June 30, 2017

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

TestAmerica Job ID: 280-98249-1
TestAmerica Sample Delivery Group: DN0155
Client Project/Site: I17-008 / W17-006

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

Attn: Mr. Scot Fitzgerald

Darlene Bandy

Authorized for release by:
6/30/2017 8:26:19 PM

Darlene Bandy, Project Manager I
(303)736-0100
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LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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.

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Job ID: 280-98249-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: CH2M Hill Plateau Remediation Company

Job Number: 280-98249-1

SDG #: DN0155
SAF#(s): I17-008 / W17-006

Date SDG Closed: June 14, 2017
Data Deliverable: 30 Day / Summary

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted. Calculations are performed before rounding to avoid round-off errors in calculated results.

LCS/LCSD = Laboratory Control Sample/Laboratory Control Sample Duplicate
MS/MSD = Matrix Spike/Matrix Spike Duplicate

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 6/14/2017 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 19.5º C.

DISSOLVED METALS (ICP)
Samples B39M90 (280-98249-1), B39MX6 (280-98249-3), B39MX7 (280-98249-6) and B39P48 (280-98249-8) were analyzed for Dissolved Metals in accordance with EPA SW-846 Method 6010C. The samples were prepared on 06/26/2017 and analyzed on 06/26/2017 and 06/28/2017.

Manganese was detected in method blank MB 280-377470/1-A at a level that was above the method detection limit (MDL) but below the reporting limit (RL). The value should be considered an estimate, and has been flagged “B”. Because the concentration in the method blank was not present at a level greater than half the RL, corrective action is deemed unnecessary. If the associated samples reported a result above the MDL and/or RL and the method blank concentration was greater than 5% of the sample concentration, the result has been flagged “C”.

No additional analytical or quality issues were noted.

TOTAL METALS (ICP)
Samples B39M85 (280-98249-2), B39MW7 (280-98249-4), B39MW8 (280-98249-5) and B39XT8 (280-98249-7) were analyzed for Total Metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 06/26/2017 and analyzed on 06/26/2017 and 06/28/2017.

Manganese was detected in method blank MB 280-377469/1-A at a level that was above the method detection limit (MDL) but below the reporting limit (RL). The value should be considered an estimate, and has been flagged “B”. Because the concentration in the method blank was not present at a level greater than half the RL, corrective action is deemed unnecessary. If the associated samples reported a result above the MDL and/or RL and the method blank concentration was greater than 5% of the sample concentration, the result has been flagged “C”.

Calcium was detected in method blank MB 280-377469/1-A at a level that was above the method detection limit (MDL) but below the reporting limit (RL). The value should be considered an estimate, and has been flagged “B”. The MB contained Calcium at a level greater

Job ID: 280-98249-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

than one-half the reporting limit; however, the associated samples were either non-detect or >20x the method blank concentration; therefore, corrective action is deemed unnecessary.

No additional analytical or quality issues were noted.

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:

Darlene Bandy
Project Manager

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 280-98249-1
SDG Number: DN0155

Login Number: 98249
List Number: 1
Creator: Pottruff, Reed W

List Source: TestAmerica Denver

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	19.5°C
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.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # I17-008-009

Page 1 of 1

Collector	Daniel Klug CHPRC DN0155	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	I17-008	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	100-NR-2 GW-OU Monitoring Apatite B	Logbook No.	HNF-N-506 92192	Ice Chest No.	GWS-447
Shipped To (Lab)	TestAmerica Denver	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	7793934676 66
Protocol	CERCLA	Priority: 30 Days	PRIORITY	Offsite Property No.	8033

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 N/A

Hold Time Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B39M90	Y	W	JUN 13 2017	1205	1x500-mL G/P	6010_METALS_ICP: COMMON	6 Months	HNO3 to pH <2
B39M85	N	W	JUN 13 2017	1205	1x500-mL G/P	6010_METALS_ICP: COMMON	6 Months	HNO3 to pH <2

280-98249 Chain of Custody

19.5 IR # 70.0 Transfer RB 6-14-17

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Daniel Klug CHPRC	D. Klug		JUN 13 2017 1245	Lesly Wall /CHPRC	Lesly Wall		JUN 13 2017 1245
Lesly Wall /CHPRC	Lesly Wall		JUN 13 2017 1400	FEDEX			
FedEx				Reed Pettruff	Reed Pettruff		6-14-17 0900

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 ON 5/4/2017 FSR ID = FSR4396 A-6004-842 (REV 2)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # I17-008-030

Collector	Daniel Klug CHPRC DN0155	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	I17-008	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	100-NR-2 GW-OU Monitoring Apatite B	Logbook No.	HNF-N-506 92192	Ice Chest No.	GWS-~~341~~ 447 TEB 6-13-17
Shipped To (Lab)	TestAmerica Denver	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	7793 9346 7606
Protocol	CERCLA	Priority:	30 Days **PRIORITY**	Offsite Property No.	8033

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
B39MX6	Y	W	JUN 13 2017	0800	1x500-mL G/P	6010_METALS_ICP: COMMON	6 Months	HNO3 to pH <2
B39MW7	N	W	JUN 13 2017	0800	1x500-mL G/P	6010_METALS_ICP: COMMON	6 Months	HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Daniel Klug CHPRC	D Klug		JUN 13 2017 1055	Janelle Zunker CHPRC			JUN 13 2017 1055
Janelle Zunker CHPRC			JUN 13 2017 1400			FEDEX	
FedEx				Reed Pottruff			6-14-17 0900

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 ON 5/4/2017 FSR ID = FSR44979 A-6004-842 (REV 2)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # I17-008-031

