

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: 280-105592-1

TestAmerica Sample Delivery Group: DN0309

Client Project/Site: S18-001 / I18-004

For:

CH2M Hill Plateau Remediation Company

PO BOX 1600, MS H8-41

Richland, Washington 99352

Attn: Mr. Scot Fitzgerald



Authorized for release by:

1/31/2018 7:48:16 PM

Darlene Bandy, Project Manager I

(303)736-0100

darlene.bandy@testamericainc.com



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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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Client: CH2M Hill Plateau Remediation Company
Project/Site: S18-001 / I18-004

TestAmerica Job ID: 280-105592-1
SDG: DN0309

Job ID: 280-105592-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: CH2M Hill Plateau Remediation Company

Project: S18-001 / I18-004

Report Number: 280-105592-1

With the 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. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

The Chain of Custody requests "6020_METALS_ICPMS: GW 01" analysis. Service List "6020_METALS_ICPMS: GW 01" includes Thorium, and while TestAmerica Denver holds Washington State (WDOE) accreditation for method 6020B, Thorium is not on the accreditation certificate at this time. Please note that Thorium is on TestAmerica Denver's primary ORELAP certification, and TestAmerica Denver is pursuing full WDOE accreditation for this element. As instructed by the client, the laboratory proceeded with the requested Thorium analyses by method 6020B.

The laboratory is not able to achieve project specified Highest Allowable Practical Quantitation Limits (HAPQL limits) for several analytes. These include: Boron 6010D, Beryllium 6020B, Silver 6020B, Tin 6020B. All analytes met statistical limits, unless otherwise detailed in the individual sections below. As instructed by the client, the data is reported.

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 1/18/2018 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.0° C.

DISSOLVED METALS (ICP)

Samples B3FW30 (280-105592-2), B3FWR8 (280-105592-8), B3FW88 (280-105592-10) and B3FVW7 (280-105592-13) were analyzed for Dissolved Metals (ICP) in accordance with EPA SW846 6010D. The samples were prepared on 01/22/2018 and analyzed on 01/22/2018 and 01/23/2018.

Boron and Sodium were detected in method blank MB 280-402173/1-A at levels that were above the method detection limit but below half the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample 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.

The instrument blank (CCB) for analytical batch 280-402549 contained Calcium (123.2 ppb) greater than one-half the reporting limit (RL, 200 ppb). Samples were not re-analyzed because the sample results were greater than 20x the result found in the CCB. The data have been qualified and reported. The following samples are affected: B3FW28 (280-105592-1), B3FW30 (280-105592-2), B3FWR8 (280-105592-8), B3FYD9 (280-105592-9), B3FYD9 (280-105592-9[MS]), B3FYD9 (280-105592-9[MSD]), B3FW88 (280-105592-10), B3FW88 (280-105592-10[MS]), B3FW88 (280-105592-10[MSD]), B3FYH1 (280-105592-11), B3FVW7 (280-105592-13), B3FVW5 (280-105592-14), (CCB 280-402549/92), (LCS 280-402172/2-A), (LCS 280-402173/2-A), (MB 280-402172/1-A), (MB 280-402173/1-A), (280-105592-A-9-A PDS), (280-105592-A-9-A SD), (280-105592-A-10-A PD) and (280-105592-A-10-A SD).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Client: CH2M Hill Plateau Remediation Company
Project/Site: S18-001 / I18-004

TestAmerica Job ID: 280-105592-1
SDG: DN0309

Job ID: 280-105592-1 (Continued)

Laboratory: TestAmerica Denver (Continued)**TOTAL METALS (ICP)**

Samples B3FW28 (280-105592-1), B3FYD9 (280-105592-9), B3FYH1 (280-105592-11) and B3FVW5 (280-105592-14) were analyzed for Total Metals (ICP) in accordance with EPA SW846 6010D. The samples were prepared on 01/22/2018 and analyzed on 01/22/2018 and 01/23/2018.

Sodium was detected in method blank MB 280-402172/1-A at a level that was above the method detection limit but below half the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample 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.

The instrument blank for analytical batch 280-402397 contained Sodium (527.9 ppb) greater than one-half the reporting limit (RL, 1000 ppb), and the samples were not re-analyzed because Sodium is a common laboratory contaminant and is thus controlled to the full value of the RL in instrument blanks. In addition, the samples results were greater than 20x the result found in the CCB. Therefore, the data have been qualified and reported. The following samples are affected: B3FW28 (280-105592-1), B3FYD9 (280-105592-9), B3FYD9 (280-105592-9[MSJ]), B3FYD9 (280-105592-9[MSD]), B3FYH1 (280-105592-11), B3FVW5 (280-105592-14), (CCB 280-402397/106), (LCS 280-402172/2-A), (MB 280-402172/1-A), (280-105592-A-9-A PDS) and (280-105592-A-9-A SD).

The instrument blank (CCB) for analytical batch 280-402549 contained Calcium (123.2 ppb) greater than one-half the reporting limit (RL, 200 ppb). Samples were not re-analyzed because the sample results were greater than 20x the result found in the CCB. The data have been qualified and reported. The following samples are affected: B3FW28 (280-105592-1), B3FW30 (280-105592-2), B3FWR8 (280-105592-8), B3FYD9 (280-105592-9), B3FYD9 (280-105592-9[MSJ]), B3FYD9 (280-105592-9[MSD]), B3FW88 (280-105592-10), B3FW88 (280-105592-10[MSJ]), B3FW88 (280-105592-10[MSD]), B3FYH1 (280-105592-11), B3FVW7 (280-105592-13), B3FVW5 (280-105592-14), (CCB 280-402549/92), (LCS 280-402172/2-A), (LCS 280-402173/2-A), (MB 280-402172/1-A), (MB 280-402173/1-A), (280-105592-A-9-A PDS), (280-105592-A-9-A SD), (280-105592-A-10-A PD) and (280-105592-A-10-A SD).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED METALS (ICP-MS)

Samples B3FW30 (280-105592-2), B3FWP2 (280-105592-7), B3FWR8 (280-105592-8), B3FW88 (280-105592-10) and B3FVW7 (280-105592-13) were analyzed for Dissolved Metals (ICP-MS) in accordance with SW846 6020B. The samples were prepared on 01/22/2018 and analyzed on 01/25/2018.

The Chain of Custody requests "6020_METALS_ICPMS: GW 01" analysis. Service List "6020_METALS_ICPMS: GW 01" includes Thorium, and while TestAmerica Denver holds Washington State (WDOE) accreditation for method 6020B, Thorium is not on the accreditation certificate at this time. Please note that Thorium is on TestAmerica Denver's primary ORELAP certification, and TestAmerica Denver is pursuing full WDOE accreditation for this element. As instructed by the client, the laboratory proceeded with the requested Thorium analyses by method 6020B.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL METALS (ICP/MS)

Samples B3FW28 (280-105592-1), B3FXJ8 (280-105592-4), B3FVN9 (280-105592-6), B3FYD9 (280-105592-9), B3FYH1 (280-105592-11) and B3FVW5 (280-105592-14) were analyzed for Total Metals (ICP/MS) in accordance with SW846 6020B. The samples were prepared on 01/22/2018 and analyzed on 01/25/2018.

The Chain of Custody requests "6020_METALS_ICPMS: GW 01" analysis. Service List "6020_METALS_ICPMS: GW 01" includes Thorium, and while TestAmerica Denver holds Washington State (WDOE) accreditation for method 6020B, Thorium is not on the accreditation certificate at this time. Please note that Thorium is on TestAmerica Denver's primary ORELAP certification, and TestAmerica Denver is pursuing full WDOE accreditation for this element. As instructed by the client, the laboratory proceeded with the requested Thorium analyses by method 6020B.

Zinc failed the recovery criteria high for the MS of sample B3FYD9 (280-105592-9) in batch 280-402890. All associated sample results have been flagged "N". The acceptable LCS data demonstrates that the analytical system was operating within control; therefore, corrective action is not needed.

Client: CH2M Hill Plateau Remediation Company
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TestAmerica Job ID: 280-105592-1
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Job ID: 280-105592-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

The accuracy and precision of Strontium in the MS/MSD performed on sample B3FYD9 (280-105592-9) in prep batch 280-402175 could not be reliably calculated due to the sample concentration reading greater than four times the spike amount. Control limits are not applicable and the MS/MSD results have been flagged "X".

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ALKALINITY

Samples B3FW28 (280-105592-1), B3FW53 (280-105592-3), B3FW54 (280-105592-5) and B3FYF2 (280-105592-12) were analyzed for Alkalinity in accordance with SM20 2320B. The samples were analyzed on 01/22/2018.

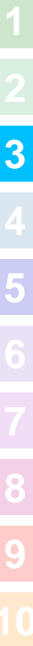
Alkalinity as CaCO₃ and Bicarbonate Alkalinity as CaCO₃ were detected in method blank MB 280-402461/29 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL and the method blank concentration was greater than 5% of the sample concentration, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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: 280-105592-1

SDG Number: DN0309

Login Number: 105592

List Number: 1

Creator: True, Joshua A

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	70 CPM
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	1.0 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 <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	



CH2M Hill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.# S18-001-009
Page 1 of 12

Collector: Dan Woehle CHPRC DN 0309
Telephone No.: 509-376-4650

SAF No.: S18-001
Purchase Order/Charge Code: 300071

Project Title: SURV, JANUARY 2018
Ice Chest No.: 6005-6600

Shipped To (Lab): TestAmerica Denver
Bill of Lading/Air Bill No.: 7712 35889351

Protocol: SURV
Offsite Property No.: 89167

Contact/Requester: Karen Waters-Husted
Sampling Origin: Hanford Site

Logbook No.: HNF-N-506-95179
Method of Shipment: Commercial Carrier

Priority: 30 Days

POSSIBLE SAMPLE HAZARDS/REMARK
** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

SPECIAL INSTRUCTIONS
N/A

Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3FW28	N	JAN 16 2018	1130	1x250-mL G/P	2320_ALKALINITY: COMMON	14 Days	Cool <=6C
B3FW28	N	✓	✓	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2
B3FW30	Y	JAN 16 2018	1130	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2



0.9g TRANS to 1 Transfer of 1-18-18

Relinquished By: Dan Woehle CHPRC Print First and Last Name	Signature: <i>Dan Woehle</i>	Date/Time: JAN 16 2018 1235	Received By: Troy Bacon CHPRC Print First and Last Name	Signature: <i>Troy Bacon</i>	Date/Time: JAN 16 2018 1235
Relinquished By: Troy Bacon CHPRC Print First and Last Name	Signature: <i>Troy Bacon</i>	Date/Time: JAN 16 2018 1315	Received By: SSU-1 Print First and Last Name	Signature: <i>SSU-1</i>	Date/Time: JAN 16 2018 1315
Relinquished By: SSU-1 Print First and Last Name	Signature: <i>SSU-1</i>	Date/Time: JAN 17 2018 0700	Received By: Leahy Wald CHPRC Print First and Last Name	Signature: <i>Leahy Wald</i>	Date/Time: JAN 17 2018 0700
Relinquished By: Leahy Wald CHPRC Print First and Last Name	Signature: <i>Leahy Wald</i>	Date/Time: JAN 17 2018 1400	Received By: FEDEX Print First and Last Name	Signature: <i>FEDEX</i>	Date/Time: JAN 17 2018 1400

Disposal Method (e.g., Return to customer, per lab procedure, used in process):

Disposed By: _____ Date/Time: _____

Matrix *

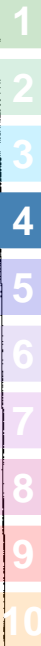
S = Soil DS = Drum Solids
SE = Sediment DL = Drum Liquid
SO = Solid T = Tissue
SL = Sludge WI = Wipe
W = Water L = Liquid
O = Oil V = Vegetation
A = Air X = Other



CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST (continued)

C.O.C. No. <u>SB-001-009</u>		Page <u>2</u> of <u>2</u>	
Relinquished By	Print <u>FedEx</u>	Sign	Date/Time
Received By	Print <u>Sasha Trule</u>	Sign	Date/Time <u>1-18-18 0930</u>
Relinquished By	Print <u>FedEx</u>	Sign <u>1-18-18</u>	Date/Time
Received By	Print <u>Sasha Trule</u>	Sign <u>ST</u>	Date/Time <u>1-18-18</u>
Relinquished By	Print	Sign	Date/Time
Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Date/Time
Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Date/Time
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Received By	Print	Sign	Date/Time
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Received By	Print	Sign	Date/Time

A-6003-962 (03/05)



CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		C.O.C.# S18-001-322 Page 1 of 12	
Collector: Dan Woehle CHPRC	DN 0309	Contact/Requester: Karen Waters-Husted	Telephone No.: 509-376-4650	Date: 1/17/18	
SAF No.: S18-001		Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300071		
Project Title: SURV, JANUARY 2018		Logbook No.: HNF-N-506	Ice Chest No.: 605-660		
Shipped To (Lab): TestAmerica Denver		Method of Shipment Commercial Carrier	Bill of Lading/Air Bill No.: 7712 35889351		
Protocol: SURV		Priority: 30 Days	Offsite Property No.: 8967		
POSSIBLE SAMPLE HAZARDS/REMARK ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1		SPECIAL INSTRUCTIONS N/A			
Sample No. B3FW53	Filter N	Date JAN 16 2018	Time 0730	No/Type Container 1x250-mL G/P	Sample Analysis 2320_AKALINITY: GW 01
				Holding Time 14 Days	Preservative Cool <=6C

Relinquished By: Dan Woehle CHPRC	Signature: <i>Allyson Bacon</i>	Date: JAN 16 2018	Time: 1235	Received By: Troy Bacon CHPRC	Signature: <i>Troy Bacon</i>	Date/Time: JAN 16 2018 1235
Relinquished By: Troy Bacon CHPRC	Signature: <i>Troy Bacon</i>	Date: JAN 16 2018	Time: 1315	Received By: SSU-1	Signature: _____	Date/Time: JAN 16 2018
Relinquished By: SSU-1	Signature: _____	Date: JAN 17 2018	Time: 0700	Received By: Leah Wall CHPRC	Signature: <i>Leah Wall</i>	Date/Time: JAN 17 2018 0700
Relinquished By: Leah Wall CHPRC	Signature: <i>Leah Wall</i>	Date: JAN 17 2018	Time: 1400	Received By: FEDEX	Signature: _____	Date/Time: _____
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process):		Disposed By: _____		Date/Time: _____

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



A-6004-842 (REV 3)

FSR ID = FSR55922

Printed On 1/16/2018

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST (continued)			C.O.C. No. 18-001-322
Relinquished By	Print	Sign	Date/Time
FedEx	Print	Sign	Date/Time
Received By	Print	Sign	Date/Time
Josh Tree	Print	Sign	1-18-18 0930
Relinquished By	Print	Sign	Date/Time
Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Date/Time
Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Date/Time
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Relinquished By	Print	Sign	Date/Time
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Relinquished By	Print	Sign	Date/Time
Received By	Print	Sign	Date/Time

A-6003-962 (03/05)



48165

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		C.O.C.# I18-004-153 Page 1 of 12
Collector: Dan Weehie CHPRC	DN0309	Contact/Requester: Karen Waters-Husted	Telephone No.: 509-376-4650	10-11718
SAF No.: I18-004		Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300071	
Project Title: SURV18, JANUARY 2018		Logbook No.: HNF-N-506 ~ 95179	Ice Chest No.: 605-660	
Shipped To (Lab): TestAmerica Denver		Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 771235889351	
Protocol: SURV		Priority: 30 Days	Offsite Property No.: 8967	
POSSIBLE SAMPLE HAZARDS/REMARK ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1		SPECIAL INSTRUCTIONS N/A		
Sample No. B3FXJ8	Filter N	* Date JAN 16 2018	No/Type Container 1x500-mL G/P	Sample Analysis 6020_METALS_ICPMS: Uranium (1)
				Holding Time 6 Months
				Preservative HNO3 to pH <2

0.9 to 0.1 I# 8 transferred by JR 1-18-18

721161Y
1220

Relinquished By: Dan Weehie CHPRC	Signature Alphabell	Date JAN 16 2018	No/Type Container 1315	Sample Analysis	Received By: Troy Bacon CHPRC	Signature Troy L Bacon	Date/Time JAN 16 2018 1235	Matrix *
Relinquished By: Troy Bacon CHPRC	Signature Troy L Bacon	Date JAN 16 2018	No/Type Container 1315		Received By: SSU-1	Signature	Date/Time JAN 16 2018	S = Soil
Relinquished By: SSU-1	Signature	Date JAN 17 2018	No/Type Container 0700		Received By: Ledy Wall CHPRC	Signature Ledy Wall	Date/Time JAN 17 2018 0700	SE = Sediment
Relinquished By: Ledy Wall CHPRC	Signature Ledy Wall	Date JAN 17 2018	No/Type Container 1400		Received By: FEDEX	Signature	Date/Time	SO = Solid
FINAL SAMPLE DISPOSITION				Disposal Method (e.g., Return to customer, per lab procedure, used in process):	Disposed By:		Date/Time:	SL = Sludge
Printed On 12/6/2017				FSR ID = FSR54497	A-6004-842 (REV 3)			W = Water



C.O.C. No. 118-004-153		Page 2 of 2	
Relinquished By	Print FedEx	Sign	Date/Time
Received By	Print Ish Tree	Sign	Date/Time
Relinquished By	Print	Sign	Date/Time
Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Date/Time
Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Date/Time
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Received By	Print	Sign	Date/Time

A-6003-962 (03/05)



CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		C.O.C.# S18-001-323 Page 1 of 1	
Collector: Dan Woehle CHPRC	Contact/Requester: Karen Waters-Eusted	Telephone No.: 509-376-4650			
SAF No.: S18-001	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300071			
Project Title: SURV, JANUARY 2018	Logbook No.: HNF-N-506-96179	Ice Chest No.: GWS-352			
Shipped To (Lab): TestAmerica Denver	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7712 29995229			
Protocol: SURV	Priority: 30 Days	Offsite Property No.: 8965			
POSSIBLE SAMPLE HAZARDS/REMARK ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1		SPECIAL INSTRUCTIONS N/A			
Sample No. B3PW54	Filter N	Date JAN 16 2018	Time 0954	No/Type Container 1x250-ML G/P	Sample Analysis 2320_AKALINITY: GW 01
				Holding Time 14 Days	Preservative Cool <=6C

Relinquished By: Dan Woehle CHPRC	Signature <i>[Signature]</i>	Date/Time JAN 16 2018 1046	Received By: Troy L Bacon CHPRC	Signature <i>[Signature]</i>	Date/Time JAN 16 2018 1046
Relinquished By: Troy L Bacon CHPRC	Signature <i>[Signature]</i>	Date/Time JAN 16 2018 1400	Received By: FEDEX	Signature <i>[Signature]</i>	Date/Time JAN 16 2018 0930
Relinquished By: FEDEX	Signature <i>[Signature]</i>	Date/Time JAN 16 2018 0930	Received By: Troy L Bacon	Signature <i>[Signature]</i>	Date/Time JAN 16 2018 0930
Relinquished By: Troy L Bacon	Signature <i>[Signature]</i>	Date/Time JAN 16 2018 0930	Received By: Troy L Bacon	Signature <i>[Signature]</i>	Date/Time JAN 16 2018 0930

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

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

67 lbs.

January 31, 2018

Rev 0

CH2M Hill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.# S18-001-115
Page 1 of 12

Collector: Dan Woehle CHPRC DN0309
Telephone No.: 509-376-4650

SAF No.: S18-001
Purchase Order/Charge Code: 300071

Project Title: SURV, JANUARY 2018
Sampling Origin: Hanford Site

Shipped To (Lab): TestAmerica Denver
Logbook No.: HNF-N-506-97/42
Ice Chest No.: GWS-384

Protocol: SURV
Method of Shipment: Commercial Carrier
Bill of Lading/Air Bill No.: 7712 2724 8118

Priority: 30 Days
Offsite Property No.: 8960

POSSIBLE SAMPLE HAZARDS/REMARK
 ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

SPECIAL INSTRUCTIONS
 N/A

Sample No.	Filter	* Time	Date	No/Type Container	Sample Analysis	Holding Time	Preservative
B3FWN9	N	W	JAN 15 2018 1020	1x500-mL G/P	6020_METALS_ICPMS: Chromium (1)	6 Months	HNO3 to pH <2
B3FWP2	Y	W	↓	1x500-mL G/P	6020_METALS_ICPMS: Chromium (1)	6 Months	HNO3 to pH <2

Relinquished By: Dan Woehle CHPRC
Signature: [Signature] Date/Time: JAN 15 2018 1300

Relinquished By: [Signature]
Signature: [Signature] Date/Time: JAN 15 2018 1400

Relinquished By: SSU-1
Signature: [Signature] Date/Time: JAN 16 2018 0900

Relinquished By: [Signature]
Signature: [Signature] Date/Time: JAN 16 2018 1400

Received By: [Signature]
Signature: [Signature] Date/Time: JAN 15 2018 1300

Received By: SSU-1
Signature: [Signature] Date/Time: JAN 15 2018 1400

Received By: [Signature]
Signature: [Signature] Date/Time: JAN 16 2018 0900

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

Disposal Method (e.g., Return to customer, per lab procedure, used in process):

FINAL SAMPLE DISPOSITION

Printed On: 11/21/2017

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

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

FSR ID = FSR53938



CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST (continued)		C.O.C. No. S18-001-115				
		Page 2 of 2				
Relinquished By <i>Feedix</i>	Print	Sign	Received By <i>Josh True</i>	Print	Sign	Date/Time
Relinquished By	Print	Sign	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Received By	Print	Sign	Date/Time

12-18-18 0930

A-6003-962 (03/05)



CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		C.O.C.# S18-001-363	
Dan Woehle CHPRC		Karen Waters-Husted		Page 1 of 1	
DAN 039		Telephone No.: 509-376-4650			
S18-001		Purchase Order/Charge Code: 300071			
SURV, JANUARY 2018		Ice Chest No.: GWS-384			
TestAmerica Denver		Bill of Lading/Air Bill No.: 77227248118			
SURV		Offsite Property No.: 8960			
POSSIBLE SAMPLE HAZARDS/REMARK		SPECIAL INSTRUCTIONS			
*** 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
B3FWR8	Y	JAN 15 2018	1318	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01
B3FYD9	N	Y	Y	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01
Collector:			Project Title:		
Dan Woehle CHPRC			SURV, JANUARY 2018		
SAF No.:			Method of Shipment:		
S18-001			Commercial Carrier		
Shipped To (Lab):			Priority:		
TestAmerica Denver			30 Days		
Protocol:			Disposal Method:		
SURV			Return to customer, per lab procedure, used in process:		
Received By:			Received By:		
Dan Woehle CHPRC			SSU-1		
Signature			Signature		
Date/Time			Date/Time		
JAN 15 2018 1510			JAN 15 2018 1516		
Relinquished By:			Relinquished By:		
SSU-1			SSU-1		
Signature			Signature		
Date/Time			Date/Time		
JAN 16 2018 0900			JAN 16 2018 0900		
Relinquished By:			Relinquished By:		
Dan Woehle CHPRC			FEDEX		
Signature			Signature		
Date/Time			Date/Time		
JAN 16 2018 1400			1-18-18 0930		
Relinquished By:			Relinquished By:		
FedEx			Josh True		
Signature			Signature		
Date/Time			Date/Time		
JAN 16 2018 1400			1-18-18 0930		
FINAL SAMPLE DISPOSITION			Date/Time:		
Disposal Method (e.g., Return to customer, per lab procedure, used in process):			Date/Time:		
Return to customer, per lab procedure, used in process:			1-18-18 0930		



CH2M Hill Plateau Remediation Company		C.O.C.# S18-001-371	
Juan Aguilar ICRP/RC		Page 1 of 1	
Collector:	DWSA	Contact/Requester:	Karen Waters-Husted
SAF No.:	S18-001	Telephone No.:	509-376-4650
Project Title:	SURV, JANUARY 2018	Purchase Order/Charge Code:	300071
Shipped To (Lab):	TestAmerica Denver	Ice Chest No.:	GWS-384
Protocol:	SURV	Bill of Lading/Air Bill No.:	771227248118
Priority:	30 Days	Offsite Property No.:	8960

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3FW88	Y	W	1-15-18	1340	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2
B3FVH1	N	W	1-15-18	1340	1x500-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2

SPECIAL INSTRUCTIONS

POSSIBLE SAMPLE HAZARDS/REMARK
 ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1

N/A

Relinquished By:	Juan Aguilar ICRP/RC	Signature		Date/Time	JAN 15 2018 1420
Received By:	SSU-1	Signature		Date/Time	JAN 15 2018 1420
Relinquished By:	Lesly Wall ICRP/RC	Signature		Date/Time	JAN 16 2018 0900
Received By:	FEDEX	Signature		Date/Time	JAN 16 2018 0900
Relinquished By:	Lesly Wall ICRP/RC	Signature		Date/Time	JAN 16 2018 1400
Received By:	Isk Tree	Signature		Date/Time	1-18-18 0930

