

June 30, 2017

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: 300-5649-1

TestAmerica Sample Delivery Group: WC2106

Client Project/Site: F10-284

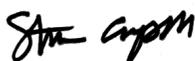
For:

CH2M Hill Plateau Remediation Company

825 Jadwin Avenue

Richland, Washington 99352

Attn: CPP Sample Management



Authorized for release by:

6/30/2017 6:09:01 PM

Steven Campbell, Project Mgmt. Assistant

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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.



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Qualifiers

HPLC/IC

Qualifier	Qualifier Description
D	The reported value is from a dilution.
U	Analyzed for but not detected.
X	See case narrative notes for explanation of the 'X' flag

General Chemistry

Qualifier	Qualifier Description
B	Estimated result. Result is less than the RL, but greater than MDL
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	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
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 (Radiochemistry)
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: F10-284

TestAmerica Job ID: 300-5649-1
SDG: WC2106

Job ID: 300-5649-1

Laboratory: TestAmerica Richland

Narrative

**Job Narrative
300-5649-1**

Comments

No additional comments.

Receipt

The samples were received on 6/13/2017 3:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 8.3° C.

HPLC/IC

Method 300.0: The Matrix Spike (MS) recovery for Sulfate in analytical batch 8262 was outside acceptance criteria. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or 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		F10-284-188	PAGE 1 OF 1
COLLECTOR CHRIS FULTON 0-2-20	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC	PRICE CODE 7H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION Effluent Valve, V-WJ13	PROJECT DESIGNATION 100-KW Pump and Treat Influent & Effluent Tanks - Water	FIELD LOGBOOK NO. HNF-N-491-16	ACTUAL SAMPLE DEPTH N/A	SAF NO. F10-284	AIR QUALITY <input type="checkbox"/>
ICE CHEST NO. NA	OFFSITE PROPERTY NO. NA	COA 302878	BILL OF LADING/AIR BILL NO. NA	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO Testamerica Incorporated, Richland		ORIGINAL			

MATRIX*	SPECIAL HANDLING AND/OR STORAGE NA	PRESERVATION	HOLDING TIME	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
B3B368	WATER						

Handwritten notes: *SEWAGE WEARISE*



June 30, 2017

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM CHRIS FULTON 0-2-20	RECEIVED BY/STORED IN JANISLE ZUKKER CHPRG JUN 13 2017 1631	TRVL-17-135
RELINQUISHED BY/REMOVED FROM JANISLE ZUKKER CHPRG	RECEIVED BY/STORED IN J. BOCK, TARRIN JUN 13 2017 1500	
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

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F10-284-183	PAGE 1 OF 1
COLLECTOR CHRIS FULTON CH2MRC	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC	PRICE CODE 7H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION Influent Valve, V-WIE06C	PROJECT DESIGNATION 100-KW Pump and Treat Influent & Effluent Tanks - Water	FIELD LOGBOOK NO. HNF-N-491-16	ACTUAL SAMPLE DEPTH N/A	SAF NO. F10-284	AIR QUALITY <input type="checkbox"/>
ICE CHEST NO. NA	OFFSITE PROPERTY NO. NA	COA 302878	BILL OF LADING/AIR BILL NO. NA	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO TestAmerica Incorporated, Richland					

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR/JATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION	Cool-to-4C
		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
83B363	WATER	JUN 13 2017	0850

5449
W2100

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM CH2MRC	RECEIVED BY/STORED IN Janelle Zunko CH2MRC	DATE/TIME JUN 13 2017 1051	DATE/TIME JUN 13 2017 1031	TRVL-17-135	
RELINQUISHED BY/REMOVED FROM Janelle Zunko	RECEIVED BY/STORED IN J. Beck, TARJUN	DATE/TIME JUN 13 2017 1500	DATE/TIME JUN 13 2017 1500		
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		
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	

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-284-193 PAGE 1 OF 1

COLLECTOR
CHRIS FULTON
CHPRC

COMPANY CONTACT
SUMNER, LC
376-3922

TELEPHONE NO.

