TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Tel: (314)298-8566

TestAmerica Job ID: 160-11927-1
TestAmerica Sample Delivery Group: SL1805
Client Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

For:
CH2M Hill Plateau Remediation Company
PO BOX 1600, MS H8-41
Richland, Washington 99352

Attn: Mr. Scot Fitzgerald

Authorized for release by:
6/30/2015 2:33:42 PM

Jayna Awalt, Project Manager II
(314)298-8566
jayna.awalt@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page 1
Table of Contents 2
Case Narrative 3
Chain of Custody 6
Definitions/Glossary 21
Method Summary 22
Sample Summary 23
Client Sample Results 24
QC Sample Results 33
QC Association Summary 39

Job ID: 160-11927-1

Laboratory: TestAmerica St. Louis

Narrative

CASE NARRATIVE

CH2MHill Plateau Remediation Company
P.O. Box 1600
Richland, Washington 99352
June 30, 2015
Attention: Scot Fitzgerald

SDG	: SL1805
Number of Samples	: 15 samples
Sample Matrix	: Water
Data Deliverable	: Summary
Date SDG Closed	: May 27, 2015

II. Introduction

Between May 20 and 27, 15 samples were received by TestAmerica - St. Louis for chemical analysis. The samples were received within temperature criteria. See the COC and receipt checklists for documentation of any variations on receipt conditions and temperature. Upon receipt, samples were given laboratory Ids to correspond with specific client Ids. Please refer to the Sample Summary sheets attached to this case narrative. This report is incomplete without the narrative.

The following SAFs are associated with this SDG: S15-005, I15-024

III. Analytical Results/ Methodology

The analytical results for this report are presented by analytical test. Each set of data includes sample identification information, analytical results and the appropriate detection limits. All results are based upon samples as they were received, i.e. wet weight, unless otherwise noted on the data sheets. See the attached Methods Summary Form for the methods used in this SDG.

MS/MSD/Dup analysis was done per the client requirements. Analytical batches that did not contain matrix QC were analyzed with an LCS/LCS duplicate.

Note: For Metals analyses, per standard practice, all 6020 water and soil samples are initially prepared at 2x dilution. This standard dilution does not affect reporting limits as MDL studies are also prepared in the same manner. These dilutions do not necessitate flagging unless otherwise noted in the case narrative.

For Anion analysis, samples have been started at a 2x dilution per CHPRC direction. The samples are flagged accordingly with a “D” flag if sample concentration is above the MDL/RL. Non-conformance will be included in the below section only if dilution is greater than 2x.

For WTPH methods, the lab utilizes method 8015B. Per CHPRC direction, the method name in the electronic data has been modified to read WTPH in the place of 8015B.

Per CHPRC direction (June 2014), Boron will be reported for Metals using method 6010. Boron will no longer be reported by method 6020.

IV. Definitions

QCBLK-	Quality Control Blank, Method Blank
QCLCS-	Quality Control Laboratory Control Sample, Blank Spike
DUP-	Laboratory Duplicate

Job ID: 160-11927-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

MS- Matrix Spike
MSD- Matrix Spike Duplicate

The term "Detection Limit" used in the analytical data report refers to either the lab's standard reporting limits or contractually required reporting limits, whichever is applicable.

The following data qualifiers may be applicable to the results in this report, as appropriate.

- **B** - For inorganic analyses, the sample result is greater than the MDL but less than the RL.
- **B** - For organic analyses, Method Blank contamination. The Method Blank contains the target analyte at a concentration above the MDL.
- **J** - For organic analyses, the sample is estimated and less than the RL.
- **C** - For inorganic analyses, Method Blank contamination. The Method Blank contains the target analyte at a concentration above the MDL.
- **D** - For all analyses, the sample result was obtained from the analysis of a dilution. For Metals analyses, per standard practice, all solid samples are initially prepared at a 2x dilution. This standard dilution does not affect reporting limits as MDL studies are also prepared in the same manner. These dilutions do not necessitate qualification unless otherwise noted in the case narrative.
- **N** - For inorganics and GC analyses, the spike/spike duplicate recoveries are outside QC limits.
- **T** - For GCMS analyses, the spike/spike duplicate recoveries are outside QC limits.
- **O**- For all analyses, the LCS (LCSD) recoveries are outside QC limits.
- **M**- For inorganic analyses, the precision was outside control limits.
- **P -** For organic analyses (PCB/Pests only), the aroclor target analyte has greater than 25% difference for detected concentrations between the two GC columns.

ICPMS Metals

Batch: 196510

Lead was detected in method blank MB 160-195778/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "B". If the associated sample reported a result above the MDL and/or RL and is not greater than 5x the method blank, the result has been flagged "C".

Due to changes in LRC concentrations, the linear range for Beryllium has been lowered. The LCS and MS/MSD were above the LRC. The LCS and MS/MSD were within acceptable QC limits. The MS/MSD is reported as an estimated value. (LCS 160-195778/2-A), (160-11927-A MS) and (160-11927-A-1-F MSD)

The initial calibration verification (ICV) result for batch 160-196510 was above the upper control limit for Cobalt. Sample results were below the reporting limit, and have been reported as qualified data. (ICV 160-196510/5)

Batch: 197502

Copper was detected in method blank MB 160-195778/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "B". If the associated sample reported a result above the MDL and/or RL and is not greater than 5x the method blank, the result has been flagged "C".

There were no observations or non-conformances associated with the following methods:

ICP Metals
Alkalinity

Job ID: 160-11927-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

We certify that this data package is in compliance with the SOW, both technically and for completeness, including a full description of, explanation of, and corrective actions for, any and all deviations, from either the analyses requested or the case narrative requested. Release of the data contained in this hard copy data package has been authorized by the Laboratory Analytical Manager or designee and the laboratory's client services representative as verified by their signature on this report.

Reviewed and approved:

Jayna Awalt
St. Louis Project Manager

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 160-11927-1
SDG Number: SL1805

Login Number: 11927
List Number: 1
Creator: Clarke, Jill C

List Source: TestAmerica St. Louis

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.	True	
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.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	20.0 (ambient)
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.	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.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

CH2MHill Plateau Remediation Company

821805

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **S15-005-286**

Page 1 of 1

Collector	J.R. Aguilar/CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	S15-005	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071
Project Title	SURV, MAY 2015	**Logbook No.**	HNF-N-506 70/88	**Ice Chest No.**	GWS-032
Shipped To (Lab)	TestAmerica St. Louis	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.**	7736 3654 8272
Protocol	SURV	**Priority:**	30 Days **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** 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 **Hold Time** Total Activity Exemption: Yes ☑ No ☐

N/A

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B30XY5	N	W	5-18-15	1254	1x500-mL G/P	6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2
B30XY9	Y	W	5-18-15	1254	1x500-mL G/P	6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.R. Aguilar/CHPRC			MAY 18 2015 1335	SSU #1			MAY 18 2015 1335
SSU-1			MAY 19 2015 1130	M.A. White CHPRC			MAY 19 2015 1130
M.A. White CHPRC			MAY 19 2015 1400	FEDEX			
Fed Ex				Jill Clarke			5-20-15 0920

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
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

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A-6004-842 (REV 2)

FedEx ® Tracking

773636548272

Ship (P/U) date
Tues 5/19/2015 3:27 pm

RICHLAND, WA US

Delivered
Signed for by: J.CLARKE

Actual delivery
Wed 5/20/2015 9:15 am

EARTH CITY, MO US

Travel History

Date/Time	Activity	Location
- 5/20/2015 - Wednesday		
9:15 am	Delivered	EARTH CITY, MO
7:03 am	On FedEx vehicle for delivery	EARTH CITY, MO
6:58 am	At local FedEx facility	EARTH CITY, MO
5:15 am	At destination sort facility	BERKELEY, MO
4:28 am	Departed FedEx location	MEMPHIS, TN
12:39 am	Arrived at FedEx location	MEMPHIS, TN
- 5/19/2015 - Tuesday		
5:06 pm	Left FedEx origin facility	PASCO, WA
3:27 pm	Picked up	PASCO, WA
1:37 pm	Shipment information sent to FedEx	

Shipment Facts

Tracking number	773636548272	Service	FedEx Priority Overnight
Weight	6 lbs / 2.72 kgs	Dimensions	13x8x11 in.
Delivered To	Shipping/Receiving	Total pieces	1
Total shipment weight	6 lbs / 2.72 kgs	Shipper reference	GWS-032
Packaging	Your Packaging	Special handling section	Deliver Weekday

© FedEx 1995-2015

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 160-11986-1
SDG Number: ~~SL1804~~ SL1805

Login Number: 11986
List Number: 1
Creator: Clarke, Jill C

List Source: TestAmerica St. Louis

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.	True	
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	0.6
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.	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.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

CH2MHill Plateau Remediation Company

~~SL1804~~ SL1805 JA 5/22/15

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **S15-005-291**

Collector	D.J. Woehle/CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	S15-005	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071
Project Title	SURV, MAY 2015	**Logbook No.**	HNF-N-506 71 /86	**Ice Chest No.**	GWS-196
Shipped To (Lab)	TestAmerica St. Louis	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.**	7736 5880 9429
Protocol	SURV	**Priority:**	30 Days **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** 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 **Hold Time** Total Activity Exemption: Yes ☑ No ☐

N/A

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B30Y67	N	W	5/21/15	1035	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01 ✓	6 Months	HNO3 to pH <2
B30Y69	Y	W	↓	↓	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01 ✓	6 Months	HNO3 to pH <2

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
D.J. Woehle/CHPRC	D.J. Woehle	MAY 2 1 2015 1200	B.E. Briggs CHPRC	B.E. Briggs	MAY 2 1 2015 1200
B.E. Briggs CHPRC	B.E. Briggs	MAY 2 1 2015 1400		FedEx	
FED EX			Jill Clarke	Jill Clarke	5-22-15 0915

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
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

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A-6004-842 (REV 2)

CH2MHill Plateau Remediation Company

~~SL1804~~ SL1805 JA 5/22/15

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **S15-005-289**

Collector	D.J. Woehle/CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	S15-005	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071
Project Title	SURV, MAY 2015	**Logbook No.**	HNF-N-506 71/86	**Ice Chest No.**	GWS-196
Shipped To (Lab)	TestAmerica St. Louis	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.**	7736 5880 9429
Protocol	SURV	**Priority:**	**30 Days** **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** 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 **Hold Time** Total Activity Exemption: Yes ☑ No ☐

N/A

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B30Y45	N	W	5/21/15	1057	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01 ✓	6 Months	HNO3 to pH <2
B30Y47	Y	W	↓	↓	1x500-mL G/P	310.1_ALKALINITY: GW 01 ✓	14 Days	Cool <=6C
B30Y47	Y	W	↓	↓	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01 ✓	6 Months	HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
D.J. Woehle/CHPRC			MAY 21 2015 1200	B.E. Briggs CHPRC			MAY 21 2015 1200
B.E. Briggs CHPRC			MAY 21 2015 1400	FEDEX			
FED EX				Jill Clarke		Jill Clarke	5-22-15 0915

