

June 26, 2017

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: 160-22705-1

TestAmerica Sample Delivery Group: SL2546
Client Project/Site: S17-005 / S17-006

For:

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

Attn: Mr. Scot Fitzgerald



Authorized for release by:
6/26/2017 11:26:44 AM

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

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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.

- 1
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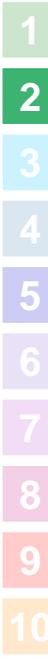


Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Chain of Custody	5
Definitions/Glossary	11
Method Summary	12
Sample Summary	13
Client Sample Results	14
QC Sample Results	15
QC Association Summary	16

Job ID: 160-22705-1

Laboratory: TestAmerica St. Louis

Narrative

CASE NARRATIVE

CH2M Hill Plateau Remediation Company
P.O. Box 1600
Richland, Washington 99352
June 26, 2017
Attention: Scot Fitzgerald

SDG	: SL2546
Number of Samples	: 8 samples
Sample Matrix	: Water
Data Deliverable	: Summary
Date SDG Closed	: June 7, 2017

II. Introduction

On June 7, 8 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: S17-005 and S17-006

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 a narrative note; however, they are flagged "D" due to a limitation in the LIMS.

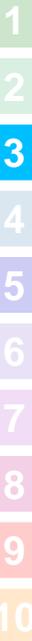
For solid matrices, all Metals analyses (including Hg) use a Standard Reference Material for the Laboratory Control Sample (LCS). Certificate for this source material may be obtained from TASL.

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, due to the short hold times for Nitrate, Nitrite and Phosphate by IC (48 hours) as well as pH analysis (24 hours), a SIR request is not needed when samples are run outside 1x hold but within 2x hold. A narrative comment will be included below if a sample is run outside the lab-specified hold time for waters.

For extractable and volatile organic analyses, several analytes are considered poor performers and will not meet CHPRC QC limits. Per CHPRC direction, the lab's statistical limits have been reported. Excursions outside these statistical limits will include a



Job ID: 160-22705-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

non-conformance in the sections below.

IV. Definitions

QCBLK-	Quality Control Blank, Method Blank
QCLCS-	Quality Control Laboratory Control Sample, Blank Spike
DUP-	Laboratory Duplicate
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.
- **B** - For radiochemistry, Method Blank reported above the MDC. Sample activity is > 5% the method blank.
- **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/RL but not greater than 5% the MB.
- **D** - For all analyses, the sample result was obtained from the analysis of a dilution. For ICPMS Metals analyses, per standard practice, all 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 and will not be narrated below. Only dilutions above 2x will be narrated and considered a true dilution for these samples.
- **N** - For inorganics, rad 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.
- **P** - For organic analyses (PCB/Pests only), the aroclor target analyte has greater than 25% difference for detected concentrations between the two GC columns.
- **X**- Organics and Anions IC - Sample concentration over calibration and/or surrogate recovery outside QC limits.
- **X**- Inorganics - The analyte present in the original sample is > 4x the spike concentration.
- **X**- Radiochemistry - Carrier or Tracer recovery is outside limits.
- **Z**- Sample was prepped or analyzed beyond the specified sample holding time.
- **y** - RPD is outside established limits.

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

ICPMS Metals

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: 160-22705-1
SDG Number: SL2546

Login Number: 22705
List Number: 1
Creator: Daniels, Brian J

List Source: TestAmerica St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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	0.4°
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 <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