PROJECT COORDINATOR
SUMNER, LC

PRICE CODE 7H
AIR QUALITY
METHOD OF SHIPMENT GOVERNMENT VEHICLE
DATA TURNAROUND 30 Days / 30 Days
ORIGINAL

SAMPLING LOCATION
Effluent Valve, V-W13 DUP

PROJECT DESIGNATION
100-KW Pump and Treat Influent & Effluent Tanks - Water

SAF NO.
F10-284

ICE CHEST NO.
NA

FIELD LOGBOOK NO.
HNF-N-491-16

COA
302878

SHIPPED TO
TestAmerica Incorporated, Richland

OFFSITE PROPERTY NO.
NA

BILL OF LADING/AIR BILL NO.
NA

MATRIX*
A=Air
D1=Drum
L=Liquids
DS=Drum
S=Solids
L=Liquid
O=Oil
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/JATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

PRESERVATION Cool-to-4C
HOLDING TIME 24 Hours
TYPE OF CONTAINER ag
NO. OF CONTAINER(S) 1
VOLUME 60mL

SAMPLE ANALYSIS
7196, CR6:
COMMON;

SPECIAL HANDLING AND/OR STORAGE
NA

SAMPLE DATE JUN 13 2017
SAMPLE TIME 0900

Handwritten: 7099, W212120

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
13B373	WATER	JUN 13 2017	0900

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
CHRIS FULTON CHPRC	JUN 13 2017 1631	JAMILLIE ZIMMER CHPRC	JUN 13 2017 1631
JAMILLIE ZIMMER CHPRC	JUN 13 2017 1500	J. BOCK, T&E	JUN 13 2017 1500

SPECIAL INSTRUCTIONS
TRVL-17-135

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	TITLE
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			DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD			DATE/TIME

June 30, 2017

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F10-284-187	PAGE 1 OF 1
COLLECTOR CHRIS FULTON C-PRC	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC	PRICE CODE 7H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION Effluent Valve, V-WJ13	PROJECT DESIGNATION 100-KW Pump and Treat Influent & Effluent Tanks - Water	FIELD LOGBOOK NO. HNF-491-16	ACTUAL SAMPLE DEPTH N/A	SAF NO. F10-284	AIR QUALITY <input type="checkbox"/>
ICE CHEST NO. NA	OFFSITE PROPERTY NO. NA	COA 302878	BILL OF LADING/AIR BILL NO. NA	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
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	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
		Cool <=6C	48 Hours	P	1	125ml			
83B367	WATER								

June 30, 2017

See 9
water

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM CHRIS FULTON	RECEIVED BY/STORED IN Janelle Zunker	TRVL-17-135 (1) 300.0 ANIONS_IC: COMMON {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};
DATE/TIME JUN 13 2017 1031	DATE/TIME JUN 13 2017 1031	
RELINQUISHED BY/REMOVED FROM Janelle Zunker	RECEIVED BY/STORED IN J. BOCK, TART	
DATE/TIME JUN 13 2017 1500	DATE/TIME JUN 13 2017 1500	
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	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
LABORATORY SECTION		
RECEIVED BY	TITLE	DATE/TIME
DISPOSAL METHOD	DISPOSED BY	DATE/TIME

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F10-284-182	PAGE 1 OF 1
COLLECTOR'S FACILITY CH2MRC	COMPANY CONTACT SUNNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUNNER, LC	PRICE CODE 7H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION Influent Valve, V-WE06C	PROJECT DESIGNATION 100-KW Pump and Treat Influent & Effluent Tanks - Water	FIELD LOGBOOK NO. HNF-N-491-16	ACTUAL SAMPLE DEPTH N/A	SAF NO. F10-284	AIR QUALITY <input type="checkbox"/>
ICE CHEST NO. NA	OFFSITE PROPERTY NO. NA	COA 302878	BILL OF LADING/AIR BILL NO. NA	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO TestAmerica Incorporated, Richland					

