 24 Hours / 3 Days
SAMPLING LOCATION 100-DX, Train F Valve V-A228F	PROJECT DESIGNATION 100-DX P&T Resin Reconditioning	FIELD LOGBOOK NO. HNF-N-491/15	ACTUAL SAMPLE DEPTH N/A	SAF NO. F16-029	METHOD OF SHIPMENT GOVERNMENT VEHICLE
ICE CHEST NO. N/A	OFFSITE PROPERTY NO. N/A	COA 302841	BILL OF LADING/AIR BILL NO. N/A	ORIGINAL	
SHIPPED TO TestAmerica Incorporated, Richland					

MATRIX*	SPECIAL HANDLING AND/OR STORAGE	PRESERVATION	HOLDING TIME	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS	SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	REMARKS
B353W9		Cool <=6C	24 Hours	ag	1	60mL	7196, CR6; COMMON;		WATER	APR 04 2016	0856	✓

April 5 2015

#2140
#205876 4.4.14
WCC0957

CHAIN OF POSSESSION	SIGN / PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY / REMOVED FROM K.C. Patterson/CH2PRC	RECEIVED BY / STORED IN Roy Shepard CH2PRC	TEST 2
RELINQUISHED BY / REMOVED FROM Roy Shepard	RECEIVED BY / STORED IN J. Bock, TARA	
RELINQUISHED BY / REMOVED FROM	RECEIVED BY / STORED IN	
RELINQUISHED BY / REMOVED FROM	RECEIVED BY / STORED IN	
RELINQUISHED BY / REMOVED FROM	RECEIVED BY / STORED IN	
RELINQUISHED BY / REMOVED FROM	RECEIVED BY / STORED IN	
RELINQUISHED BY / REMOVED FROM	RECEIVED BY / STORED IN	
RELINQUISHED BY / REMOVED FROM	RECEIVED BY / STORED IN	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD		DATE/TIME

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FL6-029-020	PAGE 1 OF 1
COLLECTOR K.C. Patterson/CHPRC	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC	PRICE CODE C09	DATA TURNAROUND 24 Hours / 3 Days
SAMPLING LOCATION 100-DX, Train F Valve V-M128F	PROJECT DESIGNATION 100-DX P&T Resin Reconditioning	FIELD LOGBOOK NO. HNF-N-49115	ACTUAL SAMPLE DEPTH N/A	SAF NO. F16-029	METHOD OF SHIPMENT GOVERNMENT VEHICLE
ICE CHEST NO. N/A	OFFSITE PROPERTY NO. N/A	COA 302841	BILL OF LADING/AIR BILL NO. N/A	ORIGINAL	
SHIPPED TO TestAmerica Incorporated, Richland					

MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WT=Wipe X=Other	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/DATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1. NA	PRESERVATION Cool <=6C	HOLDING TIME 24 Hours	TYPE OF CONTAINER ag	NO. OF CONTAINER(S) 1	VOLUME 60ml	7196 CRG: COMMON		
		SAMPLE NO. B353W7	MATRIX* WATER	SAMPLE DATE APR 04 2016	SAMPLE TIME 0855	✓				
		<p style="text-align: center;">22440 4-23-16 4:44 PM WCC0957</p>								
		<p style="text-align: center;">TEST 2</p>								
		<p style="text-align: center;">SPECIAL INSTRUCTIONS</p>								

April 5 2015

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM K.C. Patterson/CHPRC	DATE/TIME APR 04 2016	RECEIVED BY/STORED IN Roy Shepard	DATE/TIME APR 04 2016	TEST 2	
RELINQUISHED BY/REMOVED FROM Roy Shepard	DATE/TIME APR 04 2016	RECEIVED BY/STORED IN J. Bock, TARL	DATE/TIME APR 04 2016		
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		
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

