

7/6/2016

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: 300-3142-1
TestAmerica Sample Delivery Group: WC1105
Client Project/Site: F16-020

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

Attn: CPP Sample Management



Authorized for release by:
7/6/2016 10:49:49 AM
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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.



LINKS

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- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13



Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Chain of Custody	5
Detection Summary	9
Client Sample Results	10
QC Sample Results	11
QC Association Summary	12
Lab Chronicle	13
Method Summary	15
Sample Summary	16
Receipt Checklists	17

Definitions/Glossary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 300-3142-1
SDG: WC1105

Qualifiers

General Chemistry

Qualifier	Qualifier Description
U	Analyzed for but not detected.
D	The reported value is from a dilution.
B	Estimated result. Result is less than the RL, but greater than MDL

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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)

Case Narrative

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 300-3142-1
SDG: WC1105

Job ID: 300-3142-1

Laboratory: TestAmerica Richland

Narrative

Job Narrative
300-3142-1

Comments

This job is associated to SDG W07488 for rad analysis.

Receipt

The samples were received on 5/26/2016 4:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.4° C.

General Chemistry

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

7/6/2016

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F16-020-719	PAGE 1 OF 1
COLLECTOR Antonio Jaives	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 8H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C8706, Core 6, B324P2	PROJECT DESIGNATION 200-DV-1 Operable Unit Characterization of Waste Sites Phase 3 Sampling	FIELD LOGBOOK NO. N/A	SAF NO. F16-020	AIR QUALITY <input type="checkbox"/>	METHOD OF SHIPMENT GOVERNMENT VEHICLE
ICE CHEST NO. N/A	ACTUAL SAMPLE DEPTH 162.9 - 164.9 ft	COA	BILL OF LADING/AIR BILL NO. N/A	Company Vehicle	ORIGINAL AS
SHIPPED TO TestAmerica Incorporated, Richland	OFFSITE PROPERTY NO. N/A	PRESERVATION Cool <=6C	None		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION		HOLDING TIME		TYPE OF CONTAINER		NO. OF CONTAINERS(S)		VOLUME		SAMPLE ANALYSIS
		Cool <=6C	None	30 Days	6 Months	G/P	G/P	1	1	60ml	500ml	
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	*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											
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B35N89	SOIL	5-25-16	1400									

#3142
WCE1105



300-3142 000

CHAIN OF POSSESSION	SIGN / PRINT NAMES	SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM Antonio Jaives	DATE/TIME 5/25/16/1400	RECEIVED BY/STORED IN GTL Refractor	DATE/TIME 5/25/16/1400
RELINQUISHED BY/REMOVED FROM GTL Refractor	DATE/TIME 5/26/16/1500	RECEIVED BY/STORED IN Andra no Jaives	DATE/TIME 5/26/16/1500
RELINQUISHED BY/REMOVED FROM Antonio Jaives	DATE/TIME 5/26/16/1600	RECEIVED BY/STORED IN Boek, TARS do 16/1600	DATE/TIME 5/26/16/1600
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

B324P2 AS
5-25-16

SPECIAL INSTRUCTIONS
Sample From HEIS #: **B324P2** Actual Aliquot Collection Depth: **162.9-164.9 ft** ** All Cations, TIC and TOC requesting Water Extraction (WE) shall use a 1:1 ratio.
(1) GAMMA_GS: COMMON; AMCHISO_EIE_PLATE_AEA: COMMON; PUISO_PLATE_AEA: COMMON {Plutonium-238, Plutonium-239/240}; UISO_PLATE_AEA: COMMON {Uranium-233/234, Uranium-235, Uranium-238}; C14_LSC: COMMON; I129_SEP_LEPS_GS: COMMON; NI63_LSC: COMMON; NP237_LLE_PLATE_AEA: COMMON;
SR10T_SEP_PRECIP_GPC: COMMON {Total beta radiostrontium}; TC99_ETVDSK_LSC: COMMON; TRITIUM_DIST_LSC: COMMON;