MATRIX* A=Air DL=Drum Liquides DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation WF=Water WI=Wipe X=Other	*Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/ATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION	Cool <=6C
		HOLDING TIME	48 Hours
		TYPE OF CONTAINER	P
		NO. OF CONTAINER(S)	1
		VOLUME	125ml
SPECIAL HANDLING AND/OR STORAGE NA	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	
SAMPLE NO. B3B362	MATRIX* WATER	SAMPLE DATE JUN 13 2017	SAMPLE TIME 0850

5649
w2210w

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM CH2MRC	DATE/TIME JUN 13 2017 1031	RECEIVED BY/STORED IN Janelle Zander CH2MRC	DATE/TIME JUN 13 2017 1031	(1) 300.0 ANIONS, IC: COMMON {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};	
RELINQUISHED BY/REMOVED FROM Janelle Zander CH2MRC	DATE/TIME JUN 13 2017 1500	RECEIVED BY/STORED IN J. Bock, TAPUN	DATE/TIME JUN 13 2017 1500		
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	TITLE	
LABORATORY SECTION	RECEIVED BY	DISPOSED BY		DATE/TIME	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD			DATE/TIME	

June 30, 2017

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F10-284-192	PAGE 1 OF 1
COLLECTOR CHRIS FULTON CHPRC	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC	PRICE CODE 7H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION Effluent Valve, VAW13 DUP	PROJECT DESIGNATION 100-KW Pump and Treat Influent & Effluent Tanks - Water	FIELD LOGBOOK NO. HNF-N-491-16	ACTUAL SAMPLE DEPTH N/A	SAF NO. F10-284	AIR QUALITY <input type="checkbox"/>
ICE CHEST NO. NA	OFFSITE PROPERTY NO. NA	COA 302878	BILL OF LADING/AIR BILL NO. NA	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO TestAmerica Incorporated, Richland					

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/ATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION Cool <=6C		
A=Air		HOLDING TIME 48 Hours		
DL=Drum		TYPE OF CONTAINER P		
Liquids		NO. OF CONTAINER(S) 1		
DS=Drum		VOLUME 125ml		
Solids		SEE ITEM (1) IN SPECIAL INSTRUCTIONS		
L=Liquid				
O=Oil				
S=Soil				
SE=Sediment				
T=Tissue				
V=Vegetation				
W=Water				
WI=Wipe				
X=Other				
SPECIAL HANDLING AND/OR STORAGE NA	SAMPLE ANALYSIS			
SAMPLE NO. B3B372	MATRIX* WATER	SAMPLE DATE JUN 13 2017	SAMPLE TIME 0900	<input checked="" type="checkbox"/>

6-13-17
Site
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CHAIN OF POSSESSION SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM CHRIS FULTON CHPRC	REMOVED FROM JUN 13 2017 1031	RECEIVED BY/STORED IN Janelle Zurke CHPRC	RECEIVED IN JUN 13 2017 1031	SPECIAL INSTRUCTIONS TRVL-17-135 (1) 300.0 ANIONS_IC: COMMON {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};
RELINQUISHED BY/REMOVED FROM Janelle Zurke CHPRC	REMOVED FROM JUN 13 2017 1500	RECEIVED BY/STORED IN J. Bock, TARYUN	RECEIVED IN JUN 13 2017 1500	
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	

June 30, 2017 Detection Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F10-284

TestAmerica Job ID: 300-5649-1
SDG: WC2106

Client Sample ID: B3B368

Lab Sample ID: 300-5649-1

No Detections.

Client Sample ID: B3B363

Lab Sample ID: 300-5649-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.031		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B3B373

Lab Sample ID: 300-5649-3

No Detections.