Page 1 of 1

Collector	Daniel Klug CHPRC DN0155	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	I17-008	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	100-NR-2 GW-OU Monitoring Apatite B	Logbook No.	HNF-N-506 92/92	Ice Chest No.	CWS 391 6-13-17 447
Shipped To (Lab)	TestAmerica Denver	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	7793 9346 7606
Protocol	CERCLA	Priority:	30 Days PRIORITY	Offsite Property No.	8033

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
B39MW8	N	W	JUN 13 2017	0923	1x500-mL G/P	6010_METALS_ICP: COMMON	6 Months	HNO3 to pH <2
B39MX7	Y	W	JUN 13 2017	0923	1x500-mL G/P	6010_METALS_ICP: COMMON	6 Months	HNO3 to pH <2

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
Daniel Klug CHPRC	D. Klug	JUN 13 2017 1055	Janelle Zunker CHPRC	Zunker	JUN 13 2017 1055
Janelle Zunker CHPRC	Zunker	JUN 13 2017 1400		FEDEX	
Fed Ex			Reed Pottruff	Reed Pott	6-14-17 0900

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 ON 5/4/2017 FSR ID = FSR44978 A-6004-842 (REV 2)

June 30, 2017

CH2MHill Plateau Remediation Company

14165

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W17-006-198

Collector	Juan Aguilar /CHPRC DW0155	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	W17-006	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	RCRA, JUNE 2017	Logbook No.	HNF-N-506 88/79	Ice Chest No.	GWS-447
Shipped To (Lab)	TestAmerica Denver	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	7793 9346 7606
Protocol	RCRA	Priority:	30 Days PRIORITY	Offsite Property No.	8033

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
B39XT8	N	W	6-13-17	1225	1x500-mL G/P	6010_METALS_ICP: COMMON	6 Months	HNO3 to pH <2
B39P48	Y	W	6-13-17	1225	1x500-mL G/P	6010_METALS_ICP: COMMON	6 Months	HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Juan Aguilar /CHPRC			JUN 13 2017 1325	Lesly Wall /CHPRC			JUN 13 2017 1325
Lesly Wall /CHPRC			JUN 13 2017 1400	FEDEX			
FedEx				Reed Pottruff			6-14-17 0900

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 ON 6/13/2017 FSR ID = FSR44266 A-6004-842 (REV 2)

IMPORTANT!
Hurricane Season Readiness. Learn More

FedEx ® Tracking

779393467606

Ship date:		Actual delivery:
Tue 6/13/2017		**Wed 6/14/2017 9:01 am**
Richland, WA US	**Delivered** *Signed for by: R.POTTRUFF*	ARVADA, CO US

Travel History

Date/Time	Activity	Location
6/14/2017 - Wednesday		
9:01 am	Delivered	ARVADA, CO
8:45 am	On FedEx vehicle for delivery	ARVADA, CO
7:57 am	At local FedEx facility	ARVADA, CO
5:11 am	At destination sort facility	DENVER, CO
4:10 am	Departed FedEx location	MEMPHIS, TN
12:21 am	Arrived at FedEx location	MEMPHIS, TN
6/13/2017 - Tuesday		
4:49 pm	Left FedEx origin facility	PASCO, WA
3:57 pm	Shipment information sent to FedEx	
3:15 pm	Picked up	PASCO, WA

Shipment Facts

Tracking number	779393467606	**Service**	FedEx Priority Overnight
Weight	14 lbs / 6.35 kgs	**Signature services**	Direct signature required
Delivered To	Shipping/Receiving	**Total pieces**	1
Total shipment weight	14 lbs / 6.35 kgs	**Terms**	Third Party
Shipper reference	8033	**Packaging**	Your Packaging
Special handling section	Deliver Weekday, Additional Handling Surcharge, Direct Signature Required	**Standard transit**	6/14/2017 by 10:30 am

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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 associated QC blank, and the sample concentration was </= 5X the blank concentration.

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	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)

Method Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: I17-008 / W17-006

TestAmerica Job ID: 280-98249-1
SDG: DN0155

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL DEN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: I17-008 / W17-006

TestAmerica Job ID: 280-98249-1
SDG: DN0155

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-98249-1	B39M90	Water	06/13/17 12:05	06/14/17 09:00
280-98249-2	B39M85	Water	06/13/17 12:05	06/14/17 09:00
280-98249-3	B39MX6	Water	06/13/17 08:00	06/14/17 09:00
280-98249-4	B39MW7	Water	06/13/17 08:00	06/14/17 09:00
280-98249-5	B39MW8	Water	06/13/17 09:23	06/14/17 09:00
280-98249-6	B39MX7	Water	06/13/17 09:23	06/14/17 09:00
280-98249-7	B39XT8	Water	06/13/17 12:25	06/14/17 09:00
280-98249-8	B39P48	Water	06/13/17 12:25	06/14/17 09:00

Client: CH2M Hill Plateau Remediation Company
Project/Site: I17-008 / W17-006

TestAmerica Job ID: 280-98249-1
SDG: DN0155

Method: 6010C - Metals (ICP)

