

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: 300-6626-1
TestAmerica Sample Delivery Group: WC2633
Client Project/Site: S18-001

For:
CH2M Hill Plateau Remediation Company
825 Jadwin Avenue
Richland, Washington 99352

Attn: CPP Sample Management



Authorized for release by:
1/11/2018 9:53:10 AM

Ashley Worthy, Project Manager I
(509)375-3131
ashley.worthy@testamericainc.com

LINKS

Review your project results through
TotalAccess

Have a Question?



Visit us at:
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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Client: CH2M Hill Plateau Remediation Company
 Project/Site: S18-001

TestAmerica Job ID: 300-6626-1
 SDG: WC2633

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	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: S18-001

TestAmerica Job ID: 300-6626-1
SDG: WC2633

Job ID: 300-6626-1

Laboratory: TestAmerica Richland

Narrative

**Job Narrative
300-6626-1**

Comments

No additional comments.

Receipt

The samples were received on 1/4/2018 1:05 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.3° C.

HPLC/IC

Method(s) 300.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for Sulfate in analytical batch 300-10070 were outside control limits. Sample matrix interference and/or non-homogeneity are 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.



**CE2MEH11 Plateau
Remediation Company**

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
S18-001-303
Page 1 of 1

Collector: **IVAN SCHAEFFER**
CHPRC
S18-001
Project Title: **SURV, JANUARY 2018**
Shipped To (Lab): **TestAmerica Incorporated, Rich**
Protocol: **SURV**

Contact/Requester: **Karen Waters-Husted**
Sampling Origin: **Hanford Site**
Logbook No.: **HNF-N-506 96/77**
Method of Shipment: **GOVERNMENT VEHICLE**
Priority: **30 Days**

Telephone No.: **509-376-4650**
Purchase Order/Charge Code: **300071**
Ice Chest No.: **N/A**
Bill of Lading/Air Bill No.: **N/A**
Offsite Property No.: **N/A**

POSSIBLE SAMPLE HAZARDS/REMARK
** * 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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3FX85	<input checked="" type="checkbox"/>	W	1-4-18	0700	1x60-mL aG	7196_CR6: COMMON	24 Hours	COOL <=6C
B3FX81	<input type="checkbox"/>	N	1-4-18	0700	1x60-mL aG	7196_CR6: COMMON	24 Hours	COOL <=6C

01/11/2018

Wc 2033

Relinquished By: **IVAN SCHAEFFER**
CHPRC
Signature: *Ivan Schaeffer*
Date/Time: **JAN 04 2018 1030**

Received By: **Christina Aguirre**
CHPRC
Signature: *Christina Aguirre*
Date/Time: **JAN 04 2018 1030**

Relinquished By: **Christina Aguirre**
CHPRC
Signature: *Christina Aguirre*
Date/Time: **JAN 04 2018 1305**

Received By: **J. Bock, TARA**
Signature: *J. Bock*
Date/Time: **1-4-18 1355**

Relinquished By: _____
Signature: _____
Date/Time: _____

Received By: _____
Signature: _____
Date/Time: _____

Matrix *
S = Soil DS = Drum Solids
SE = Sediment DL = Drum Liquid
SO = Solid T = Tissue
SL = Sludge WI = Wipe
W = Water L = Liquid
O = Oil V = Vegetation
A = Air X = Other

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process): _____
Disposed By: _____
Date/Time: _____

**CH2MHill Plateau
Remediation Company**

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
S18-001-307
Page 1 of 1

Collector: IVAN SCHAEFFER
CHPRC

LSAF No.: S18-001

Project Title: SURV, JANUARY 2018

Shipped To (Lab): TestAmerica Incorporated, Rich

Protocol: SURV

Contact/Requester: Karen Waters-Husted

Sampling Origin: Hanford Site

Logbook No.: HNF-N-506 96 177

Method of Shipment: GOVERNMENT VEHICLE

Priority: 30 Days

Telephone No.: 509-376-4650

Purchase Order/Charge Code: 300071

Ice Chest No.: N/A

Bill of Lading/Air Bill No.: N/A

Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARK
 ** * 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