Client Sample ID: B3B367

Lab Sample ID: 300-5649-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	14	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	5.3	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.22	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	79	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B3B362

Lab Sample ID: 300-5649-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	14	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	5.4	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.23	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	80	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B3B372

Lab Sample ID: 300-5649-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	14	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	5.3	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.22	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	80	D	0.50	0.25	mg/L	2		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Richland

Client: CH2M Hill Plateau Remediation Company
Project/Site: F10-284

TestAmerica Job ID: 300-5649-1
SDG: WC2106

Client Sample ID: B3B368

Lab Sample ID: 300-5649-1

Date Collected: 06/13/17 09:00
Date Received: 06/13/17 15:00

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			06/13/17 17:40	1

Client Sample ID: B3B363

Lab Sample ID: 300-5649-2

Date Collected: 06/13/17 08:50
Date Received: 06/13/17 15:00

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.031		0.0040	0.0015	mg/L			06/13/17 17:44	1

Client Sample ID: B3B373

Lab Sample ID: 300-5649-3

Date Collected: 06/13/17 09:00
Date Received: 06/13/17 15:00

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			06/13/17 17:44	1

Client Sample ID: B3B367

Lab Sample ID: 300-5649-4

Date Collected: 06/13/17 09:00
Date Received: 06/13/17 15:00

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14	D	0.40	0.20	mg/L			06/13/17 20:50	2
Nitrate as N	5.3	D	0.056	0.028	mg/L			06/13/17 20:50	2
Fluoride	0.22	D	0.10	0.050	mg/L			06/13/17 20:50	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			06/13/17 20:50	2
Sulfate	79	D	0.50	0.25	mg/L			06/13/17 20:50	2

Client Sample ID: B3B362

Lab Sample ID: 300-5649-5

Date Collected: 06/13/17 08:50
Date Received: 06/13/17 15:00

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14	D	0.40	0.20	mg/L			06/13/17 21:36	2
Nitrate as N	5.4	D	0.056	0.028	mg/L			06/13/17 21:36	2
Fluoride	0.23	D	0.10	0.050	mg/L			06/13/17 21:36	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			06/13/17 21:36	2
Sulfate	80	D	0.50	0.25	mg/L			06/13/17 21:36	2

Client Sample ID: B3B372

Lab Sample ID: 300-5649-6

Date Collected: 06/13/17 09:00
Date Received: 06/13/17 15:00

Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14	D	0.40	0.20	mg/L			06/13/17 21:51	2
Nitrate as N	5.3	D	0.056	0.028	mg/L			06/13/17 21:51	2

TestAmerica Richland

Client: CH2M Hill Plateau Remediation Company
Project/Site: F10-284

TestAmerica Job ID: 300-5649-1
SDG: WC2106

Client Sample ID: B3B372

Lab Sample ID: 300-5649-6

Date Collected: 06/13/17 09:00

Matrix: Water

Date Received: 06/13/17 15:00

Method: 300.0 - Anions, Ion Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.22	D	0.10	0.050	mg/L			06/13/17 21:51	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			06/13/17 21:51	2
Sulfate	80	D	0.50	0.25	mg/L			06/13/17 21:51	2

Client: CH2M Hill Plateau Remediation Company
Project/Site: F10-284

TestAmerica Job ID: 300-5649-1
SDG: WC2106

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 300-8261/5
Matrix: Water
Analysis Batch: 8261

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			06/13/17 18:35	1
Nitrite as N	0.019	U	0.038	0.019	mg/L			06/13/17 18:35	1

Lab Sample ID: LCS 300-8261/6
Matrix: Water
Analysis Batch: 8261

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	2.21		mg/L		98	80 - 120
Nitrite as N	3.04	3.01		mg/L		99	80 - 120

Lab Sample ID: 300-5647-A-3 MS
Matrix: Water
Analysis Batch: 8261

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	2.0	D	0.452	2.44	D	mg/L		95	75 - 125
Nitrite as N	0.038	U D	0.609	0.553	D	mg/L		91	75 - 125

Lab Sample ID: 300-5647-A-3 DU
Matrix: Water
Analysis Batch: 8261

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Nitrate as N	2.0	D	1.98	D	mg/L		2	20
Nitrite as N	0.038	U D	0.038	U D	mg/L		NC	20

Lab Sample ID: MB 300-8262/5
Matrix: Water
Analysis Batch: 8262

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			06/13/17 18:35	1
Fluoride	0.025	U	0.050	0.025	mg/L			06/13/17 18:35	1
Sulfate	0.13	U	0.25	0.13	mg/L			06/13/17 18:35	1