Client Sample ID: B39M85 — **Lab Sample ID: 280-98249-2**
Date Collected: 06/13/17 12:05 — **Matrix: Water**
Date Received: 06/14/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	5.2	U	20.0	5.2	ug/L		06/26/17 13:45	06/26/17 21:47	1
Arsenic	4.4	U	15.0	4.4	ug/L		06/26/17 13:45	06/26/17 21:47	1
Barium	**22.2**		10.0	0.82	ug/L		06/26/17 13:45	06/26/17 21:47	1
Cadmium	0.45	U	5.0	0.45	ug/L		06/26/17 13:45	06/26/17 21:47	1
Calcium	**20000**		200	34.5	ug/L		06/26/17 13:45	06/26/17 21:47	1
Chromium	**1.4**	**B**	10.0	0.66	ug/L		06/26/17 13:45	06/26/17 21:47	1
Cobalt	1.2	U	10.0	1.2	ug/L		06/26/17 13:45	06/26/17 21:47	1
Copper	4.2	U	15.0	4.2	ug/L		06/26/17 13:45	06/26/17 21:47	1
Iron	**144**		100	22.0	ug/L		06/26/17 13:45	06/28/17 00:50	1
Magnesium	**4360**		200	10.7	ug/L		06/26/17 13:45	06/26/17 21:47	1
Manganese	**1.1**	**B C**	10.0	0.26	ug/L		06/26/17 13:45	06/26/17 21:47	1
Nickel	2.6	U	40.0	2.6	ug/L		06/26/17 13:45	06/26/17 21:47	1
Potassium	**1020**	**B**	3000	237	ug/L		06/26/17 13:45	06/26/17 21:47	1
Silver	0.93	U	10.0	0.93	ug/L		06/26/17 13:45	06/26/17 21:47	1
Sodium	**5110**		1000	117	ug/L		06/26/17 13:45	06/26/17 21:47	1
Vanadium	**3.2**	**B**	10.0	1.1	ug/L		06/26/17 13:45	06/26/17 21:47	1
Zinc	4.5	U	20.0	4.5	ug/L		06/26/17 13:45	06/26/17 21:47	1

Client Sample ID: B39MW7 — **Lab Sample ID: 280-98249-4**
Date Collected: 06/13/17 08:00 — **Matrix: Water**
Date Received: 06/14/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	5.2	U	20.0	5.2	ug/L		06/26/17 13:45	06/26/17 22:02	1
Arsenic	4.4	U	15.0	4.4	ug/L		06/26/17 13:45	06/26/17 22:02	1
Barium	0.82	U	10.0	0.82	ug/L		06/26/17 13:45	06/26/17 22:02	1
Cadmium	0.45	U	5.0	0.45	ug/L		06/26/17 13:45	06/26/17 22:02	1
Calcium	34.5	U	200	34.5	ug/L		06/26/17 13:45	06/26/17 22:02	1
Chromium	0.66	U	10.0	0.66	ug/L		06/26/17 13:45	06/26/17 22:02	1
Cobalt	1.2	U	10.0	1.2	ug/L		06/26/17 13:45	06/26/17 22:02	1
Copper	4.2	U	15.0	4.2	ug/L		06/26/17 13:45	06/26/17 22:02	1
Iron	22.0	U	100	22.0	ug/L		06/26/17 13:45	06/28/17 01:05	1
Magnesium	10.7	U	200	10.7	ug/L		06/26/17 13:45	06/26/17 22:02	1
Manganese	**0.41**	**B C**	10.0	0.26	ug/L		06/26/17 13:45	06/26/17 22:02	1
Nickel	2.6	U	40.0	2.6	ug/L		06/26/17 13:45	06/26/17 22:02	1
Potassium	237	U	3000	237	ug/L		06/26/17 13:45	06/26/17 22:02	1
Silver	0.93	U	10.0	0.93	ug/L		06/26/17 13:45	06/26/17 22:02	1
Sodium	117	U	1000	117	ug/L		06/26/17 13:45	06/26/17 22:02	1
Vanadium	1.1	U	10.0	1.1	ug/L		06/26/17 13:45	06/26/17 22:02	1
Zinc	4.5	U	20.0	4.5	ug/L		06/26/17 13:45	06/26/17 22:02	1

Client Sample ID: B39MW8 — **Lab Sample ID: 280-98249-5**
Date Collected: 06/13/17 09:23 — **Matrix: Water**
Date Received: 06/14/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	5.2	U	20.0	5.2	ug/L		06/26/17 13:45	06/26/17 22:05	1
Arsenic	4.4	U	15.0	4.4	ug/L		06/26/17 13:45	06/26/17 22:05	1
Barium	**18.9**		10.0	0.82	ug/L		06/26/17 13:45	06/26/17 22:05	1
Cadmium	0.45	U	5.0	0.45	ug/L		06/26/17 13:45	06/26/17 22:05	1
Calcium	**20400**		200	34.5	ug/L		06/26/17 13:45	06/26/17 22:05	1
Chromium	**2.5**	**B**	10.0	0.66	ug/L		06/26/17 13:45	06/26/17 22:05	1

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

Client Sample ID: B39MW8 — **Lab Sample ID: 280-98249-5**
Date Collected: 06/13/17 09:23 — **Matrix: Water**
Date Received: 06/14/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	1.2	U	10.0	1.2	ug/L		06/26/17 13:45	06/26/17 22:05	1
Copper	4.2	U	15.0	4.2	ug/L		06/26/17 13:45	06/26/17 22:05	1
Iron	**31.5**	**B**	100	22.0	ug/L		06/26/17 13:45	06/28/17 01:08	1
Magnesium	**4490**		200	10.7	ug/L		06/26/17 13:45	06/26/17 22:05	1
Manganese	**3.2**	**B C**	10.0	0.26	ug/L		06/26/17 13:45	06/26/17 22:05	1
Nickel	2.6	U	40.0	2.6	ug/L		06/26/17 13:45	06/26/17 22:05	1
Potassium	**688**	**B**	3000	237	ug/L		06/26/17 13:45	06/26/17 22:05	1
Silver	0.93	U	10.0	0.93	ug/L		06/26/17 13:45	06/26/17 22:05	1
Sodium	**3940**		1000	117	ug/L		06/26/17 13:45	06/26/17 22:05	1
Vanadium	1.1	U	10.0	1.1	ug/L		06/26/17 13:45	06/26/17 22:05	1
Zinc	**4.8**	**B**	20.0	4.5	ug/L		06/26/17 13:45	06/26/17 22:05	1