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

7/6/2016

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FIG-020-721	PAGE 1 OF 1
COLLECTOR <i>Antonio Jaines</i>	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 8H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C8706, Core 9, B324P5	PROJECT DESIGNATION 200-DV-1 Operable Unit Characterization of Waste Sites Phase 3 Sampling	FIELD LOGBOOK NO. N/A	ACTUAL SAMPLE DEPTH 78.0-80.4 ft	SAF NO. F16-020	AIR QUALITY <input type="checkbox"/>
ICE CHEST NO. N/A	OFFSITE PROPERTY NO. N/A	ACTUAL SAMPLE DEPTH 78.0-80.4 ft	COA	METHOD OF SHIPMENT -GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO TestAmerica Incorporated, Richland	PRESERVATION Cool <=6C None		BILL OF LADING/AIR BILL NO. Company <i>AS 5-25-16</i>		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/LATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1. NA	HOLDING TIME		TYPE OF CONTAINER		NO. OF CONTAINER(S)		VOLUME		SPECIAL HANDLING AND/OR STORAGE N/A
		30 Days	6 Months	G/P	G/P	1	1	60ml	500ml	
A=Air D=L=Drum L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WT=Wipe X=Other										
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME							
B35N91	SOIL	5-25-16	1530							

#3142
WGC1105

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM <i>Antonio Jaines</i>	RECEIVED BY/STORED IN <i>GR Refrigerator</i>	Sample From HEIS #: <i>B324P5</i> Actual Aliquot Collection Depth: <i>78.0-80.4 ft</i> (1) GAMMA_GS: COMMON; AMCMISO_EIE_PLATE_AEA: COMMON; PUISO_PLATE_AEA: COMMON {Plutonium-238, Plutonium-239/240}; UISO_PLATE_AEA: COMMON {Uranium-233/234, Uranium-235, Uranium-238}; C14_LSC: COMMON; I129_SEP_LEPS_GS: COMMON; NI63_LSC: COMMON; NP237_LLE_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON {Total beta radiostrontium}; TC99_ETVDSK_LSC: COMMON; TRITIUM_DIST_LSC: COMMON;
DATE/TIME <i>5/25/16 / 1530</i>	DATE/TIME <i>5/25/16 / 1530</i>	
RELINQUISHED BY/REMOVED FROM <i>GTL Jaines</i>	RECEIVED BY/STORED IN <i>Antonio Jaines</i>	
DATE/TIME <i>5/26/16 / 1500</i>	DATE/TIME <i>5/26/16 / 1500</i>	
RELINQUISHED BY/REMOVED FROM <i>Antonio Jaines</i>	RECEIVED BY/STORED IN <i>Book 1, Book, TABL Sample 1000</i>	
DATE/TIME <i>5/26/16 / 1100</i>	DATE/TIME <i>5/26/16 / 1100</i>	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	

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

PRINTED ON 5/19/2016 FSR ID = FSR32328 TRVL NUM = TRVL-16-150 A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F16-020-723	PAGE 1 OF 1
COLLECTOR <i>Antonio Jaires</i>	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 8H	DATA TURNOVER 30 Days / 30 Days
SAMPLING LOCATION C8706, Core 15, B324R1	PROJECT DESIGNATION 200-DIV-1 Operable Unit Characterization of Waste Sites Phase 3 Sampling	FIELD LOGBOOK NO. N/A	ACTUAL SAMPLE DEPTH 108.2 - 110.2 Ft	SAF NO. F16-020	AIR QUALITY <input type="checkbox"/>
ICE CHEST NO. N/A	OFFSITE PROPERTY NO. N/A	COA	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL	
SHIPPED TO TestAmerica Incorporated, Richland	PRESERVATION Cool <=6C	None	BILL OF LADING/AIR BILL NO. <i>Company</i>	#3142 WFC1105	

MATRIX*	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION		HOLDING TIME		TYPE OF CONTAINER		NO. OF CONTAINER(S)		VOLUME	
			COOL <=6C	None	30 Days	6 Months	G/P	G/P	1	1	60mL	500mL
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	N/A	*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. NA										
B35N93	SOIL		5-25-16	1700	X	X						