SPECIAL INSTRUCTIONS
N/A

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3FW93	Y	W	JAN 04 2018	0910	1x60-mL aG	7196_CR6: COMMON	24 Hours	COOL <=6C
B3FX90	N	W			1x60-mL aG	7196_CR6: COMMON	24 Hours	COOL <=6C

01/11/2018

Lease
w/2003

Relinquished By: IVAN SCHAEFFER
CHPRC
Signature: [Signature] Date/Time: JAN 04 2018 1030

Received By: Christina Agalar
ACPRC
Signature: [Signature] Date/Time: JAN 04 2018 1030

Relinquished By: Christina Agalar
ACPRC
Signature: [Signature] Date/Time: JAN 04 2018 1305

Received By: J. Bock, TARL
Signature: [Signature] Date/Time: 1-4-18 1305

Relinquished By: [Signature] Date/Time: [Date/Time]

Received By: [Signature] Date/Time: [Date/Time]

Matrix *
 S = Soil DS = Drum Solids
 SE = Sediment DL = Drum Liquid
 SO = Solid T = Tissue
 SL = Sludge WI = Wipe
 W = Water L = Liquid
 O = Oil V = Vegetation
 A = Air X = Other

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process): [] Disposed By: [] Date/Time: []

**CH2M Hill Plateau
Remediation Company**

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. #
S18-001-288
Page 1 of 1

Collector: IVAN SCHAEFFER
CHPRC
SAF No.: S18-001
Project Title: SURV, JANUARY 2018
Shipped To (Lab): TestAmerica Incorporated, Rich
Protocol: SURV
Contact/Requester: Karen Waters-Husted
Sampling Origin: Hanford Site
Logbook No.: HNF-N-506 96 177
Method of Shipment: GOVERNMENT VEHICLE
Priority: 30 Days
Telephone No.: 509-376-4650
Purchase Order/Charge Code: 300071
Ice Chest No.: N/A
Bill of Lading/Air Bill No.: N/A
Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARK
** ** 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

SPECIAL INSTRUCTIONS
N/A

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3FW68	N	W	1/11/18	1210	1x125-ML P	300.0_ANTONS_IC: COMMON	48 Hours	COOL <=6C

01/11/2018
W234
W233

Relinquished By: IVAN SCHAEFFER CHPRC Signature: <i>Ivan Schaeffer</i> Date/Time: JAN 04 2018 1230	Received By: <i>[Signature]</i> Signature: <i>[Signature]</i> Date/Time: JAN 04 2018 1230	<p>Matrix *</p> <p>S = Soil DS = Drum Solids SE = Sediment DL = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wipe W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other</p>
Relinquished By: <i>[Signature]</i> Signature: <i>[Signature]</i> Date/Time: JAN 04 2018 1305	Received By: <i>[Signature]</i> Signature: <i>[Signature]</i> Date/Time: 1/14/18/1305	
Relinquished By: <i>[Signature]</i> Signature: <i>[Signature]</i> Date/Time: _____	Received By: <i>[Signature]</i> Signature: <i>[Signature]</i> Date/Time: _____	
Relinquished By: <i>[Signature]</i> Signature: <i>[Signature]</i> Date/Time: _____	Received By: <i>[Signature]</i> Signature: <i>[Signature]</i> Date/Time: _____	
Relinquished By: <i>[Signature]</i> Signature: <i>[Signature]</i> Date/Time: _____	Received By: <i>[Signature]</i> Signature: <i>[Signature]</i> Date/Time: _____	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process): _____
Disposed By: _____
Date/Time: _____

Collector: **IAN SCHAEFFER**
 SAF No.: **S18-001**
 Project Title: **SURV, JANUARY 2018**
 Shipped To (Lab): **TestAmerica Incorporated, Rich**
 Protocol: **SURV**

Contact/Requester: **Karen Waters-Husted**
 Sampling Origin: **Hanford Site**
 Logbook No.: **HNF-N-506 96/177**
 Method of Shipment: **GOVERNMENT VEHICLE**
 Priority: **30 Days**

Telephone No.: **509-376-4650**
 Purchase Order/Charge Code: **300071**
 Ice Chest No.: **N/A**
 Bill of Lading/Air Bill No.: **N/A**
 Offsite Property No.: **N/A**