April 5, 2015

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F16-029-018	PAGE 1 OF 1
COLLECTOR K.C. Patterson/GHP&C	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC	PRICE CODE C09	DATA TURNAROUND 24 Hours / 3 Days
SAMPLING LOCATION 100-DX, Train D valve V-M428D	PROJECT DESIGNATION 100-DX P&T Resin Reconditioning	FIELD LOGBOOK NO. HNF-N-4911/15	ACTUAL SAMPLE DEPTH D/A	SAF NO. F16-029	<input type="checkbox"/> ORIGINAL
ICE CHEST NO. D/A	OFFSITE PROPERTY NO. N/A	COA 302841	BILL OF LADING/AIR BILL NO. D/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO TestAmerica Incorporated, Richland					

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	*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/DATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1. NA	PRESERVATION Cool <=6C	HOLDING TIME 24 Hours	NO. OF CONTAINER(S) 1	VOLUME 60ml	7916 CRG COMMON;		
		SPECIAL HANDLING AND/OR STORAGE						
		SAMPLE NO. B353W5	MATRIX*	SAMPLE DATE APR 04 2016	SAMPLE TIME 0851			
					WCO957			

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM K.C. Patterson/GHP&C	APR 04 2016 RECEIVED BY/STOPPED IN Roy Shepard	TEST 2
RELINQUISHED BY/REMOVED FROM Roy Shepard	APR 04 2016 RECEIVED BY/STORED IN G. Bock, TARL	
RELINQUISHED BY/REMOVED FROM	APR 04 2016 RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	APR 04 2016 RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	APR 04 2016 RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	APR 04 2016 RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	APR 04 2016 RECEIVED BY/STORED IN	
LABORATORY SECTION	RECEIVED BY	TITLE
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY

COLLECTOR: K.C. Patterson/CH2PAC COMPANY CONTACT: SUMNER, LC TELEPHONE NO.: 376-3922 PROJECT COORDINATOR: SUMNER, LC PRICE CODE: C09 DATA TURNAROUND: 24 Hours / 3 Days

SAMPLING LOCATION: 100-DX Train D Valve V-A328D PROJECT DESIGNATION: 100-DX P&T Resin Reconditioning FIELD LOGBOOK NO.: HNF-N-191/15 ACTUAL SAMPLE DEPTH: N/A SAF NO.: F16-029 AIR QUALITY: METHOD OF SHIPMENT: GOVERNMENT VEHICLE ORIGINAL

ICE CHEST NO.: N/A OFFSITE PROPERTY NO.: N/A BILL OF LADING/AIR BILL NO.: N/A

SHIPPED TO: TestAmerica Incorporated, Richard

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

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

SPECIAL HANDLING AND/OR STORAGE: NO. OF CONTAINER(S): 1, VOLUME: 60mL, HOLDING TIME: 24 Hours, TYPE OF CONTAINER: ag

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B363W3	WATER	APR 04 2016	0848 ✓

Handwritten notes: 2210, 2238 by 4.19, W00957

April 5 2015

CHAIN OF POSSESSION		SIGN / PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	TEST 2	
K.C. Patterson/CH2PAC	APR 04 2016 10:00	Roy Shepard/CH2PAC	APR 04 2016 10:00		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
Roy Shepard	APR 04 2016 11:15	J. Bock, TAMPR	APR 04 2016 11:15		
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		

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F16-029-014	PAGE 1 OF 1
COLLECTOR K.C. Patterson/CHPRC	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC	PRICE CODE C09	DATA TURNAROUND 24 Hours / 3 Days
SAMPLING LOCATION 100-DX, Train D valve V-M228D -- DUP	PROJECT DESIGNATION 100-DX P&T Resin Reconditioning	FIELD LOGBOOK NO. HNF-N-49115	ACTUAL SAMPLE DEPTH N/A	SAF NO. F16-029	<input type="checkbox"/> ORIGINAL
ICE CHEST NO. N/A	OFFSITE PROPERTY NO. N/A	COA 302841	BILL OF LADING/AIR BILL NO. N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO TestAmerica Incorporated, Richland					

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HOLDING TIME	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SPECIAL HANDLING AND/OR STORAGE
A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/DATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1. NA	Cool <=6C	24 Hours	3G	1	60mL	
B353W1							