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
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

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A-6004-842 (REV 2)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **S15-005-284**

Page 1 of 1

~~SL1804~~ SL1805 JA 5/22/15

Collector	D.J. Woehle/CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	S15-005	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071
Project Title	SURV, MAY 2015	**Logbook No.**	HNF-N-506 71 / 86	**Ice Chest No.**	GWS-196
Shipped To (Lab)	TestAmerica St. Louis	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.**	7736 5880 9429
Protocol	SURV	**Priority:**	**30 Days** **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** 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 **Hold Time** Total Activity Exemption: Yes ☑ No ☐

N/A

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B30XY2	Y	W	5/21/15	1112	1x500-mL G/P	310.1_ALKALINITY: GW 01	14 Days	Cool <=6C

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
D.J. Woehle/CHPRC	D.J. Woehle	MAY 2 1 2015 1200	B.E. Briggs CHPRC	B.E. Briggs	MAY 2 1 2015 1200
B.E. Briggs CHPRC	B.E. Briggs	MAY 2 1 2015 1400	FEDEX		bb 5.21.15 ~~MAY 2 1 2015~~
FED EX			Jill Clarke	Jill Clarke	5-22-15 0915

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
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

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CH2MHill Plateau Remediation Company

~~SL1804~~ SL1805 JA 5/22/15

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **S15-005-287**

Collector	L.D. Wall CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	S15-005	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071
Project Title	SURV, MAY 2015	**Logbook No.**	HNF-N-506 71/85	**Ice Chest No.**	GWS-196
Shipped To (Lab)	TestAmerica St. Louis	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.**	7736 5880 9429
Protocol	SURV	**Priority:**	30 Days **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** 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 **Hold Time** Total Activity Exemption: Yes ☑ No ☐

N/A

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B30Y17	Y	W	5/20/15	1059	1x500-mL G/P	310.1_ALKALINITY: GW 01	14 Days	Cool <=6C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
L.D. Wall CHPRC		L.D. Wall	MAY 20 2015 1225	SSU-1			MAY 20 2015 1225
SSU-1			MAY 21 2015 0730	B.E. Briggs CHPRC		B.E. Briggs	MAY 21 2015 0730
B.E. Briggs CHPRC		B.E. Briggs	MAY 21 2015 1430	FEDEX			
Relinquished By			Date/Time	Received By			Date/Time
FED EX				Jill Clarke		Jill Clarke	5.22.15 0915

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
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

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CH2MHill Plateau Remediation Company

~~SL1804~~ SL1805 JA 5/22/15

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **S15-005-288**

Collector	L.D. Wall CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	S15-005	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071
Project Title	SURV, MAY 2015	**Logbook No.**	HNF-N-506 71/85	**Ice Chest No.**	GWS-196
Shipped To (Lab)	TestAmerica St. Louis	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.**	7736 5880 9429
Protocol	SURV	**Priority:**	**30 Days** **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** 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 **Hold Time** Total Activity Exemption: Yes ☑ No ☐

N/A

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B30Y18	Y	W	5/20/15	0745	1x500-mL G/P	310.1_ALKALINITY: GW 01	14 Days	Cool <=6C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
L.D. Wall CHPRC		L.D. Wall	MAY 20 2015 1225	SSU-1			MAY 20 2015 1225
SSU-1			MAY 21 2015 0730	B.E. Briggs CHPRC		B.E. Briggs	MAY 21 2015 0730
B.E. Briggs CHPRC		B.E. Briggs	MAY 21 2015 1430	FEDEX			
		FED EX		Jill Clarke		Jill Clarke	5.22.15 0915

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
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

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A-6004-842 (REV 2)

FedEx ® Tracking

773658809429

Ship (P/U) date
Thur 5/21/2015 3:27 pm

RICHLAND WA US

Delivered
Signed for by: B.DANIELS

Actual delivery
Fri 5/22/2015 9:12 am

EARTH CITY, MO US

Travel History

Date/Time	Activity	Location
- 5/22/2015 - Friday		
9:12 am	Delivered	EARTH CITY, MO
7:03 am	On FedEx vehicle for delivery	EARTH CITY, MO
6:57 am	At local FedEx facility	EARTH CITY, MO
5:03 am	At destination sort facility	BERKELEY, MO
4:19 am	Departed FedEx location	MEMPHIS, TN
12:32 am	Arrived at FedEx location	MEMPHIS, TN
- 5/21/2015 - Thursday		
3:27 pm	Picked up	PASCO, WA
2:29 pm	Shipment information sent to FedEx	

Shipment Facts

Tracking number	773658809429	**Service**	FedEx Priority Overnight
Weight	74 lbs / 33.57 kgs	**Delivered To**	Shipping/Receiving
Total pieces	1	**Total shipment weight**	74 lbs / 33.57 kgs
Shipper reference	gws-196	**Packaging**	Your Packaging
Special handling section	Deliver Weekday		

© FedEx 1995-2015

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 160-12017-1
SDG Number: SL1805

Login Number: 12017
List Number: 1
Creator: Clarke, Jill C

List Source: TestAmerica St. Louis

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.	True	
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	1.3
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.	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.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

2/165

CH2MHill Plateau Remediation Company SL1805

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **I15-024-332**

Page 1 of 1

Collector	S.W. King/CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	I15-024	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071
Project Title	100-KR-4, MAY 2015	**Logbook No.**	HNF-N-506 70/91	**Ice Chest No.**	GWS-198
Shipped To (Lab)	TestAmerica St. Louis	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.**	773682112898
Protocol	CERCLA	**Priority:**	**30 Days** **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** 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 **Hold Time** Total Activity Exemption: Yes ☑ No ☐

N/A

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B30WX8	N	W	MAY 26 2015	0854	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01 ✓	6 Months	HNO3 to pH <2
B30WY0	Y	W	↓	↓	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01 ✓	6 Months	HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
S.W. King/CHPRC			MAY 26 2015 1140	E.L. Kauer/CHPRC			MAY 26 2015 1140
E.L. Kauer/CHPRC			MAY 26 2015 1400	FEDEX			
Fed Ex				Jill Clarke			5-27-15 1025

Matrix *

S	= Soil	DS	= Drum Solids		
SE	= Sediment	DL	= Drum Liquids		
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

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CH2MHill Plateau Remediation Company SL1805

S.W. King/CHPRC

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **I15-024-343**

Collector		**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	I15-024	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071
Project Title	100-KR-4, MAY 2015	**Logbook No.**	HNF-N-506 70/91	**Ice Chest No.**	GWS - 198
Shipped To (Lab)	TestAmerica St. Louis	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.**	7736-8211 2898
Protocol	CERCLA	**Priority:**	30 Days **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** 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 **Hold Time**

N/A

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B30XD4	N	W	MAY 26 2015	0955	1x500-mL G/P	310.1_ALKALINITY: GW 01 ✓	14 Days	Cool <=6C
B30XD4	N	W	↓	↓	1x500-mL G/P	6010_METALS_ICP: COMMON; 6010_METALS_ICP: GW 03 ✓	6 Months	HNO3 to pH <2
B30XD5	Y	W	MAY 26 2015	0955	1x500-mL G/P	6010_METALS_ICP: COMMON; 6010_METALS_ICP: GW 03 ✓	6 Months	HNO3 to pH <2

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
S.W. King/CHPRC	[signature]	MAY 26 2015 1140	E.L. Kauer/CHPRC	[signature]	MAY 26 2015 1140
E.L. Kauer/CHPRC	[signature]	1400	FEDEX		
Fed Ex			Jill Clarke	Jill Clarke	5.27.15 1025

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
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

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A-6004-842 (REV 2)

CH2MHill Plateau Remediation Company 524805

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **I15-024-326**

Collector	S.W. King/CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	I15-024	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071
Project Title	100-KR-4, MAY 2015	**Logbook No.**	HNF-N-506 70/91	**Ice Chest No.**	GWS-198
Shipped To (Lab)	TestAmerica St. Louis	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.**	7736-8211 2898
Protocol	CERCLA	**Priority:**	**30 Days** **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** 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 **Hold Time** Total Activity Exemption: Yes ☑ No ☐

N/A

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B30WP0	N	W	MAY 26 2015	0918	1x500-mL G/P	6010_METALS_ICP: COMMON; 6010_METALS_ICP: GW 03 ✓	6 Months	HNO3 to pH <2
B30WP2	Y	W	↓	↓	1x500-mL G/P	6010_METALS_ICP: COMMON; 6010_METALS_ICP: GW 03 ✓	6 Months	HNO3 to pH <2

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
S.W. King/CHPRC	Scott King	MAY 26 2015 1140	E.L. Kauer/CHPRC	E.L. Kauer	MAY 26 2015 1140
E.L. Kauer/CHPRC	E.L. Kauer	MAY 26 2015 1400	FEDEX		~~MAY 26 2015~~ 5-26-15
Fed Ex			Jill Clarke	Jill Clarke	5.27.15 1025

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
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

PRINTED O 3/26/2015

A-6004-842 (REV 2)

IMPORTANT!
Heavy rainfall and flooding are causing hazardous conditions in the areas of Louisiana, Oklahoma and Texas. Learn More

FedEx ® Tracking

773682112898

Ship (P/U) date :
Tues 5/26/2015 3:32 pm

RICHLAND, WA US

Delivered
Signed for by: CLARK

Actual delivery :
Wed 5/27/2015 10:19 am

EARTH CITY, MO US

Travel History

Date/Time	Activity	Location
- 5/27/2015 - Wednesday		
10:19 am	Delivered	EARTH CITY, MO
7:17 am	On FedEx vehicle for delivery	EARTH CITY, MO
7:12 am	At local FedEx facility	EARTH CITY, MO
5:36 am	At destination sort facility	BERKELEY, MO
4:50 am	Departed FedEx location	MEMPHIS, TN
12:51 am	Arrived at FedEx location	MEMPHIS, TN
- 5/26/2015 - Tuesday		
3:32 pm	Picked up	PASCO, WA
2:35 pm	Shipment information sent to FedEx	

Shipment Facts

Tracking number	773682112898	Service	FedEx Priority Overnight
Weight	21 lbs / 9.53 kgs	Dimensions	15x10x14 in
Delivered To	Shipping/Receiving	Total pieces	1
Total shipment weight	21 lbs / 9.53 kgs	Shipper reference	GWS-198
Packaging	Your Packaging	Special handling section	Deliver Weekday

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Qualifiers

Metals

Qualifier	Qualifier Description
U	Analyzed for but not detected.
B	Estimated result. Result is less than the RL, but greater than MDL
C	The analyte was detected in both the sample and the assoicated QC blank, and the sample concentration was </= 5X the blank concentration.