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process):	Disposed By:	Date/Time:
Printed On	11/21/2017	FSR ID = FSR53965	A-6004-842 (REV 3)



CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		C.O.C.# S18-001-366 Page 1 of 1
Collector: Dan Woehle CHPRC	DNO309	Contact/Requester:	Karen Waters-Husted	
SAF No.:	S18-001	Sampling Origin:	Hanford Site	
Project Title:	SURV, JANUARY 2018	Logbook No.:	HNF-N-506-977/42	
Shipped To (Lab):	TestAmerica Denver	Method of Shipment:	Commercial Carrier	
Protocol:	SURV	Priority:	30 Days	
POSSIBLE SAMPLE HAZARDS/REMARK ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1		SPECIAL INSTRUCTIONS N/A		
Sample No.	Filter	*	Date	Time
B3FYF2	N		JAN 15 2018	1410
No/Type Container	1x250-ML G/P			
Sample Analysis	2320 ALKALINITY: COMMON			
Holding Time	14 Days			
Preservative	COOL <=6C			
Telephone No.:	509-376-4650			
Purchase Order/Charge Code:	300071			
Ice Chest No.:	6625-384			
Bill of Lading/Air Bill No.:	7712 27248118			
Offsite Property No.:	8960			

Relinquished By:	Dan Woehle CHPRC	Signature	<i>Dan Woehle</i>	Received By:	SSU-1	Signature	<i>SSU-1</i>	Date/Time	JAN 15 2018 1510
Relinquished By:	SSU-1	Signature	<i>SSU-1</i>	Received By:	Lucy West CHPRC	Signature	<i>Lucy West</i>	Date/Time	JAN 16 2018 0900
Relinquished By:	Lucy West CHPRC	Signature	<i>Lucy West</i>	Received By:	FEDEX	Signature	<i>FEDEX</i>	Date/Time	JAN 16 2018 1400
Relinquished By:	FEDEX	Signature	<i>FEDEX</i>	Received By:	Sesh Trave	Signature	<i>Sesh Trave</i>	Date/Time	JAN 18 0930

Disposal Method (e.g., Return to customer, per lab procedure, used in process):

Disposed By:

Date/Time:

Matrix *

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



CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		C.O.C. # S18-001-138			
Collector: <i>Barbara Briggs /CHPRC</i> DMB309		Contact/Requester: Karen Waters-Husted		Telephone No.: 509-376-4650			
SAF No.: S18-001		Sampling Origin: Hanford Site		Purchase Order/Charge Code: 300071			
Project Title: SURV, JANUARY 2018		Logbook No.: HNF-N-506 -95 pg 78		Ice Chest No.: GWS-399			
Shipped To (Lab): TestAmerica Denver		Method of Shipment: Commercial Carrier		Bill of Lading/Air Bill No.: 771227248541			
Protocol: SURV		Priority: 30 Days		Offsite Property No.: 8960			
POSSIBLE SAMPLE HAZARDS/REMARK ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1		SPECIAL INSTRUCTIONS N/A					
Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3.FVW7	Y	1/15/18	1346	1x500-ml G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2
B3.FVW5	N	1/15/18	1346	1x500-ml G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2

Relinquished By: <i>Barbara Briggs /CHPRC</i>		Received By: SSU-1		JAN 1 5 2018 1445	
Print First and Last Name		Signature		Date/Time	
Relinquished By: <i>Lesly Wall /CHPRC</i>		Received By: <i>Lesly Wall /CHPRC</i>		JAN 1 6 2018 0900	
Print First and Last Name		Signature		Date/Time	
Relinquished By: <i>Cheryl Wall /CHPRC</i>		Received By: <i>Cheryl Wall /CHPRC</i>		JAN 1 6 2018 1400	
Print First and Last Name		Signature		Date/Time	
Relinquished By: <i>FedEx</i>		Received By: <i>Sash True</i>		1-18-18 0930	
Print First and Last Name		Signature		Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process):		Disposed By:	
				Signature	
				Date/Time	

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





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FedEx® Tracking

771235889351

Ship date:

Wed 1/17/2018

Actual delivery

Thu 1/18/2018 9:23 am

Richland, WA US

Delivered

Signed for by: A.GOMEZ

ARVADA, CO US

Travel History

Date/Time	Activity	Location
1/18/2018 - Thursday		
9:23 am	Delivered	ARVADA, CO
9:06 am	On FedEx vehicle for delivery	ARVADA, CO
8:34 am	At local FedEx facility	ARVADA, CO
6:33 am	In transit	MEMPHIS, TN
6:27 am	At destination sort facility	DENVER, CO
6:23 am	In transit	MEMPHIS, TN
5:23 am	Departed FedEx location	MEMPHIS, TN
4:09 am	In transit	MEMPHIS, TN
12:29 am	Arrived at FedEx location	MEMPHIS, TN
1/17/2018 - Wednesday		
4:47 pm	Left FedEx origin facility	PARCO, WA
2:43 pm	Picked up	PARCO, WA
10:17 am	Shipment information sent to FedEx	

Shipment Facts

Tracking Number	771235889351	Service	FedEx Priority Overnight
Weight	48 lbs / 21.77 kgs	Signature services	Direct signature required
Delivered To	Shipping/Receiving	Total pieces	1
Total shipment weight	48 lbs / 21.77 kgs	Terms	Third Party
Shipper reference	plr# 8967/cooler# gws-660	Packaging	Your Packaging
Special handling section	Deliver Weekday, Additional Handling Surcharge, Direct Signature Required	Standard transit	1/18/2018 by 10:30 am

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771229995229

Ship date:		Actual delivery:
Tue 1/16/2018		Thu 1/18/2018 9:23 am
Richland, WA US	Delivered	ARVADA, CO US
	<i>Signed for by: A GOMEZ</i>	

2 Piece shipment

Travel History

Date/Time	Activity	Location
1/18/2018 - Thursday		
9:23 am	Delivered	ARVADA, CO
9:08 am	On FedEx vehicle for delivery	ARVADA, CO
8:34 am	At local FedEx facility	ARVADA, CO
7:50 am	In transit	MEMPHIS, TN
7:19 am	In transit	MEMPHIS, TN
6:27 am	At destination sort facility	DENVER, CO
5:23 am	Departed FedEx location	MEMPHIS, TN
1/17/2018 - Wednesday		
5:32 am	In transit	MEMPHIS, TN
4:29 am	In transit	MEMPHIS, TN
1:33 am	Arrived at FedEx location	MEMPHIS, TN
1/16/2018 - Tuesday		
4:51 pm	Left FedEx origin facility	PASCO, WA
2:39 pm	Shipment information sent to FedEx	
2:17 pm	Picked up	PASCO, WA

Shipment Facts

Tracking Number	771229995229	Service	FedEx Priority Overnight
Master tracking number	771229995229	Weight	90 lbs / 40.82 kgs
Dimensions	28x16x17 in	Signature services	Direct signature required
Delivered To	Shipping/Receiving	Total pieces	2
Total shipment weight	154 lbs / 69.85 kgs	Terms	Third Party
Shipper reference	pt# 8965	Packaging	Your Packaging
Special handling section	Deliver Weekday, Additional Handling Surcharge, Direct Signature Required	Standard transit	1/17/2018 by 10:30 am

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771227248118

Ship date		Actual delivery
Tue 1/16/2018		Thu 1/18/2018 9:23 am
Richland, WA US	Delivered	ARVADA, CO US
	Signed for by A.GOMEZ	

2 Piece shipment

Travel History

Date/Time	Activity	Location
■ 1/18/2018 - Thursday		
9:23 am	Delivered	ARVADA, CO
9:08 am	On FedEx vehicle for delivery	ARVADA, CO
8:34 am	At local FedEx facility	ARVADA, CO
7:49 am	In transit	MEMPHIS, TN
7:19 am	In transit	MEMPHIS, TN
6:27 am	At destination sort facility	DENVER, CO
5:23 am	Departed FedEx location	MEMPHIS, TN
■ 1/17/2018 - Wednesday		
5:32 am	In transit	MEMPHIS, TN
4:29 am	In transit	MEMPHIS, TN
1:33 am	Arrived at FedEx location	MEMPHIS, TN
■ 1/16/2018 - Tuesday		
4:51 pm	Left FedEx origin facility	PASCO, WA
2:17 pm	Picked up	PASCO, WA
12:13 pm	Shipment information sent to FedEx	

Shipment Facts

Tracking Number	771227248118	Service	FedEx Priority Overnight
Master tracking number	771227248541	Weight	67 lbs / 30.39 kgs
Signature services	Direct signature required	Delivered To	Shipping/Receiving
Total pieces	2	Total shipment weight	67 lbs / 30.39 kgs
Terms	Third Party	Shipper reference	ptr# 8960
Packaging	Your Packaging	Special handling section	Deliver Weekday, Direct Signature Required
Standard transit	1/17/2018 by 10:30 am		

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771227248541

Ship date Tue 1/16/2018	Actual delivery: Thu 1/18/2018 9:23 am
Richland, WA US	Delivered Signed for by <i>A GOMEZ</i>
	ARVADA, CO US

2 Piece shipment

Travel History

Date/Time	Activity	Location
1/18/2018 - Thursday		
9:23 am	Delivered	ARVADA, CO
9:08 am	On FedEx vehicle for delivery	ARVADA, CO
7:35 am	At local FedEx facility	ARVADA, CO
12:18 am	At local FedEx facility	DENVER, CO
1/17/2018 - Wednesday		
5:43 pm	At destination sort facility	DENVER, CO
4:35 pm	Departed FedEx location	MEMPHIS, TN
4:29 am	In transit	MEMPHIS, TN
1:33 am	Arrived at FedEx location	MEMPHIS, TN
1/16/2018 - Tuesday		
4:51 pm	Left FedEx origin facility	PASCO, WA
2:17 pm	Picked up	PASCO, WA
12:13 pm	Shipment information sent to FedEx	

Shipment Facts

Tracking Number	771227248541	Service	FedEx Priority Overnight
Master tracking number	771227248541	Weight	68 lbs / 30.84 kgs
Dimensions	24x15x15 in	Signature services	Direct signature required
Delivered To	Shipping/Receiving	Total pieces	2
Total shipment weight	135 lbs / 61.23 kgs	Terms	Third Party
Shipper reference	ptr# 8950	Packaging	Your Packaging
Special handling section	Deliver Weekday, Additional Handling Surcharge, Direct Signature Required	Standard transit	1/17/2018 by 10:30 am

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Client: CH2M Hill Plateau Remediation Company
 Project/Site: S18-001 / I18-004

TestAmerica Job ID: 280-105592-1
 SDG: DN0309

Qualifiers

Metals

Qualifier	Qualifier Description
B	Estimated result. Result is less than the RL, but greater than MDL
U	Analyzed for but not detected.
N	Recovery exceeds upper or lower control limits
C	The analyte was detected in both the sample and the associated QC blank, and the sample concentration was $\leq 5X$ the blank concentration.
X	See case narrative notes for explanation of the 'X' flag

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	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: CH2M Hill Plateau Remediation Company
Project/Site: S18-001 / I18-004

TestAmerica Job ID: 280-105592-1
SDG: DN0309

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	TAL DEN
6020B	Metals (ICP/MS)	SW846	TAL DEN
SM 2320B	Alkalinity	SM	TAL DEN

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater",
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



Client: CH2M Hill Plateau Remediation Company
Project/Site: S18-001 / I18-004

TestAmerica Job ID: 280-105592-1
SDG: DN0309

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-105592-1	B3FW28	Water	01/16/18 11:30	01/18/18 09:30
280-105592-2	B3FW30	Water	01/16/18 11:30	01/18/18 09:30
280-105592-3	B3FW53	Water	01/16/18 07:30	01/18/18 09:30
280-105592-4	B3FXJ8	Water	01/16/18 12:20	01/18/18 09:30
280-105592-5	B3FW54	Water	01/16/18 09:54	01/18/18 09:30
280-105592-6	B3FWN9	Water	01/15/18 10:32	01/18/18 09:30
280-105592-7	B3FWP2	Water	01/15/18 10:32	01/18/18 09:30
280-105592-8	B3FWR8	Water	01/15/18 13:18	01/18/18 09:30
280-105592-9	B3FYD9	Water	01/15/18 13:18	01/18/18 09:30
280-105592-10	B3FW88	Water	01/15/18 13:40	01/18/18 09:30
280-105592-11	B3FYH1	Water	01/15/18 13:40	01/18/18 09:30
280-105592-12	B3FYF2	Water	01/15/18 14:16	01/18/18 09:30
280-105592-13	B3FVW7	Water	01/15/18 13:48	01/18/18 09:30
280-105592-14	B3FVW5	Water	01/15/18 13:48	01/18/18 09:30



