

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: 300-5647-1

TestAmerica Sample Delivery Group: WC2104

Client Project/Site: F11-002

For:

CH2M Hill Plateau Remediation Company

825 Jadwin Avenue

Richland, Washington 99352

Attn: CPP Sample Management



Authorized for release by:

6/30/2017 5:52:27 PM

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Designee for

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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.



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	13
Lab Chronicle	14
Method Summary	16
Sample Summary	17
Receipt Checklists	18

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: F11-002

TestAmerica Job ID: 300-5647-1
SDG: WC2104

Job ID: 300-5647-1

Laboratory: TestAmerica Richland

Narrative

Job Narrative
300-5647-1

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

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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June 30, 2017

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F11-002-176	PAGE 1 OF 1
COLLECTOR CH2M HILL CH2M	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC	PRICE CODE 7H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION 100-KR-4, INFLUENT, VALVE T-K3 (Kp-16)	PROJECT DESIGNATION 100-KR-4 Pump and Treat Influent & Effluent Tanks - Water	FIELD LOGBOOK NO. HNF-N-491-16	ACTUAL SAMPLE DEPTH N/A	AIR QUALITY <input type="checkbox"/>	METHOD OF SHIPMENT GOVERNMENT VEHICLE ORIGINAL
ICE CHEST NO. NA	OFFSITE PROPERTY NO. NA	SAF NO. F11-002	COA 302891	BILL OF LADING/AIR BILL NO. NA	
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 regulated for transportation per 49 CFR/JATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION	Cool <=6C
		HOLDING TIME	24 Hours
		TYPE OF CONTAINER	ag
		NO. OF CONTAINER(S)	1
		VOLUME	60ml
SPECIAL HANDLING AND/OR STORAGE NA	SAMPLE ANALYSIS	7196 CR6: COMMON;	
SAMPLE NO. B3B343	MATRIX* WATER	SAMPLE DATE JUN 13 2017	SAMPLE TIME 1030

SWM
we are



300-5647 COC

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM CH2M	RECEIVED BY/STORED IN Troy Bacon CH2M	TRVL-17-135
DATE/TIME JUN 13 2017 13:15	DATE/TIME JUN 13 2017 13:45	
RELINQUISHED BY/REMOVED FROM Troy Bacon CH2M	RECEIVED BY/STORED IN Moele Bacon CH2M	
DATE/TIME JUN 13 2017 13:15	DATE/TIME JUN 13 2017 13:45	
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

PRINTED ON 5/8/2017 FSR ID = FSR45068 TRVL NUM = TRVL-17-135 A-6003-618 (REV 2)

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-002-171	PAGE 1 OF 1
COLLECTOR CJPRC	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC	PRICE CODE 7H	AIR QUALITY	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION 100-KR-4, EFFLUENT, VALVE T-K5 (FILTER VENT)	PROJECT DESIGNATION 100-KR-4 Pump and Treat Influent & Effluent Tanks - Water	FIELD LOGBOOK NO. HNF-A-491-16	ACTUAL SAMPLE DEPTH N/A	SAF NO. F11-002	<input type="checkbox"/>	ORIGINAL
ICE CHEST NO. NA	OFFSITE PROPERTY NO. NA	COA 302891	BILL OF LADING/AIR BILL NO. NA	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Testamerica Incorporated, Richland						

MATRIX* A=Air DL=Drum L=Drum DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation WL=Water WI=Wipe X=Other	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
		HOLDING TIME		24 Hours
		TYPE OF CONTAINER		3G
		NO. OF CONTAINER(S)		1
		VOLUME		60ml
SPECIAL HANDLING AND/OR STORAGE NA		SAMPLE ANALYSIS		7196 CR6: COMMON;
SAMPLE NO. B3B338	MATRIX* WATER	SAMPLE DATE JUN 13 2017	SAMPLE TIME 1645	✓

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CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM CARRIS FULTON		DATE/TIME JUN 13 2017 1345	RECEIVED BY/STORED IN Toy Baggett	DATE/TIME JUN 13 2017 1345	TRVL-17-135
RELINQUISHED BY/REMOVED FROM CHPRC		DATE/TIME JUN 13 2017 1500	RECEIVED BY/STORED IN J. Bock, TARI	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	
LABORATORY SECTION		RECEIVED BY	TITLE		DATE/TIME
FINAL SAMPLE DISPOSITION		DISPOSAL METHOD	DISPOSED BY		DATE/TIME