POSSIBLE SAMPLE HAZARDS/REMARK
 ** 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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3FX89	N	W	JAN 04 2018	0946	1x125-mL P	300.0_ANIONS_IC: COMMON	48 HOURS	COOL <=6C

01/11/2018

Handwritten: 1022p
wca2633

Relinquished By: BYAN SCHAEFFER <i>Signature</i>	Received By: Christina Aguirre <i>Signature</i>	JAN 04 2018 1030	JAN 04 2018	1030	Matrix * S = Soil DS = Drum Solids SE = Sediment DL = Drum Liquid SO = Solid T = Tissue SL = Sludge WI = Wipe W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By: <i>Signature</i>	Received By: <i>Signature</i>	JAN 04 2018 1305	JAN 04 2018	1305	
Relinquished By: <i>Signature</i>	Received By: <i>Signature</i>				
Relinquished By: <i>Signature</i>	Received By: <i>Signature</i>				
Relinquished By: <i>Signature</i>	Received By: <i>Signature</i>				

01/11/2018
Detection Summary

REV.0

Client: CH2M Hill Plateau Remediation Company
Project/Site: S18-001

TestAmerica Job ID: 300-6626-1
SDG: WC2633

Client Sample ID: B3FW18

Lab Sample ID: 300-6626-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.010		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B3FW19

Lab Sample ID: 300-6626-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.011		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B3FX85

Lab Sample ID: 300-6626-3

No Detections.

Client Sample ID: B3FX81

Lab Sample ID: 300-6626-4

No Detections.

Client Sample ID: B3FX86

Lab Sample ID: 300-6626-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.0063		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B3FX82

Lab Sample ID: 300-6626-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.0066		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B3FW93

Lab Sample ID: 300-6626-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.014		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B3FX90

Lab Sample ID: 300-6626-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cr (VI)	0.013		0.0040	0.0015	mg/L	1		7196A	Total/NA

Client Sample ID: B3FW68

Lab Sample ID: 300-6626-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	18	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	38	D	0.28	0.14	mg/L	10		300.0	Total/NA
Fluoride	0.26	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	48	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B3FX79

Lab Sample ID: 300-6626-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	0.036	B D	0.056	0.028	mg/L	2		300.0	Total/NA

Client Sample ID: B3FX80

Lab Sample ID: 300-6626-11

This Detection Summary does not include radiochemical test results.

TestAmerica Richland

01/11/2018
Detection Summary

REV.0

Client: CH2M Hill Plateau Remediation Company
Project/Site: S18-001

TestAmerica Job ID: 300-6626-1
SDG: WC2633

Client Sample ID: B3FX80 (Continued)

Lab Sample ID: 300-6626-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	24	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	5.0	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.42	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	77	D	0.50	0.25	mg/L	2		300.0	Total/NA

Client Sample ID: B3FX89

Lab Sample ID: 300-6626-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	15	D	0.40	0.20	mg/L	2		300.0	Total/NA
Nitrate as N	5.8	D	0.056	0.028	mg/L	2		300.0	Total/NA
Fluoride	0.30	D	0.10	0.050	mg/L	2		300.0	Total/NA
Sulfate	67	D	0.50	0.25	mg/L	2		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Richland



01/11/2018
Client Sample Results

REV.0

Client: CH2M Hill Plateau Remediation Company
 Project/Site: S18-001

TestAmerica Job ID: 300-6626-1
 SDG: WC2633

Client Sample ID: B3FW18

Lab Sample ID: 300-6626-1

Date Collected: 01/04/18 10:53
 Date Received: 01/04/18 13:05

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.010		0.0040	0.0015	mg/L			01/04/18 15:28	1

Client Sample ID: B3FW19

Lab Sample ID: 300-6626-2

Date Collected: 01/04/18 10:53
 Date Received: 01/04/18 13:05

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.011		0.0040	0.0015	mg/L			01/04/18 15:28	1