January 31, 2018
Client Sample Results

Rev 0

Client: CH2M Hill Plateau Remediation Company
Project/Site: S18-001 / I18-004

TestAmerica Job ID: 280-105592-1
SDG: DN0309

Method: 6010D - Metals (ICP)

Client Sample ID: B3FW28
Date Collected: 01/16/18 11:30
Date Received: 01/18/18 09:30

Lab Sample ID: 280-105592-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	16.0	B	100	4.4	ug/L		01/22/18 07:35	01/22/18 20:02	1
Calcium	62100		200	34.5	ug/L		01/22/18 07:35	01/23/18 16:20	1
Iron	59.9	B	100	22.0	ug/L		01/22/18 07:35	01/23/18 16:20	1
Magnesium	18300		200	10.7	ug/L		01/22/18 07:35	01/22/18 20:02	1
Potassium	8020		3000	237	ug/L		01/22/18 07:35	01/22/18 20:02	1
Sodium	21300		1000	117	ug/L		01/22/18 07:35	01/22/18 20:02	1
Vanadium	13.6		10.0	1.1	ug/L		01/22/18 07:35	01/22/18 20:02	1

Client Sample ID: B3FYD9
Date Collected: 01/15/18 13:18
Date Received: 01/18/18 09:30

Lab Sample ID: 280-105592-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	18.6	B	100	4.4	ug/L		01/22/18 07:35	01/22/18 20:05	1
Calcium	35000		200	34.5	ug/L		01/22/18 07:35	01/23/18 16:22	1
Iron	22.0	U	100	22.0	ug/L		01/22/18 07:35	01/23/18 16:22	1
Magnesium	11600		200	10.7	ug/L		01/22/18 07:35	01/22/18 20:05	1
Potassium	4380		3000	237	ug/L		01/22/18 07:35	01/22/18 20:05	1
Sodium	19300		1000	117	ug/L		01/22/18 07:35	01/22/18 20:05	1
Vanadium	25.6		10.0	1.1	ug/L		01/22/18 07:35	01/22/18 20:05	1

Client Sample ID: B3FYH1
Date Collected: 01/15/18 13:40
Date Received: 01/18/18 09:30

Lab Sample ID: 280-105592-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	10.8	B	100	4.4	ug/L		01/22/18 07:35	01/22/18 20:17	1
Calcium	31500		200	34.5	ug/L		01/22/18 07:35	01/23/18 16:43	1
Iron	65.4	B	100	22.0	ug/L		01/22/18 07:35	01/23/18 16:43	1
Magnesium	8670		200	10.7	ug/L		01/22/18 07:35	01/22/18 20:17	1
Potassium	5340		3000	237	ug/L		01/22/18 07:35	01/22/18 20:17	1
Sodium	11200		1000	117	ug/L		01/22/18 07:35	01/22/18 20:17	1
Vanadium	27.7		10.0	1.1	ug/L		01/22/18 07:35	01/22/18 20:17	1

Client Sample ID: B3FVW5
Date Collected: 01/15/18 13:48
Date Received: 01/18/18 09:30

Lab Sample ID: 280-105592-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	14.1	B	100	4.4	ug/L		01/22/18 07:35	01/22/18 20:19	1
Calcium	51200		200	34.5	ug/L		01/22/18 07:35	01/23/18 16:45	1
Iron	369		100	22.0	ug/L		01/22/18 07:35	01/23/18 16:45	1
Magnesium	15700		200	10.7	ug/L		01/22/18 07:35	01/22/18 20:19	1
Potassium	7650		3000	237	ug/L		01/22/18 07:35	01/22/18 20:19	1
Sodium	22700		1000	117	ug/L		01/22/18 07:35	01/22/18 20:19	1
Vanadium	14.7		10.0	1.1	ug/L		01/22/18 07:35	01/22/18 20:19	1

TestAmerica Denver

Client: CH2M Hill Plateau Remediation Company
 Project/Site: S18-001 / I18-004

TestAmerica Job ID: 280-105592-1
 SDG: DN0309

Method: 6010D - Metals (ICP) - Dissolved

Client Sample ID: B3FW30
Date Collected: 01/16/18 11:30
Date Received: 01/18/18 09:30

Lab Sample ID: 280-105592-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	20.8	B C	100	4.4	ug/L		01/22/18 07:35	01/22/18 19:28	1
Calcium	64900		200	34.5	ug/L		01/22/18 07:35	01/23/18 15:44	1
Iron	22.0	U	100	22.0	ug/L		01/22/18 07:35	01/23/18 15:44	1
Magnesium	20300		200	10.7	ug/L		01/22/18 07:35	01/22/18 19:28	1
Potassium	8770		3000	237	ug/L		01/22/18 07:35	01/22/18 19:28	1
Sodium	23800		1000	117	ug/L		01/22/18 07:35	01/22/18 19:28	1
Vanadium	15.9		10.0	1.1	ug/L		01/22/18 07:35	01/22/18 19:28	1

Client Sample ID: B3FWR8
Date Collected: 01/15/18 13:18
Date Received: 01/18/18 09:30

Lab Sample ID: 280-105592-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	22.2	B C	100	4.4	ug/L		01/22/18 07:35	01/22/18 19:31	1
Calcium	32300		200	34.5	ug/L		01/22/18 07:35	01/23/18 15:47	1
Iron	22.0	U	100	22.0	ug/L		01/22/18 07:35	01/23/18 15:47	1
Magnesium	11500		200	10.7	ug/L		01/22/18 07:35	01/22/18 19:31	1
Potassium	4280		3000	237	ug/L		01/22/18 07:35	01/22/18 19:31	1
Sodium	18800		1000	117	ug/L		01/22/18 07:35	01/22/18 19:31	1
Vanadium	24.7		10.0	1.1	ug/L		01/22/18 07:35	01/22/18 19:31	1

Client Sample ID: B3FW88
Date Collected: 01/15/18 13:40
Date Received: 01/18/18 09:30

Lab Sample ID: 280-105592-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	12.4	B C	100	4.4	ug/L		01/22/18 07:35	01/22/18 19:33	1
Calcium	31300		200	34.5	ug/L		01/22/18 07:35	01/23/18 15:49	1
Iron	58.9	B	100	22.0	ug/L		01/22/18 07:35	01/23/18 15:49	1
Magnesium	7770		200	10.7	ug/L		01/22/18 07:35	01/22/18 19:33	1
Potassium	4810		3000	237	ug/L		01/22/18 07:35	01/22/18 19:33	1
Sodium	11600		1000	117	ug/L		01/22/18 07:35	01/22/18 19:33	1
Vanadium	25.2		10.0	1.1	ug/L		01/22/18 07:35	01/22/18 19:33	1

Client Sample ID: B3FVW7
Date Collected: 01/15/18 13:48
Date Received: 01/18/18 09:30

Lab Sample ID: 280-105592-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	18.0	B C	100	4.4	ug/L		01/22/18 07:35	01/22/18 19:45	1
Calcium	54200		200	34.5	ug/L		01/22/18 07:35	01/23/18 16:02	1
Iron	65.5	B	100	22.0	ug/L		01/22/18 07:35	01/23/18 16:02	1
Magnesium	16900		200	10.7	ug/L		01/22/18 07:35	01/22/18 19:45	1
Potassium	8410		3000	237	ug/L		01/22/18 07:35	01/22/18 19:45	1
Sodium	24600		1000	117	ug/L		01/22/18 07:35	01/22/18 19:45	1
Vanadium	16.2		10.0	1.1	ug/L		01/22/18 07:35	01/22/18 19:45	1

Client: CH2M Hill Plateau Remediation Company
 Project/Site: S18-001 / I18-004

TestAmerica Job ID: 280-105592-1
 SDG: DN0309

Method: 6020B - Metals (ICP/MS)

Client Sample ID: B3FW28
Date Collected: 01/16/18 11:30
Date Received: 01/18/18 09:30

Lab Sample ID: 280-105592-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9.2	U	50.0	9.2	ug/L		01/22/18 07:35	01/25/18 14:39	1
Antimony	0.44	B	2.0	0.40	ug/L		01/22/18 07:35	01/25/18 14:39	1
Arsenic	4.2	B	5.0	0.33	ug/L		01/22/18 07:35	01/25/18 14:39	1
Barium	48.9		1.0	0.29	ug/L		01/22/18 07:35	01/25/18 14:39	1
Beryllium	0.080	U	1.0	0.080	ug/L		01/22/18 07:35	01/25/18 14:39	1
Cadmium	0.27	U	1.0	0.27	ug/L		01/22/18 07:35	01/25/18 14:39	1
Chromium	1.8	B	2.0	0.50	ug/L		01/22/18 07:35	01/25/18 14:39	1
Cobalt	0.054	U	1.0	0.054	ug/L		01/22/18 07:35	01/25/18 14:39	1
Copper	0.56	U	2.0	0.56	ug/L		01/22/18 07:35	01/25/18 14:39	1
Lead	0.18	U	1.0	0.18	ug/L		01/22/18 07:35	01/25/18 14:39	1
Manganese	6.4		1.0	0.31	ug/L		01/22/18 07:35	01/25/18 14:39	1
Molybdenum	3.4		2.0	0.14	ug/L		01/22/18 07:35	01/25/18 14:39	1
Nickel	0.44	B	2.0	0.30	ug/L		01/22/18 07:35	01/25/18 14:39	1
Selenium	6.8		5.0	0.70	ug/L		01/22/18 07:35	01/25/18 14:39	1
Silver	0.050	B	5.0	0.033	ug/L		01/22/18 07:35	01/25/18 14:39	1
Strontium	377		10.0	0.30	ug/L		01/22/18 07:35	01/25/18 14:39	1
Thallium	0.050	U	1.0	0.050	ug/L		01/22/18 07:35	01/25/18 14:39	1
Thorium	1.2	U	5.0	1.2	ug/L		01/22/18 07:35	01/25/18 14:39	1
Tin	0.77	U	10.0	0.77	ug/L		01/22/18 07:35	01/25/18 14:39	1
Uranium	3.7		1.0	0.050	ug/L		01/22/18 07:35	01/25/18 14:39	1
Zinc	2.0	U N	10.0	2.0	ug/L		01/22/18 07:35	01/25/18 14:39	1

Client Sample ID: B3FXJ8
Date Collected: 01/16/18 12:20
Date Received: 01/18/18 09:30

Lab Sample ID: 280-105592-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	18.6		1.0	0.050	ug/L		01/22/18 07:35	01/25/18 14:43	1

Client Sample ID: B3FWN9
Date Collected: 01/15/18 10:32
Date Received: 01/18/18 09:30

Lab Sample ID: 280-105592-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	104		2.0	0.50	ug/L		01/22/18 07:35	01/25/18 14:46	1

Client Sample ID: B3FYD9
Date Collected: 01/15/18 13:18
Date Received: 01/18/18 09:30

Lab Sample ID: 280-105592-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9.2	U	50.0	9.2	ug/L		01/22/18 07:35	01/25/18 14:56	1
Antimony	0.40	U	2.0	0.40	ug/L		01/22/18 07:35	01/25/18 14:56	1
Arsenic	3.3	B	5.0	0.33	ug/L		01/22/18 07:35	01/25/18 14:56	1
Barium	54.0		1.0	0.29	ug/L		01/22/18 07:35	01/25/18 14:56	1
Beryllium	0.080	U	1.0	0.080	ug/L		01/22/18 07:35	01/25/18 14:56	1
Cadmium	0.27	U	1.0	0.27	ug/L		01/22/18 07:35	01/25/18 14:56	1
Chromium	136		2.0	0.50	ug/L		01/22/18 07:35	01/25/18 14:56	1
Cobalt	0.054	U	1.0	0.054	ug/L		01/22/18 07:35	01/25/18 14:56	1
Copper	0.56	U	2.0	0.56	ug/L		01/22/18 07:35	01/25/18 14:56	1
Lead	0.18	U	1.0	0.18	ug/L		01/22/18 07:35	01/25/18 14:56	1
Manganese	1.1		1.0	0.31	ug/L		01/22/18 07:35	01/25/18 14:56	1
Molybdenum	14.6		2.0	0.14	ug/L		01/22/18 07:35	01/25/18 14:56	1

Client: CH2M Hill Plateau Remediation Company
 Project/Site: S18-001 / I18-004

TestAmerica Job ID: 280-105592-1
 SDG: DN0309

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

Client Sample ID: B3FYD9
Date Collected: 01/15/18 13:18
Date Received: 01/18/18 09:30