General Chemistry

Qualifier	Qualifier Description
U	Analyzed for but not detected.
B	Estimated result. Result is less than the RL, but greater than MDL

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-11927-1
SDG: SL1805

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL SL
6020A	Metals (ICP/MS)	SW846	TAL SL
310.1	Alkalinity	MCAWW	TAL SL

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 SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-11927-1
SDG: SL1805

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-11927-1	B30XY5	Water	05/18/15 12:54	05/20/15 09:20
160-11927-2	B30XY9	Water	05/18/15 12:54	05/20/15 09:20
160-11986-1	B30Y67	Water	05/21/15 10:35	05/22/15 09:15
160-11986-2	B30Y69	Water	05/21/15 10:35	05/22/15 09:15
160-11986-3	B30Y45	Water	05/21/15 10:57	05/22/15 09:15
160-11986-4	B30Y47	Water	05/21/15 10:57	05/22/15 09:15
160-11986-5	B30XY2	Water	05/21/15 11:12	05/22/15 09:15
160-11986-6	B30Y17	Water	05/20/15 10:59	05/22/15 09:15
160-11986-7	B30Y18	Water	05/20/15 07:45	05/22/15 09:15
160-12017-1	B30WX8	Water	05/26/15 08:54	05/27/15 10:25
160-12017-2	B30WY0	Water	05/26/15 08:54	05/27/15 10:25
160-12017-3	B30XD4	Water	05/26/15 09:55	05/27/15 10:25
160-12017-4	B30XD5	Water	05/26/15 09:55	05/27/15 10:25
160-12017-5	B30WP0	Water	05/26/15 09:18	05/27/15 10:25
160-12017-6	B30WP2	Water	05/26/15 09:18	05/27/15 10:25

Method: 6010C - Metals (ICP)

Client Sample ID: B30XY5 — **Lab Sample ID: 160-11927-1**
Date Collected: 05/18/15 12:54 — **Matrix: Water**
Date Received: 05/20/15 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	56.1		50.0	7.2	ug/L		06/17/15 11:08	06/21/15 14:55	1

Client Sample ID: B30Y67 — **Lab Sample ID: 160-11986-1**
Date Collected: 05/21/15 10:35 — **Matrix: Water**
Date Received: 05/22/15 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	88100		1000	54.2	ug/L		06/17/15 11:08	06/21/15 15:26	1
Iron	12.8	U	100	12.8	ug/L		06/17/15 11:08	06/21/15 15:26	1
Magnesium	19200		1000	50.5	ug/L		06/17/15 11:08	06/21/15 15:26	1
Potassium	4580	B	5000	456	ug/L		06/17/15 11:08	06/21/15 15:26	1
Sodium	10900		1000	105	ug/L		06/17/15 11:08	06/21/15 15:26	1
Vanadium	4.4	B	50.0	4.4	ug/L		06/17/15 11:08	06/21/15 15:26	1
Boron	14.4	B	50.0	7.2	ug/L		06/17/15 11:08	06/21/15 15:26	1

Client Sample ID: B30Y45 — **Lab Sample ID: 160-11986-3**
Date Collected: 05/21/15 10:57 — **Matrix: Water**
Date Received: 05/22/15 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	92900		1000	54.2	ug/L		06/17/15 11:08	06/21/15 15:34	1
Iron	12.8	U	100	12.8	ug/L		06/17/15 11:08	06/21/15 15:34	1
Magnesium	20300		1000	50.5	ug/L		06/17/15 11:08	06/21/15 15:34	1
Potassium	4890	B	5000	456	ug/L		06/17/15 11:08	06/21/15 15:34	1
Sodium	14800		1000	105	ug/L		06/17/15 11:08	06/21/15 15:34	1
Vanadium	5.5	B	50.0	4.4	ug/L		06/17/15 11:08	06/21/15 15:34	1
Boron	11.2	B	50.0	7.2	ug/L		06/17/15 11:08	06/21/15 15:34	1

Client Sample ID: B30WX8 — **Lab Sample ID: 160-12017-1**
Date Collected: 05/26/15 08:54 — **Matrix: Water**
Date Received: 05/27/15 10:25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	51100		1000	54.2	ug/L		06/17/15 11:08	06/21/15 15:42	1
Iron	12.8	U	100	12.8	ug/L		06/17/15 11:08	06/21/15 15:42	1
Magnesium	11100		1000	50.5	ug/L		06/17/15 11:08	06/21/15 15:42	1
Potassium	4250	B	5000	456	ug/L		06/17/15 11:08	06/21/15 15:42	1
Sodium	11400		1000	105	ug/L		06/17/15 11:08	06/21/15 15:42	1
Vanadium	9.5	B	50.0	4.4	ug/L		06/17/15 11:08	06/21/15 15:42	1
Boron	7.2	U	50.0	7.2	ug/L		06/17/15 11:08	06/21/15 15:42	1

Client Sample ID: B30XD4 — **Lab Sample ID: 160-12017-3**
Date Collected: 05/26/15 09:55 — **Matrix: Water**
Date Received: 05/27/15 10:25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	3.7	U	10.0	3.7	ug/L		06/17/15 11:08	06/21/15 15:50	1
Arsenic	1.8	U	10.0	1.8	ug/L		06/17/15 11:08	06/21/15 15:50	1
Barium	33.5	B	50.0	2.1	ug/L		06/17/15 11:08	06/21/15 15:50	1
Beryllium	0.28	U	5.0	0.28	ug/L		06/17/15 11:08	06/21/15 15:50	1
Cadmium	0.34	U	5.0	0.34	ug/L		06/17/15 11:08	06/21/15 15:50	1
Calcium	46400		1000	54.2	ug/L		06/17/15 11:08	06/21/15 15:50	1
Chromium	6.8	B	10.0	3.4	ug/L		06/17/15 11:08	06/21/15 15:50	1
Cobalt	2.7	U	50.0	2.7	ug/L		06/17/15 11:08	06/21/15 15:50	1

Method: 6010C - Metals (ICP) (Continued)

Client Sample ID: B30XD4 — **Lab Sample ID: 160-12017-3**
Date Collected: 05/26/15 09:55 — **Matrix: Water**
Date Received: 05/27/15 10:25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	3.1	B	25.0	2.1	ug/L		06/17/15 11:08	06/21/15 15:50	1
Iron	12.8	U	100	12.8	ug/L		06/17/15 11:08	06/21/15 15:50	1
Magnesium	9080		1000	50.5	ug/L		06/17/15 11:08	06/21/15 15:50	1
Manganese	1.0	U	15.0	1.0	ug/L		06/17/15 11:08	06/21/15 15:50	1
Nickel	3.3	B	40.0	2.6	ug/L		06/17/15 11:08	06/21/15 15:50	1
Potassium	3470	B	5000	456	ug/L		06/17/15 11:08	06/21/15 15:50	1
Silver	0.99	U	10.0	0.99	ug/L		06/17/15 11:08	06/21/15 15:50	1
Sodium	6540		1000	105	ug/L		06/17/15 11:08	06/21/15 15:50	1
Strontium	238		5.0	0.24	ug/L		06/17/15 11:08	06/21/15 15:50	1
Vanadium	4.4	B	50.0	4.4	ug/L		06/17/15 11:08	06/21/15 15:50	1
Zinc	8.3	U	20.0	8.3	ug/L		06/17/15 11:08	06/21/15 15:50	1

Client Sample ID: B30WP0 — **Lab Sample ID: 160-12017-5**
Date Collected: 05/26/15 09:18 — **Matrix: Water**
Date Received: 05/27/15 10:25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	3.7	U	10.0	3.7	ug/L		06/17/15 11:08	06/21/15 15:58	1
Arsenic	1.8	U	10.0	1.8	ug/L		06/17/15 11:08	06/21/15 15:58	1
Barium	38.4	B	50.0	2.1	ug/L		06/17/15 11:08	06/21/15 15:58	1
Beryllium	0.28	U	5.0	0.28	ug/L		06/17/15 11:08	06/21/15 15:58	1
Cadmium	0.34	U	5.0	0.34	ug/L		06/17/15 11:08	06/21/15 15:58	1
Calcium	50500		1000	54.2	ug/L		06/17/15 11:08	06/21/15 15:58	1
Chromium	12.8		10.0	3.4	ug/L		06/17/15 11:08	06/21/15 15:58	1
Cobalt	2.7	U	50.0	2.7	ug/L		06/17/15 11:08	06/21/15 15:58	1
Copper	3.8	B	25.0	2.1	ug/L		06/17/15 11:08	06/21/15 15:58	1
Iron	12.8	U	100	12.8	ug/L		06/17/15 11:08	06/21/15 15:58	1
Magnesium	11200		1000	50.5	ug/L		06/17/15 11:08	06/21/15 15:58	1
Manganese	1.0	U	15.0	1.0	ug/L		06/17/15 11:08	06/21/15 15:58	1
Nickel	3.5	B	40.0	2.6	ug/L		06/17/15 11:08	06/21/15 15:58	1
Potassium	4810	B	5000	456	ug/L		06/17/15 11:08	06/21/15 15:58	1
Silver	0.99	U	10.0	0.99	ug/L		06/17/15 11:08	06/21/15 15:58	1
Sodium	7710		1000	105	ug/L		06/17/15 11:08	06/21/15 15:58	1
Strontium	300		5.0	0.24	ug/L		06/17/15 11:08	06/21/15 15:58	1
Vanadium	14.7	B	50.0	4.4	ug/L		06/17/15 11:08	06/21/15 15:58	1
Zinc	34.4		20.0	8.3	ug/L		06/17/15 11:08	06/21/15 15:58	1

Method: 6010C - Metals (ICP) - Dissolved

Client Sample ID: B30XY9 — **Lab Sample ID: 160-11927-2**
Date Collected: 05/18/15 12:54 — **Matrix: Water**
Date Received: 05/20/15 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	58.8		50.0	7.2	ug/L		06/17/15 11:08	06/21/15 15:10	1

Client Sample ID: B30Y69 — **Lab Sample ID: 160-11986-2**
Date Collected: 05/21/15 10:35 — **Matrix: Water**
Date Received: 05/22/15 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	10.4	B	50.0	7.2	ug/L		06/17/15 11:08	06/21/15 15:30	1
Calcium	86700		1000	54.2	ug/L		06/17/15 11:08	06/21/15 15:30	1

Method: 6010C - Metals (ICP) - Dissolved (Continued)

