

July 13, 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: 300-3249-1
TestAmerica Sample Delivery Group: WC1151
Client Project/Site: F16-042

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

Attn: CPP Sample Management



Authorized for release by:
7/13/2016 11:35:53 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.



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Definitions/Glossary

Client: CH2M Hill Plateau Remediation Company
 Project/Site: F16-042

TestAmerica Job ID: 300-3249-1
 SDG: WC1151

Qualifiers

HPLC/IC

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

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.
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: F16-042

TestAmerica Job ID: 300-3249-1
SDG: WC1151

Job ID: 300-3249-1

Laboratory: TestAmerica Richland

Narrative

Job Narrative
300-3249-1

Comments

No additional comments.

Receipt

The samples were received on 6/10/2016 11:05 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 6.4° C.

HPLC/IC

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

General Chemistry

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



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CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F16-042-041	PAGE 1 OF 1
COLLECTOR J.R. Aguilar/CHPRC	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 7H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C9401, I-005	PROJECT DESIGNATION 100-NR-2 Drilling - Water	FIELD LOGBOOK NO. HNF-N-645-3186	SAF NO. F16-042	AIR QUALITY <input type="checkbox"/>	ORIGINAL
ICE CHEST NO. N/A	FIELD LOGBOOK NO. HNF-N-645-3186	ACTUAL SAMPLE DEPTH 74.51'	COA 304070	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO TestAmerica Incorporated, Richland	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

MATRIX*	SPECIAL HANDLING AND/OR STORAGE	PRESERVATION	HOLDING TIME	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE DATE	SAMPLE TIME
B35VR5	WATER						JUN 09 2016	1438

FILTER

300-3249 COC



W0C1151

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM J.R. Aguilar/CHPRC	DATE/TIME JUN 09 2016 1520	RECEIVED BY/STORED IN SSU #1	DATE/TIME JUN 09 2016 1520	FILTER	
RELINQUISHED BY/REMOVED FROM SSU #1	DATE/TIME JUN 10 2016 1000	RECEIVED BY/STORED IN Frank Hall ASHPRC	DATE/TIME JUN 10 2016 1000		
RELINQUISHED BY/REMOVED FROM Frank Hall ASHPRC	DATE/TIME JUN 10 2016 1105	RECEIVED BY/STORED IN J. Bock, TAPIN	DATE/TIME JUN 10 2016 1105		
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		

PRINTED ON 5/24/2016 FSR ID = FSR32675 TRVL NUM = TRVL-16-153 A-6003-618 (REV 2)

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CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F16-042-036	PAGE 1 OF 1
COLLECTOR J.R. Aguilar/CHPRC	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 7H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C9401, I-005	PROJECT DESIGNATION 100-NR-2 Drilling - Water	FIELD LOGBOOK NO. HNF-N-1445-3/86	SAF NO. F16-042	AIR QUALITY <input type="checkbox"/>	ORIGINAL
ICE CHEST NO. N/A	ACTUAL SAMPLE DEPTH 74.51'	COA 304070	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
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=Sediment SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	*Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR/JATIA 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;		
		SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
		B35V/R0	WATER	JUN 09 2016	1438			
		SPECIAL HANDLING AND/OR STORAGE						

300-3249
WC1151
* All Samples Filtered

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM J.R. Aguilar/CHPRC	RECEIVED BY/STORED IN SSU #1	
DATE/TIME JUN 09 2016 1530	DATE/TIME JUN 09 2016 1530	
RELINQUISHED BY/REMOVED FROM SSU-1	RECEIVED BY/STORED IN Frank Heit	
DATE/TIME JUN 10 2016 1000	DATE/TIME JUN 10 2016 1000	
RELINQUISHED BY/REMOVED FROM Frank Heit	RECEIVED BY/STORED IN J. Bock, TARI	
DATE/TIME JUN 10 2016 1105	DATE/TIME JUN 10 2016 1105	
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 5/24/2016			
FSR ID = FSR32675			
TRVL NUM = TRVL-16-153			
A-6003-618 (REV 2)			