June 26, 2017

CH2M Hill Plateau Remediation Company		C.O.C.# S17-005-004	
SL2546		Page 1 of 1	
Collector	Roger Frieze Jr. /CHPRC	Contact/Requester	Karen Waters-Husted
SAF No.	S17-005	Sampling Origin	Hanford Site
Project Title	SURV, MAY 2017	Logbook No.	HNF-N-506 92 / 88
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier
Protocol	SURV	Priority:	30 Days PRIORITY
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	
Telephone No. 509-376-4650 Purchase Order/Charge Code 300071 Ice Chest No. 8005-319 Bill of Lading/Air Bill No. 7793 15157820 Offsite Property No. N/A		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Sample No.	Filter	* Date	Time
B39CB8	Y	6-6-17	0900
B39CB4	N	6-6-17	0900
No/Type Container	1x500-mL G/P	Sample Analysis	6020_METALS_ICPMS: Chromium (1)
Holding Time	6 Months	Preservative	HNO3 to pH <2
	6 Months		HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Roger Frieze Jr. /CHPRC			JUN 06 2017 1015	Roy Shepard /CHPRC			JUN 06 2017 1015
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Roy Shepard /CHPRC			JUN 06 2017 1400	FED EX			JUN 06 2017 1400
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
			FED EX	3			6/7/17 0900
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process)				Disposed By Date/Time			

0 of 66 6/26/2017



CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		C.O.C. # S17-005-012	
SL2540		Page 1 of 1			
Collector Larry Rossano FAC/PMC	Contact/Requester Karen Waters-Husted	Telephone No.	509-376-4650		
SAF No. S17-005	Sampling Origin Hanford Site	Purchase Order/Charge Code	300071		
Project Title SURV, MAY 2017	Logbook No. HNF-N-506 93 / 46	Ice Chest No.	GWS 319		
Shipped To (Lab) TestAmerica St. Louis	Method of Shipment Commercial Carrier	Bill of Lading/Air Bill No.	7793 1516 980		
Protocol SURV	Priority: 30 Days	Offsite Property No.	N/A		
POSSIBLE SAMPLE HAZARDS/REMARKS		SPECIAL INSTRUCTIONS		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
** ** 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		N/A			
Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis
B39CN7	N	6-6-17	0853	1x500-mL G/P	6020_METALS_ICPMS: Chromium (1)
B39CP1	Y	6-6-17	0853	1x500-mL G/P	6020_METALS_ICPMS: Chromium (1)
					Holding Time
					6 Months
					6 Months
					Preservative
					HNO3 to pH <2
					HNO3 to pH <2

Relinquished By Larry Rossano FAC/PMC	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time JUN 06 2017 1110	Received By Roy Shepard FAC/PMC	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time JUN 06 2017 1110
Relinquished By Roy Shepard FAC/PMC	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time JUN 06 2017 1400	Received By FED EX	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time JUN 06 2017 1110
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
				FED EX			6/26/17 0900
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time

7 of 6

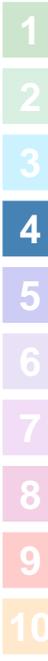
FINAL SAMPLE DISPOSITION



CH2M Hill Plateau Remediation Company		C.O.C. # S17-006-202	
SLZSAH		Page 1 of 1	
Collector	Larry Rosane IC/PRC	Contact/Requester	Karen Waters-Husted
SAF No.	S17-006	Sampling Origin	Hanford Site
Project Title	SURV, JUNE 2017	Logbook No.	HNF-N-506 93/44
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier
Protocol	SURV	Priority:	30 Days PRIORITY
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	
Telephone No. 509-376-4650 Purchase Order/Charge Code 300071 Ice Chest No. GWS 319 Bill of Lading/Air Bill No. 7793 15157820 Offsite Property No. N/A		Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Sample No.	Filter	* Date	Time
B39PK4	N	W 6-6-17	0904
B39PL0	Y	W 6-6-17	0904
No/Type Container	Sample Analysis	Holding Time	Preservative
1x500-mL G/P	6020_METALS_ICPMS: Chromium (1)	6 Months	HNO3 to pH <2
1x500-mL G/P	6020_METALS_ICPMS: Chromium (1)	6 Months	HNO3 to pH <2