Client Sample ID: B30Y69 — **Lab Sample ID: 160-11986-2**
Date Collected: 05/21/15 10:35 — **Matrix: Water**
Date Received: 05/22/15 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	12.8	U	100	12.8	ug/L		06/17/15 11:08	06/21/15 15:30	1
Magnesium	18800		1000	50.5	ug/L		06/17/15 11:08	06/21/15 15:30	1
Potassium	4580	B	5000	456	ug/L		06/17/15 11:08	06/21/15 15:30	1
Sodium	10900		1000	105	ug/L		06/17/15 11:08	06/21/15 15:30	1
Vanadium	7.0	B	50.0	4.4	ug/L		06/17/15 11:08	06/21/15 15:30	1

Client Sample ID: B30Y47 — **Lab Sample ID: 160-11986-4**
Date Collected: 05/21/15 10:57 — **Matrix: Water**
Date Received: 05/22/15 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	8.3	B	50.0	7.2	ug/L		06/17/15 11:08	06/21/15 15:38	1
Calcium	90700		1000	54.2	ug/L		06/17/15 11:08	06/21/15 15:38	1
Iron	12.8	U	100	12.8	ug/L		06/17/15 11:08	06/21/15 15:38	1
Magnesium	20300		1000	50.5	ug/L		06/17/15 11:08	06/21/15 15:38	1
Potassium	5120		5000	456	ug/L		06/17/15 11:08	06/21/15 15:38	1
Sodium	15700		1000	105	ug/L		06/17/15 11:08	06/21/15 15:38	1
Vanadium	9.6	B	50.0	4.4	ug/L		06/17/15 11:08	06/21/15 15:38	1

Client Sample ID: B30WY0 — **Lab Sample ID: 160-12017-2**
Date Collected: 05/26/15 08:54 — **Matrix: Water**
Date Received: 05/27/15 10:25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	7.2	U	50.0	7.2	ug/L		06/17/15 11:08	06/21/15 15:46	1
Calcium	50200		1000	54.2	ug/L		06/17/15 11:08	06/21/15 15:46	1
Iron	12.8	U	100	12.8	ug/L		06/17/15 11:08	06/21/15 15:46	1
Magnesium	11000		1000	50.5	ug/L		06/17/15 11:08	06/21/15 15:46	1
Potassium	4230	B	5000	456	ug/L		06/17/15 11:08	06/21/15 15:46	1
Sodium	11300		1000	105	ug/L		06/17/15 11:08	06/21/15 15:46	1
Vanadium	9.5	B	50.0	4.4	ug/L		06/17/15 11:08	06/21/15 15:46	1

Client Sample ID: B30XD5 — **Lab Sample ID: 160-12017-4**
Date Collected: 05/26/15 09:55 — **Matrix: Water**
Date Received: 05/27/15 10:25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	3.7	U	10.0	3.7	ug/L		06/17/15 11:08	06/21/15 15:54	1
Arsenic	1.8	U	10.0	1.8	ug/L		06/17/15 11:08	06/21/15 15:54	1
Barium	34.2	B	50.0	2.1	ug/L		06/17/15 11:08	06/21/15 15:54	1
Beryllium	0.28	U	5.0	0.28	ug/L		06/17/15 11:08	06/21/15 15:54	1
Cadmium	0.34	U	5.0	0.34	ug/L		06/17/15 11:08	06/21/15 15:54	1
Calcium	49100		1000	54.2	ug/L		06/17/15 11:08	06/21/15 15:54	1
Chromium	6.4	B	10.0	3.4	ug/L		06/17/15 11:08	06/21/15 15:54	1
Cobalt	2.7	U	50.0	2.7	ug/L		06/17/15 11:08	06/21/15 15:54	1
Copper	3.0	B	25.0	2.1	ug/L		06/17/15 11:08	06/21/15 15:54	1
Iron	12.8	U	100	12.8	ug/L		06/17/15 11:08	06/21/15 15:54	1
Magnesium	9480		1000	50.5	ug/L		06/17/15 11:08	06/21/15 15:54	1
Manganese	1.0	U	15.0	1.0	ug/L		06/17/15 11:08	06/21/15 15:54	1
Nickel	3.5	B	40.0	2.6	ug/L		06/17/15 11:08	06/21/15 15:54	1
Potassium	3560	B	5000	456	ug/L		06/17/15 11:08	06/21/15 15:54	1
Silver	1.0	B	10.0	0.99	ug/L		06/17/15 11:08	06/21/15 15:54	1
Sodium	6680		1000	105	ug/L		06/17/15 11:08	06/21/15 15:54	1

Method: 6010C - Metals (ICP) - Dissolved (Continued)

Client Sample ID: B30XD5 — **Lab Sample ID: 160-12017-4**
Date Collected: 05/26/15 09:55 — **Matrix: Water**
Date Received: 05/27/15 10:25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Strontium	243		5.0	0.24	ug/L		06/17/15 11:08	06/21/15 15:54	1
Vanadium	5.0	B	50.0	4.4	ug/L		06/17/15 11:08	06/21/15 15:54	1
Zinc	15.5	B	20.0	8.3	ug/L		06/17/15 11:08	06/21/15 15:54	1

Client Sample ID: B30WP2 — **Lab Sample ID: 160-12017-6**
Date Collected: 05/26/15 09:18 — **Matrix: Water**
Date Received: 05/27/15 10:25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	3.7	U	10.0	3.7	ug/L		06/17/15 11:08	06/21/15 16:02	1
Arsenic	3.5	B	10.0	1.8	ug/L		06/17/15 11:08	06/21/15 16:02	1
Barium	38.6	B	50.0	2.1	ug/L		06/17/15 11:08	06/21/15 16:02	1
Beryllium	0.28	U	5.0	0.28	ug/L		06/17/15 11:08	06/21/15 16:02	1
Cadmium	0.34	U	5.0	0.34	ug/L		06/17/15 11:08	06/21/15 16:02	1
Calcium	49900		1000	54.2	ug/L		06/17/15 11:08	06/21/15 16:02	1
Chromium	12.5		10.0	3.4	ug/L		06/17/15 11:08	06/21/15 16:02	1
Cobalt	2.7	U	50.0	2.7	ug/L		06/17/15 11:08	06/21/15 16:02	1
Copper	2.5	B	25.0	2.1	ug/L		06/17/15 11:08	06/21/15 16:02	1
Iron	12.8	U	100	12.8	ug/L		06/17/15 11:08	06/21/15 16:02	1
Magnesium	11000		1000	50.5	ug/L		06/17/15 11:08	06/21/15 16:02	1
Manganese	1.0	U	15.0	1.0	ug/L		06/17/15 11:08	06/21/15 16:02	1
Nickel	3.6	B	40.0	2.6	ug/L		06/17/15 11:08	06/21/15 16:02	1
Potassium	4860	B	5000	456	ug/L		06/17/15 11:08	06/21/15 16:02	1
Silver	0.99	U	10.0	0.99	ug/L		06/17/15 11:08	06/21/15 16:02	1
Sodium	7870		1000	105	ug/L		06/17/15 11:08	06/21/15 16:02	1
Strontium	300		5.0	0.24	ug/L		06/17/15 11:08	06/21/15 16:02	1
Vanadium	7.6	B	50.0	4.4	ug/L		06/17/15 11:08	06/21/15 16:02	1
Zinc	14.3	B	20.0	8.3	ug/L		06/17/15 11:08	06/21/15 16:02	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: B30XY5 — **Lab Sample ID: 160-11927-1**
Date Collected: 05/18/15 12:54 — **Matrix: Water**
Date Received: 05/20/15 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	17.3	U	30.0	17.3	ug/L		06/17/15 11:11	06/19/15 23:36	2
Antimony	1.7	U	5.0	1.7	ug/L		06/17/15 11:11	06/19/15 23:36	2
Arsenic	2.5	B	10.0	1.2	ug/L		06/17/15 11:11	06/19/15 23:36	2
Barium	50.9		2.0	0.22	ug/L		06/17/15 11:11	06/19/15 23:36	2
Beryllium	0.35	U	0.50	0.35	ug/L		06/17/15 11:11	06/19/15 23:36	2
Cadmium	0.10	U	0.50	0.10	ug/L		06/17/15 11:11	06/19/15 23:36	2
Chromium	131		10.0	1.0	ug/L		06/17/15 11:11	06/19/15 23:36	2
Cobalt	0.22	U	2.0	0.22	ug/L		06/17/15 11:11	06/19/15 23:36	2
Copper	1.0	C	1.0	0.68	ug/L		06/17/15 11:11	06/25/15 17:22	2
Lead	0.30	B C	3.0	0.17	ug/L		06/17/15 11:11	06/19/15 23:36	2
Manganese	0.88	U	2.0	0.88	ug/L		06/17/15 11:11	06/19/15 23:36	2
Molybdenum	1.7	B	5.0	1.0	ug/L		06/17/15 11:11	06/19/15 23:36	2
Nickel	1.7	B	5.0	0.80	ug/L		06/17/15 11:11	06/19/15 23:36	2
Selenium	1.6	B	5.0	1.6	ug/L		06/17/15 11:11	06/19/15 23:36	2
Silver	0.82	U	2.0	0.82	ug/L		06/17/15 11:11	06/19/15 23:36	2
Strontium	492		5.0	0.060	ug/L		06/17/15 11:11	06/19/15 23:36	2

Method: 6020A - Metals (ICP/MS) (Continued)

Client Sample ID: B30XY5 — **Lab Sample ID: 160-11927-1**
Date Collected: 05/18/15 12:54 — **Matrix: Water**
Date Received: 05/20/15 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	0.55	U	2.0	0.55	ug/L		06/17/15 11:11	06/19/15 23:36	2
Thorium	0.55	U	2.0	0.55	ug/L		06/17/15 11:11	06/19/15 23:36	2
Tin	1.1	U	2.0	1.1	ug/L		06/17/15 11:11	06/19/15 23:36	2
Uranium	**2.8**		1.0	0.23	ug/L		06/17/15 11:11	06/19/15 23:36	2
Zinc	9.3	U	10.0	9.3	ug/L		06/17/15 11:11	06/19/15 23:36	2