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CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FIG-042-037	PAGE 1 OF 1
COLLECTOR J.R. Aguilar/CH2M	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 7H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION C9401, I-005	PROJECT DESIGNATION 100-NR-2 Drilling - Water	FIELD LOGBOOK NO. HNF-N-645-3/84	SAF NO. F16-042	AIR QUALITY <input type="checkbox"/>	ORIGINAL
ICE CHEST NO. N/A	ACTUAL SAMPLE DEPTH 74.51'	COA 304070	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
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 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	PRESERVATION	Cool <=6C
		HOLDING TIME	48 Hours
		TYPE OF CONTAINER	P
		NO. OF CONTAINER(S)	1
SPECIAL HANDLING AND/OR STORAGE		VOLUME	500ml
		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
SAMPLE NO. B35VR1	MATRIX* WATER	SAMPLE DATE JUN 09 2016	SAMPLE TIME 1438

* All samples Filtered
300-3249
Wc1151

CHAIN OF POSSESSION	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SIGN/ PRINT NAMES	DATE/TIME	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM J.R. Aguilar/CH2M	JUN 09 2016 1500	RECEIVED BY/STORED IN SSU H1	JUN 09 2016 1500			(1) 300.0 ANIONS_IC: COMMON {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}; 300.0 ANIONS_IC: COMMON (Add-on) {Phosphorus in phosphate};
RELINQUISHED BY/REMOVED FROM SSU-1	JUN 10 2016 1000	RECEIVED BY/STORED IN Frank Hall /CH2M	JUN 10 2016 1000			
RELINQUISHED BY/REMOVED FROM Frank Hall /CH2M	JUN 10 2016 1105	RECEIVED BY/STORED IN J. BOCK, TARE	JUN 10 2016 1105			
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 5/24/2016 FSR ID = FSR32675 TRVL NUM = TRVL-16-153 A-6003-618 (REV 2)

Detection Summary

Client: CH2M Hill Plateau Remediation Company
 Project/Site: F16-042

TestAmerica Job ID: 300-3249-1
 SDG: WC1151

Client Sample ID: B35VR5

Lab Sample ID: 300-3249-1

No Detections.

Client Sample ID: B35VR0

Lab Sample ID: 300-3249-2

No Detections.

Client Sample ID: B35VR1

Lab Sample ID: 300-3249-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	21	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	6.0	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.37	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	120	D	5.0	2.5	mg/L	20		300.0	Total/NA

This Detection Summary does not include radiochemical test results.



Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-042

TestAmerica Job ID: 300-3249-1
SDG: WC1151

Client Sample ID: B35VR5

Lab Sample ID: 300-3249-1

Date Collected: 06/09/16 14:38

Matrix: Water

Date Received: 06/10/16 11:05

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0015	U	0.0040	0.0015	mg/L			06/10/16 12:39	1

Client Sample ID: B35VR0

Lab Sample ID: 300-3249-2

Date Collected: 06/09/16 14:38

Matrix: Water

Date Received: 06/10/16 11:05

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0015	U	0.0040	0.0015	mg/L			06/10/16 12:39	1

Client Sample ID: B35VR1

Lab Sample ID: 300-3249-3

Date Collected: 06/09/16 14:38

Matrix: Water

Date Received: 06/10/16 11:05

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	21	D	0.40	0.20	mg/L			06/10/16 21:51	2
Nitrate as N	6.0	D	0.056	0.028	mg/L			06/10/16 21:51	2
Fluoride	0.37	D	0.10	0.050	mg/L			06/10/16 21:51	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			06/10/16 21:51	2
Orthophosphate as P	0.082	U D	0.16	0.082	mg/L			06/10/16 21:51	2
Sulfate	120	D	5.0	2.5	mg/L			06/11/16 00:52	20

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-042

TestAmerica Job ID: 300-3249-1
SDG: WC1151

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 300-4507/5

Matrix: Water

Analysis Batch: 4507

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.014	U	0.028	0.014	mg/L			06/10/16 18:35	1
Nitrite as N	0.019	U	0.038	0.019	mg/L			06/10/16 18:35	1
Orthophosphate as P	0.041	U	0.082	0.041	mg/L			06/10/16 18:35	1

Lab Sample ID: LCS 300-4507/6

Matrix: Water

Analysis Batch: 4507

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	2.26	2.31		mg/L		102	80 - 120
Nitrite as N	3.04	3.12		mg/L		103	80 - 120
Orthophosphate as P	6.53	6.61		mg/L		101	80 - 120

Lab Sample ID: 300-3252-A-33 MS

Matrix: Water

Analysis Batch: 4507

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	1.4	D	0.452	1.90	D	mg/L		104	75 - 125
Nitrite as N	0.066	B D	0.609	0.579	D	mg/L		84	75 - 125
Orthophosphate as P	0.082	U D	1.31	1.13	D	mg/L		86	75 - 125