Client Sample ID: B39XT8 — **Lab Sample ID: 280-98249-7**
Date Collected: 06/13/17 12:25 — **Matrix: Water**
Date Received: 06/14/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	5.2	U	20.0	5.2	ug/L		06/26/17 13:45	06/26/17 22:08	1
Arsenic	**7.3**	**B**	15.0	4.4	ug/L		06/26/17 13:45	06/26/17 22:08	1
Barium	**25.3**		10.0	0.82	ug/L		06/26/17 13:45	06/26/17 22:08	1
Cadmium	0.45	U	5.0	0.45	ug/L		06/26/17 13:45	06/26/17 22:08	1
Calcium	**20900**		200	34.5	ug/L		06/26/17 13:45	06/26/17 22:08	1
Chromium	**3.0**	**B**	10.0	0.66	ug/L		06/26/17 13:45	06/26/17 22:08	1
Cobalt	1.2	U	10.0	1.2	ug/L		06/26/17 13:45	06/26/17 22:08	1
Copper	4.2	U	15.0	4.2	ug/L		06/26/17 13:45	06/26/17 22:08	1
Iron	**90.2**	**B**	100	22.0	ug/L		06/26/17 13:45	06/28/17 01:11	1
Magnesium	**6750**		200	10.7	ug/L		06/26/17 13:45	06/26/17 22:08	1
Manganese	**4.0**	**B C**	10.0	0.26	ug/L		06/26/17 13:45	06/26/17 22:08	1
Nickel	2.6	U	40.0	2.6	ug/L		06/26/17 13:45	06/26/17 22:08	1
Potassium	**2480**	**B**	3000	237	ug/L		06/26/17 13:45	06/26/17 22:08	1
Silver	0.93	U	10.0	0.93	ug/L		06/26/17 13:45	06/26/17 22:08	1
Sodium	**22600**		1000	117	ug/L		06/26/17 13:45	06/26/17 22:08	1
Vanadium	**32.7**		10.0	1.1	ug/L		06/26/17 13:45	06/26/17 22:08	1
Zinc	4.5	U	20.0	4.5	ug/L		06/26/17 13:45	06/26/17 22:08	1

Method: 6010C - Metals (ICP) - Dissolved

Client Sample ID: B39M90 — **Lab Sample ID: 280-98249-1**
Date Collected: 06/13/17 12:05 — **Matrix: Water**
Date Received: 06/14/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	5.2	U	20.0	5.2	ug/L		06/26/17 13:45	06/26/17 21:05	1
Arsenic	4.4	U	15.0	4.4	ug/L		06/26/17 13:45	06/26/17 21:05	1
Barium	**19.8**		10.0	0.82	ug/L		06/26/17 13:45	06/26/17 21:05	1
Cadmium	0.45	U	5.0	0.45	ug/L		06/26/17 13:45	06/26/17 21:05	1
Calcium	**18000**		200	34.5	ug/L		06/26/17 13:45	06/26/17 21:05	1
Chromium	**1.5**	**B**	10.0	0.66	ug/L		06/26/17 13:45	06/26/17 21:05	1
Cobalt	1.2	U	10.0	1.2	ug/L		06/26/17 13:45	06/26/17 21:05	1
Copper	4.2	U	15.0	4.2	ug/L		06/26/17 13:45	06/26/17 21:05	1
Iron	22.0	U	100	22.0	ug/L		06/26/17 13:45	06/28/17 00:08	1
Magnesium	**3920**		200	10.7	ug/L		06/26/17 13:45	06/26/17 21:05	1

Client: CH2M Hill Plateau Remediation Company
Project/Site: I17-008 / W17-006

TestAmerica Job ID: 280-98249-1
SDG: DN0155

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

Client Sample ID: B39M90 — **Lab Sample ID: 280-98249-1**
Date Collected: 06/13/17 12:05 — **Matrix: Water**
Date Received: 06/14/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**0.35**	**B C**	10.0	0.26	ug/L		06/26/17 13:45	06/26/17 21:05	1
Nickel	2.6	U	40.0	2.6	ug/L		06/26/17 13:45	06/26/17 21:05	1
Potassium	**997**	**B**	3000	237	ug/L		06/26/17 13:45	06/26/17 21:05	1
Silver	0.93	U	10.0	0.93	ug/L		06/26/17 13:45	06/26/17 21:05	1
Sodium	**4570**		1000	117	ug/L		06/26/17 13:45	06/28/17 00:08	1
Vanadium	**3.2**	**B**	10.0	1.1	ug/L		06/26/17 13:45	06/26/17 21:05	1
Zinc	**5.8**	**B**	20.0	4.5	ug/L		06/26/17 13:45	06/26/17 21:05	1

Client Sample ID: B39MX6 — **Lab Sample ID: 280-98249-3**
Date Collected: 06/13/17 08:00 — **Matrix: Water**
Date Received: 06/14/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	5.2	U	20.0	5.2	ug/L		06/26/17 13:45	06/26/17 21:20	1
Arsenic	4.4	U	15.0	4.4	ug/L		06/26/17 13:45	06/26/17 21:20	1
Barium	0.82	U	10.0	0.82	ug/L		06/26/17 13:45	06/26/17 21:20	1
Cadmium	0.45	U	5.0	0.45	ug/L		06/26/17 13:45	06/26/17 21:20	1
Calcium	34.5	U	200	34.5	ug/L		06/26/17 13:45	06/26/17 21:20	1
Chromium	0.66	U	10.0	0.66	ug/L		06/26/17 13:45	06/26/17 21:20	1
Cobalt	1.2	U	10.0	1.2	ug/L		06/26/17 13:45	06/26/17 21:20	1
Copper	4.2	U	15.0	4.2	ug/L		06/26/17 13:45	06/26/17 21:20	1
Iron	22.0	U	100	22.0	ug/L		06/26/17 13:45	06/28/17 00:23	1
Magnesium	10.7	U	200	10.7	ug/L		06/26/17 13:45	06/26/17 21:20	1
Manganese	0.26	U	10.0	0.26	ug/L		06/26/17 13:45	06/26/17 21:20	1
Nickel	2.6	U	40.0	2.6	ug/L		06/26/17 13:45	06/26/17 21:20	1
Potassium	237	U	3000	237	ug/L		06/26/17 13:45	06/26/17 21:20	1
Silver	0.93	U	10.0	0.93	ug/L		06/26/17 13:45	06/26/17 21:20	1
Sodium	**145**	**B**	1000	117	ug/L		06/26/17 13:45	06/28/17 00:23	1
Vanadium	1.1	U	10.0	1.1	ug/L		06/26/17 13:45	06/26/17 21:20	1
Zinc	4.5	U	20.0	4.5	ug/L		06/26/17 13:45	06/26/17 21:20	1