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RELINQUISHED BY/REMOVED FROM	DATE/TIME
<i>Antonio Jaires</i>	5-25-16/1700	<i>ETL Peristeris</i>	5-25-16/1700	Sample From HEIS # <i>B32R41</i> Actual Aliquot Collection	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	Depth: <i>108.2 - 110.2 ft</i>	
<i>ETL Peristeris</i>	5/26/16/1500	<i>Antonio Jaires</i>	5-26-16/1500	(1) GAMMA_GS: COMMON; AMCMISO_EIE_PLATE_AEA: COMMON; PUSO_PLATE_AEA: COMMON {Plutonium-238, Plutonium-239/240}; UISO_PLATE_AEA: COMMON {Uranium-233/234, Uranium-235, Uranium-238}; C14_LSC: COMMON; I129_SEP_LEPS_GS: COMMON; NI63_LSC: COMMON; NP237_LLE_PLATE_AEA: COMMON; SRITOT_SEP_PRECIP_GPC: COMMON {Total beta radiostrontium}; TC99_ETVDSK_LSC: COMMON; TRITIUM_DIST_LSC: COMMON;	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
<i>Antonio Jaires</i>	5/26/16/1600	<i>1 Bock, TARI</i>	5/26/16/1600		
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

PRINTED ON 5/19/2016 FSR ID = FSR32329 TRVL NUM = TRVL-16-150 A-6003-618 (REV 2)

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F16-020-725	PAGE 1 OF 1
COLLECTOR <i>Jan Russell</i>	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 8H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C8706, Core 20, B324R6	PROJECT DESIGNATION 200-DV-1 Operable Unit Characterization of Waste Sites Phase 3 Sampling	FIELD LOGBOOK NO. N/A	ACTUAL SAMPLE DEPTH 135.4 - 136.9 ft	SAF NO. F16-020	AIR QUALITY <input type="checkbox"/>
ICE CHEST NO. N/A	OFFSITE PROPERTY NO. N/A	COA 302914	BILL OF LADING/AIR BILL NO. N/A	METHOD OF SHIPMENT -GOVERNMENT VEHICLE Company ORIGINAL	
SHIPPED TO TestAmerica Incorporated, Richland					

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	NO. OF CONTAINER(S)	VOLUME	7196_CRG: COMMON;	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
		COOL <=6C	1			
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	30 Days	1	60mL		
		6 Months	1	500mL		
	SPECIAL HANDLING AND/OR STORAGE					
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B35N95	SOIL	5/26/14	<i>JE 5/26/14</i> 1430 1050		X	X

3142
WG1105

CHAIN OF POSSESSION	SIGN/ PRINT NAMES
RELINQUISHED BY/REMOVED FROM <i>Jan Russell</i>	RECEIVED BY/STORED IN <i>ATZ Refrigerator</i>
DATE/TIME <i>5/26/14 1430</i>	DATE/TIME <i>5/26/14 1430</i>
RELINQUISHED BY/REMOVED FROM <i>ATZ Refrigerator</i>	RECEIVED BY/STORED IN <i>Antonio Jaines</i>
DATE/TIME <i>5/26/14/1500</i>	DATE/TIME <i>5/26/14/1500</i>
RELINQUISHED BY/REMOVED FROM <i>Antonio Jaines</i>	RECEIVED BY/STORED IN <i>Jose S. Sosa</i>
DATE/TIME <i>5/26/14 1600</i>	DATE/TIME <i>5/26/14 1600</i>
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN
DATE/TIME	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN
DATE/TIME	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN
DATE/TIME	DATE/TIME

SPECIAL INSTRUCTIONS
Sample From HEIS #: *B324R6* Actual Aliquot Collection
Depth: *135.4 - 136.9 ft*
(1) GAMMA_GS: COMMON; AMCMISO_EIE_PLATE_AEA: COMMON;
PUISO_PLATE_AEA: COMMON {Plutonium-238, Plutonium-239/240};
UIISO_PLATE_AEA: COMMON {Uranium-233/234, Uranium-235, Uranium-238};
C14_LSC: COMMON; I129_SEP_LEPS_GS: COMMON; NI63_LSC: COMMON;
NP237_LLE_PLATE_AEA: COMMON;
SRTOT_SEP_PRECIP_GPC: COMMON {total beta radioisotopes};
TC99_ETVDSK_LSC: COMMON; TRITIUM_DIST_LSC: COMMON;

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

Detection Summary

Client: CH2M Hill Plateau Remediation Company
 Project/Site: F16-020

TestAmerica Job ID: 300-3142-1
 SDG: WC1105

Client Sample ID: B35N89

Lab Sample ID: 300-3142-1

No Detections.

Client Sample ID: B35N91

Lab Sample ID: 300-3142-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.31	B	2.0	0.15	mg/Kg	1		7196A	Total/NA

Client Sample ID: B35N93

Lab Sample ID: 300-3142-3

No Detections.