Client Sample ID: B3FX85

Lab Sample ID: 300-6626-3

Date Collected: 01/04/18 07:00
 Date Received: 01/04/18 13:05

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			01/04/18 15:29	1

Client Sample ID: B3FX81

Lab Sample ID: 300-6626-4

Date Collected: 01/04/18 07:00
 Date Received: 01/04/18 13:05

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			01/04/18 15:29	1

Client Sample ID: B3FX86

Lab Sample ID: 300-6626-5

Date Collected: 01/04/18 09:09
 Date Received: 01/04/18 13:05

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0063		0.0040	0.0015	mg/L			01/04/18 15:29	1

Client Sample ID: B3FX82

Lab Sample ID: 300-6626-6

Date Collected: 01/04/18 09:09
 Date Received: 01/04/18 13:05

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0066		0.0040	0.0015	mg/L			01/04/18 15:29	1

Client Sample ID: B3FW93

Lab Sample ID: 300-6626-7

Date Collected: 01/04/18 09:46
 Date Received: 01/04/18 13:05

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.014		0.0040	0.0015	mg/L			01/04/18 15:33	1

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01/11/2018
Client Sample Results

REV.0

Client: CH2M Hill Plateau Remediation Company
Project/Site: S18-001

TestAmerica Job ID: 300-6626-1
SDG: WC2633

Client Sample ID: B3FX90

Lab Sample ID: 300-6626-8

Date Collected: 01/04/18 09:46

Matrix: Water

Date Received: 01/04/18 13:05

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.013		0.0040	0.0015	mg/L			01/04/18 15:33	1

Client Sample ID: B3FW68

Lab Sample ID: 300-6626-9

Date Collected: 01/04/18 12:10

Matrix: Water

Date Received: 01/04/18 13:05

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	18	D	0.40	0.20	mg/L			01/05/18 21:59	2
Nitrate as N	38	D	0.28	0.14	mg/L			01/06/18 04:40	10
Fluoride	0.26	D	0.10	0.050	mg/L			01/05/18 21:59	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			01/05/18 21:59	2
Sulfate	48	D	0.50	0.25	mg/L			01/05/18 21:59	2

Client Sample ID: B3FX79

Lab Sample ID: 300-6626-10

Date Collected: 01/04/18 07:00

Matrix: Water

Date Received: 01/04/18 13:05

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.20	U D	0.40	0.20	mg/L			01/05/18 21:43	2
Nitrate as N	0.036	B D	0.056	0.028	mg/L			01/05/18 21:43	2
Fluoride	0.050	U D	0.10	0.050	mg/L			01/05/18 21:43	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			01/05/18 21:43	2
Sulfate	0.25	U D	0.50	0.25	mg/L			01/05/18 21:43	2

Client Sample ID: B3FX80

Lab Sample ID: 300-6626-11

Date Collected: 01/04/18 09:09

Matrix: Water

Date Received: 01/04/18 13:05

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	24	D	0.40	0.20	mg/L			01/05/18 21:27	2
Nitrate as N	5.0	D	0.056	0.028	mg/L			01/05/18 21:27	2
Fluoride	0.42	D	0.10	0.050	mg/L			01/05/18 21:27	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			01/05/18 21:27	2
Sulfate	77	D	0.50	0.25	mg/L			01/05/18 21:27	2

Client Sample ID: B3FX89

Lab Sample ID: 300-6626-12

Date Collected: 01/04/18 09:46

Matrix: Water

Date Received: 01/04/18 13:05

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15	D	0.40	0.20	mg/L			01/05/18 20:39	2
Nitrate as N	5.8	D	0.056	0.028	mg/L			01/05/18 20:39	2
Fluoride	0.30	D	0.10	0.050	mg/L			01/05/18 20:39	2
Nitrite as N	0.038	U D	0.076	0.038	mg/L			01/05/18 20:39	2
Sulfate	67	D	0.50	0.25	mg/L			01/05/18 20:39	2

TestAmerica Richland

Client: CH2M Hill Plateau Remediation Company
 Project/Site: S18-001

TestAmerica Job ID: 300-6626-1
 SDG: WC2633

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 300-10069/5
Matrix: Water
Analysis Batch: 10069

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			01/05/18 15:01	1
Nitrite as N	0.019	U	0.038	0.019	mg/L			01/05/18 15:01	1

Lab Sample ID: LCS 300-10069/6
Matrix: Water
Analysis Batch: 10069

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	2.25		mg/L		100	80 - 120
Nitrite as N	3.04	3.07		mg/L		101	80 - 120