Client Sample ID: B30Y67 — **Lab Sample ID: 160-11986-1**
Date Collected: 05/21/15 10:35 — **Matrix: Water**
Date Received: 05/22/15 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	17.3	U	30.0	17.3	ug/L		06/17/15 11:11	06/20/15 00:10	2
Antimony	1.7	U	5.0	1.7	ug/L		06/17/15 11:11	06/20/15 00:10	2
Arsenic	**1.3**	**B**	10.0	1.2	ug/L		06/17/15 11:11	06/20/15 00:10	2
Barium	**75.1**		2.0	0.22	ug/L		06/17/15 11:11	06/20/15 00:10	2
Beryllium	0.35	U	0.50	0.35	ug/L		06/17/15 11:11	06/20/15 00:10	2
Cadmium	0.10	U	0.50	0.10	ug/L		06/17/15 11:11	06/20/15 00:10	2
Chromium	**100**		10.0	1.0	ug/L		06/17/15 11:11	06/20/15 00:10	2
Cobalt	0.22	U	2.0	0.22	ug/L		06/17/15 11:11	06/20/15 00:10	2
Copper	**1.8**	**C**	1.0	0.68	ug/L		06/17/15 11:11	06/25/15 17:44	2
Lead	**0.45**	**B C**	3.0	0.17	ug/L		06/17/15 11:11	06/20/15 00:10	2
Manganese	0.88	U	2.0	0.88	ug/L		06/17/15 11:11	06/20/15 00:10	2
Molybdenum	1.0	U	5.0	1.0	ug/L		06/17/15 11:11	06/20/15 00:10	2
Nickel	**1.2**	**B**	5.0	0.80	ug/L		06/17/15 11:11	06/20/15 00:10	2
Selenium	1.6	U	5.0	1.6	ug/L		06/17/15 11:11	06/20/15 00:10	2
Silver	0.82	U	2.0	0.82	ug/L		06/17/15 11:11	06/20/15 00:10	2
Strontium	**513**		5.0	0.060	ug/L		06/17/15 11:11	06/20/15 00:10	2
Thallium	0.55	U	2.0	0.55	ug/L		06/17/15 11:11	06/20/15 00:10	2
Thorium	0.55	U	2.0	0.55	ug/L		06/17/15 11:11	06/20/15 00:10	2
Tin	1.1	U	2.0	1.1	ug/L		06/17/15 11:11	06/20/15 00:10	2
Uranium	**2.3**		1.0	0.23	ug/L		06/17/15 11:11	06/20/15 00:10	2
Zinc	9.3	U	10.0	9.3	ug/L		06/17/15 11:11	06/20/15 00:10	2

Client Sample ID: B30Y45 — **Lab Sample ID: 160-11986-3**
Date Collected: 05/21/15 10:57 — **Matrix: Water**
Date Received: 05/22/15 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	17.3	U	30.0	17.3	ug/L		06/17/15 11:11	06/20/15 00:23	2
Antimony	1.7	U	5.0	1.7	ug/L		06/17/15 11:11	06/20/15 00:23	2
Arsenic	**1.4**	**B**	10.0	1.2	ug/L		06/17/15 11:11	06/20/15 00:23	2
Barium	**82.8**		2.0	0.22	ug/L		06/17/15 11:11	06/20/15 00:23	2
Beryllium	0.35	U	0.50	0.35	ug/L		06/17/15 11:11	06/20/15 00:23	2
Cadmium	0.10	U	0.50	0.10	ug/L		06/17/15 11:11	06/20/15 00:23	2
Chromium	**37.8**		10.0	1.0	ug/L		06/17/15 11:11	06/20/15 00:23	2
Cobalt	0.22	U	2.0	0.22	ug/L		06/17/15 11:11	06/20/15 00:23	2
Copper	0.68	U	1.0	0.68	ug/L		06/17/15 11:11	06/25/15 17:52	2
Lead	**0.23**	**B C**	3.0	0.17	ug/L		06/17/15 11:11	06/20/15 00:23	2
Manganese	0.88	U	2.0	0.88	ug/L		06/17/15 11:11	06/20/15 00:23	2
Molybdenum	**1.3**	**B**	5.0	1.0	ug/L		06/17/15 11:11	06/20/15 00:23	2
Nickel	**1.2**	**B**	5.0	0.80	ug/L		06/17/15 11:11	06/20/15 00:23	2
Selenium	**2.1**	**B**	5.0	1.6	ug/L		06/17/15 11:11	06/20/15 00:23	2

Method: 6020A - Metals (ICP/MS) (Continued)

Client Sample ID: B30Y45 — **Lab Sample ID: 160-11986-3**
Date Collected: 05/21/15 10:57 — **Matrix: Water**
Date Received: 05/22/15 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.82	U	2.0	0.82	ug/L		06/17/15 11:11	06/20/15 00:23	2
Strontium	**545**		5.0	0.060	ug/L		06/17/15 11:11	06/20/15 00:23	2
Thallium	0.55	U	2.0	0.55	ug/L		06/17/15 11:11	06/20/15 00:23	2
Thorium	0.55	U	2.0	0.55	ug/L		06/17/15 11:11	06/20/15 00:23	2
Tin	1.1	U	2.0	1.1	ug/L		06/17/15 11:11	06/20/15 00:23	2
Uranium	**2.5**		1.0	0.23	ug/L		06/17/15 11:11	06/20/15 00:23	2
Zinc	9.3	U	10.0	9.3	ug/L		06/17/15 11:11	06/20/15 00:23	2

Client Sample ID: B30WX8 — **Lab Sample ID: 160-12017-1**
Date Collected: 05/26/15 08:54 — **Matrix: Water**
Date Received: 05/27/15 10:25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	17.3	U	30.0	17.3	ug/L		06/17/15 11:11	06/20/15 00:57	2
Antimony	1.7	U	5.0	1.7	ug/L		06/17/15 11:11	06/20/15 00:57	2
Arsenic	**2.5**	**B**	10.0	1.2	ug/L		06/17/15 11:11	06/20/15 00:57	2
Barium	**33.9**		2.0	0.22	ug/L		06/17/15 11:11	06/20/15 00:57	2
Beryllium	0.35	U	0.50	0.35	ug/L		06/17/15 11:11	06/20/15 00:57	2
Cadmium	0.10	U	0.50	0.10	ug/L		06/17/15 11:11	06/20/15 00:57	2
Chromium	**2.4**	**B**	10.0	1.0	ug/L		06/17/15 11:11	06/20/15 00:57	2
Cobalt	0.22	U	2.0	0.22	ug/L		06/17/15 11:11	06/20/15 00:57	2
Copper	**9.6**		1.0	0.68	ug/L		06/17/15 11:11	06/25/15 18:14	2
Lead	**0.19**	**B C**	3.0	0.17	ug/L		06/17/15 11:11	06/20/15 00:57	2
Manganese	0.88	U	2.0	0.88	ug/L		06/17/15 11:11	06/20/15 00:57	2
Molybdenum	**1.6**	**B**	5.0	1.0	ug/L		06/17/15 11:11	06/20/15 00:57	2
Nickel	0.80	U	5.0	0.80	ug/L		06/17/15 11:11	06/20/15 00:57	2
Selenium	1.6	U	5.0	1.6	ug/L		06/17/15 11:11	06/20/15 00:57	2
Silver	0.82	U	2.0	0.82	ug/L		06/17/15 11:11	06/20/15 00:57	2
Strontium	**292**		5.0	0.060	ug/L		06/17/15 11:11	06/20/15 00:57	2
Thallium	0.55	U	2.0	0.55	ug/L		06/17/15 11:11	06/20/15 00:57	2
Thorium	0.55	U	2.0	0.55	ug/L		06/17/15 11:11	06/20/15 00:57	2
Tin	1.1	U	2.0	1.1	ug/L		06/17/15 11:11	06/20/15 00:57	2
Uranium	**2.9**		1.0	0.23	ug/L		06/17/15 11:11	06/20/15 00:57	2
Zinc	9.3	U	10.0	9.3	ug/L		06/17/15 11:11	06/20/15 00:57	2

Method: 6020A - Metals (ICP/MS) - Dissolved

Client Sample ID: B30XY9 — **Lab Sample ID: 160-11927-2**
Date Collected: 05/18/15 12:54 — **Matrix: Water**
Date Received: 05/20/15 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	17.3	U	30.0	17.3	ug/L		06/17/15 11:11	06/20/15 00:03	2
Antimony	1.7	U	5.0	1.7	ug/L		06/17/15 11:11	06/20/15 00:03	2
Arsenic	**2.5**	**B**	10.0	1.2	ug/L		06/17/15 11:11	06/20/15 00:03	2
Barium	**51.1**		2.0	0.22	ug/L		06/17/15 11:11	06/20/15 00:03	2
Beryllium	0.35	U	0.50	0.35	ug/L		06/17/15 11:11	06/20/15 00:03	2
Cadmium	0.10	U	0.50	0.10	ug/L		06/17/15 11:11	06/20/15 00:03	2
Chromium	**130**		10.0	1.0	ug/L		06/17/15 11:11	06/20/15 00:03	2
Cobalt	0.22	U	2.0	0.22	ug/L		06/17/15 11:11	06/20/15 00:03	2
Copper	**1.8**	**C**	1.0	0.68	ug/L		06/17/15 11:11	06/25/15 17:39	2
Lead	**0.40**	**B C**	3.0	0.17	ug/L		06/17/15 11:11	06/20/15 00:03	2

Method: 6020A - Metals (ICP/MS) - Dissolved (Continued)

Client Sample ID: B30XY9 — **Lab Sample ID: 160-11927-2**
Date Collected: 05/18/15 12:54 — **Matrix: Water**
Date Received: 05/20/15 09:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.88	U	2.0	0.88	ug/L		06/17/15 11:11	06/20/15 00:03	2
Molybdenum	**1.8**	**B**	5.0	1.0	ug/L		06/17/15 11:11	06/20/15 00:03	2
Nickel	**2.9**	**B**	5.0	0.80	ug/L		06/17/15 11:11	06/20/15 00:03	2
Selenium	**1.7**	**B**	5.0	1.6	ug/L		06/17/15 11:11	06/20/15 00:03	2
Silver	0.82	U	2.0	0.82	ug/L		06/17/15 11:11	06/20/15 00:03	2
Strontium	**490**		5.0	0.060	ug/L		06/17/15 11:11	06/20/15 00:03	2
Thallium	0.55	U	2.0	0.55	ug/L		06/17/15 11:11	06/20/15 00:03	2
Thorium	0.55	U	2.0	0.55	ug/L		06/17/15 11:11	06/20/15 00:03	2
Tin	1.1	U	2.0	1.1	ug/L		06/17/15 11:11	06/20/15 00:03	2
Uranium	**2.8**		1.0	0.23	ug/L		06/17/15 11:11	06/20/15 00:03	2
Zinc	9.3	U	10.0	9.3	ug/L		06/17/15 11:11	06/20/15 00:03	2