Client Sample ID: B39MX7 — **Lab Sample ID: 280-98249-6**
Date Collected: 06/13/17 09:23 — **Matrix: Water**
Date Received: 06/14/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	5.2	U	20.0	5.2	ug/L		06/26/17 13:45	06/26/17 21:23	1
Arsenic	4.4	U	15.0	4.4	ug/L		06/26/17 13:45	06/26/17 21:23	1
Barium	**18.6**		10.0	0.82	ug/L		06/26/17 13:45	06/26/17 21:23	1
Cadmium	0.45	U	5.0	0.45	ug/L		06/26/17 13:45	06/26/17 21:23	1
Calcium	**20700**		200	34.5	ug/L		06/26/17 13:45	06/26/17 21:23	1
Chromium	**2.1**	**B**	10.0	0.66	ug/L		06/26/17 13:45	06/26/17 21:23	1
Cobalt	1.2	U	10.0	1.2	ug/L		06/26/17 13:45	06/26/17 21:23	1
Copper	4.2	U	15.0	4.2	ug/L		06/26/17 13:45	06/26/17 21:23	1
Iron	22.0	U	100	22.0	ug/L		06/26/17 13:45	06/28/17 00:26	1
Magnesium	**4520**		200	10.7	ug/L		06/26/17 13:45	06/26/17 21:23	1
Manganese	**0.74**	**B C**	10.0	0.26	ug/L		06/26/17 13:45	06/26/17 21:23	1
Nickel	2.6	U	40.0	2.6	ug/L		06/26/17 13:45	06/26/17 21:23	1
Potassium	**646**	**B**	3000	237	ug/L		06/26/17 13:45	06/26/17 21:23	1
Silver	0.93	U	10.0	0.93	ug/L		06/26/17 13:45	06/26/17 21:23	1
Sodium	**3570**		1000	117	ug/L		06/26/17 13:45	06/28/17 00:26	1
Vanadium	1.1	U	10.0	1.1	ug/L		06/26/17 13:45	06/26/17 21:23	1

Client: CH2M Hill Plateau Remediation Company
Project/Site: I17-008 / W17-006

TestAmerica Job ID: 280-98249-1
SDG: DN0155

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

Client Sample ID: B39MX7
Date Collected: 06/13/17 09:23
Date Received: 06/14/17 09:00

Lab Sample ID: 280-98249-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	**14.7**	**B**	20.0	4.5	ug/L		06/26/17 13:45	06/26/17 21:23	1

Client Sample ID: B39P48
Date Collected: 06/13/17 12:25
Date Received: 06/14/17 09:00

Lab Sample ID: 280-98249-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	5.2	U	20.0	5.2	ug/L		06/26/17 13:45	06/26/17 21:26	1
Arsenic	4.4	U	15.0	4.4	ug/L		06/26/17 13:45	06/26/17 21:26	1
Barium	**23.6**		10.0	0.82	ug/L		06/26/17 13:45	06/26/17 21:26	1
Cadmium	0.45	U	5.0	0.45	ug/L		06/26/17 13:45	06/26/17 21:26	1
Calcium	**19700**		200	34.5	ug/L		06/26/17 13:45	06/26/17 21:26	1
Chromium	**3.0**	**B**	10.0	0.66	ug/L		06/26/17 13:45	06/26/17 21:26	1
Cobalt	1.2	U	10.0	1.2	ug/L		06/26/17 13:45	06/26/17 21:26	1
Copper	4.2	U	15.0	4.2	ug/L		06/26/17 13:45	06/26/17 21:26	1
Iron	22.0	U	100	22.0	ug/L		06/26/17 13:45	06/28/17 00:29	1
Magnesium	**6570**		200	10.7	ug/L		06/26/17 13:45	06/26/17 21:26	1
Manganese	**0.60**	**B C**	10.0	0.26	ug/L		06/26/17 13:45	06/26/17 21:26	1
Nickel	2.6	U	40.0	2.6	ug/L		06/26/17 13:45	06/26/17 21:26	1
Potassium	**2300**	**B**	3000	237	ug/L		06/26/17 13:45	06/26/17 21:26	1
Silver	0.93	U	10.0	0.93	ug/L		06/26/17 13:45	06/26/17 21:26	1
Sodium	**20400**		1000	117	ug/L		06/26/17 13:45	06/28/17 00:29	1
Vanadium	**31.3**		10.0	1.1	ug/L		06/26/17 13:45	06/26/17 21:26	1
Zinc	4.5	U	20.0	4.5	ug/L		06/26/17 13:45	06/26/17 21:26	1

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: I17-008 / W17-006

TestAmerica Job ID: 280-98249-1
SDG: DN0155

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 280-377469/1-A
Matrix: Water
Analysis Batch: 378853