Lab Sample ID: 300-6625-A-1 MS
Matrix: Water
Analysis Batch: 10069

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
Nitrite as N	0.038	U D	0.609	0.526	D	mg/L		86	75 - 125

Lab Sample ID: 300-6625-A-1 MS
Matrix: Water
Analysis Batch: 10069

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	6.0	D	1.13	7.04	D	mg/L		88	75 - 125

Lab Sample ID: 300-6625-A-1 DU
Matrix: Water
Analysis Batch: 10069

Client Sample ID: Duplicate
Prep Type: Total/NA

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

Lab Sample ID: 300-6625-A-1 DU
Matrix: Water
Analysis Batch: 10069

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	6.0	D	5.95	D	mg/L		2	20

Lab Sample ID: MB 300-10070/5
Matrix: Water
Analysis Batch: 10070

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			01/05/18 15:01	1
Fluoride	0.025	U	0.050	0.025	mg/L			01/05/18 15:01	1
Sulfate	0.13	U	0.25	0.13	mg/L			01/05/18 15:01	1

Client: CH2M Hill Plateau Remediation Company
 Project/Site: S18-001

TestAmerica Job ID: 300-6626-1
 SDG: WC2633

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 300-10070/6
 Matrix: Water
 Analysis Batch: 10070

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	15.9		mg/L		99	80 - 120
Fluoride	4.00	3.92		mg/L		98	80 - 120
Sulfate	20.0	20.3		mg/L		101	80 - 120

Lab Sample ID: 300-6625-A-1 MS
 Matrix: Water
 Analysis Batch: 10070

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
Chloride	21	D	3.20	23.7	D	mg/L		82	75 - 125
Fluoride	0.32	D	0.800	1.08	D	mg/L		95	75 - 125
Sulfate	61	D	4.00	63.8	D	mg/L		73	75 - 125

Lab Sample ID: 300-6625-A-1 DU
 Matrix: Water
 Analysis Batch: 10070

Client Sample ID: Duplicate
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	21	D	20.3	D	mg/L		4	20
Fluoride	0.32	D	0.309	D	mg/L		2	20
Sulfate	61	D	58.6	D	mg/L		4	20

Method: 7196A - Chromium, Hexavalent

Lab Sample ID: MB 300-10066/3
 Matrix: Water
 Analysis Batch: 10066

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cr (VI)	0.0015	U	0.0040	0.0015	mg/L			01/04/18 15:24	1

Lab Sample ID: LCS 300-10066/4
 Matrix: Water
 Analysis Batch: 10066

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.250	0.256		mg/L		102	80 - 120

Lab Sample ID: 300-6626-2 MS
 Matrix: Water
 Analysis Batch: 10066

Client Sample ID: B3FW19
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cr (VI)	0.011		0.0501	0.0623		mg/L		103	75 - 125

01/11/2018
QC Sample Results

REV.0

Client: CH2M Hill Plateau Remediation Company
 Project/Site: S18-001

TestAmerica Job ID: 300-6626-1
 SDG: WC2633

Method: 7196A - Chromium, Hexavalent (Continued)

Lab Sample ID: 300-6626-2 DU
Matrix: Water
Analysis Batch: 10066

Client Sample ID: B3FW19
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cr (VI)	0.011		0.0104		mg/L		3	20

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

Client: CH2M Hill Plateau Remediation Company
Project/Site: S18-001

TestAmerica Job ID: 300-6626-1
SDG: WC2633

HPLC/IC

Analysis Batch: 10069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-6626-9	B3FW68	Total/NA	Water	300.0	
300-6626-9	B3FW68	Total/NA	Water	300.0	
300-6626-10	B3FX79	Total/NA	Water	300.0	
300-6626-11	B3FX80	Total/NA	Water	300.0	
300-6626-12	B3FX89	Total/NA	Water	300.0	
MB 300-10069/5	Method Blank	Total/NA	Water	300.0	
LCS 300-10069/6	Lab Control Sample	Total/NA	Water	300.0	
300-6625-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
300-6625-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
300-6625-A-1 DU	Duplicate	Total/NA	Water	300.0	
300-6625-A-1 DU	Duplicate	Total/NA	Water	300.0	