June 30, 2017

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F11-002-177	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 100-KR-4, INFLUENT, VALVE 1-K3 (KR-16)	PROJECT DESIGNATION 100-KR-4 Pump and Treat Influent & Effluent Tanks - Water	FIELD LOGBOOK NO. HNF-N-491-16	ACTUAL SAMPLE DEPTH N/A	AIR QUALITY <input type="checkbox"/>	METHOD OF SHIPMENT GOVERNMENT VEHICLE ORIGINAL
ICE CHEST NO. NA	OFFSITE PROPERTY NO. NA	COA 302891	BILL OF LADING/AIR BILL NO. NA		
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 <=6C
		HOLDING TIME	48 Hours
		TYPE OF CONTAINER	P
		NO. OF CONTAINER(S)	1
		VOLUME	125ml
		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B3B344	WATER	JUN 13 2017	1630

June 30, 2017

Stagn water

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM CHRIS FULTON CHPRC	RECEIVED FROM JUN 13 2017 1345	RECEIVED BY/STORED IN Troy Baeort CHPRC	DATE/TIME JUN 13 2017 1345	TRVL-17-135 (1) 300.0 ANIONS_IC: COMMON {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};	
RELINQUISHED BY/REMOVED FROM Troy Baeort CHPRC	RECEIVED FROM JUN 13 2017 1500	RECEIVED BY/STORED IN J. Bock, TARL	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		
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		F11-002-172	PAGE 1 OF 1
COLLECTOR CHRS FULTON CHPRC	COMPANY CONTACT SUNNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUNNER, LC	PRICE CODE 7H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION 100-KR-4, EFFLUENT, VALVE T-K5 (FILTER VENT)	PROJECT DESIGNATION 100-KR-4 Pump and Treat Influent & Effluent Tanks - Water	FIELD LOGBOOK NO. HNF-N-491-1G	ACTUAL SAMPLE DEPTH N/A	SAF NO. F11-002	AIR QUALITY <input type="checkbox"/>
ICE CHEST NO. NA	OFFSITE PROPERTY NO. NA	COA 302891	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/JATA 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
		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B38339	WATER	JUN 13 2017	1645

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CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM CHRS FULTON CHPRC	DATE/TIME JUN 13 2017 1345	RECEIVED BY/STORED IN Troy Beckett CHPRC	DATE/TIME JUN 13 2017 1345	(1) 300.0 ANIONS_IC: COMMON {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate};	
RELINQUISHED BY/REMOVED FROM Troy Beckett CHPRC	DATE/TIME JUN 13 2017 1500	RECEIVED BY/STORED IN J. Bock, TARRL	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		

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

PRINTED ON 5/8/2017 FSR ID = FSR45067 TRVL NUM = TRVL-17-135 A-6003-618 (REV 2)

June 30, 2017 Detection Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F11-002

TestAmerica Job ID: 300-5647-1
SDG: WC2104

Client Sample ID: B3B343

Lab Sample ID: 300-5647-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.0023	B	0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B3B338

Lab Sample ID: 300-5647-2

No Detections.

Client Sample ID: B3B344

Lab Sample ID: 300-5647-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.3	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	2.0	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.14	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	45	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B3B339

Lab Sample ID: 300-5647-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	8.2	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	2.1	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.14	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	45	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: F11-002

TestAmerica Job ID: 300-5647-1
SDG: WC2104

Client Sample ID: B3B343

Lab Sample ID: 300-5647-1

Date Collected: 06/13/17 10:30

Matrix: Water

Date Received: 06/13/17 15:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0023	B	0.0040	0.0015	mg/L			06/13/17 17:38	1

Client Sample ID: B3B338

Lab Sample ID: 300-5647-2

Date Collected: 06/13/17 10:45

Matrix: Water

Date Received: 06/13/17 15:00

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 17:39	1

Client Sample ID: B3B344

Lab Sample ID: 300-5647-3

Date Collected: 06/13/17 10:30

Matrix: Water

Date Received: 06/13/17 15:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.3	D	0.40	0.20	mg/L			06/13/17 19:05	2
Nitrate as N	2.0	D	0.056	0.028	mg/L			06/13/17 19:05	2
Fluoride	0.14	D	0.10	0.050	mg/L			06/13/17 19:05	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			06/13/17 19:05	2
Sulfate	45	D	0.50	0.25	mg/L			06/13/17 19:05	2

Client Sample ID: B3B339

Lab Sample ID: 300-5647-4

Date Collected: 06/13/17 10:45

Matrix: Water

Date Received: 06/13/17 15:00

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.2	D	0.40	0.20	mg/L			06/13/17 19:50	2
Nitrate as N	2.1	D	0.056	0.028	mg/L			06/13/17 19:50	2
Fluoride	0.14	D	0.10	0.050	mg/L			06/13/17 19:50	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			06/13/17 19:50	2
Sulfate	45	D	0.50	0.25	mg/L			06/13/17 19:50	2