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 377469

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	5.2	U	20.0	5.2	ug/L		06/26/17 13:45	06/26/17 21:41	1
Arsenic	4.4	U	15.0	4.4	ug/L		06/26/17 13:45	06/26/17 21:41	1
Barium	0.82	U	10.0	0.82	ug/L		06/26/17 13:45	06/26/17 21:41	1
Cadmium	0.45	U	5.0	0.45	ug/L		06/26/17 13:45	06/26/17 21:41	1
Calcium	115.1	B	200	34.5	ug/L		06/26/17 13:45	06/26/17 21:41	1
Chromium	0.66	U	10.0	0.66	ug/L		06/26/17 13:45	06/26/17 21:41	1
Cobalt	1.2	U	10.0	1.2	ug/L		06/26/17 13:45	06/26/17 21:41	1
Copper	4.2	U	15.0	4.2	ug/L		06/26/17 13:45	06/26/17 21:41	1
Magnesium	10.7	U	200	10.7	ug/L		06/26/17 13:45	06/26/17 21:41	1
Manganese	0.415	B	10.0	0.26	ug/L		06/26/17 13:45	06/26/17 21:41	1
Nickel	2.6	U	40.0	2.6	ug/L		06/26/17 13:45	06/26/17 21:41	1
Potassium	237	U	3000	237	ug/L		06/26/17 13:45	06/26/17 21:41	1
Silver	0.93	U	10.0	0.93	ug/L		06/26/17 13:45	06/26/17 21:41	1
Sodium	117	U	1000	117	ug/L		06/26/17 13:45	06/26/17 21:41	1
Vanadium	1.1	U	10.0	1.1	ug/L		06/26/17 13:45	06/26/17 21:41	1
Zinc	4.5	U	20.0	4.5	ug/L		06/26/17 13:45	06/26/17 21:41	1

Lab Sample ID: MB 280-377469/1-A
Matrix: Water
Analysis Batch: 379003

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 377469

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	22.0	U	100	22.0	ug/L		06/26/17 13:45	06/28/17 00:44	1

Lab Sample ID: LCS 280-377469/2-A
Matrix: Water
Analysis Batch: 378853

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 377469

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	500	526.8		ug/L		105	80 - 120
Arsenic	1000	1027		ug/L		103	80 - 120
Barium	2000	2105		ug/L		105	80 - 120
Cadmium	100	102.9		ug/L		103	80 - 120
Calcium	50000	51980		ug/L		104	80 - 120
Chromium	200	207.9		ug/L		104	80 - 120
Cobalt	500	500.1		ug/L		100	80 - 120
Copper	250	252.2		ug/L		101	80 - 120
Magnesium	50000	50790		ug/L		102	80 - 120
Manganese	500	514.3		ug/L		103	80 - 120
Nickel	500	490.0		ug/L		98	80 - 120
Potassium	50000	53010		ug/L		106	80 - 120
Silver	50.0	53.14		ug/L		106	80 - 120
Sodium	50000	54150		ug/L		108	80 - 120
Vanadium	500	518.5		ug/L		104	80 - 120
Zinc	500	506.0		ug/L		101	80 - 120

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

Lab Sample ID: LCS 280-377469/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 379003 — **Prep Batch: 377469**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	1000	994.6		ug/L		99	80 - 120

Lab Sample ID: 280-98249-2 MS — **Client Sample ID: B39M85**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378853 — **Prep Batch: 377469**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	5.2	U	500	537.4		ug/L		107	75 - 125
Arsenic	4.4	U	1000	1048		ug/L		105	75 - 125
Barium	22.2		2000	2174		ug/L		108	75 - 125
Cadmium	0.45	U	100	103.7		ug/L		104	75 - 125
Calcium	20000		50000	73200		ug/L		106	75 - 125
Chromium	1.4	B	200	211.8		ug/L		105	75 - 125
Cobalt	1.2	U	500	504.3		ug/L		101	75 - 125
Copper	4.2	U	250	257.2		ug/L		103	75 - 125
Magnesium	4360		50000	55890		ug/L		103	75 - 125
Manganese	1.1	B C	500	520.3		ug/L		104	75 - 125
Nickel	2.6	U	500	497.0		ug/L		99	75 - 125
Potassium	1020	B	50000	55630		ug/L		109	75 - 125
Silver	0.93	U	50.0	53.63		ug/L		107	75 - 125
Sodium	5110		50000	60150		ug/L		110	75 - 125
Vanadium	3.2	B	500	529.0		ug/L		105	75 - 125
Zinc	4.5	U	500	511.4		ug/L		102	75 - 125

Lab Sample ID: 280-98249-2 MS — **Client Sample ID: B39M85**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 379003 — **Prep Batch: 377469**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	144		1000	1028		ug/L		88	75 - 125

Lab Sample ID: 280-98249-2 MSD — **Client Sample ID: B39M85**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378853 — **Prep Batch: 377469**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	5.2	U	500	509.6		ug/L		102	75 - 125	5	20
Arsenic	4.4	U	1000	984.1		ug/L		98	75 - 125	6	20
Barium	22.2		2000	2041		ug/L		101	75 - 125	6	20
Cadmium	0.45	U	100	97.55		ug/L		98	75 - 125	6	20
Calcium	20000		50000	70080		ug/L		100	75 - 125	4	20
Chromium	1.4	B	200	200.4		ug/L		100	75 - 125	6	20
Cobalt	1.2	U	500	475.4		ug/L		95	75 - 125	6	20
Copper	4.2	U	250	242.6		ug/L		97	75 - 125	6	20
Magnesium	4360		50000	52770		ug/L		97	75 - 125	6	20
Manganese	1.1	B C	500	491.2		ug/L		98	75 - 125	6	20
Nickel	2.6	U	500	467.6		ug/L		94	75 - 125	6	20
Potassium	1020	B	50000	53120		ug/L		104	75 - 125	5	20
Silver	0.93	U	50.0	50.50		ug/L		101	75 - 125	6	20