Analysis Batch: 10070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-6626-9	B3FW68	Total/NA	Water	300.0	
300-6626-10	B3FX79	Total/NA	Water	300.0	
300-6626-11	B3FX80	Total/NA	Water	300.0	
300-6626-12	B3FX89	Total/NA	Water	300.0	
MB 300-10070/5	Method Blank	Total/NA	Water	300.0	
LCS 300-10070/6	Lab Control Sample	Total/NA	Water	300.0	
300-6625-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
300-6625-A-1 DU	Duplicate	Total/NA	Water	300.0	

General Chemistry

Analysis Batch: 10066

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
300-6626-1	B3FW18	Total/NA	Water	7196A	
300-6626-2	B3FW19	Total/NA	Water	7196A	
300-6626-3	B3FX85	Total/NA	Water	7196A	
300-6626-4	B3FX81	Total/NA	Water	7196A	
300-6626-5	B3FX86	Total/NA	Water	7196A	
300-6626-6	B3FX82	Total/NA	Water	7196A	
300-6626-7	B3FW93	Total/NA	Water	7196A	
300-6626-8	B3FX90	Total/NA	Water	7196A	
MB 300-10066/3	Method Blank	Total/NA	Water	7196A	
LCS 300-10066/4	Lab Control Sample	Total/NA	Water	7196A	
300-6626-2 MS	B3FW19	Total/NA	Water	7196A	
300-6626-2 DU	B3FW19	Total/NA	Water	7196A	

Client: CH2M Hill Plateau Remediation Company
Project/Site: S18-001

TestAmerica Job ID: 300-6626-1
SDG: WC2633

Client Sample ID: B3FW18

Date Collected: 01/04/18 10:53

Date Received: 01/04/18 13:05

Lab Sample ID: 300-6626-1

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			10066	01/04/18 15:28	TRH	TAL RCH

Client Sample ID: B3FW19

Date Collected: 01/04/18 10:53

Date Received: 01/04/18 13:05

Lab Sample ID: 300-6626-2

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			10066	01/04/18 15:28	TRH	TAL RCH

Client Sample ID: B3FX85

Date Collected: 01/04/18 07:00

Date Received: 01/04/18 13:05

Lab Sample ID: 300-6626-3

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			10066	01/04/18 15:29	TRH	TAL RCH

Client Sample ID: B3FX81

Date Collected: 01/04/18 07:00

Date Received: 01/04/18 13:05

Lab Sample ID: 300-6626-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1			10066	01/04/18 15:29	TRH	TAL RCH

Client Sample ID: B3FX86

Date Collected: 01/04/18 09:09

Date Received: 01/04/18 13:05

Lab Sample ID: 300-6626-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1			10066	01/04/18 15:29	TRH	TAL RCH

Client Sample ID: B3FX82

Date Collected: 01/04/18 09:09

Date Received: 01/04/18 13:05

Lab Sample ID: 300-6626-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	7196A		1			10066	01/04/18 15:29	TRH	TAL RCH

Client: CH2M Hill Plateau Remediation Company
Project/Site: S18-001

TestAmerica Job ID: 300-6626-1
SDG: WC2633

Client Sample ID: B3FW93

Lab Sample ID: 300-6626-7

Date Collected: 01/04/18 09:46

Matrix: Water

Date Received: 01/04/18 13:05

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			10066	01/04/18 15:33	TRH	TAL RCH

Client Sample ID: B3FX90

Lab Sample ID: 300-6626-8

Date Collected: 01/04/18 09:46

Matrix: Water

Date Received: 01/04/18 13:05

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			10066	01/04/18 15:33	TRH	TAL RCH

Client Sample ID: B3FW68

Lab Sample ID: 300-6626-9

Date Collected: 01/04/18 12:10

Matrix: Water

Date Received: 01/04/18 13:05

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			10069	01/05/18 21:59	RTQ	TAL RCH
Total/NA	Analysis	300.0		2			10070	01/05/18 21:59	RTQ	TAL RCH
Total/NA	Analysis	300.0		10			10069	01/06/18 04:40	RTQ	TAL RCH