Lab Sample ID: LCS 300-8262/6
Matrix: Water
Analysis Batch: 8262

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	15.5		mg/L		97	80 - 120
Fluoride	4.00	3.88		mg/L		97	80 - 120
Sulfate	20.0	19.6		mg/L		98	80 - 120

Client: CH2M Hill Plateau Remediation Company
Project/Site: F10-284

TestAmerica Job ID: 300-5649-1
SDG: WC2106

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 300-5647-A-3 MS
Matrix: Water
Analysis Batch: 8262

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Chloride	8.3	D	3.20	11.3	D	mg/L		94	75 - 125	
Fluoride	0.14	D	0.800	0.848	D	mg/L		88	75 - 125	
Sulfate	45	D	4.00	47.9	X D	mg/L		72	75 - 125	

Lab Sample ID: 300-5647-A-3 DU
Matrix: Water
Analysis Batch: 8262

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	RPD	Limit
	Result	Qualifier	Result	Qualifier					
Chloride	8.3	D	8.15	D	mg/L		1	1	20
Fluoride	0.14	D	0.140	D	mg/L		3	3	20
Sulfate	45	D	44.4	D	mg/L		1	1	20

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 300-8280/3
Matrix: Water
Analysis Batch: 8280

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			06/13/17 17:35	1

Lab Sample ID: LCS 300-8280/4
Matrix: Water
Analysis Batch: 8280

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

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
	Added	Result	Qualifier					
Cr (VI)	0.250	0.254		mg/L		102	80 - 120	

Lab Sample ID: 300-5647-A-1 MS
Matrix: Water
Analysis Batch: 8280

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Cr (VI)	0.0023	B	0.0501	0.0536		mg/L		102	75 - 125	

Lab Sample ID: 300-5647-A-1 DU
Matrix: Water
Analysis Batch: 8280

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	RPD	Limit
	Result	Qualifier	Result	Qualifier					
Cr (VI)	0.0023	B	0.00220	B	mg/L		4	4	20

Client: CH2M Hill Plateau Remediation Company
Project/Site: F10-284

TestAmerica Job ID: 300-5649-1
SDG: WC2106

HPLC/IC

Analysis Batch: 8261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-5649-4	B3B367	Total/NA	Water	300.0	
300-5649-5	B3B362	Total/NA	Water	300.0	
300-5649-6	B3B372	Total/NA	Water	300.0	
MB 300-8261/5	Method Blank	Total/NA	Water	300.0	
LCS 300-8261/6	Lab Control Sample	Total/NA	Water	300.0	
300-5647-A-3 MS	Matrix Spike	Total/NA	Water	300.0	
300-5647-A-3 DU	Duplicate	Total/NA	Water	300.0	

Analysis Batch: 8262

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-5649-4	B3B367	Total/NA	Water	300.0	
300-5649-5	B3B362	Total/NA	Water	300.0	
300-5649-6	B3B372	Total/NA	Water	300.0	
MB 300-8262/5	Method Blank	Total/NA	Water	300.0	
LCS 300-8262/6	Lab Control Sample	Total/NA	Water	300.0	
300-5647-A-3 MS	Matrix Spike	Total/NA	Water	300.0	
300-5647-A-3 DU	Duplicate	Total/NA	Water	300.0	

General Chemistry

Analysis Batch: 8280

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-5649-1	B3B368	Total/NA	Water	7196A	
300-5649-2	B3B363	Total/NA	Water	7196A	
300-5649-3	B3B373	Total/NA	Water	7196A	
MB 300-8280/3	Method Blank	Total/NA	Water	7196A	
LCS 300-8280/4	Lab Control Sample	Total/NA	Water	7196A	
300-5647-A-1 MS	Matrix Spike	Total/NA	Water	7196A	
300-5647-A-1 DU	Duplicate	Total/NA	Water	7196A	

Client: CH2M Hill Plateau Remediation Company
Project/Site: F10-284

TestAmerica Job ID: 300-5649-1
SDG: WC2106

Client Sample ID: B3B368
Date Collected: 06/13/17 09:00
Date Received: 06/13/17 15:00