Client: CH2M Hill Plateau Remediation Company
Project/Site: F11-002

TestAmerica Job ID: 300-5647-1
SDG: WC2104

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: 300-5647-3 MS
Matrix: Water
Analysis Batch: 8261

Client Sample ID: B3B344
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: 300-5647-3 DU
Matrix: Water
Analysis Batch: 8261

Client Sample ID: B3B344
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: F11-002

TestAmerica Job ID: 300-5647-1
SDG: WC2104

Method: 300.0 - Anions, Ion Chromatography (Continued)

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

Client Sample ID: B3B344
Prep Type: Total/NA

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier		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: 300-5647-3 DU
Matrix: Water
Analysis Batch: 8262

Client Sample ID: B3B344
Prep Type: Total/NA

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

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

Client Sample ID: B3B343
Prep Type: Total/NA

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

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

Client Sample ID: B3B343
Prep Type: Total/NA

Analyte	Sample	Sample	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: F11-002

TestAmerica Job ID: 300-5647-1
SDG: WC2104

HPLC/IC

Analysis Batch: 8261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-5647-3	B3B344	Total/NA	Water	300.0	
300-5647-4	B3B339	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	
300-5647-3 MS	B3B344	Total/NA	Water	300.0	
300-5647-3 DU	B3B344	Total/NA	Water	300.0	

Analysis Batch: 8262

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-5647-3	B3B344	Total/NA	Water	300.0	
300-5647-4	B3B339	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	
300-5647-3 MS	B3B344	Total/NA	Water	300.0	
300-5647-3 DU	B3B344	Total/NA	Water	300.0	

General Chemistry

Analysis Batch: 8280

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-5647-1	B3B343	Total/NA	Water	7196A	
300-5647-2	B3B338	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	
300-5647-1 MS	B3B343	Total/NA	Water	7196A	
300-5647-1 DU	B3B343	Total/NA	Water	7196A	



Client: CH2M Hill Plateau Remediation Company
Project/Site: F11-002

TestAmerica Job ID: 300-5647-1
SDG: WC2104

Client Sample ID: B3B343
Date Collected: 06/13/17 10:30
Date Received: 06/13/17 15:00

Lab Sample ID: 300-5647-1
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 17:38	HR	TAL RCH

Client Sample ID: B3B338
Date Collected: 06/13/17 10:45
Date Received: 06/13/17 15:00

Lab Sample ID: 300-5647-2
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 17:39	HR	TAL RCH

Client Sample ID: B3B344
Date Collected: 06/13/17 10:30
Date Received: 06/13/17 15:00

Lab Sample ID: 300-5647-3
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			8261	06/13/17 19:05	ALR	TAL RCH
Total/NA	Analysis	300.0		2			8262	06/13/17 19:05	ALR	TAL RCH

Client Sample ID: B3B339
Date Collected: 06/13/17 10:45
Date Received: 06/13/17 15:00

Lab Sample ID: 300-5647-4
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 19:50	ALR	TAL RCH
Total/NA	Analysis	300.0		2			8262	06/13/17 19:50	ALR	TAL RCH

Client Sample ID: Method Blank
Date Collected: N/A
Date Received: N/A

Lab Sample ID: MB 300-8261/5
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		1			8261	06/13/17 18:35	ALR	TAL RCH

Client Sample ID: Method Blank
Date Collected: N/A
Date Received: N/A

Lab Sample ID: MB 300-8262/5
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		1			8262	06/13/17 18:35	ALR	TAL RCH

Client: CH2M Hill Plateau Remediation Company
Project/Site: F11-002

TestAmerica Job ID: 300-5647-1
SDG: WC2104

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 Sample ID: B3B343

Lab Sample ID: 300-5647-1 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: B3B344

Lab Sample ID: 300-5647-3 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

Client: CH2M Hill Plateau Remediation Company
Project/Site: F11-002

TestAmerica Job ID: 300-5647-1
SDG: WC2104

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: F11-002

TestAmerica Job ID: 300-5647-1
SDG: WC2104

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-5647-1	B3B343	Water	06/13/17 10:30	06/13/17 15:00
300-5647-2	B3B338	Water	06/13/17 10:45	06/13/17 15:00
300-5647-3	B3B344	Water	06/13/17 10:30	06/13/17 15:00
300-5647-4	B3B339	Water	06/13/17 10:45	06/13/17 15:00

- 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: 300-5647-1

SDG Number: WC2104

Login Number: 5647

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	