Client Sample ID: B35N95

Lab Sample ID: 300-3142-4

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Richland



Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 300-3142-1
SDG: WC1105

Client Sample ID: B35N89

Date Collected: 05/25/16 14:00

Date Received: 05/26/16 16:00

Lab Sample ID: 300-3142-1

Matrix: Soil

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.15	U	2.0	0.15	mg/Kg		06/28/16 16:39	06/20/16 17:51	1

Client Sample ID: B35N91

Date Collected: 05/25/16 15:30

Date Received: 05/26/16 16:00

Lab Sample ID: 300-3142-2

Matrix: Soil

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.31	B	2.0	0.15	mg/Kg		06/28/16 16:39	06/20/16 17:55	1

Client Sample ID: B35N93

Date Collected: 05/25/16 17:00

Date Received: 05/26/16 16:00

Lab Sample ID: 300-3142-3

Matrix: Soil

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.15	U	2.0	0.15	mg/Kg		06/28/16 16:39	06/20/16 17:57	1

Client Sample ID: B35N95

Date Collected: 05/26/16 10:50

Date Received: 05/26/16 16:00

Lab Sample ID: 300-3142-4

Matrix: Soil

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.15	U	2.0	0.15	mg/Kg		06/28/16 16:39	06/20/16 17:58	1

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
 Project/Site: F16-020

TestAmerica Job ID: 300-3142-1
 SDG: WC1105

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 300-4724/1-A
 Matrix: Solid
 Analysis Batch: 4723

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 4724

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.15	U	2.0	0.15	mg/Kg		06/28/16 16:39	06/20/16 17:48	1

Lab Sample ID: LCS 300-4724/2-A
 Matrix: Solid
 Analysis Batch: 4723

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 4724

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	20.0	18.12		mg/Kg		91	85 - 115

Lab Sample ID: 300-3142-1 MS
 Matrix: Soil
 Analysis Batch: 4723

Client Sample ID: B35N89
 Prep Type: Total/NA
 Prep Batch: 4724

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.15	U	29.8	25.82		mg/Kg		87	75 - 125

Lab Sample ID: 300-3142-1 MSI
 Matrix: Soil
 Analysis Batch: 4723

Client Sample ID: B35N89
 Prep Type: Total/NA
 Prep Batch: 4724

Analyte	Sample Result	Sample Qualifier	Spike Added	MSI Result	MSI Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.15	U	674	695.3	D	mg/Kg		103	

Lab Sample ID: 300-3142-1 DU
 Matrix: Soil
 Analysis Batch: 4723

Client Sample ID: B35N89
 Prep Type: Total/NA
 Prep Batch: 4724

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cr (VI)	0.15	U	0.15	U	mg/Kg		NC	35

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
 Project/Site: F16-020

TestAmerica Job ID: 300-3142-1
 SDG: WC1105

General Chemistry

Analysis Batch: 4723

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-3142-1	B35N89	Total/NA	Soil	7196A	4724
300-3142-1 DU	B35N89	Total/NA	Soil	7196A	4724
300-3142-1 MS	B35N89	Total/NA	Soil	7196A	4724
300-3142-1 MSI	B35N89	Total/NA	Soil	7196A	4724
300-3142-2	B35N91	Total/NA	Soil	7196A	4724
300-3142-3	B35N93	Total/NA	Soil	7196A	4724
300-3142-4	B35N95	Total/NA	Soil	7196A	4724
LCS 300-4724/2-A	Lab Control Sample	Total/NA	Solid	7196A	4724
MB 300-4724/1-A	Method Blank	Total/NA	Solid	7196A	4724

Prep Batch: 4724

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-3142-1	B35N89	Total/NA	Soil	3060A	
300-3142-1 DU	B35N89	Total/NA	Soil	3060A	
300-3142-1 MS	B35N89	Total/NA	Soil	3060A	
300-3142-1 MSI	B35N89	Total/NA	Soil	3060A	
300-3142-2	B35N91	Total/NA	Soil	3060A	
300-3142-3	B35N93	Total/NA	Soil	3060A	
300-3142-4	B35N95	Total/NA	Soil	3060A	
LCS 300-4724/2-A	Lab Control Sample	Total/NA	Solid	3060A	
MB 300-4724/1-A	Method Blank	Total/NA	Solid	3060A	