Lab Sample ID: 280-105592-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	1.2	B	2.0	0.30	ug/L		01/22/18 07:35	01/25/18 14:56	1
Selenium	2.7	B	5.0	0.70	ug/L		01/22/18 07:35	01/25/18 14:56	1
Silver	0.056	B	5.0	0.033	ug/L		01/22/18 07:35	01/25/18 14:56	1
Strontium	183		10.0	0.30	ug/L		01/22/18 07:35	01/25/18 14:56	1
Thallium	0.050	U	1.0	0.050	ug/L		01/22/18 07:35	01/25/18 14:56	1
Thorium	1.2	U	5.0	1.2	ug/L		01/22/18 07:35	01/25/18 14:56	1
Tin	0.77	U	10.0	0.77	ug/L		01/22/18 07:35	01/25/18 14:56	1
Uranium	2.4		1.0	0.050	ug/L		01/22/18 07:35	01/25/18 14:56	1
Zinc	2.1	B N	10.0	2.0	ug/L		01/22/18 07:35	01/25/18 14:56	1

Client Sample ID: B3FYH1
Date Collected: 01/15/18 13:40
Date Received: 01/18/18 09:30

Lab Sample ID: 280-105592-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	10.9	B	50.0	9.2	ug/L		01/22/18 07:35	01/25/18 15:13	1
Antimony	0.41	B	2.0	0.40	ug/L		01/22/18 07:35	01/25/18 15:13	1
Arsenic	8.5		5.0	0.33	ug/L		01/22/18 07:35	01/25/18 15:13	1
Barium	34.4		1.0	0.29	ug/L		01/22/18 07:35	01/25/18 15:13	1
Beryllium	0.20	B	1.0	0.080	ug/L		01/22/18 07:35	01/25/18 15:13	1
Cadmium	0.27	U	1.0	0.27	ug/L		01/22/18 07:35	01/25/18 15:13	1
Chromium	6.3		2.0	0.50	ug/L		01/22/18 07:35	01/25/18 15:13	1
Cobalt	0.12	B	1.0	0.054	ug/L		01/22/18 07:35	01/25/18 15:13	1
Copper	0.82	B	2.0	0.56	ug/L		01/22/18 07:35	01/25/18 15:13	1
Lead	0.18	U	1.0	0.18	ug/L		01/22/18 07:35	01/25/18 15:13	1
Manganese	0.89	B	1.0	0.31	ug/L		01/22/18 07:35	01/25/18 15:13	1
Molybdenum	2.6		2.0	0.14	ug/L		01/22/18 07:35	01/25/18 15:13	1
Nickel	3.4		2.0	0.30	ug/L		01/22/18 07:35	01/25/18 15:13	1
Selenium	0.73	B	5.0	0.70	ug/L		01/22/18 07:35	01/25/18 15:13	1
Silver	0.033	U	5.0	0.033	ug/L		01/22/18 07:35	01/25/18 15:13	1
Strontium	171		10.0	0.30	ug/L		01/22/18 07:35	01/25/18 15:13	1
Thallium	0.061	B	1.0	0.050	ug/L		01/22/18 07:35	01/25/18 15:13	1
Thorium	1.2	U	5.0	1.2	ug/L		01/22/18 07:35	01/25/18 15:13	1
Tin	0.77	U	10.0	0.77	ug/L		01/22/18 07:35	01/25/18 15:13	1
Uranium	2.5		1.0	0.050	ug/L		01/22/18 07:35	01/25/18 15:13	1
Zinc	3.4	B N	10.0	2.0	ug/L		01/22/18 07:35	01/25/18 15:13	1

Client Sample ID: B3FVW5
Date Collected: 01/15/18 13:48
Date Received: 01/18/18 09:30

Lab Sample ID: 280-105592-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9.2	U	50.0	9.2	ug/L		01/22/18 07:35	01/25/18 15:17	1
Antimony	0.40	U	2.0	0.40	ug/L		01/22/18 07:35	01/25/18 15:17	1
Arsenic	5.0		5.0	0.33	ug/L		01/22/18 07:35	01/25/18 15:17	1
Barium	30.0		1.0	0.29	ug/L		01/22/18 07:35	01/25/18 15:17	1
Beryllium	0.080	U	1.0	0.080	ug/L		01/22/18 07:35	01/25/18 15:17	1
Cadmium	0.27	U	1.0	0.27	ug/L		01/22/18 07:35	01/25/18 15:17	1
Chromium	1.0	B	2.0	0.50	ug/L		01/22/18 07:35	01/25/18 15:17	1
Cobalt	0.054	U	1.0	0.054	ug/L		01/22/18 07:35	01/25/18 15:17	1
Copper	0.56	U	2.0	0.56	ug/L		01/22/18 07:35	01/25/18 15:17	1
Lead	0.18	U	1.0	0.18	ug/L		01/22/18 07:35	01/25/18 15:17	1

TestAmerica Denver

January 31, 2018
Client Sample Results

Rev 0

Client: CH2M Hill Plateau Remediation Company
 Project/Site: S18-001 / I18-004

TestAmerica Job ID: 280-105592-1
 SDG: DN0309

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

Client Sample ID: B3FVW5
Date Collected: 01/15/18 13:48
Date Received: 01/18/18 09:30

Lab Sample ID: 280-105592-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	24.1		1.0	0.31	ug/L		01/22/18 07:35	01/25/18 15:17	1
Molybdenum	3.8		2.0	0.14	ug/L		01/22/18 07:35	01/25/18 15:17	1
Nickel	0.30	U	2.0	0.30	ug/L		01/22/18 07:35	01/25/18 15:17	1
Selenium	5.7		5.0	0.70	ug/L		01/22/18 07:35	01/25/18 15:17	1
Silver	0.033	U	5.0	0.033	ug/L		01/22/18 07:35	01/25/18 15:17	1
Strontium	296		10.0	0.30	ug/L		01/22/18 07:35	01/25/18 15:17	1
Thallium	0.050	U	1.0	0.050	ug/L		01/22/18 07:35	01/25/18 15:17	1
Thorium	1.2	U	5.0	1.2	ug/L		01/22/18 07:35	01/25/18 15:17	1
Tin	0.77	U	10.0	0.77	ug/L		01/22/18 07:35	01/25/18 15:17	1
Uranium	2.3		1.0	0.050	ug/L		01/22/18 07:35	01/25/18 15:17	1
Zinc	2.0	U N	10.0	2.0	ug/L		01/22/18 07:35	01/25/18 15:17	1

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

Client Sample ID: B3FW30
Date Collected: 01/16/18 11:30
Date Received: 01/18/18 09:30

Lab Sample ID: 280-105592-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9.2	U	50.0	9.2	ug/L		01/22/18 07:35	01/25/18 13:48	1
Antimony	0.54	B	2.0	0.40	ug/L		01/22/18 07:35	01/25/18 13:48	1
Arsenic	4.1	B	5.0	0.33	ug/L		01/22/18 07:35	01/25/18 13:48	1
Barium	45.3		1.0	0.29	ug/L		01/22/18 07:35	01/25/18 13:48	1
Beryllium	0.080	U	1.0	0.080	ug/L		01/22/18 07:35	01/25/18 13:48	1
Cadmium	0.27	U	1.0	0.27	ug/L		01/22/18 07:35	01/25/18 13:48	1
Chromium	1.6	B	2.0	0.50	ug/L		01/22/18 07:35	01/25/18 13:48	1
Cobalt	0.082	B	1.0	0.054	ug/L		01/22/18 07:35	01/25/18 13:48	1
Copper	0.56	U	2.0	0.56	ug/L		01/22/18 07:35	01/25/18 13:48	1
Lead	0.18	U	1.0	0.18	ug/L		01/22/18 07:35	01/25/18 13:48	1
Manganese	3.6		1.0	0.31	ug/L		01/22/18 07:35	01/25/18 13:48	1
Molybdenum	3.5		2.0	0.14	ug/L		01/22/18 07:35	01/25/18 13:48	1
Nickel	0.31	B	2.0	0.30	ug/L		01/22/18 07:35	01/25/18 13:48	1
Selenium	6.7		5.0	0.70	ug/L		01/22/18 07:35	01/25/18 13:48	1
Silver	0.033	U	5.0	0.033	ug/L		01/22/18 07:35	01/25/18 13:48	1
Strontium	344		10.0	0.30	ug/L		01/22/18 07:35	01/25/18 13:48	1
Thallium	0.050	U	1.0	0.050	ug/L		01/22/18 07:35	01/25/18 13:48	1
Thorium	1.2	U	5.0	1.2	ug/L		01/22/18 07:35	01/25/18 13:48	1
Tin	0.77	U	10.0	0.77	ug/L		01/22/18 07:35	01/25/18 13:48	1
Uranium	3.5		1.0	0.050	ug/L		01/22/18 07:35	01/25/18 13:48	1
Zinc	2.0	U	10.0	2.0	ug/L		01/22/18 07:35	01/25/18 13:48	1

Client Sample ID: B3FWP2
Date Collected: 01/15/18 10:32
Date Received: 01/18/18 09:30

Lab Sample ID: 280-105592-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	84.6		2.0	0.50	ug/L		01/22/18 07:35	01/25/18 13:51	1

TestAmerica Denver

Client: CH2M Hill Plateau Remediation Company
 Project/Site: S18-001 / I18-004

TestAmerica Job ID: 280-105592-1
 SDG: DN0309

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

Client Sample ID: B3FWR8
Date Collected: 01/15/18 13:18
Date Received: 01/18/18 09:30

Lab Sample ID: 280-105592-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9.2	U	50.0	9.2	ug/L		01/22/18 07:35	01/25/18 13:55	1
Antimony	0.40	U	2.0	0.40	ug/L		01/22/18 07:35	01/25/18 13:55	1
Arsenic	3.3	B	5.0	0.33	ug/L		01/22/18 07:35	01/25/18 13:55	1
Barium	53.3		1.0	0.29	ug/L		01/22/18 07:35	01/25/18 13:55	1
Beryllium	0.080	U	1.0	0.080	ug/L		01/22/18 07:35	01/25/18 13:55	1
Cadmium	0.27	U	1.0	0.27	ug/L		01/22/18 07:35	01/25/18 13:55	1
Chromium	129		2.0	0.50	ug/L		01/22/18 07:35	01/25/18 13:55	1
Cobalt	0.054	U	1.0	0.054	ug/L		01/22/18 07:35	01/25/18 13:55	1
Copper	0.56	U	2.0	0.56	ug/L		01/22/18 07:35	01/25/18 13:55	1
Lead	0.18	U	1.0	0.18	ug/L		01/22/18 07:35	01/25/18 13:55	1
Manganese	0.66	B	1.0	0.31	ug/L		01/22/18 07:35	01/25/18 13:55	1
Molybdenum	13.9		2.0	0.14	ug/L		01/22/18 07:35	01/25/18 13:55	1
Nickel	1.2	B	2.0	0.30	ug/L		01/22/18 07:35	01/25/18 13:55	1
Selenium	2.5	B	5.0	0.70	ug/L		01/22/18 07:35	01/25/18 13:55	1
Silver	0.033	U	5.0	0.033	ug/L		01/22/18 07:35	01/25/18 13:55	1
Strontium	181		10.0	0.30	ug/L		01/22/18 07:35	01/25/18 13:55	1
Thallium	0.050	U	1.0	0.050	ug/L		01/22/18 07:35	01/25/18 13:55	1
Thorium	1.2	U	5.0	1.2	ug/L		01/22/18 07:35	01/25/18 13:55	1
Tin	0.77	U	10.0	0.77	ug/L		01/22/18 07:35	01/25/18 13:55	1
Uranium	2.2		1.0	0.050	ug/L		01/22/18 07:35	01/25/18 13:55	1
Zinc	2.0	U	10.0	2.0	ug/L		01/22/18 07:35	01/25/18 13:55	1

Client Sample ID: B3FW88
Date Collected: 01/15/18 13:40
Date Received: 01/18/18 09:30