Lab Sample ID: 300-3252-A-33 DU

Matrix: Water

Analysis Batch: 4507

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Nitrate as N	1.4	D	1.40	D	mg/L		3	20
Nitrite as N	0.066	B D	0.0647	B D	mg/L		2	20
Orthophosphate as P	0.082	U D	0.082	U D	mg/L		NC	20

Lab Sample ID: MB 300-4508/5

Matrix: Water

Analysis Batch: 4508

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.10	U	0.20	0.10	mg/L			06/10/16 18:35	1
Fluoride	0.025	U	0.050	0.025	mg/L			06/10/16 18:35	1
Sulfate	0.13	U	0.25	0.13	mg/L			06/10/16 18:35	1

Lab Sample ID: LCS 300-4508/6

Matrix: Water

Analysis Batch: 4508

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	16.0	16.1		mg/L		100	80 - 120
Fluoride	4.00	4.02		mg/L		101	80 - 120
Sulfate	20.0	20.2		mg/L		101	80 - 120

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-042

TestAmerica Job ID: 300-3249-1
SDG: WC1151

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 300-3252-A-33 MS

Matrix: Water

Analysis Batch: 4508

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample		Spike Added	MS MS		Unit	D	%Rec	%Rec. Limits	
	Result	Qualifier		Result	Qualifier				Limits	Limits
Chloride	12	D	3.20	14.9	D	mg/L		101	75 - 125	
Fluoride	0.24	D	0.800	0.983	D	mg/L		92	75 - 125	
Sulfate	66	D	4.00	69.7	D	mg/L		101	75 - 125	

Lab Sample ID: 300-3252-A-33 DU

Matrix: Water

Analysis Batch: 4508

Client Sample ID: Duplicate

Prep Type: Total/NA

Analyte	Sample		DU DU		Unit	D	RPD	RPD Limit	
	Result	Qualifier	Result	Qualifier				RPD	Limit
Chloride	12	D	11.4	D	mg/L		2	20	
Fluoride	0.24	D	0.238	D	mg/L		2	20	
Sulfate	66	D	64.3	D	mg/L		2	20	

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 300-4518/3

Matrix: Water

Analysis Batch: 4518

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cr (VI)	0.0015	U	0.0040	0.0015	mg/L			06/10/16 12:35	1

Lab Sample ID: LCS 300-4518/4

Matrix: Water

Analysis Batch: 4518

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits	
		Result	Qualifier				Limits	Limits
Cr (VI)	0.250	0.251		mg/L		101	80 - 120	

Lab Sample ID: 300-3249-1 MS

Matrix: Water

Analysis Batch: 4518

Client Sample ID: B35VR5

Prep Type: Total/NA

Analyte	Sample		Spike Added	MS MS		Unit	D	%Rec	%Rec. Limits	
	Result	Qualifier		Result	Qualifier				Limits	Limits
Cr (VI)	0.0015	U	0.0499	0.0503		mg/L		101	75 - 125	

Lab Sample ID: 300-3249-1 DU

Matrix: Water

Analysis Batch: 4518

Client Sample ID: B35VR5

Prep Type: Total/NA

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

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
 Project/Site: F16-042

TestAmerica Job ID: 300-3249-1
 SDG: WC1151

HPLC/IC

Analysis Batch: 4507

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-3249-3	B35VR1	Total/NA	Water	300.0	
300-3252-A-33 DU	Duplicate	Total/NA	Water	300.0	
300-3252-A-33 MS	Matrix Spike	Total/NA	Water	300.0	
LCS 300-4507/6	Lab Control Sample	Total/NA	Water	300.0	
MB 300-4507/5	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 4508

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-3249-3	B35VR1	Total/NA	Water	300.0	
300-3249-3	B35VR1	Total/NA	Water	300.0	
300-3252-A-33 DU	Duplicate	Total/NA	Water	300.0	
300-3252-A-33 MS	Matrix Spike	Total/NA	Water	300.0	
LCS 300-4508/6	Lab Control Sample	Total/NA	Water	300.0	
MB 300-4508/5	Method Blank	Total/NA	Water	300.0	