APR 04 2016 0846 ✓

7196 GRG: COMMON;

2240
2225-24419
WCO957

April 5 2015

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM K.C. Patterson/CHPRC	RECEIVED BY/STORED IN Roy Sheppard/CHPRC	TEST 2
RELINQUISHED BY/REMOVED FROM Roy Sheppard/CHPRC	RECEIVED BY/STORED IN J. Bock, TARAPPRC	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
LABORATORY SECTION	RECEIVED BY	TITLE
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F16-029-010	PAGE 1 OF 1
COLLECTOR K.C. Patterson/CHPRC	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC	PRICE CODE C09	DATA TURNAROUND 24 Hours / 3 Days
SAMPLING LOCATION 100-DX, Train D valve V-M128D	PROJECT DESIGNATION 100-DX P&T Resin Reconditioning	FIELD LOGBOOK NO. HNF-N-491/15	ACTUAL SAMPLE DEPTH N/A	SAF NO. F16-029	METHOD OF SHIPMENT GOVERNMENT VEHICLE ORIGINAL
ICE CHEST NO. N/A	OFFSITE PROPERTY NO. N/A	COA 302841	BILL OF LADING/AIR BILL NO. N/A		
SHIPPED TO TestAmerica Incorporated, Richland					

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	*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/DATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1. NA	PRESERVATION Cool <=6C	HOLDING TIME 24 Hours	NO. OF CONTAINER(S) 1	VOLUME 60ml	7196 CR6 COMMON;		
		SPECIAL HANDLING AND/OR STORAGE		# 2010 2015/1510 WCC0957				
		SAMPLE NO. B353V7	MATRIX* WATER	SAMPLE DATE APR 04 2016	SAMPLE TIME 0839	✓		

April 5, 2015

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM K.C. Patterson/CHPRC	RECEIVED BY/STORED IN Roy Shepard	TEST 2
RELINQUISHED BY/REMOVED FROM Roy Shepard	RECEIVED BY/STORED IN J. Beck, TARI	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

~~April 5, 2015~~
Detection Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-029

TestAmerica Job ID: 300-2740-1
SDG: WC0957

Client Sample ID: B353X5

Lab Sample ID: 300-2740-1

No Detections.

Client Sample ID: B353X3

Lab Sample ID: 300-2740-2

No Detections.

Client Sample ID: B353X1

Lab Sample ID: 300-2740-3

No Detections.

Client Sample ID: B353W9

Lab Sample ID: 300-2740-4

No Detections.

Client Sample ID: B353W7

Lab Sample ID: 300-2740-5

No Detections.

Client Sample ID: B353W5

Lab Sample ID: 300-2740-6

No Detections.

Client Sample ID: B353W3

Lab Sample ID: 300-2740-7

No Detections.

Client Sample ID: B353V9

Lab Sample ID: 300-2740-8

No Detections.

Client Sample ID: B353W1

Lab Sample ID: 300-2740-9

No Detections.