Lab Sample ID: 280-105592-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9.2	U	50.0	9.2	ug/L		01/22/18 07:35	01/25/18 14:05	1
Antimony	0.40	U	2.0	0.40	ug/L		01/22/18 07:35	01/25/18 14:05	1
Arsenic	7.6		5.0	0.33	ug/L		01/22/18 07:35	01/25/18 14:05	1
Barium	29.6		1.0	0.29	ug/L		01/22/18 07:35	01/25/18 14:05	1
Beryllium	0.080	U	1.0	0.080	ug/L		01/22/18 07:35	01/25/18 14:05	1
Cadmium	0.27	U	1.0	0.27	ug/L		01/22/18 07:35	01/25/18 14:05	1
Chromium	4.0		2.0	0.50	ug/L		01/22/18 07:35	01/25/18 14:05	1
Cobalt	0.13	B	1.0	0.054	ug/L		01/22/18 07:35	01/25/18 14:05	1
Copper	0.59	B	2.0	0.56	ug/L		01/22/18 07:35	01/25/18 14:05	1
Lead	0.18	U	1.0	0.18	ug/L		01/22/18 07:35	01/25/18 14:05	1
Manganese	0.85	B	1.0	0.31	ug/L		01/22/18 07:35	01/25/18 14:05	1
Molybdenum	2.1		2.0	0.14	ug/L		01/22/18 07:35	01/25/18 14:05	1
Nickel	2.3		2.0	0.30	ug/L		01/22/18 07:35	01/25/18 14:05	1
Selenium	0.70	U	5.0	0.70	ug/L		01/22/18 07:35	01/25/18 14:05	1
Silver	0.033	U	5.0	0.033	ug/L		01/22/18 07:35	01/25/18 14:05	1
Strontium	150		10.0	0.30	ug/L		01/22/18 07:35	01/25/18 14:05	1
Thallium	0.050	U	1.0	0.050	ug/L		01/22/18 07:35	01/25/18 14:05	1
Thorium	1.2	U	5.0	1.2	ug/L		01/22/18 07:35	01/25/18 14:05	1
Tin	0.77	U	10.0	0.77	ug/L		01/22/18 07:35	01/25/18 14:05	1
Uranium	2.1		1.0	0.050	ug/L		01/22/18 07:35	01/25/18 14:05	1
Zinc	2.0	U	10.0	2.0	ug/L		01/22/18 07:35	01/25/18 14:05	1

Client: CH2M Hill Plateau Remediation Company
 Project/Site: S18-001 / I18-004

TestAmerica Job ID: 280-105592-1
 SDG: DN0309

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

Client Sample ID: B3FVW7
Date Collected: 01/15/18 13:48
Date Received: 01/18/18 09:30

Lab Sample ID: 280-105592-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9.2	U	50.0	9.2	ug/L		01/22/18 07:35	01/25/18 14:22	1
Antimony	0.40	U	2.0	0.40	ug/L		01/22/18 07:35	01/25/18 14:22	1
Arsenic	4.9	B	5.0	0.33	ug/L		01/22/18 07:35	01/25/18 14:22	1
Barium	25.8		1.0	0.29	ug/L		01/22/18 07:35	01/25/18 14:22	1
Beryllium	0.23	B	1.0	0.080	ug/L		01/22/18 07:35	01/25/18 14:22	1
Cadmium	0.27	U	1.0	0.27	ug/L		01/22/18 07:35	01/25/18 14:22	1
Chromium	0.90	B	2.0	0.50	ug/L		01/22/18 07:35	01/25/18 14:22	1
Cobalt	0.079	B	1.0	0.054	ug/L		01/22/18 07:35	01/25/18 14:22	1
Copper	0.56	U	2.0	0.56	ug/L		01/22/18 07:35	01/25/18 14:22	1
Lead	0.18	U	1.0	0.18	ug/L		01/22/18 07:35	01/25/18 14:22	1
Manganese	19.2		1.0	0.31	ug/L		01/22/18 07:35	01/25/18 14:22	1
Molybdenum	3.9		2.0	0.14	ug/L		01/22/18 07:35	01/25/18 14:22	1
Nickel	0.30	U	2.0	0.30	ug/L		01/22/18 07:35	01/25/18 14:22	1
Selenium	5.5		5.0	0.70	ug/L		01/22/18 07:35	01/25/18 14:22	1
Silver	0.033	U	5.0	0.033	ug/L		01/22/18 07:35	01/25/18 14:22	1
Strontium	257		10.0	0.30	ug/L		01/22/18 07:35	01/25/18 14:22	1
Thallium	0.081	B	1.0	0.050	ug/L		01/22/18 07:35	01/25/18 14:22	1
Thorium	1.2	U	5.0	1.2	ug/L		01/22/18 07:35	01/25/18 14:22	1
Tin	0.77	U	10.0	0.77	ug/L		01/22/18 07:35	01/25/18 14:22	1
Uranium	2.1		1.0	0.050	ug/L		01/22/18 07:35	01/25/18 14:22	1
Zinc	2.0	U	10.0	2.0	ug/L		01/22/18 07:35	01/25/18 14:22	1

General Chemistry

Client Sample ID: B3FW28
Date Collected: 01/16/18 11:30
Date Received: 01/18/18 09:30

Lab Sample ID: 280-105592-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	89100		5000	1070	ug/L			01/22/18 17:27	1

Client Sample ID: B3FW53
Date Collected: 01/16/18 07:30
Date Received: 01/18/18 09:30

Lab Sample ID: 280-105592-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	1070	U	5000	1070	ug/L			01/22/18 17:49	1
Bicarbonate Alkalinity as CaCO3	1070	U	5000	1070	ug/L			01/22/18 17:49	1
Carbonate Alkalinity as CaCO3	1070	U	5000	1070	ug/L			01/22/18 17:49	1
Hydroxide Alkalinity as CaCO3	1070	U	5000	1070	ug/L			01/22/18 17:49	1

Client Sample ID: B3FW54
Date Collected: 01/16/18 09:54
Date Received: 01/18/18 09:30

Lab Sample ID: 280-105592-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	91400		5000	1070	ug/L			01/22/18 17:20	1
Bicarbonate Alkalinity as CaCO3	91400		5000	1070	ug/L			01/22/18 17:20	1
Carbonate Alkalinity as CaCO3	1070	U	5000	1070	ug/L			01/22/18 17:20	1
Hydroxide Alkalinity as CaCO3	1070	U	5000	1070	ug/L			01/22/18 17:20	1

January 31, 2018
Client Sample Results

Rev 0

Client: CH2M Hill Plateau Remediation Company
Project/Site: S18-001 / I18-004

TestAmerica Job ID: 280-105592-1
SDG: DN0309

General Chemistry

Client Sample ID: B3FYF2
Date Collected: 01/15/18 14:16
Date Received: 01/18/18 09:30

Lab Sample ID: 280-105592-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	117000		5000	1070	ug/L			01/22/18 17:13	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

Client: CH2M Hill Plateau Remediation Company
 Project/Site: S18-001 / I18-004

TestAmerica Job ID: 280-105592-1
 SDG: DN0309

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 280-402172/1-A
Matrix: Water
Analysis Batch: 402397

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 402172

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.4	U	100	4.4	ug/L		01/22/18 07:35	01/22/18 19:57	1
Magnesium	10.7	U	200	10.7	ug/L		01/22/18 07:35	01/22/18 19:57	1
Potassium	237	U	3000	237	ug/L		01/22/18 07:35	01/22/18 19:57	1
Sodium	190.7	B	1000	117	ug/L		01/22/18 07:35	01/22/18 19:57	1
Vanadium	1.1	U	10.0	1.1	ug/L		01/22/18 07:35	01/22/18 19:57	1

Lab Sample ID: MB 280-402172/1-A
Matrix: Water
Analysis Batch: 402549

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 402172

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	34.5	U	200	34.5	ug/L		01/22/18 07:35	01/23/18 16:15	1
Iron	22.0	U	100	22.0	ug/L		01/22/18 07:35	01/23/18 16:15	1

Lab Sample ID: LCS 280-402172/2-A
Matrix: Water
Analysis Batch: 402397

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 402172

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1000	1012		ug/L		101	80 - 120
Magnesium	50000	55450		ug/L		111	80 - 120
Potassium	50000	54690		ug/L		109	80 - 120
Sodium	50000	54870		ug/L		110	80 - 120
Vanadium	500	522.1		ug/L		104	80 - 120

Lab Sample ID: LCS 280-402172/2-A
Matrix: Water
Analysis Batch: 402549

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 402172

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	50000	51090		ug/L		102	80 - 120
Iron	1000	1018		ug/L		102	80 - 120

Lab Sample ID: 280-105592-9 MS
Matrix: Water
Analysis Batch: 402397

Client Sample ID: B3FYD9
Prep Type: Total/NA
Prep Batch: 402172

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	18.6	B	1000	1012		ug/L		99	75 - 125
Magnesium	11600		50000	66860		ug/L		111	75 - 125
Potassium	4380		50000	58990		ug/L		109	75 - 125
Sodium	19300		50000	74400		ug/L		110	75 - 125
Vanadium	25.6		500	542.6		ug/L		103	75 - 125

Client: CH2M Hill Plateau Remediation Company
 Project/Site: S18-001 / I18-004

TestAmerica Job ID: 280-105592-1
 SDG: DN0309

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

Lab Sample ID: 280-105592-9 MS
 Matrix: Water
 Analysis Batch: 402549

Client Sample ID: B3FYD9
 Prep Type: Total/NA
 Prep Batch: 402172

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Calcium	35000		50000	86360		ug/L		103	75 - 125
Iron	22.0	U	1000	1026		ug/L		103	75 - 125

Lab Sample ID: 280-105592-9 MSD
 Matrix: Water
 Analysis Batch: 402397

Client Sample ID: B3FYD9
 Prep Type: Total/NA
 Prep Batch: 402172

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Boron	18.6	B	1000	983.0		ug/L		96	75 - 125	3	20
Magnesium	11600		50000	64360		ug/L		106	75 - 125	4	20
Potassium	4380		50000	56510		ug/L		104	75 - 125	4	20
Sodium	19300		50000	71480		ug/L		104	75 - 125	4	20
Vanadium	25.6		500	522.5		ug/L		99	75 - 125	4	20

Lab Sample ID: 280-105592-9 MSD
 Matrix: Water
 Analysis Batch: 402549

Client Sample ID: B3FYD9
 Prep Type: Total/NA
 Prep Batch: 402172

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Calcium	35000		50000	88210		ug/L		106	75 - 125	2	20
Iron	22.0	U	1000	1048		ug/L		105	75 - 125	2	20

Lab Sample ID: MB 280-402173/1-A
 Matrix: Water
 Analysis Batch: 402397

Client Sample ID: Method Blank
 Prep Type: Total Recoverable
 Prep Batch: 402173

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	7.55	B	100	4.4	ug/L		01/22/18 07:35	01/22/18 19:23	1
Magnesium	10.7	U	200	10.7	ug/L		01/22/18 07:35	01/22/18 19:23	1
Potassium	237	U	3000	237	ug/L		01/22/18 07:35	01/22/18 19:23	1
Sodium	297.6	B	1000	117	ug/L		01/22/18 07:35	01/22/18 19:23	1
Vanadium	1.1	U	10.0	1.1	ug/L		01/22/18 07:35	01/22/18 19:23	1

Lab Sample ID: MB 280-402173/1-A
 Matrix: Water
 Analysis Batch: 402549

Client Sample ID: Method Blank
 Prep Type: Total Recoverable
 Prep Batch: 402173

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	34.5	U	200	34.5	ug/L		01/22/18 07:35	01/23/18 15:39	1
Iron	22.0	U	100	22.0	ug/L		01/22/18 07:35	01/23/18 15:39	1

Lab Sample ID: LCS 280-402173/2-A
 Matrix: Water
 Analysis Batch: 402397

Client Sample ID: Lab Control Sample
 Prep Type: Total Recoverable
 Prep Batch: 402173

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Boron	1000	1030		ug/L		103	80 - 120
Magnesium	50000	55170		ug/L		110	80 - 120
Potassium	50000	54180		ug/L		108	80 - 120

TestAmerica Denver

Client: CH2M Hill Plateau Remediation Company
 Project/Site: S18-001 / I18-004

TestAmerica Job ID: 280-105592-1
 SDG: DN0309

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

Lab Sample ID: LCS 280-402173/2-A
 Matrix: Water
 Analysis Batch: 402397

Client Sample ID: Lab Control Sample
 Prep Type: Total Recoverable
 Prep Batch: 402173

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sodium	50000	54760		ug/L		110	80 - 120
Vanadium	500	520.3		ug/L		104	80 - 120

Lab Sample ID: LCS 280-402173/2-A
 Matrix: Water
 Analysis Batch: 402549

Client Sample ID: Lab Control Sample
 Prep Type: Total Recoverable
 Prep Batch: 402173

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	50000	51830		ug/L		104	80 - 120
Iron	1000	1033		ug/L		103	80 - 120

Lab Sample ID: 280-105592-10 MS
 Matrix: Water
 Analysis Batch: 402397

Client Sample ID: B3FW88
 Prep Type: Dissolved
 Prep Batch: 402173

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	12.4	B C	1000	890.8		ug/L		88	75 - 125
Magnesium	7770		50000	55430		ug/L		95	75 - 125
Potassium	4810		50000	51160		ug/L		93	75 - 125
Sodium	11600		50000	56660		ug/L		90	75 - 125
Vanadium	25.2		500	472.4		ug/L		89	75 - 125