General Chemistry

Analysis Batch: 4518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-3249-1	B35VR5	Total/NA	Water	7196A	
300-3249-1 DU	B35VR5	Total/NA	Water	7196A	
300-3249-1 MS	B35VR5	Total/NA	Water	7196A	
300-3249-2	B35VR0	Total/NA	Water	7196A	
LCS 300-4518/4	Lab Control Sample	Total/NA	Water	7196A	
MB 300-4518/3	Method Blank	Total/NA	Water	7196A	

Lab Chronicle

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-042

TestAmerica Job ID: 300-3249-1
SDG: WC1151

Client Sample ID: B35VR5

Date Collected: 06/09/16 14:38

Date Received: 06/10/16 11:05

Lab Sample ID: 300-3249-1

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			4518	06/10/16 12:39	RLC	TAL RCH

Client Sample ID: B35VR0

Date Collected: 06/09/16 14:38

Date Received: 06/10/16 11:05

Lab Sample ID: 300-3249-2

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			4518	06/10/16 12:39	RLC	TAL RCH

Client Sample ID: B35VR1

Date Collected: 06/09/16 14:38

Date Received: 06/10/16 11:05

Lab Sample ID: 300-3249-3

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	300.0		2	10 mL		4507	06/10/16 21:51	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		4508	06/10/16 21:51	CPM	TAL RCH
Total/NA	Analysis	300.0		20	10 mL		4508	06/11/16 00:52	CPM	TAL RCH

Client Sample ID: B35VR5

Date Collected: 06/09/16 14:38

Date Received: 06/10/16 11:05

Lab Sample ID: 300-3249-1 DU

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			4518	06/10/16 12:39	RLC	TAL RCH

Client Sample ID: Duplicate

Date Collected: 06/10/16 10:11

Date Received: 06/10/16 15:15

Lab Sample ID: 300-3252-A-33 DU

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	300.0		2	10 mL		4507	06/10/16 19:35	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		4508	06/10/16 19:35	CPM	TAL RCH

Client Sample ID: Lab Control Sample

Date Collected: N/A

Date Received: N/A

Lab Sample ID: LCS 300-4507/6

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	300.0		1	10 mL		4507	06/10/16 18:50	CPM	TAL RCH

Lab Chronicle

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-042

TestAmerica Job ID: 300-3249-1
SDG: WC1151

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-4508/6

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	300.0		1	10 mL		4508	06/10/16 18:50	CPM	TAL RCH

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-4518/4

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			4518	06/10/16 12:36	RLC	TAL RCH

Client Sample ID: Method Blank

Lab Sample ID: MB 300-4507/5

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	300.0		1	10 mL		4507	06/10/16 18:35	CPM	TAL RCH

Client Sample ID: Method Blank

Lab Sample ID: MB 300-4508/5

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	300.0		1	10 mL		4508	06/10/16 18:35	CPM	TAL RCH

Client Sample ID: Method Blank

Lab Sample ID: MB 300-4518/3

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			4518	06/10/16 12:35	RLC	TAL RCH

Client Sample ID: B35VR5

Lab Sample ID: 300-3249-1 MS

Date Collected: 06/09/16 14:38

Matrix: Water

Date Received: 06/10/16 11:05

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	4518	06/10/16 12:36	RLC	TAL RCH

Lab Chronicle

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-042

TestAmerica Job ID: 300-3249-1
SDG: WC1151

Client Sample ID: Matrix Spike

Lab Sample ID: 300-3252-A-33 MS

Date Collected: 06/10/16 10:11

Matrix: Water

Date Received: 06/10/16 15:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2	10 mL		4507	06/10/16 19:20	CPM	TAL RCH
Total/NA	Analysis	300.0		2	10 mL		4508	06/10/16 19:20	CPM	TAL RCH

Laboratory References:

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

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Method Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-042

TestAmerica Job ID: 300-3249-1
SDG: WC1151

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL RCH
7196A	Chromium, Hexavalent	SW846	TAL RCH

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
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



July 13, 2016

Sample Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-042

TestAmerica Job ID: 300-3249-1
SDG: WC1151

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-3249-1	B35VR5	Water	06/09/16 14:38	06/10/16 11:05
300-3249-2	B35VR0	Water	06/09/16 14:38	06/10/16 11:05
300-3249-3	B35VR1	Water	06/09/16 14:38	06/10/16 11:05

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Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 300-3249-1

SDG Number: WC1151

Login Number: 3249

List Number: 1

Creator: Bock, Julie A

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.	True	
Residual Chlorine Checked.	N/A	