Relinquished By Rosane IC/PRC	Print	Sign	Date/Time	Received By by Sheward IC/PRC	Print	Sign	Date/Time
Relinquished By IC/PRC			JUN 06 2017 1110	Received By FED EX			JUN 06 2017 1110
Relinquished By			JUN 06 2017 1400	Received By E. J. Brian Daniels			6/7/17 0900
Relinquished By			FED EX	Received By			
Relinquished By			Date/Time	Received By			Date/Time
Disposal Method (e.g., Return to customer, per lab procedure, used in process)				Disposed By			
FINAL SAMPLE DISPOSITION				Date/Time			

8 of 8

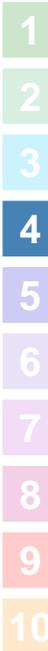


CH2M Hill Plateau Remediation Company		CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		C.O.C. # S17-006-201	
Larry Rose ICP/PC		SUSAL		Page 1 of 1			
Collector	Larry Rose ICP/PC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650		
SAF No.	S17-006	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071		
Project Title	SURV, JUNE 2017	Logbook No.	HNF-N-506 93 / 46	Ice Chest No.	GWS 39		
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	7793 15157820		
Protocol	SURV	Priority:	30 Days	Offsite Property No.	N/A		
POSSIBLE SAMPLE HAZARDS/REMARKS		SPECIAL INSTRUCTIONS		Hold Time		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
*** 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		N/A					

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B39PK9	Y	W	6-6-17	0805	1x500-mL GIP	6020_METALS_ICPMS: Chromium (1)	6 Months	HNO3 to pH <2
B39PK3	N	W	6-6-17	0805	1x500-mL GIP	6020_METALS_ICPMS: Chromium (1)	6 Months	HNO3 to pH <2

Relinquished By Larry Rose ICP/PC	Print Larry Rose	Sign <i>[Signature]</i>	Date/Time JUN 06 2017 1110	Received By Roy Shepard ICP/PC	Print Roy Shepard	Sign <i>[Signature]</i>	Date/Time JUN 06 2017 1110
Relinquished By Roy Shepard ICP/PC	Print Roy Shepard	Sign <i>[Signature]</i>	Date/Time JUN 06 2017 1400	Received By FED EX	Print FED EX	Sign <i>[Signature]</i>	Date/Time JUN 06 2017 1400
Relinquished By	Print	Sign	Date/Time	Received By FED EX	Print FED EX	Sign <i>[Signature]</i>	Date/Time JUN 06 2017 1400
Relinquished By	Print	Sign	Date/Time	Received By Brim Daniels	Print Brim Daniels	Sign <i>[Signature]</i>	Date/Time 6/27/09w





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779315157820

Ship date:
Tue 6/06/2017

RICHLAND, WA US

Actual delivery:
Wed 6/07/2017 8:47 am

EARTH CITY, MO US

Delivered

Signed for by: B. DANIELS

Travel History

Date/Time	Activity	Location
6/07/2017 - Wednesday		
8:47 am	Delivered	EARTH CITY, MO
7:20 am	On FedEx vehicle for delivery	EARTH CITY, MO
7:15 am	At local FedEx facility	EARTH CITY, MO
5:36 am	At destination sort facility	BERKELEY, MO
4:51 am	Departed FedEx location	MEMPHIS, TN
12:20 am	Arrived at FedEx location	MEMPHIS, TN
6/06/2017 Tuesday		
4:54 pm	Left FedEx origin facility	PASCO, WA
3:21 pm	Shipment information sent to FedEx	
3:18 pm	Picked up	PASCO, WA

Shipment Facts

Tracking number	779315157820	Service	FedEx Standard Overnight
Weight	81 lbs / 36.74 kgs	Delivered To	Shipping/Receiving
Total pieces	1	Total shipment weight	81 lbs / 36.74 kgs
Terms	Recipient	Shipper reference	GWS-319
Packaging	Your Packaging	Special handling section	Deliver Weekday, Additional Handling Surcharge
Standard transit	6/07/2017 by 3:00 pm		