Client Sample ID: B30Y69 — **Lab Sample ID: 160-11986-2**
Date Collected: 05/21/15 10:35 — **Matrix: Water**
Date Received: 05/22/15 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	17.3	U	30.0	17.3	ug/L		06/17/15 11:11	06/20/15 00:16	2
Antimony	1.7	U	5.0	1.7	ug/L		06/17/15 11:11	06/20/15 00:16	2
Arsenic	**1.2**	**B**	10.0	1.2	ug/L		06/17/15 11:11	06/20/15 00:16	2
Barium	**81.5**		2.0	0.22	ug/L		06/17/15 11:11	06/20/15 00:16	2
Beryllium	0.35	U	0.50	0.35	ug/L		06/17/15 11:11	06/20/15 00:16	2
Cadmium	0.10	U	0.50	0.10	ug/L		06/17/15 11:11	06/20/15 00:16	2
Chromium	**102**		10.0	1.0	ug/L		06/17/15 11:11	06/20/15 00:16	2
Cobalt	0.22	U	2.0	0.22	ug/L		06/17/15 11:11	06/20/15 00:16	2
Copper	0.68	U	1.0	0.68	ug/L		06/17/15 11:11	06/25/15 17:48	2
Lead	**0.49**	**B C**	3.0	0.17	ug/L		06/17/15 11:11	06/20/15 00:16	2
Manganese	0.88	U	2.0	0.88	ug/L		06/17/15 11:11	06/20/15 00:16	2
Molybdenum	1.0	U	5.0	1.0	ug/L		06/17/15 11:11	06/20/15 00:16	2
Nickel	**1.2**	**B**	5.0	0.80	ug/L		06/17/15 11:11	06/20/15 00:16	2
Selenium	1.6	U	5.0	1.6	ug/L		06/17/15 11:11	06/20/15 00:16	2
Silver	0.82	U	2.0	0.82	ug/L		06/17/15 11:11	06/20/15 00:16	2
Strontium	**537**		5.0	0.060	ug/L		06/17/15 11:11	06/20/15 00:16	2
Thallium	0.55	U	2.0	0.55	ug/L		06/17/15 11:11	06/20/15 00:16	2
Thorium	0.55	U	2.0	0.55	ug/L		06/17/15 11:11	06/20/15 00:16	2
Tin	1.1	U	2.0	1.1	ug/L		06/17/15 11:11	06/20/15 00:16	2
Uranium	**2.5**		1.0	0.23	ug/L		06/17/15 11:11	06/20/15 00:16	2
Zinc	9.3	U	10.0	9.3	ug/L		06/17/15 11:11	06/20/15 00:16	2

Client Sample ID: B30Y47 — **Lab Sample ID: 160-11986-4**
Date Collected: 05/21/15 10:57 — **Matrix: Water**
Date Received: 05/22/15 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	17.3	U	30.0	17.3	ug/L		06/17/15 11:11	06/20/15 00:50	2
Antimony	1.7	U	5.0	1.7	ug/L		06/17/15 11:11	06/20/15 00:50	2
Arsenic	**1.5**	**B**	10.0	1.2	ug/L		06/17/15 11:11	06/20/15 00:50	2
Barium	**88.1**		2.0	0.22	ug/L		06/17/15 11:11	06/20/15 00:50	2
Beryllium	0.35	U	0.50	0.35	ug/L		06/17/15 11:11	06/20/15 00:50	2
Cadmium	0.10	U	0.50	0.10	ug/L		06/17/15 11:11	06/20/15 00:50	2
Chromium	**37.9**		10.0	1.0	ug/L		06/17/15 11:11	06/20/15 00:50	2
Cobalt	0.22	U	2.0	0.22	ug/L		06/17/15 11:11	06/20/15 00:50	2

Method: 6020A - Metals (ICP/MS) - Dissolved (Continued)

Client Sample ID: B30Y47 — **Lab Sample ID: 160-11986-4**
Date Collected: 05/21/15 10:57 — **Matrix: Water**
Date Received: 05/22/15 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	0.74	B C	1.0	0.68	ug/L		06/17/15 11:11	06/25/15 18:10	2
Lead	0.21	B C	3.0	0.17	ug/L		06/17/15 11:11	06/20/15 00:50	2
Manganese	0.88	U	2.0	0.88	ug/L		06/17/15 11:11	06/20/15 00:50	2
Molybdenum	1.4	B	5.0	1.0	ug/L		06/17/15 11:11	06/20/15 00:50	2
Nickel	1.6	B	5.0	0.80	ug/L		06/17/15 11:11	06/20/15 00:50	2
Selenium	1.9	B	5.0	1.6	ug/L		06/17/15 11:11	06/20/15 00:50	2
Silver	0.82	U	2.0	0.82	ug/L		06/17/15 11:11	06/20/15 00:50	2
Strontium	561		5.0	0.060	ug/L		06/17/15 11:11	06/20/15 00:50	2
Thallium	0.55	U	2.0	0.55	ug/L		06/17/15 11:11	06/20/15 00:50	2
Thorium	0.55	U	2.0	0.55	ug/L		06/17/15 11:11	06/20/15 00:50	2
Tin	1.1	U	2.0	1.1	ug/L		06/17/15 11:11	06/20/15 00:50	2
Uranium	2.6		1.0	0.23	ug/L		06/17/15 11:11	06/20/15 00:50	2
Zinc	9.3	U	10.0	9.3	ug/L		06/17/15 11:11	06/20/15 00:50	2

Client Sample ID: B30WY0 — **Lab Sample ID: 160-12017-2**
Date Collected: 05/26/15 08:54 — **Matrix: Water**
Date Received: 05/27/15 10:25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	17.3	U	30.0	17.3	ug/L		06/17/15 11:11	06/20/15 01:03	2
Antimony	1.7	U	5.0	1.7	ug/L		06/17/15 11:11	06/20/15 01:03	2
Arsenic	2.6	B	10.0	1.2	ug/L		06/17/15 11:11	06/20/15 01:03	2
Barium	33.7		2.0	0.22	ug/L		06/17/15 11:11	06/20/15 01:03	2
Beryllium	0.35	U	0.50	0.35	ug/L		06/17/15 11:11	06/20/15 01:03	2
Cadmium	0.10	U	0.50	0.10	ug/L		06/17/15 11:11	06/20/15 01:03	2
Chromium	2.4	B	10.0	1.0	ug/L		06/17/15 11:11	06/20/15 01:03	2
Cobalt	0.40	B	2.0	0.22	ug/L		06/17/15 11:11	06/20/15 01:03	2
Copper	11.8		1.0	0.68	ug/L		06/17/15 11:11	06/25/15 18:19	2
Lead	0.20	B C	3.0	0.17	ug/L		06/17/15 11:11	06/20/15 01:03	2
Manganese	0.88	U	2.0	0.88	ug/L		06/17/15 11:11	06/20/15 01:03	2
Molybdenum	1.6	B	5.0	1.0	ug/L		06/17/15 11:11	06/20/15 01:03	2
Nickel	0.80	U	5.0	0.80	ug/L		06/17/15 11:11	06/20/15 01:03	2
Selenium	1.6	U	5.0	1.6	ug/L		06/17/15 11:11	06/20/15 01:03	2
Silver	0.82	U	2.0	0.82	ug/L		06/17/15 11:11	06/20/15 01:03	2
Strontium	288		5.0	0.060	ug/L		06/17/15 11:11	06/20/15 01:03	2
Thallium	0.55	U	2.0	0.55	ug/L		06/17/15 11:11	06/20/15 01:03	2
Thorium	0.55	U	2.0	0.55	ug/L		06/17/15 11:11	06/20/15 01:03	2
Tin	1.1	U	2.0	1.1	ug/L		06/17/15 11:11	06/20/15 01:03	2
Uranium	2.9		1.0	0.23	ug/L		06/17/15 11:11	06/20/15 01:03	2
Zinc	9.3	U	10.0	9.3	ug/L		06/17/15 11:11	06/20/15 01:03	2

General Chemistry

Client Sample ID: B30Y47 — **Lab Sample ID: 160-11986-4**
Date Collected: 05/21/15 10:57 — **Matrix: Water**
Date Received: 05/22/15 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	94.0		5.0	0.54	mg/L			06/02/15 10:41	1
Bicarbonate Alkalinity	94.0		5.0	0.54	mg/L			06/02/15 10:41	1
Carbonate Alkalinity	0.54	U	5.0	0.54	mg/L			06/02/15 10:41	1
Hydroxide Alkalinity	0.54	U	5.0	0.54	mg/L			06/02/15 10:41	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-11927-1
SDG: SL1805

Client Sample ID: B30XY2 — **Lab Sample ID: 160-11986-5**
Date Collected: 05/21/15 11:12 — **Matrix: Water**
Date Received: 05/22/15 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**70.0**		5.0	0.54	mg/L			06/02/15 10:41	1
Bicarbonate Alkalinity	**70.0**		5.0	0.54	mg/L			06/02/15 10:41	1
Carbonate Alkalinity	0.54	U	5.0	0.54	mg/L			06/02/15 10:41	1
Hydroxide Alkalinity	0.54	U	5.0	0.54	mg/L			06/02/15 10:41	1

Client Sample ID: B30Y17 — **Lab Sample ID: 160-11986-6**
Date Collected: 05/20/15 10:59 — **Matrix: Water**
Date Received: 05/22/15 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**102**		5.0	0.54	mg/L			06/02/15 10:41	1
Bicarbonate Alkalinity	**102**		5.0	0.54	mg/L			06/02/15 10:41	1
Carbonate Alkalinity	0.54	U	5.0	0.54	mg/L			06/02/15 10:41	1
Hydroxide Alkalinity	0.54	U	5.0	0.54	mg/L			06/02/15 10:41	1

Client Sample ID: B30Y18 — **Lab Sample ID: 160-11986-7**
Date Collected: 05/20/15 07:45 — **Matrix: Water**
Date Received: 05/22/15 09:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**1.0**	**B**	5.0	0.54	mg/L			06/02/15 10:41	1
Bicarbonate Alkalinity	**1.0**	**B**	5.0	0.54	mg/L			06/02/15 10:41	1
Carbonate Alkalinity	0.54	U	5.0	0.54	mg/L			06/02/15 10:41	1
Hydroxide Alkalinity	0.54	U	5.0	0.54	mg/L			06/02/15 10:41	1

Client Sample ID: B30XD4 — **Lab Sample ID: 160-12017-3**
Date Collected: 05/26/15 09:55 — **Matrix: Water**
Date Received: 05/27/15 10:25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**94.0**		5.0	0.54	mg/L			06/02/15 10:41	1
Bicarbonate Alkalinity	**94.0**		5.0	0.54	mg/L			06/02/15 10:41	1
Carbonate Alkalinity	0.54	U	5.0	0.54	mg/L			06/02/15 10:41	1
Hydroxide Alkalinity	0.54	U	5.0	0.54	mg/L			06/02/15 10:41	1

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-11927-1
SDG: SL1805

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 160-195777/1-A
Matrix: Water
Analysis Batch: 196505