Lab Sample ID: 280-105592-10 MS
 Matrix: Water
 Analysis Batch: 402549

Client Sample ID: B3FW88
 Prep Type: Dissolved
 Prep Batch: 402173

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	31300		50000	72750		ug/L		83	75 - 125
Iron	58.9	B	1000	942.8		ug/L		88	75 - 125

Lab Sample ID: 280-105592-10 MSD
 Matrix: Water
 Analysis Batch: 402397

Client Sample ID: B3FW88
 Prep Type: Dissolved
 Prep Batch: 402173

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Boron	12.4	B C	1000	951.0		ug/L		94	75 - 125	7	20
Magnesium	7770		50000	59040		ug/L		103	75 - 125	6	20
Potassium	4810		50000	55140		ug/L		101	75 - 125	7	20
Sodium	11600		50000	60380		ug/L		98	75 - 125	6	20
Vanadium	25.2		500	504.3		ug/L		96	75 - 125	7	20

Lab Sample ID: 280-105592-10 MSD
 Matrix: Water
 Analysis Batch: 402549

Client Sample ID: B3FW88
 Prep Type: Dissolved
 Prep Batch: 402173

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Calcium	31300		50000	77780		ug/L		93	75 - 125	7	20
Iron	58.9	B	1000	1014		ug/L		96	75 - 125	7	20

TestAmerica Denver

Client: CH2M Hill Plateau Remediation Company
 Project/Site: S18-001 / I18-004

TestAmerica Job ID: 280-105592-1
 SDG: DN0309

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 280-402175/1-A
Matrix: Water
Analysis Batch: 402890

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 402175

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9.2	U	50.0	9.2	ug/L		01/22/18 07:35	01/25/18 14:32	1
Antimony	0.40	U	2.0	0.40	ug/L		01/22/18 07:35	01/25/18 14:32	1
Arsenic	0.33	U	5.0	0.33	ug/L		01/22/18 07:35	01/25/18 14:32	1
Barium	0.29	U	1.0	0.29	ug/L		01/22/18 07:35	01/25/18 14:32	1
Beryllium	0.080	U	1.0	0.080	ug/L		01/22/18 07:35	01/25/18 14:32	1
Cadmium	0.27	U	1.0	0.27	ug/L		01/22/18 07:35	01/25/18 14:32	1
Chromium	0.50	U	2.0	0.50	ug/L		01/22/18 07:35	01/25/18 14:32	1
Cobalt	0.054	U	1.0	0.054	ug/L		01/22/18 07:35	01/25/18 14:32	1
Copper	0.56	U	2.0	0.56	ug/L		01/22/18 07:35	01/25/18 14:32	1
Lead	0.18	U	1.0	0.18	ug/L		01/22/18 07:35	01/25/18 14:32	1
Manganese	0.31	U	1.0	0.31	ug/L		01/22/18 07:35	01/25/18 14:32	1
Molybdenum	0.14	U	2.0	0.14	ug/L		01/22/18 07:35	01/25/18 14:32	1
Nickel	0.30	U	2.0	0.30	ug/L		01/22/18 07:35	01/25/18 14:32	1
Selenium	0.70	U	5.0	0.70	ug/L		01/22/18 07:35	01/25/18 14:32	1
Silver	0.033	U	5.0	0.033	ug/L		01/22/18 07:35	01/25/18 14:32	1
Strontium	0.30	U	10.0	0.30	ug/L		01/22/18 07:35	01/25/18 14:32	1
Thallium	0.050	U	1.0	0.050	ug/L		01/22/18 07:35	01/25/18 14:32	1
Thorium	1.2	U	5.0	1.2	ug/L		01/22/18 07:35	01/25/18 14:32	1
Tin	0.77	U	10.0	0.77	ug/L		01/22/18 07:35	01/25/18 14:32	1
Uranium	0.050	U	1.0	0.050	ug/L		01/22/18 07:35	01/25/18 14:32	1
Zinc	2.0	U	10.0	2.0	ug/L		01/22/18 07:35	01/25/18 14:32	1

Lab Sample ID: LCS 280-402175/2-A
Matrix: Water
Analysis Batch: 402890

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 402175

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Aluminum	400	406.6		ug/L		102	80 - 120
Antimony	40.0	40.65		ug/L		102	80 - 120
Arsenic	40.0	39.82		ug/L		100	80 - 120
Barium	40.0	39.08		ug/L		98	80 - 120
Beryllium	40.0	40.40		ug/L		101	80 - 120
Cadmium	40.0	41.59		ug/L		104	80 - 120
Chromium	40.0	42.09		ug/L		105	80 - 120
Cobalt	40.0	41.82		ug/L		105	80 - 120
Copper	40.0	41.99		ug/L		105	80 - 120
Lead	40.0	41.68		ug/L		104	80 - 120
Manganese	40.0	42.52		ug/L		106	80 - 120
Molybdenum	40.0	41.16		ug/L		103	80 - 120
Nickel	40.0	42.64		ug/L		107	80 - 120
Selenium	40.0	40.77		ug/L		102	80 - 120
Silver	40.0	42.01		ug/L		105	80 - 120
Strontium	40.0	41.27		ug/L		103	80 - 120
Thallium	40.0	41.14		ug/L		103	80 - 120
Thorium	40.0	39.51		ug/L		99	80 - 120
Tin	40.0	41.86		ug/L		105	80 - 120
Uranium	40.0	40.40		ug/L		101	80 - 120
Zinc	40.0	43.40		ug/L		109	80 - 120

TestAmerica Denver

Client: CH2M Hill Plateau Remediation Company
 Project/Site: S18-001 / I18-004

TestAmerica Job ID: 280-105592-1
 SDG: DN0309

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

Lab Sample ID: 280-105592-9 MS

Matrix: Water

Analysis Batch: 402890

Client Sample ID: B3FYD9

Prep Type: Total/NA

Prep Batch: 402175

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Aluminum	9.2	U	400	426.9		ug/L		107	75 - 125
Antimony	0.40	U	40.0	43.73		ug/L		109	75 - 125
Arsenic	3.3	B	40.0	44.06		ug/L		102	75 - 125
Barium	54.0		40.0	96.51		ug/L		106	75 - 125
Beryllium	0.080	U	40.0	42.83		ug/L		107	75 - 125
Cadmium	0.27	U	40.0	41.43		ug/L		104	75 - 125
Chromium	136		40.0	178.7		ug/L		106	75 - 125
Cobalt	0.054	U	40.0	42.02		ug/L		105	75 - 125
Copper	0.56	U	40.0	42.16		ug/L		105	75 - 125
Lead	0.18	U	40.0	43.02		ug/L		108	75 - 125
Manganese	1.1		40.0	43.10		ug/L		105	75 - 125
Molybdenum	14.6		40.0	57.14		ug/L		106	75 - 125
Nickel	1.2	B	40.0	43.00		ug/L		105	75 - 125
Selenium	2.7	B	40.0	43.30		ug/L		102	75 - 125
Silver	0.056	B	40.0	41.91		ug/L		105	75 - 125
Strontium	183		40.0	227.1	X	ug/L		109	75 - 125
Thallium	0.050	U	40.0	42.34		ug/L		106	75 - 125
Thorium	1.2	U	40.0	41.61		ug/L		104	75 - 125
Tin	0.77	U	40.0	42.86		ug/L		107	75 - 125
Uranium	2.4		40.0	44.21		ug/L		104	75 - 125
Zinc	2.1	B N	40.0	53.16	N	ug/L		128	75 - 125

Lab Sample ID: 280-105592-9 MSD

Matrix: Water

Analysis Batch: 402890

Client Sample ID: B3FYD9

Prep Type: Total/NA

Prep Batch: 402175

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Aluminum	9.2	U	400	427.3		ug/L		107	75 - 125	0	20
Antimony	0.40	U	40.0	43.54		ug/L		109	75 - 125	0	20
Arsenic	3.3	B	40.0	44.83		ug/L		104	75 - 125	2	20
Barium	54.0		40.0	92.62		ug/L		97	75 - 125	4	20
Beryllium	0.080	U	40.0	44.26		ug/L		111	75 - 125	3	20
Cadmium	0.27	U	40.0	41.44		ug/L		104	75 - 125	0	20
Chromium	136		40.0	173.2		ug/L		93	75 - 125	3	20
Cobalt	0.054	U	40.0	42.20		ug/L		105	75 - 125	0	20
Copper	0.56	U	40.0	42.93		ug/L		107	75 - 125	2	20
Lead	0.18	U	40.0	43.12		ug/L		108	75 - 125	0	20
Manganese	1.1		40.0	43.89		ug/L		107	75 - 125	2	20
Molybdenum	14.6		40.0	57.30		ug/L		107	75 - 125	0	20
Nickel	1.2	B	40.0	43.34		ug/L		105	75 - 125	1	20
Selenium	2.7	B	40.0	46.23		ug/L		109	75 - 125	7	20
Silver	0.056	B	40.0	42.22		ug/L		105	75 - 125	1	20
Strontium	183		40.0	219.5	X	ug/L		90	75 - 125	3	20
Thallium	0.050	U	40.0	42.64		ug/L		107	75 - 125	1	20
Thorium	1.2	U	40.0	41.24		ug/L		103	75 - 125	1	20
Tin	0.77	U	40.0	43.81		ug/L		110	75 - 125	2	20
Uranium	2.4		40.0	44.00		ug/L		104	75 - 125	0	20
Zinc	2.1	B N	40.0	44.19		ug/L		105	75 - 125	18	20

TestAmerica Denver

Client: CH2M Hill Plateau Remediation Company
 Project/Site: S18-001 / I18-004

TestAmerica Job ID: 280-105592-1
 SDG: DN0309

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

Lab Sample ID: MB 280-402178/1-A
 Matrix: Water
 Analysis Batch: 402890

Client Sample ID: Method Blank
 Prep Type: Total Recoverable
 Prep Batch: 402178

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9.2	U	50.0	9.2	ug/L		01/22/18 07:35	01/25/18 13:41	1
Antimony	0.40	U	2.0	0.40	ug/L		01/22/18 07:35	01/25/18 13:41	1
Arsenic	0.33	U	5.0	0.33	ug/L		01/22/18 07:35	01/25/18 13:41	1
Barium	0.29	U	1.0	0.29	ug/L		01/22/18 07:35	01/25/18 13:41	1
Beryllium	0.080	U	1.0	0.080	ug/L		01/22/18 07:35	01/25/18 13:41	1
Cadmium	0.27	U	1.0	0.27	ug/L		01/22/18 07:35	01/25/18 13:41	1
Chromium	0.50	U	2.0	0.50	ug/L		01/22/18 07:35	01/25/18 13:41	1
Cobalt	0.054	U	1.0	0.054	ug/L		01/22/18 07:35	01/25/18 13:41	1
Copper	0.56	U	2.0	0.56	ug/L		01/22/18 07:35	01/25/18 13:41	1
Lead	0.18	U	1.0	0.18	ug/L		01/22/18 07:35	01/25/18 13:41	1
Manganese	0.31	U	1.0	0.31	ug/L		01/22/18 07:35	01/25/18 13:41	1
Molybdenum	0.14	U	2.0	0.14	ug/L		01/22/18 07:35	01/25/18 13:41	1
Nickel	0.30	U	2.0	0.30	ug/L		01/22/18 07:35	01/25/18 13:41	1
Selenium	0.70	U	5.0	0.70	ug/L		01/22/18 07:35	01/25/18 13:41	1
Silver	0.033	U	5.0	0.033	ug/L		01/22/18 07:35	01/25/18 13:41	1
Strontium	0.30	U	10.0	0.30	ug/L		01/22/18 07:35	01/25/18 13:41	1
Thallium	0.050	U	1.0	0.050	ug/L		01/22/18 07:35	01/25/18 13:41	1
Thorium	1.2	U	5.0	1.2	ug/L		01/22/18 07:35	01/25/18 13:41	1
Tin	0.77	U	10.0	0.77	ug/L		01/22/18 07:35	01/25/18 13:41	1
Uranium	0.050	U	1.0	0.050	ug/L		01/22/18 07:35	01/25/18 13:41	1
Zinc	2.0	U	10.0	2.0	ug/L		01/22/18 07:35	01/25/18 13:41	1

Lab Sample ID: LCS 280-402178/2-A
 Matrix: Water
 Analysis Batch: 402890

Client Sample ID: Lab Control Sample
 Prep Type: Total Recoverable
 Prep Batch: 402178