Client Sample ID: B3FX79

Lab Sample ID: 300-6626-10

Date Collected: 01/04/18 07:00

Matrix: Water

Date Received: 01/04/18 13:05

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			10069	01/05/18 21:43	RTQ	TAL RCH
Total/NA	Analysis	300.0		2			10070	01/05/18 21:43	RTQ	TAL RCH

Client Sample ID: B3FX80

Lab Sample ID: 300-6626-11

Date Collected: 01/04/18 09:09

Matrix: Water

Date Received: 01/04/18 13:05

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			10069	01/05/18 21:27	RTQ	TAL RCH
Total/NA	Analysis	300.0		2			10070	01/05/18 21:27	RTQ	TAL RCH

Client Sample ID: B3FX89

Lab Sample ID: 300-6626-12

Date Collected: 01/04/18 09:46

Matrix: Water

Date Received: 01/04/18 13:05

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			10069	01/05/18 20:39	RTQ	TAL RCH
Total/NA	Analysis	300.0		2			10070	01/05/18 20:39	RTQ	TAL RCH

Client: CH2M Hill Plateau Remediation Company
Project/Site: S18-001

TestAmerica Job ID: 300-6626-1
SDG: WC2633

Client Sample ID: Method Blank

Lab Sample ID: MB 300-10066/3

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			10066	01/04/18 15:24	TRH	TAL RCH

Client Sample ID: Method Blank

Lab Sample ID: MB 300-10069/5

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			10069	01/05/18 15:01	RTQ	TAL RCH

Client Sample ID: Method Blank

Lab Sample ID: MB 300-10070/5

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			10070	01/05/18 15:01	RTQ	TAL RCH

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-10066/4

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			10066	01/04/18 15:25	TRH	TAL RCH

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-10069/6

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			10069	01/05/18 15:17	RTQ	TAL RCH

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 300-10070/6

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			10070	01/05/18 15:17	RTQ	TAL RCH

Client: CH2M Hill Plateau Remediation Company
Project/Site: S18-001

TestAmerica Job ID: 300-6626-1
SDG: WC2633

Client Sample ID: Matrix Spike

Lab Sample ID: 300-6625-A-1 MS

Date Collected: 01/04/18 10:21

Matrix: Water

Date Received: 01/04/18 11:20

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			10069	01/05/18 19:34	RTQ	TAL RCH
Total/NA	Analysis	300.0		2			10070	01/05/18 19:34	RTQ	TAL RCH
Total/NA	Analysis	300.0		5			10069	01/06/18 02:16	RTQ	TAL RCH

Client Sample ID: B3FW19

Lab Sample ID: 300-6626-2 MS

Date Collected: 01/04/18 10:53

Matrix: Water

Date Received: 01/04/18 13:05

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			10066	01/04/18 15:25	TRH	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: S18-001

TestAmerica Job ID: 300-6626-1
SDG: WC2633

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



01/11/2018
Sample Summary

REV.0

Client: CH2M Hill Plateau Remediation Company
Project/Site: S18-001

TestAmerica Job ID: 300-6626-1
SDG: WC2633

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
300-6626-1	B3FW18	Water	01/04/18 10:53	01/04/18 13:05
300-6626-2	B3FW19	Water	01/04/18 10:53	01/04/18 13:05
300-6626-3	B3FX85	Water	01/04/18 07:00	01/04/18 13:05
300-6626-4	B3FX81	Water	01/04/18 07:00	01/04/18 13:05
300-6626-5	B3FX86	Water	01/04/18 09:09	01/04/18 13:05
300-6626-6	B3FX82	Water	01/04/18 09:09	01/04/18 13:05
300-6626-7	B3FW93	Water	01/04/18 09:46	01/04/18 13:05
300-6626-8	B3FX90	Water	01/04/18 09:46	01/04/18 13:05
300-6626-9	B3FW68	Water	01/04/18 12:10	01/04/18 13:05
300-6626-10	B3FX79	Water	01/04/18 07:00	01/04/18 13:05
300-6626-11	B3FX80	Water	01/04/18 09:09	01/04/18 13:05
300-6626-12	B3FX89	Water	01/04/18 09:46	01/04/18 13:05

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 300-6626-1

SDG Number: WC2633

Login Number: 6626

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	