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 195777

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	3.7	U	10.0	3.7	ug/L		06/17/15 11:08	06/21/15 14:47	1
Arsenic	1.8	U	10.0	1.8	ug/L		06/17/15 11:08	06/21/15 14:47	1
Barium	2.1	U	50.0	2.1	ug/L		06/17/15 11:08	06/21/15 14:47	1
Beryllium	0.28	U	5.0	0.28	ug/L		06/17/15 11:08	06/21/15 14:47	1
Cadmium	0.34	U	5.0	0.34	ug/L		06/17/15 11:08	06/21/15 14:47	1
Calcium	54.2	U	1000	54.2	ug/L		06/17/15 11:08	06/21/15 14:47	1
Boron	7.2	U	50.0	7.2	ug/L		06/17/15 11:08	06/21/15 14:47	1
Chromium	3.4	U	10.0	3.4	ug/L		06/17/15 11:08	06/21/15 14:47	1
Cobalt	2.7	U	50.0	2.7	ug/L		06/17/15 11:08	06/21/15 14:47	1
Copper	2.1	U	25.0	2.1	ug/L		06/17/15 11:08	06/21/15 14:47	1
Iron	12.8	U	100	12.8	ug/L		06/17/15 11:08	06/21/15 14:47	1
Magnesium	50.5	U	1000	50.5	ug/L		06/17/15 11:08	06/21/15 14:47	1
Manganese	1.0	U	15.0	1.0	ug/L		06/17/15 11:08	06/21/15 14:47	1
Nickel	2.6	U	40.0	2.6	ug/L		06/17/15 11:08	06/21/15 14:47	1
Potassium	456	U	5000	456	ug/L		06/17/15 11:08	06/21/15 14:47	1
Silver	0.99	U	10.0	0.99	ug/L		06/17/15 11:08	06/21/15 14:47	1
Sodium	105	U	1000	105	ug/L		06/17/15 11:08	06/21/15 14:47	1
Strontium	0.24	U	5.0	0.24	ug/L		06/17/15 11:08	06/21/15 14:47	1
Vanadium	4.4	U	50.0	4.4	ug/L		06/17/15 11:08	06/21/15 14:47	1
Zinc	8.3	U	20.0	8.3	ug/L		06/17/15 11:08	06/21/15 14:47	1

Lab Sample ID: LCS 160-195777/2-A
Matrix: Water
Analysis Batch: 196505

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 195777

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	500	491.5		ug/L		98	80 - 120
Arsenic	1000	977.9		ug/L		98	80 - 120
Barium	1000	1049		ug/L		105	80 - 120
Beryllium	1000	1019		ug/L		102	80 - 120
Cadmium	1000	999.6		ug/L		100	80 - 120
Calcium	10000	10570		ug/L		106	80 - 120
Boron	2000	1922		ug/L		96	80 - 120
Chromium	1000	1035		ug/L		104	80 - 120
Cobalt	1000	1045		ug/L		105	80 - 120
Copper	1000	1038		ug/L		104	80 - 120
Iron	10000	9783		ug/L		98	80 - 120
Magnesium	10000	9096		ug/L		91	80 - 120
Manganese	1000	990.6		ug/L		99	80 - 120
Nickel	1000	1049		ug/L		105	80 - 120
Potassium	10000	10040		ug/L		100	80 - 120
Silver	200	204.0		ug/L		102	80 - 120
Sodium	10000	10240		ug/L		102	80 - 120
Strontium	1000	1060		ug/L		106	80 - 120
Vanadium	1000	978.8		ug/L		98	80 - 120
Zinc	1000	1000		ug/L		100	80 - 120

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 160-11927-1 MS **Client Sample ID: B30XY5**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 196505 **Prep Batch: 195777**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	4.7	B	500	512.1		ug/L		101	75 - 125
Arsenic	1.8	U	1000	1018		ug/L		102	75 - 125
Barium	54.8		1000	1120		ug/L		107	75 - 125
Beryllium	0.28	U	1000	1050		ug/L		105	75 - 125
Cadmium	0.34	U	1000	1020		ug/L		102	75 - 125
Calcium	84500		10000	93930		ug/L		95	75 - 125
Boron	56.1		2000	2060		ug/L		100	75 - 125
Chromium	136		1000	1166		ug/L		103	75 - 125
Cobalt	2.7	U	1000	1031		ug/L		103	75 - 125
Copper	2.1	U	1000	1047		ug/L		105	75 - 125
Iron	20.5	B	10000	10010		ug/L		100	75 - 125
Magnesium	20600		10000	30640		ug/L		101	75 - 125
Manganese	1.0	U	1000	1006		ug/L		101	75 - 125
Nickel	6.6	B	1000	1043		ug/L		104	75 - 125
Potassium	5190		10000	15530		ug/L		103	75 - 125
Silver	0.99	U	200	207.0		ug/L		104	75 - 125
Sodium	21800		10000	32870		ug/L		111	75 - 125
Strontium	513		1000	1604		ug/L		109	75 - 125
Vanadium	9.7	B	1000	1015		ug/L		101	75 - 125
Zinc	8.3	U	1000	1021		ug/L		102	75 - 125

Lab Sample ID: 160-11927-1 MSD **Client Sample ID: B30XY5**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 196505 **Prep Batch: 195777**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	4.7	B	500	524.2		ug/L		104	75 - 125	2	20
Arsenic	1.8	U	1000	1037		ug/L		104	75 - 125	2	20
Barium	54.8		1000	1097		ug/L		104	75 - 125	2	20
Beryllium	0.28	U	1000	1030		ug/L		103	75 - 125	2	20
Cadmium	0.34	U	1000	1036		ug/L		104	75 - 125	2	20
Calcium	84500		10000	95490		ug/L		110	75 - 125	2	20
Boron	56.1		2000	2023		ug/L		98	75 - 125	2	20
Chromium	136		1000	1163		ug/L		103	75 - 125	0	20
Cobalt	2.7	U	1000	1044		ug/L		104	75 - 125	1	20
Copper	2.1	U	1000	1057		ug/L		106	75 - 125	1	20
Iron	20.5	B	10000	9819		ug/L		98	75 - 125	2	20
Magnesium	20600		10000	30200		ug/L		96	75 - 125	1	20
Manganese	1.0	U	1000	984.9		ug/L		98	75 - 125	2	20
Nickel	6.6	B	1000	1057		ug/L		105	75 - 125	1	20
Potassium	5190		10000	15370		ug/L		102	75 - 125	1	20
Silver	0.99	U	200	207.4		ug/L		104	75 - 125	0	20
Sodium	21800		10000	32680		ug/L		109	75 - 125	1	20
Strontium	513		1000	1575		ug/L		106	75 - 125	2	20
Vanadium	9.7	B	1000	992.9		ug/L		98	75 - 125	2	20
Zinc	8.3	U	1000	1036		ug/L		104	75 - 125	1	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 160-195778/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 196510 — **Prep Batch: 195778**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	17.3	U	30.0	17.3	ug/L		06/17/15 11:11	06/19/15 23:23	2
Antimony	1.7	U	5.0	1.7	ug/L		06/17/15 11:11	06/19/15 23:23	2
Arsenic	1.2	U	10.0	1.2	ug/L		06/17/15 11:11	06/19/15 23:23	2
Barium	0.22	U	2.0	0.22	ug/L		06/17/15 11:11	06/19/15 23:23	2
Beryllium	0.35	U	0.50	0.35	ug/L		06/17/15 11:11	06/19/15 23:23	2
Cadmium	0.10	U	0.50	0.10	ug/L		06/17/15 11:11	06/19/15 23:23	2
Chromium	1.0	U	10.0	1.0	ug/L		06/17/15 11:11	06/19/15 23:23	2
Cobalt	0.22	U	2.0	0.22	ug/L		06/17/15 11:11	06/19/15 23:23	2
Lead	0.172	B	3.0	0.17	ug/L		06/17/15 11:11	06/19/15 23:23	2
Manganese	0.88	U	2.0	0.88	ug/L		06/17/15 11:11	06/19/15 23:23	2
Molybdenum	1.0	U	5.0	1.0	ug/L		06/17/15 11:11	06/19/15 23:23	2
Nickel	0.80	U	5.0	0.80	ug/L		06/17/15 11:11	06/19/15 23:23	2
Selenium	1.6	U	5.0	1.6	ug/L		06/17/15 11:11	06/19/15 23:23	2
Silver	0.82	U	2.0	0.82	ug/L		06/17/15 11:11	06/19/15 23:23	2
Strontium	0.060	U	5.0	0.060	ug/L		06/17/15 11:11	06/19/15 23:23	2
Thallium	0.55	U	2.0	0.55	ug/L		06/17/15 11:11	06/19/15 23:23	2
Thorium	0.55	U	2.0	0.55	ug/L		06/17/15 11:11	06/19/15 23:23	2
Tin	1.1	U	2.0	1.1	ug/L		06/17/15 11:11	06/19/15 23:23	2
Uranium	0.23	U	1.0	0.23	ug/L		06/17/15 11:11	06/19/15 23:23	2
Zinc	9.3	U	10.0	9.3	ug/L		06/17/15 11:11	06/19/15 23:23	2

Lab Sample ID: MB 160-195778/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 197502 — **Prep Batch: 195778**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	0.922	B	1.0	0.68	ug/L		06/17/15 11:11	06/25/15 17:13	2

Lab Sample ID: LCS 160-195778/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 196510 — **Prep Batch: 195778**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	10000	9367		ug/L		94	80 - 120
Antimony	500	508.0		ug/L		102	80 - 120
Arsenic	1000	1036		ug/L		104	80 - 120
Barium	1000	990.6		ug/L		99	80 - 120
Beryllium	1000	1118		ug/L		112	80 - 120
Cadmium	1000	1035		ug/L		104	80 - 120
Chromium	1000	994.3		ug/L		99	80 - 120
Cobalt	1000	1015		ug/L		101	80 - 120
Lead	1000	1008		ug/L		101	80 - 120
Manganese	1000	1058		ug/L		106	80 - 120
Molybdenum	500	506.0		ug/L		101	80 - 120
Nickel	1000	1072		ug/L		107	80 - 120
Selenium	500	506.7		ug/L		101	80 - 120
Silver	200	197.2		ug/L		99	80 - 120
Strontium	1000	1037		ug/L		104	80 - 120

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 160-195778/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 196510 — **Prep Batch: 195778**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Thallium	200	199.2		ug/L		100	80 - 120
Thorium	1000	1012		ug/L		101	80 - 120
Tin	1000	989.7		ug/L		99	80 - 120
Uranium	1000	1016		ug/L		102	80 - 120
Zinc	1000	993.5		ug/L		99	80 - 120

Lab Sample ID: LCS 160-195778/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 197502 — **Prep Batch: 195778**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Copper	1000	969.2		ug/L		97	80 - 120