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

Lab Sample ID: 280-98249-2 MSD — **Client Sample ID: B39M85**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 378853 — **Prep Batch: 377469**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sodium	5110		50000	57370		ug/L		105	75 - 125	5	20
Vanadium	3.2	B	500	499.3		ug/L		99	75 - 125	6	20
Zinc	4.5	U	500	483.9		ug/L		97	75 - 125	6	20

Lab Sample ID: 280-98249-2 MSD — **Client Sample ID: B39M85**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 379003 — **Prep Batch: 377469**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	144		1000	991.4		ug/L		85	75 - 125	4	20

Lab Sample ID: MB 280-377470/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 378853 — **Prep Batch: 377470**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	5.2	U	20.0	5.2	ug/L		06/26/17 13:45	06/26/17 20:58	1
Arsenic	4.4	U	15.0	4.4	ug/L		06/26/17 13:45	06/26/17 20:58	1
Barium	0.82	U	10.0	0.82	ug/L		06/26/17 13:45	06/26/17 20:58	1
Cadmium	0.45	U	5.0	0.45	ug/L		06/26/17 13:45	06/26/17 20:58	1
Calcium	34.5	U	200	34.5	ug/L		06/26/17 13:45	06/26/17 20:58	1
Chromium	0.66	U	10.0	0.66	ug/L		06/26/17 13:45	06/26/17 20:58	1
Cobalt	1.2	U	10.0	1.2	ug/L		06/26/17 13:45	06/26/17 20:58	1
Copper	4.2	U	15.0	4.2	ug/L		06/26/17 13:45	06/26/17 20:58	1
Magnesium	10.7	U	200	10.7	ug/L		06/26/17 13:45	06/26/17 20:58	1
Manganese	0.260	B	10.0	0.26	ug/L		06/26/17 13:45	06/26/17 20:58	1
Nickel	2.6	U	40.0	2.6	ug/L		06/26/17 13:45	06/26/17 20:58	1
Potassium	237	U	3000	237	ug/L		06/26/17 13:45	06/26/17 20:58	1
Silver	0.93	U	10.0	0.93	ug/L		06/26/17 13:45	06/26/17 20:58	1
Vanadium	1.1	U	10.0	1.1	ug/L		06/26/17 13:45	06/26/17 20:58	1
Zinc	4.5	U	20.0	4.5	ug/L		06/26/17 13:45	06/26/17 20:58	1

Lab Sample ID: MB 280-377470/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 379003 — **Prep Batch: 377470**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	22.0	U	100	22.0	ug/L		06/26/17 13:45	06/28/17 00:02	1
Sodium	117	U	1000	117	ug/L		06/26/17 13:45	06/28/17 00:02	1

Lab Sample ID: LCS 280-377470/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 378853 — **Prep Batch: 377470**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	500	506.0		ug/L		101	80 - 120
Arsenic	1000	983.1		ug/L		98	80 - 120
Barium	2000	1943		ug/L		97	80 - 120
Cadmium	100	96.71		ug/L		97	80 - 120

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

Lab Sample ID: LCS 280-377470/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 378853 — **Prep Batch: 377470**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	50000	48320		ug/L		97	80 - 120
Chromium	200	196.2		ug/L		98	80 - 120
Cobalt	500	468.8		ug/L		94	80 - 120
Copper	250	237.2		ug/L		95	80 - 120
Magnesium	50000	47730		ug/L		95	80 - 120
Manganese	500	483.0		ug/L		97	80 - 120
Nickel	500	462.9		ug/L		93	80 - 120
Potassium	50000	49360		ug/L		99	80 - 120
Silver	50.0	50.24		ug/L		100	80 - 120
Vanadium	500	487.0		ug/L		97	80 - 120
Zinc	500	478.3		ug/L		96	80 - 120

Lab Sample ID: LCS 280-377470/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 379003 — **Prep Batch: 377470**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	1000	1005		ug/L		101	80 - 120
Sodium	50000	51750		ug/L		103	80 - 120

Lab Sample ID: 280-98249-1 MS — **Client Sample ID: B39M90**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 378853 — **Prep Batch: 377470**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	5.2	U	500	517.6		ug/L		104	75 - 125
Arsenic	4.4	U	1000	1008		ug/L		101	75 - 125
Barium	19.8		2000	2017		ug/L		100	75 - 125
Cadmium	0.45	U	100	99.61		ug/L		100	75 - 125
Calcium	18000		50000	67910		ug/L		100	75 - 125
Chromium	1.5	B	200	202.9		ug/L		101	75 - 125
Cobalt	1.2	U	500	483.2		ug/L		97	75 - 125
Copper	4.2	U	250	245.3		ug/L		98	75 - 125
Magnesium	3920		50000	53500		ug/L		99	75 - 125
Manganese	0.35	B C	500	497.5		ug/L		99	75 - 125
Nickel	2.6	U	500	472.9		ug/L		95	75 - 125
Potassium	997	B	50000	51690		ug/L		101	75 - 125
Silver	0.93	U	50.0	51.29		ug/L		103	75 - 125
Vanadium	3.2	B	500	505.2		ug/L		100	75 - 125
Zinc	5.8	B	500	497.0		ug/L		98	75 - 125

Lab Sample ID: 280-98249-1 MS — **Client Sample ID: B39M90**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 379003 — **Prep Batch: 377470**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	22.0	U	1000	993.3		ug/L		99	75 - 125
Sodium	4570		50000	56350		ug/L		104	75 - 125