Search or tracking number Subr

Customer Focus
 New Customer Center
 Small Business Center
 Service Guide
 Customer Support

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 FedEx Delivery Manager
 FedEx Critical Inventory Logistics
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 FedEx Home Delivery
 FedEx TechConnect
 FedEx HealthCare Solutions
 Online Retail Solutions
 Packaging Services
 Ancillary Clearance Services

Other Resources
 FedEx Compatible
 Developer Resource Center
 FedEx Ship Manager Software
 FedEx Mobile

Companies
 FedEx Express
 FedEx Ground
 FedEx Office
 FedEx Freight
 FedEx Custom Critical
 FedEx Trade Networks
 FedEx Cross Border
 FedEx Supply Chain

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Qualifiers

Metals

Qualifier	Qualifier Description
D	The reported value is from a dilution.
B	Estimated result. Result is less than the RL, but greater than MDL
U	Analyzed for but not detected.

Glossary

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

Client: CH2M Hill Plateau Remediation Company
Project/Site: S17-005 / S17-006

TestAmerica Job ID: 160-22705-1
SDG: SL2546

Method	Method Description	Protocol	Laboratory
6020A	Metals (ICP/MS)	SW846	TAL SL

Protocol References:

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

Laboratory References:

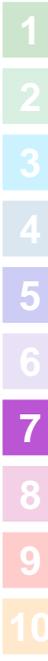
TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Client: CH2M Hill Plateau Remediation Company
Project/Site: S17-005 / S17-006

TestAmerica Job ID: 160-22705-1
SDG: SL2546

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-22705-1	B39CB8	Water	06/06/17 09:00	06/07/17 09:00
160-22705-2	B39CB4	Water	06/06/17 09:00	06/07/17 09:00
160-22705-3	B39CN7	Water	06/06/17 08:53	06/07/17 09:00
160-22705-4	B39CP1	Water	06/06/17 08:53	06/07/17 09:00
160-22705-5	B39PK4	Water	06/06/17 09:04	06/07/17 09:00
160-22705-6	B39PL0	Water	06/06/17 09:04	06/07/17 09:00
160-22705-7	B39PK9	Water	06/06/17 08:05	06/07/17 09:00
160-22705-8	B39PK3	Water	06/06/17 08:05	06/07/17 09:00



June 26, 2017 Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: S17-005 / S17-006

TestAmerica Job ID: 160-22705-1
SDG: SL2546

Method: 6020A - Metals (ICP/MS)

Client Sample ID: B39CB4
Date Collected: 06/06/17 09:00
Date Received: 06/07/17 09:00

Lab Sample ID: 160-22705-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	7.4	B D	10.0	4.0	ug/L		06/21/17 13:31	06/23/17 05:23	2

Client Sample ID: B39CN7
Date Collected: 06/06/17 08:53
Date Received: 06/07/17 09:00

Lab Sample ID: 160-22705-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	4.0	U D	10.0	4.0	ug/L		06/21/17 13:31	06/23/17 05:30	2

Client Sample ID: B39PK4
Date Collected: 06/06/17 09:04
Date Received: 06/07/17 09:00

Lab Sample ID: 160-22705-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	4.3	B D	10.0	4.0	ug/L		06/21/17 13:31	06/23/17 05:44	2

Client Sample ID: B39PK3
Date Collected: 06/06/17 08:05
Date Received: 06/07/17 09:00

Lab Sample ID: 160-22705-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	4.0	U D	10.0	4.0	ug/L		06/21/17 13:31	06/23/17 06:04	2

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

Client Sample ID: B39CB8
Date Collected: 06/06/17 09:00
Date Received: 06/07/17 09:00

Lab Sample ID: 160-22705-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	7.6	B D	10.0	4.0	ug/L		06/21/17 13:31	06/23/17 05:17	2