Lab Sample ID: 160-11927-1 MS — **Client Sample ID: B30XY5**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 196510 — **Prep Batch: 195778**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	17.3	U	10000	9563		ug/L		96	75 - 125
Antimony	1.7	U	500	510.6		ug/L		102	75 - 125
Arsenic	2.5	B	1000	1013		ug/L		101	75 - 125
Barium	50.9		1000	1037		ug/L		99	75 - 125
Beryllium	0.35	U	1000	1135		ug/L		113	75 - 125
Cadmium	0.10	U	1000	1027		ug/L		103	75 - 125
Chromium	131		1000	1117		ug/L		99	75 - 125
Cobalt	0.22	U	1000	957.6		ug/L		96	75 - 125
Lead	0.30	B C	1000	1002		ug/L		100	75 - 125
Manganese	0.88	U	1000	1013		ug/L		101	75 - 125
Molybdenum	1.7	B	500	490.1		ug/L		98	75 - 125
Nickel	1.7	B	1000	1008		ug/L		101	75 - 125
Selenium	1.6	B	500	489.8		ug/L		98	75 - 125
Silver	0.82	U	200	193.9		ug/L		97	75 - 125
Strontium	492		1000	1473		ug/L		98	75 - 125
Thallium	0.55	U	200	198.8		ug/L		99	75 - 125
Thorium	0.55	U	1000	1035		ug/L		103	75 - 125
Tin	1.1	U	1000	990.0		ug/L		99	75 - 125
Uranium	2.8		1000	1032		ug/L		103	75 - 125
Zinc	9.3	U	1000	948.5		ug/L		95	75 - 125

Lab Sample ID: 160-11927-1 MS — **Client Sample ID: B30XY5**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 197502 — **Prep Batch: 195778**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Copper	1.0	C	1000	932.4		ug/L		93	75 - 125

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: 160-11927-1 MSD — **Client Sample ID: B30XY5**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 196510 — **Prep Batch: 195778**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	17.3	U	10000	9418		ug/L		94	75 - 125	2	20
Antimony	1.7	U	500	505.9		ug/L		101	75 - 125	1	20
Arsenic	2.5	B	1000	1016		ug/L		101	75 - 125	0	20
Barium	50.9		1000	1025		ug/L		97	75 - 125	1	20
Beryllium	0.35	U	1000	1116		ug/L		112	75 - 125	2	20
Cadmium	0.10	U	1000	1017		ug/L		102	75 - 125	1	20
Chromium	131		1000	1113		ug/L		98	75 - 125	0	20
Cobalt	0.22	U	1000	970.6		ug/L		97	75 - 125	1	20
Lead	0.30	B C	1000	990.8		ug/L		99	75 - 125	1	20
Manganese	0.88	U	1000	1017		ug/L		102	75 - 125	0	20
Molybdenum	1.7	B	500	485.3		ug/L		97	75 - 125	1	20
Nickel	1.7	B	1000	1017		ug/L		102	75 - 125	1	20
Selenium	1.6	B	500	500.4		ug/L		100	75 - 125	2	20
Silver	0.82	U	200	192.6		ug/L		96	75 - 125	1	20
Strontium	492		1000	1482		ug/L		99	75 - 125	1	20
Thallium	0.55	U	200	195.7		ug/L		98	75 - 125	2	20
Thorium	0.55	U	1000	1013		ug/L		101	75 - 125	2	20
Tin	1.1	U	1000	984.0		ug/L		98	75 - 125	1	20
Uranium	2.8		1000	1007		ug/L		100	75 - 125	2	20
Zinc	9.3	U	1000	951.6		ug/L		95	75 - 125	0	20

Lab Sample ID: 160-11927-1 MSD — **Client Sample ID: B30XY5**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 197502 — **Prep Batch: 195778**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Copper	1.0	C	1000	935.6		ug/L		93	75 - 125	0	20

Method: 310.1 - Alkalinity

Lab Sample ID: MB 160-193070/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 193070

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	0.54	U	5.0	0.54	mg/L			06/02/15 10:41	1
Bicarbonate Alkalinity	0.54	U	5.0	0.54	mg/L			06/02/15 10:41	1
Carbonate Alkalinity	0.54	U	5.0	0.54	mg/L			06/02/15 10:41	1
Hydroxide Alkalinity	0.54	U	5.0	0.54	mg/L			06/02/15 10:41	1

Lab Sample ID: HLCS 160-193070/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 193070

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	400	382.0		mg/L		96	90 - 110
Bicarbonate Alkalinity	400	382.0		mg/L		96	90 - 110

Method: 310.1 - Alkalinity (Continued)

Lab Sample ID: LCS 160-193070/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 193070

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	192.0		mg/L		96	90 - 110
Bicarbonate Alkalinity	200	192.0		mg/L		96	90 - 110

Lab Sample ID: 160-12017-3 MS — **Client Sample ID: B30XD4**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 193070

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	94.0		100	188.0		mg/L		94	80 - 120
Bicarbonate Alkalinity	94.0		100	188.0		mg/L		94	80 - 120

Lab Sample ID: 160-12017-3 DU — **Client Sample ID: B30XD4**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 193070

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity	94.0		92.00		mg/L		2	20
Bicarbonate Alkalinity	94.0		92.00		mg/L		2	20
Carbonate Alkalinity	0.54	U	0.54	U	mg/L		NC	20
Hydroxide Alkalinity	0.54	U	0.54	U	mg/L		NC	20

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-11927-1
SDG: SL1805

Metals

Prep Batch: 195777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-11927-1	B30XY5	Total/NA	Water	3010A	
160-11927-1 MS	B30XY5	Total/NA	Water	3010A	
160-11927-1 MSD	B30XY5	Total/NA	Water	3010A	
160-11927-2	B30XY9	Dissolved	Water	3010A	
160-11986-1	B30Y67	Total/NA	Water	3010A	
160-11986-2	B30Y69	Dissolved	Water	3010A	
160-11986-3	B30Y45	Total/NA	Water	3010A	
160-11986-4	B30Y47	Dissolved	Water	3010A	
160-12017-1	B30WX8	Total/NA	Water	3010A	
160-12017-2	B30WY0	Dissolved	Water	3010A	
160-12017-3	B30XD4	Total/NA	Water	3010A	
160-12017-4	B30XD5	Dissolved	Water	3010A	
160-12017-5	B30WP0	Total/NA	Water	3010A	
160-12017-6	B30WP2	Dissolved	Water	3010A	
LCS 160-195777/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 160-195777/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 195778

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-11927-1	B30XY5	Total/NA	Water	3010A	
160-11927-1 MS	B30XY5	Total/NA	Water	3010A	
160-11927-1 MSD	B30XY5	Total/NA	Water	3010A	
160-11927-2	B30XY9	Dissolved	Water	3010A	
160-11986-1	B30Y67	Total/NA	Water	3010A	
160-11986-2	B30Y69	Dissolved	Water	3010A	
160-11986-3	B30Y45	Total/NA	Water	3010A	
160-11986-4	B30Y47	Dissolved	Water	3010A	
160-12017-1	B30WX8	Total/NA	Water	3010A	
160-12017-2	B30WY0	Dissolved	Water	3010A	
LCS 160-195778/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 160-195778/1-A	Method Blank	Total/NA	Water	3010A	

Analysis Batch: 196505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-11927-1	B30XY5	Total/NA	Water	6010C	195777
160-11927-1 MS	B30XY5	Total/NA	Water	6010C	195777
160-11927-1 MSD	B30XY5	Total/NA	Water	6010C	195777
160-11927-2	B30XY9	Dissolved	Water	6010C	195777
160-11986-1	B30Y67	Total/NA	Water	6010C	195777
160-11986-2	B30Y69	Dissolved	Water	6010C	195777
160-11986-3	B30Y45	Total/NA	Water	6010C	195777
160-11986-4	B30Y47	Dissolved	Water	6010C	195777
160-12017-1	B30WX8	Total/NA	Water	6010C	195777
160-12017-2	B30WY0	Dissolved	Water	6010C	195777
160-12017-3	B30XD4	Total/NA	Water	6010C	195777
160-12017-4	B30XD5	Dissolved	Water	6010C	195777
160-12017-5	B30WP0	Total/NA	Water	6010C	195777
160-12017-6	B30WP2	Dissolved	Water	6010C	195777
LCS 160-195777/2-A	Lab Control Sample	Total/NA	Water	6010C	195777
MB 160-195777/1-A	Method Blank	Total/NA	Water	6010C	195777

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: S,W,I,A ,X SAFS- GROUNDWATER

TestAmerica Job ID: 160-11927-1
SDG: SL1805

Metals (Continued)

Analysis Batch: 196510

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-11927-1	B30XY5	Total/NA	Water	6020A	195778
160-11927-1 MS	B30XY5	Total/NA	Water	6020A	195778
160-11927-1 MSD	B30XY5	Total/NA	Water	6020A	195778
160-11927-2	B30XY9	Dissolved	Water	6020A	195778
160-11986-1	B30Y67	Total/NA	Water	6020A	195778
160-11986-2	B30Y69	Dissolved	Water	6020A	195778
160-11986-3	B30Y45	Total/NA	Water	6020A	195778
160-11986-4	B30Y47	Dissolved	Water	6020A	195778
160-12017-1	B30WX8	Total/NA	Water	6020A	195778
160-12017-2	B30WY0	Dissolved	Water	6020A	195778
LCS 160-195778/2-A	Lab Control Sample	Total/NA	Water	6020A	195778
MB 160-195778/1-A	Method Blank	Total/NA	Water	6020A	195778

Analysis Batch: 197502

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-11927-1	B30XY5	Total/NA	Water	6020A	195778
160-11927-1 MS	B30XY5	Total/NA	Water	6020A	195778
160-11927-1 MSD	B30XY5	Total/NA	Water	6020A	195778
160-11927-2	B30XY9	Dissolved	Water	6020A	195778
160-11986-1	B30Y67	Total/NA	Water	6020A	195778
160-11986-2	B30Y69	Dissolved	Water	6020A	195778
160-11986-3	B30Y45	Total/NA	Water	6020A	195778
160-11986-4	B30Y47	Dissolved	Water	6020A	195778
160-12017-1	B30WX8	Total/NA	Water	6020A	195778
160-12017-2	B30WY0	Dissolved	Water	6020A	195778
LCS 160-195778/2-A	Lab Control Sample	Total/NA	Water	6020A	195778
MB 160-195778/1-A	Method Blank	Total/NA	Water	6020A	195778

General Chemistry

Analysis Batch: 193070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-11986-4	B30Y47	Total/NA	Water	310.1	
160-11986-5	B30XY2	Total/NA	Water	310.1	
160-11986-6	B30Y17	Total/NA	Water	310.1	
160-11986-7	B30Y18	Total/NA	Water	310.1	
160-12017-3	B30XD4	Total/NA	Water	310.1	
160-12017-3 DU	B30XD4	Total/NA	Water	310.1	
160-12017-3 MS	B30XD4	Total/NA	Water	310.1	
HLCS 160-193070/3	Lab Control Sample	Total/NA	Water	310.1	
LCS 160-193070/2	Lab Control Sample	Total/NA	Water	310.1	
MB 160-193070/1	Method Blank	Total/NA	Water	310.1	