Lab Sample ID: 300-5649-1
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			8280	06/13/17 17:40	HR	TAL RCH

Client Sample ID: B3B363
Date Collected: 06/13/17 08:50
Date Received: 06/13/17 15:00

Lab Sample ID: 300-5649-2
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			8280	06/13/17 17:44	HR	TAL RCH

Client Sample ID: B3B373
Date Collected: 06/13/17 09:00
Date Received: 06/13/17 15:00

Lab Sample ID: 300-5649-3
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			8280	06/13/17 17:44	HR	TAL RCH

Client Sample ID: B3B367
Date Collected: 06/13/17 09:00
Date Received: 06/13/17 15:00

Lab Sample ID: 300-5649-4
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	300.0		2			8261	06/13/17 20:50	ALR	TAL RCH
Total/NA	Analysis	300.0		2			8262	06/13/17 20:50	ALR	TAL RCH

Client Sample ID: B3B362
Date Collected: 06/13/17 08:50
Date Received: 06/13/17 15:00

Lab Sample ID: 300-5649-5
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	300.0		2			8261	06/13/17 21:36	ALR	TAL RCH
Total/NA	Analysis	300.0		2			8262	06/13/17 21:36	ALR	TAL RCH

Client Sample ID: B3B372
Date Collected: 06/13/17 09:00
Date Received: 06/13/17 15:00

Lab Sample ID: 300-5649-6
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		2			8261	06/13/17 21:51	ALR	TAL RCH
Total/NA	Analysis	300.0		2			8262	06/13/17 21:51	ALR	TAL RCH

Client: CH2M Hill Plateau Remediation Company
Project/Site: F10-284

TestAmerica Job ID: 300-5649-1
SDG: WC2106

Client Sample ID: Method Blank

Lab Sample ID: MB 300-8261/5

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			8261	06/13/17 18:35	ALR	TAL RCH

Client Sample ID: Method Blank

Lab Sample ID: MB 300-8262/5

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			8262	06/13/17 18:35	ALR	TAL RCH

Client Sample ID: Method Blank

Lab Sample ID: MB 300-8280/3

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			8280	06/13/17 17:35	HR	TAL RCH

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-8261/6

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			8261	06/13/17 18:50	ALR	TAL RCH

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-8262/6

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			8262	06/13/17 18:50	ALR	TAL RCH

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-8280/4

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			8280	06/13/17 17:35	HR	TAL RCH

Client: CH2M Hill Plateau Remediation Company
Project/Site: F10-284

TestAmerica Job ID: 300-5649-1
SDG: WC2106

Client Sample ID: Matrix Spike

Lab Sample ID: 300-5647-A-1 MS

Date Collected: 06/13/17 10:30

Matrix: Water

Date Received: 06/13/17 15:00

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			8280	06/13/17 17:36	HR	TAL RCH

Client Sample ID: Matrix Spike

Lab Sample ID: 300-5647-A-3 MS

Date Collected: 06/13/17 10:30

Matrix: Water

Date Received: 06/13/17 15:00

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			8261	06/13/17 19:20	ALR	TAL RCH
Total/NA	Analysis	300.0		2			8262	06/13/17 19:20	ALR	TAL RCH

Laboratory References:

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

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Client: CH2M Hill Plateau Remediation Company
Project/Site: F10-284

TestAmerica Job ID: 300-5649-1
SDG: WC2106

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



June 30, 2017 Sample Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F10-284

TestAmerica Job ID: 300-5649-1
SDG: WC2106

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-5649-1	B3B368	Water	06/13/17 09:00	06/13/17 15:00
300-5649-2	B3B363	Water	06/13/17 08:50	06/13/17 15:00
300-5649-3	B3B373	Water	06/13/17 09:00	06/13/17 15:00
300-5649-4	B3B367	Water	06/13/17 09:00	06/13/17 15:00
300-5649-5	B3B362	Water	06/13/17 08:50	06/13/17 15:00
300-5649-6	B3B372	Water	06/13/17 09:00	06/13/17 15:00

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Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 300-5649-1

SDG Number: WC2106

Login Number: 5649

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	