Client Sample ID: B39CP1
Date Collected: 06/06/17 08:53
Date Received: 06/07/17 09:00

Lab Sample ID: 160-22705-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	4.0	U D	10.0	4.0	ug/L		06/21/17 13:31	06/23/17 05:37	2

Client Sample ID: B39PL0
Date Collected: 06/06/17 09:04
Date Received: 06/07/17 09:00

Lab Sample ID: 160-22705-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	4.1	B D	10.0	4.0	ug/L		06/21/17 13:31	06/23/17 05:51	2

Client Sample ID: B39PK9
Date Collected: 06/06/17 08:05
Date Received: 06/07/17 09:00

Lab Sample ID: 160-22705-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	4.0	U D	10.0	4.0	ug/L		06/21/17 13:31	06/23/17 05:57	2

TestAmerica St. Louis

June 26, 2017 QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: S17-005 / S17-006

TestAmerica Job ID: 160-22705-1
SDG: SL2546

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 160-314598/1-A
Matrix: Water
Analysis Batch: 314989

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 314598

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	4.0	U D	10.0	4.0	ug/L		06/21/17 13:31	06/23/17 03:09	2

Lab Sample ID: LCS 160-314598/2-A
Matrix: Water
Analysis Batch: 314989

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 314598

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Chromium	1000	939.9	D	ug/L		94	80 - 120

Lab Sample ID: 160-22703-A-10-B MS
Matrix: Water
Analysis Batch: 314989

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 314598

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Chromium	4.0	U D	1000	950.2	D	ug/L		95	75 - 125

Lab Sample ID: 160-22703-A-10-C MSD
Matrix: Water
Analysis Batch: 314989

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 314598

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chromium	4.0	U D	1000	948.0	D	ug/L		95	75 - 125	0	20

June 26, 2017
QC Association Summary

Client: CH2M Hill Plateau Remediation Company
 Project/Site: S17-005 / S17-006

TestAmerica Job ID: 160-22705-1
 SDG: SL2546

Metals

Prep Batch: 314598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-22705-1	B39CB8	Dissolved	Water	3010A	
160-22705-2	B39CB4	Total/NA	Water	3010A	
160-22705-3	B39CN7	Total/NA	Water	3010A	
160-22705-4	B39CP1	Dissolved	Water	3010A	
160-22705-5	B39PK4	Total/NA	Water	3010A	
160-22705-6	B39PL0	Dissolved	Water	3010A	
160-22705-7	B39PK9	Dissolved	Water	3010A	
160-22705-8	B39PK3	Total/NA	Water	3010A	
MB 160-314598/1-A	Method Blank	Total/NA	Water	3010A	
LCS 160-314598/2-A	Lab Control Sample	Total/NA	Water	3010A	
160-22703-A-10-B MS	Matrix Spike	Dissolved	Water	3010A	
160-22703-A-10-C MSD	Matrix Spike Duplicate	Dissolved	Water	3010A	

Analysis Batch: 314989

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-22705-1	B39CB8	Dissolved	Water	6020A	314598
160-22705-2	B39CB4	Total/NA	Water	6020A	314598
160-22705-3	B39CN7	Total/NA	Water	6020A	314598
160-22705-4	B39CP1	Dissolved	Water	6020A	314598
160-22705-5	B39PK4	Total/NA	Water	6020A	314598
160-22705-6	B39PL0	Dissolved	Water	6020A	314598
160-22705-7	B39PK9	Dissolved	Water	6020A	314598
160-22705-8	B39PK3	Total/NA	Water	6020A	314598
MB 160-314598/1-A	Method Blank	Total/NA	Water	6020A	314598
LCS 160-314598/2-A	Lab Control Sample	Total/NA	Water	6020A	314598
160-22703-A-10-B MS	Matrix Spike	Dissolved	Water	6020A	314598
160-22703-A-10-C MSD	Matrix Spike Duplicate	Dissolved	Water	6020A	314598