Client Sample ID: B353V7

Lab Sample ID: 300-2740-10

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Richland

April 5, 2015
Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-029

TestAmerica Job ID: 300-2740-1
SDG: WC0957

Client Sample ID: B353X5

Date Collected: 04/04/16 09:00
Date Received: 04/04/16 11:15

Lab Sample ID: 300-2740-1

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			04/04/16 17:30	1

Client Sample ID: B353X3

Date Collected: 04/04/16 09:00
Date Received: 04/04/16 11:15

Lab Sample ID: 300-2740-2

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			04/04/16 17:30	1

Client Sample ID: B353X1

Date Collected: 04/04/16 08:58
Date Received: 04/04/16 11:15

Lab Sample ID: 300-2740-3

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			04/04/16 17:30	1

Client Sample ID: B353W9

Date Collected: 04/04/16 08:56
Date Received: 04/04/16 11:15

Lab Sample ID: 300-2740-4

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			04/04/16 17:31	1

Client Sample ID: B353W7

Date Collected: 04/04/16 08:55
Date Received: 04/04/16 11:15

Lab Sample ID: 300-2740-5

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			04/04/16 17:31	1

Client Sample ID: B353W5

Date Collected: 04/04/16 08:51
Date Received: 04/04/16 11:15

Lab Sample ID: 300-2740-6

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			04/04/16 17:31	1

Client Sample ID: B353W3

Date Collected: 04/04/16 08:48
Date Received: 04/04/16 11:15

Lab Sample ID: 300-2740-7

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			04/04/16 17:35	1

TestAmerica Richland

April 5, 2015
Client Sample Results

Client: CH2M Hill Plateau Remediation Company
 Project/Site: F16-029

TestAmerica Job ID: 300-2740-1
 SDG: WC0957

Client Sample ID: B353V9
 Date Collected: 04/04/16 08:46
 Date Received: 04/04/16 11:15

Lab Sample ID: 300-2740-8
 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			04/04/16 17:35	1

Client Sample ID: B353W1
 Date Collected: 04/04/16 08:46
 Date Received: 04/04/16 11:15

Lab Sample ID: 300-2740-9
 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			04/04/16 17:35	1

Client Sample ID: B353V7
 Date Collected: 04/04/16 08:39
 Date Received: 04/04/16 11:15

Lab Sample ID: 300-2740-10
 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			04/04/16 17:36	1

April 5, 2015
QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-029

TestAmerica Job ID: 300-2740-1
SDG: WC0957

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 300-3661/3
Matrix: Water
Analysis Batch: 3661

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			04/04/16 17:26	1

Lab Sample ID: LCS 300-3661/4
Matrix: Water
Analysis Batch: 3661

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	0.253		mg/L		101	80 - 120

Lab Sample ID: 300-2740-1 MS
Matrix: Water
Analysis Batch: 3661

Client Sample ID: B353X5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.0015	U	0.0499	0.0492		mg/L		99	75 - 125

Lab Sample ID: 300-2740-1 DU
Matrix: Water
Analysis Batch: 3661

Client Sample ID: B353X5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cr (VI)	0.0015	U	0.0015	U	mg/L		NC	20

April 5, 2015
QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-029

TestAmerica Job ID: 300-2740-1
SDG: WC0957

General Chemistry

Analysis Batch: 3661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-2740-1	B353X5	Total/NA	Water	7196A	
300-2740-1 DU	B353X5	Total/NA	Water	7196A	
300-2740-1 MS	B353X5	Total/NA	Water	7196A	
300-2740-2	B353X3	Total/NA	Water	7196A	
300-2740-3	B353X1	Total/NA	Water	7196A	
300-2740-4	B353W9	Total/NA	Water	7196A	
300-2740-5	B353W7	Total/NA	Water	7196A	
300-2740-6	B353W5	Total/NA	Water	7196A	
300-2740-7	B353W3	Total/NA	Water	7196A	
300-2740-8	B353V9	Total/NA	Water	7196A	
300-2740-9	B353W1	Total/NA	Water	7196A	
300-2740-10	B353V7	Total/NA	Water	7196A	
LCS 300-3661/4	Lab Control Sample	Total/NA	Water	7196A	
MB 300-3661/3	Method Blank	Total/NA	Water	7196A	

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-029

TestAmerica Job ID: 300-2740-1
SDG: WC0957

Client Sample ID: B353X5
Date Collected: 04/04/16 09:00
Date Received: 04/04/16 11:15

Lab Sample ID: 300-2740-1
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			3661	04/04/16 17:30	RLC	TAL RCH

Client Sample ID: B353X3
Date Collected: 04/04/16 09:00
Date Received: 04/04/16 11:15

Lab Sample ID: 300-2740-2
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			3661	04/04/16 17:30	RLC	TAL RCH

Client Sample ID: B353X1
Date Collected: 04/04/16 08:58
Date Received: 04/04/16 11:15

Lab Sample ID: 300-2740-3
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			3661	04/04/16 17:30	RLC	TAL RCH