Lab Chronicle

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 300-3142-1
SDG: WC1105

Client Sample ID: B35N89

Date Collected: 05/25/16 14:00

Date Received: 05/26/16 16:00

Lab Sample ID: 300-3142-1

Matrix: Soil

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	2.4993 g	100 mL	4723	06/20/16 17:51	TDA	TAL RCH
Total/NA	Prep	3060A			2.4993 g	100 mL	4724	06/28/16 16:39	TDA	TAL RCH

Client Sample ID: B35N91

Date Collected: 05/25/16 15:30

Date Received: 05/26/16 16:00

Lab Sample ID: 300-3142-2

Matrix: Soil

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	2.5049 g	100 mL	4723	06/20/16 17:55	TDA	TAL RCH
Total/NA	Prep	3060A			2.5049 g	100 mL	4724	06/28/16 16:39	TDA	TAL RCH

Client Sample ID: B35N93

Date Collected: 05/25/16 17:00

Date Received: 05/26/16 16:00

Lab Sample ID: 300-3142-3

Matrix: Soil

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	2.5123 g	100 mL	4723	06/20/16 17:57	TDA	TAL RCH
Total/NA	Prep	3060A			2.5123 g	100 mL	4724	06/28/16 16:39	TDA	TAL RCH

Client Sample ID: B35N95

Date Collected: 05/26/16 10:50

Date Received: 05/26/16 16:00

Lab Sample ID: 300-3142-4

Matrix: Soil

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	2.5077 g	100 mL	4723	06/20/16 17:58	TDA	TAL RCH
Total/NA	Prep	3060A			2.5077 g	100 mL	4724	06/28/16 16:39	TDA	TAL RCH

Client Sample ID: B35N89

Date Collected: 05/25/16 14:00

Date Received: 05/26/16 16:00

Lab Sample ID: 300-3142-1 DU

Matrix: Soil

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	2.5107 g	100 mL	4723	06/20/16 17:53	TDA	TAL RCH
Total/NA	Prep	3060A			2.5107 g	100 mL	4724	06/28/16 16:39	TDA	TAL RCH

Client Sample ID: Lab Control Sample

Date Collected: N/A

Date Received: N/A

Lab Sample ID: LCS 300-4724/2-A

Matrix: Solid

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	2.5 g	100 mL	4723	06/20/16 17:49	TDA	TAL RCH
Total/NA	Prep	3060A			2.5 g	100 mL	4724	06/28/16 16:39	TDA	TAL RCH

TestAmerica Richland

Lab Chronicle

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 300-3142-1
SDG: WC1105

Client Sample ID: Method Blank

Lab Sample ID: MB 300-4724/1-A

Date Collected: N/A

Matrix: Solid

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	2.5 g	100 mL	4723	06/20/16 17:48	TDA	TAL RCH
Total/NA	Prep	3060A			2.5 g	100 mL	4724	06/28/16 16:39	TDA	TAL RCH

Client Sample ID: B35N89

Lab Sample ID: 300-3142-1 MS

Date Collected: 05/25/16 14:00

Matrix: Soil

Date Received: 05/26/16 16:00

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	2.5116 g	100 mL	4723	06/20/16 17:52	TDA	TAL RCH
Total/NA	Prep	3060A			2.5116 g	100 mL	4724	06/28/16 16:39	TDA	TAL RCH

Client Sample ID: B35N89

Lab Sample ID: 300-3142-1 MSI

Date Collected: 05/25/16 14:00

Matrix: Soil

Date Received: 05/26/16 16:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		20	2.5066 g	100 mL	4723	06/20/16 17:54	TDA	TAL RCH
Total/NA	Prep	3060A			2.5066 g	100 mL	4724	06/28/16 16:39	TDA	TAL RCH

Laboratory References:

TAL RCH = TestAmerica Richland, 2800 George Washington Way, Richland, WA 99352, TEL (509)375-3131

Method Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 300-3142-1
SDG: WC1105

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



Sample Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-020

TestAmerica Job ID: 300-3142-1
SDG: WC1105

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-3142-1	B35N89	Soil	05/25/16 14:00	05/26/16 16:00
300-3142-2	B35N91	Soil	05/25/16 15:30	05/26/16 16:00
300-3142-3	B35N93	Soil	05/25/16 17:00	05/26/16 16:00
300-3142-4	B35N95	Soil	05/26/16 10:50	05/26/16 16:00

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 300-3142-1

SDG Number: WC1105

Login Number: 3142**List Number: 1****Creator: Anderson, Lori F****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.	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 <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	