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

Lab Sample ID: 280-98249-1 MSD **Client Sample ID: B39M90**
Matrix: Water **Prep Type: Dissolved**
Analysis Batch: 378853 **Prep Batch: 377470**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	5.2	U	500	506.8		ug/L		101	75 - 125	2	20
Arsenic	4.4	U	1000	987.0		ug/L		99	75 - 125	2	20
Barium	19.8		2000	1997		ug/L		99	75 - 125	1	20
Cadmium	0.45	U	100	97.26		ug/L		97	75 - 125	2	20
Calcium	18000		50000	66860		ug/L		98	75 - 125	2	20
Chromium	1.5	B	200	197.9		ug/L		98	75 - 125	2	20
Cobalt	1.2	U	500	469.9		ug/L		94	75 - 125	3	20
Copper	4.2	U	250	239.3		ug/L		96	75 - 125	2	20
Magnesium	3920		50000	51980		ug/L		96	75 - 125	3	20
Manganese	0.35	B C	500	484.8		ug/L		97	75 - 125	3	20
Nickel	2.6	U	500	465.3		ug/L		93	75 - 125	2	20
Potassium	997	B	50000	51630		ug/L		101	75 - 125	0	20
Silver	0.93	U	50.0	49.86		ug/L		100	75 - 125	3	20
Vanadium	3.2	B	500	492.8		ug/L		98	75 - 125	2	20
Zinc	5.8	B	500	483.6		ug/L		96	75 - 125	3	20

Lab Sample ID: 280-98249-1 MSD **Client Sample ID: B39M90**
Matrix: Water **Prep Type: Dissolved**
Analysis Batch: 379003 **Prep Batch: 377470**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	22.0	U	1000	1077		ug/L		108	75 - 125	8	20
Sodium	4570		50000	55900		ug/L		103	75 - 125	1	20

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: I17-008 / W17-006

TestAmerica Job ID: 280-98249-1
SDG: DN0155

Metals

Prep Batch: 377469

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-98249-2	B39M85	Total/NA	Water	3010A	
280-98249-4	B39MW7	Total/NA	Water	3010A	
280-98249-5	B39MW8	Total/NA	Water	3010A	
280-98249-7	B39XT8	Total/NA	Water	3010A	
MB 280-377469/1-A	Method Blank	Total/NA	Water	3010A	
LCS 280-377469/2-A	Lab Control Sample	Total/NA	Water	3010A	
280-98249-2 MS	B39M85	Total/NA	Water	3010A	
280-98249-2 MSD	B39M85	Total/NA	Water	3010A	

Prep Batch: 377470

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-98249-1	B39M90	Dissolved	Water	3005A	
280-98249-3	B39MX6	Dissolved	Water	3005A	
280-98249-6	B39MX7	Dissolved	Water	3005A	
280-98249-8	B39P48	Dissolved	Water	3005A	
MB 280-377470/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 280-377470/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-98249-1 MS	B39M90	Dissolved	Water	3005A	
280-98249-1 MSD	B39M90	Dissolved	Water	3005A	

Analysis Batch: 378853

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-98249-1	B39M90	Dissolved	Water	6010C	377470
280-98249-2	B39M85	Total/NA	Water	6010C	377469
280-98249-3	B39MX6	Dissolved	Water	6010C	377470
280-98249-4	B39MW7	Total/NA	Water	6010C	377469
280-98249-5	B39MW8	Total/NA	Water	6010C	377469
280-98249-6	B39MX7	Dissolved	Water	6010C	377470
280-98249-7	B39XT8	Total/NA	Water	6010C	377469
280-98249-8	B39P48	Dissolved	Water	6010C	377470
MB 280-377469/1-A	Method Blank	Total/NA	Water	6010C	377469
MB 280-377470/1-A	Method Blank	Total Recoverable	Water	6010C	377470
LCS 280-377469/2-A	Lab Control Sample	Total/NA	Water	6010C	377469
LCS 280-377470/2-A	Lab Control Sample	Total Recoverable	Water	6010C	377470
280-98249-1 MS	B39M90	Dissolved	Water	6010C	377470
280-98249-1 MSD	B39M90	Dissolved	Water	6010C	377470
280-98249-2 MS	B39M85	Total/NA	Water	6010C	377469
280-98249-2 MSD	B39M85	Total/NA	Water	6010C	377469

Analysis Batch: 379003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-98249-1	B39M90	Dissolved	Water	6010C	377470
280-98249-2	B39M85	Total/NA	Water	6010C	377469
280-98249-3	B39MX6	Dissolved	Water	6010C	377470
280-98249-4	B39MW7	Total/NA	Water	6010C	377469
280-98249-5	B39MW8	Total/NA	Water	6010C	377469
280-98249-6	B39MX7	Dissolved	Water	6010C	377470
280-98249-7	B39XT8	Total/NA	Water	6010C	377469
280-98249-8	B39P48	Dissolved	Water	6010C	377470
MB 280-377469/1-A	Method Blank	Total/NA	Water	6010C	377469
MB 280-377470/1-A	Method Blank	Total Recoverable	Water	6010C	377470

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: I17-008 / W17-006

TestAmerica Job ID: 280-98249-1
SDG: DN0155

Metals (Continued)

Analysis Batch: 379003 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-377469/2-A	Lab Control Sample	Total/NA	Water	6010C	377469
LCS 280-377470/2-A	Lab Control Sample	Total Recoverable	Water	6010C	377470
280-98249-1 MS	B39M90	Dissolved	Water	6010C	377470
280-98249-1 MSD	B39M90	Dissolved	Water	6010C	377470
280-98249-2 MS	B39M85	Total/NA	Water	6010C	377469
280-98249-2 MSD	B39M85	Total/NA	Water	6010C	377469