Client Sample ID: B353W9
Date Collected: 04/04/16 08:56
Date Received: 04/04/16 11:15

Lab Sample ID: 300-2740-4
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			3661	04/04/16 17:31	RLC	TAL RCH

Client Sample ID: B353W7
Date Collected: 04/04/16 08:55
Date Received: 04/04/16 11:15

Lab Sample ID: 300-2740-5
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			3661	04/04/16 17:31	RLC	TAL RCH

Client Sample ID: B353W5
Date Collected: 04/04/16 08:51
Date Received: 04/04/16 11:15

Lab Sample ID: 300-2740-6
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			3661	04/04/16 17:31	RLC	TAL RCH

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-029

TestAmerica Job ID: 300-2740-1
SDG: WC0957

Client Sample ID: B353W3

Lab Sample ID: 300-2740-7

Date Collected: 04/04/16 08:48

Matrix: Water

Date Received: 04/04/16 11:15

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			3661	04/04/16 17:35	RLC	TAL RCH

Client Sample ID: B353V9

Lab Sample ID: 300-2740-8

Date Collected: 04/04/16 08:46

Matrix: Water

Date Received: 04/04/16 11:15

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			3661	04/04/16 17:35	RLC	TAL RCH

Client Sample ID: B353W1

Lab Sample ID: 300-2740-9

Date Collected: 04/04/16 08:46

Matrix: Water

Date Received: 04/04/16 11:15

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			3661	04/04/16 17:35	RLC	TAL RCH

Client Sample ID: B353V7

Lab Sample ID: 300-2740-10

Date Collected: 04/04/16 08:39

Matrix: Water

Date Received: 04/04/16 11:15

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			3661	04/04/16 17:36	RLC	TAL RCH

Client Sample ID: B353X5

Lab Sample ID: 300-2740-1 DU

Date Collected: 04/04/16 09:00

Matrix: Water

Date Received: 04/04/16 11:15

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			3661	04/04/16 17:30	RLC	TAL RCH

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-3661/4

Date Collected: N/A

Matrix: Water

Date Received: N/A

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			3661	04/04/16 17:27	RLC	TAL RCH

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-029

TestAmerica Job ID: 300-2740-1
SDG: WC0957

Client Sample ID: Method Blank

Lab Sample ID: MB 300-3661/3

Date Collected: N/A

Matrix: Water

Date Received: N/A

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			3661	04/04/16 17:26	RLC	TAL RCH

Client Sample ID: B353X5

Lab Sample ID: 300-2740-1 MS

Date Collected: 04/04/16 09:00

Matrix: Water

Date Received: 04/04/16 11:15

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	3661	04/04/16 17:27	RLC	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: F16-029

TestAmerica Job ID: 300-2740-1
SDG: WC0957

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



April 5, 2015
Sample Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-029

TestAmerica Job ID: 300-2740-1
SDG: WC0957

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-2740-1	B353X5	Water	04/04/16 09:00	04/04/16 11:15
300-2740-2	B353X3	Water	04/04/16 09:00	04/04/16 11:15
300-2740-3	B353X1	Water	04/04/16 08:58	04/04/16 11:15
300-2740-4	B353W9	Water	04/04/16 08:56	04/04/16 11:15
300-2740-5	B353W7	Water	04/04/16 08:55	04/04/16 11:15
300-2740-6	B353W5	Water	04/04/16 08:51	04/04/16 11:15
300-2740-7	B353W3	Water	04/04/16 08:48	04/04/16 11:15
300-2740-8	B353V9	Water	04/04/16 08:46	04/04/16 11:15
300-2740-9	B353W1	Water	04/04/16 08:46	04/04/16 11:15
300-2740-10	B353V7	Water	04/04/16 08:39	04/04/16 11:15

- 1
- 2
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April 5, 2015

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 300-2740-1

SDG Number: WC0957

Login Number: 2740

List Number: 1

Creator: Bock, Julie A

List Source: TestAmerica Richland

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
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 (excluding tests with immediate HTs)	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 $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	