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Aluminum	400	437.6		ug/L		109	80 - 120
Antimony	40.0	41.10		ug/L		103	80 - 120
Arsenic	40.0	41.33		ug/L		103	80 - 120
Barium	40.0	42.19		ug/L		105	80 - 120
Beryllium	40.0	44.18		ug/L		110	80 - 120
Cadmium	40.0	41.50		ug/L		104	80 - 120
Chromium	40.0	43.88		ug/L		110	80 - 120
Cobalt	40.0	44.51		ug/L		111	80 - 120
Copper	40.0	44.34		ug/L		111	80 - 120
Lead	40.0	43.09		ug/L		108	80 - 120
Manganese	40.0	43.87		ug/L		110	80 - 120
Molybdenum	40.0	43.69		ug/L		109	80 - 120
Nickel	40.0	44.95		ug/L		112	80 - 120
Selenium	40.0	43.18		ug/L		108	80 - 120
Silver	40.0	43.51		ug/L		109	80 - 120
Strontium	40.0	41.96		ug/L		105	80 - 120
Thallium	40.0	41.99		ug/L		105	80 - 120
Thorium	40.0	41.33		ug/L		103	80 - 120
Tin	40.0	42.55		ug/L		106	80 - 120
Uranium	40.0	41.47		ug/L		104	80 - 120
Zinc	40.0	46.72		ug/L		117	80 - 120

TestAmerica Denver

Client: CH2M Hill Plateau Remediation Company
 Project/Site: S18-001 / I18-004

TestAmerica Job ID: 280-105592-1
 SDG: DN0309

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

Lab Sample ID: 280-105592-10 MS

Matrix: Water

Analysis Batch: 402890

Client Sample ID: B3FW88

Prep Type: Dissolved

Prep Batch: 402178

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits	%Rec.
Aluminum	9.2	U	400	396.4		ug/L		99	75 - 125	
Antimony	0.40	U	40.0	38.83		ug/L		97	75 - 125	
Arsenic	7.6		40.0	45.65		ug/L		95	75 - 125	
Barium	29.6		40.0	68.74		ug/L		98	75 - 125	
Beryllium	0.080	U	40.0	39.81		ug/L		100	75 - 125	
Cadmium	0.27	U	40.0	36.70		ug/L		92	75 - 125	
Chromium	4.0		40.0	41.72		ug/L		94	75 - 125	
Cobalt	0.13	B	40.0	37.47		ug/L		93	75 - 125	
Copper	0.59	B	40.0	38.66		ug/L		95	75 - 125	
Lead	0.18	U	40.0	39.78		ug/L		99	75 - 125	
Manganese	0.85	B	40.0	38.84		ug/L		95	75 - 125	
Molybdenum	2.1		40.0	41.03		ug/L		97	75 - 125	
Nickel	2.3		40.0	40.36		ug/L		95	75 - 125	
Selenium	0.70	U	40.0	39.53		ug/L		99	75 - 125	
Silver	0.033	U	40.0	34.04		ug/L		85	75 - 125	
Strontium	150		40.0	188.5		ug/L		97	75 - 125	
Thallium	0.050	U	40.0	40.24		ug/L		101	75 - 125	
Thorium	1.2	U	40.0	38.16		ug/L		95	75 - 125	
Tin	0.77	U	40.0	38.25		ug/L		96	75 - 125	
Uranium	2.1		40.0	41.19		ug/L		98	75 - 125	
Zinc	2.0	U	40.0	41.31		ug/L		103	75 - 125	

Lab Sample ID: 280-105592-10 MSD

Matrix: Water

Analysis Batch: 402890

Client Sample ID: B3FW88

Prep Type: Dissolved

Prep Batch: 402178

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Aluminum	9.2	U	400	422.8		ug/L		106	75 - 125	6	20
Antimony	0.40	U	40.0	41.00		ug/L		103	75 - 125	5	20
Arsenic	7.6		40.0	47.35		ug/L		99	75 - 125	4	20
Barium	29.6		40.0	72.65		ug/L		108	75 - 125	6	20
Beryllium	0.080	U	40.0	41.21		ug/L		103	75 - 125	3	20
Cadmium	0.27	U	40.0	38.46		ug/L		96	75 - 125	5	20
Chromium	4.0		40.0	44.77		ug/L		102	75 - 125	7	20
Cobalt	0.13	B	40.0	39.19		ug/L		98	75 - 125	5	20
Copper	0.59	B	40.0	41.08		ug/L		101	75 - 125	6	20
Lead	0.18	U	40.0	41.59		ug/L		104	75 - 125	4	20
Manganese	0.85	B	40.0	40.74		ug/L		100	75 - 125	5	20
Molybdenum	2.1		40.0	42.65		ug/L		102	75 - 125	4	20
Nickel	2.3		40.0	41.77		ug/L		99	75 - 125	3	20
Selenium	0.70	U	40.0	40.59		ug/L		101	75 - 125	3	20
Silver	0.033	U	40.0	40.09		ug/L		100	75 - 125	16	20
Strontium	150		40.0	199.1		ug/L		124	75 - 125	5	20
Thallium	0.050	U	40.0	41.30		ug/L		103	75 - 125	3	20
Thorium	1.2	U	40.0	39.30		ug/L		98	75 - 125	3	20
Tin	0.77	U	40.0	40.64		ug/L		102	75 - 125	6	20
Uranium	2.1		40.0	42.55		ug/L		101	75 - 125	3	20
Zinc	2.0	U	40.0	41.48		ug/L		104	75 - 125	0	20

TestAmerica Denver

Client: CH2M Hill Plateau Remediation Company
 Project/Site: S18-001 / I18-004

TestAmerica Job ID: 280-105592-1
 SDG: DN0309

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-402461/29
Matrix: Water
Analysis Batch: 402461

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	2500	B	5000	1070	ug/L			01/22/18 16:21	1
Bicarbonate Alkalinity as CaCO3	1530	B	5000	1070	ug/L			01/22/18 16:21	1
Carbonate Alkalinity as CaCO3	1070	U	5000	1070	ug/L			01/22/18 16:21	1
Hydroxide Alkalinity as CaCO3	1070	U	5000	1070	ug/L			01/22/18 16:21	1

Lab Sample ID: LCS 280-402461/28
Matrix: Water
Analysis Batch: 402461

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3	200000	183200		ug/L		92	80 - 120

Lab Sample ID: 280-105592-3 DU
Matrix: Water
Analysis Batch: 402461

Client Sample ID: B3FW53
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity as CaCO3	1070	U	1070	U	ug/L		NC	20

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

Client: CH2M Hill Plateau Remediation Company
 Project/Site: S18-001 / I18-004

TestAmerica Job ID: 280-105592-1
 SDG: DN0309

Metals

Prep Batch: 402172

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-105592-1	B3FW28	Total/NA	Water	3010A	
280-105592-9	B3FYD9	Total/NA	Water	3010A	
280-105592-11	B3FYH1	Total/NA	Water	3010A	
280-105592-14	B3FVW5	Total/NA	Water	3010A	
MB 280-402172/1-A	Method Blank	Total/NA	Water	3010A	
LCS 280-402172/2-A	Lab Control Sample	Total/NA	Water	3010A	
280-105592-9 MS	B3FYD9	Total/NA	Water	3010A	
280-105592-9 MSD	B3FYD9	Total/NA	Water	3010A	

Prep Batch: 402173

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-105592-2	B3FW30	Dissolved	Water	3005A	
280-105592-8	B3FWR8	Dissolved	Water	3005A	
280-105592-10	B3FW88	Dissolved	Water	3005A	
280-105592-13	B3FVW7	Dissolved	Water	3005A	
MB 280-402173/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 280-402173/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-105592-10 MS	B3FW88	Dissolved	Water	3005A	
280-105592-10 MSD	B3FW88	Dissolved	Water	3005A	

Prep Batch: 402175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-105592-1	B3FW28	Total/NA	Water	3020A	
280-105592-4	B3FXJ8	Total/NA	Water	3020A	
280-105592-6	B3FWN9	Total/NA	Water	3020A	
280-105592-9	B3FYD9	Total/NA	Water	3020A	
280-105592-11	B3FYH1	Total/NA	Water	3020A	
280-105592-14	B3FVW5	Total/NA	Water	3020A	
MB 280-402175/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-402175/2-A	Lab Control Sample	Total/NA	Water	3020A	
280-105592-9 MS	B3FYD9	Total/NA	Water	3020A	
280-105592-9 MSD	B3FYD9	Total/NA	Water	3020A	

Prep Batch: 402178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-105592-2	B3FW30	Dissolved	Water	3005A	
280-105592-7	B3FWP2	Dissolved	Water	3005A	
280-105592-8	B3FWR8	Dissolved	Water	3005A	
280-105592-10	B3FW88	Dissolved	Water	3005A	
280-105592-13	B3FVW7	Dissolved	Water	3005A	
MB 280-402178/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 280-402178/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-105592-10 MS	B3FW88	Dissolved	Water	3005A	
280-105592-10 MSD	B3FW88	Dissolved	Water	3005A	

Analysis Batch: 402397

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-105592-1	B3FW28	Total/NA	Water	6010D	402172
280-105592-2	B3FW30	Dissolved	Water	6010D	402173
280-105592-8	B3FWR8	Dissolved	Water	6010D	402173
280-105592-9	B3FYD9	Total/NA	Water	6010D	402172



Client: CH2M Hill Plateau Remediation Company
 Project/Site: S18-001 / I18-004

TestAmerica Job ID: 280-105592-1
 SDG: DN0309

Metals (Continued)

Analysis Batch: 402397 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-105592-10	B3FW88	Dissolved	Water	6010D	402173
280-105592-11	B3FYH1	Total/NA	Water	6010D	402172
280-105592-13	B3FVW7	Dissolved	Water	6010D	402173
280-105592-14	B3FVW5	Total/NA	Water	6010D	402172
MB 280-402172/1-A	Method Blank	Total/NA	Water	6010D	402172
MB 280-402173/1-A	Method Blank	Total Recoverable	Water	6010D	402173
LCS 280-402172/2-A	Lab Control Sample	Total/NA	Water	6010D	402172
LCS 280-402173/2-A	Lab Control Sample	Total Recoverable	Water	6010D	402173
280-105592-9 MS	B3FYD9	Total/NA	Water	6010D	402172
280-105592-9 MSD	B3FYD9	Total/NA	Water	6010D	402172
280-105592-10 MS	B3FW88	Dissolved	Water	6010D	402173
280-105592-10 MSD	B3FW88	Dissolved	Water	6010D	402173

Analysis Batch: 402549

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-105592-1	B3FW28	Total/NA	Water	6010D	402172
280-105592-2	B3FW30	Dissolved	Water	6010D	402173
280-105592-8	B3FWR8	Dissolved	Water	6010D	402173
280-105592-9	B3FYD9	Total/NA	Water	6010D	402172
280-105592-10	B3FW88	Dissolved	Water	6010D	402173
280-105592-11	B3FYH1	Total/NA	Water	6010D	402172
280-105592-13	B3FVW7	Dissolved	Water	6010D	402173
280-105592-14	B3FVW5	Total/NA	Water	6010D	402172
MB 280-402172/1-A	Method Blank	Total/NA	Water	6010D	402172
MB 280-402173/1-A	Method Blank	Total Recoverable	Water	6010D	402173
LCS 280-402172/2-A	Lab Control Sample	Total/NA	Water	6010D	402172
LCS 280-402173/2-A	Lab Control Sample	Total Recoverable	Water	6010D	402173
280-105592-9 MS	B3FYD9	Total/NA	Water	6010D	402172
280-105592-9 MSD	B3FYD9	Total/NA	Water	6010D	402172
280-105592-10 MS	B3FW88	Dissolved	Water	6010D	402173
280-105592-10 MSD	B3FW88	Dissolved	Water	6010D	402173

Analysis Batch: 402890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-105592-1	B3FW28	Total/NA	Water	6020B	402175
280-105592-2	B3FW30	Dissolved	Water	6020B	402178
280-105592-4	B3FXJ8	Total/NA	Water	6020B	402175
280-105592-6	B3FVN9	Total/NA	Water	6020B	402175
280-105592-7	B3FWP2	Dissolved	Water	6020B	402178
280-105592-8	B3FWR8	Dissolved	Water	6020B	402178
280-105592-9	B3FYD9	Total/NA	Water	6020B	402175
280-105592-10	B3FW88	Dissolved	Water	6020B	402178
280-105592-11	B3FYH1	Total/NA	Water	6020B	402175
280-105592-13	B3FVW7	Dissolved	Water	6020B	402178
280-105592-14	B3FVW5	Total/NA	Water	6020B	402175
MB 280-402175/1-A	Method Blank	Total/NA	Water	6020B	402175
MB 280-402178/1-A	Method Blank	Total Recoverable	Water	6020B	402178
LCS 280-402175/2-A	Lab Control Sample	Total/NA	Water	6020B	402175
LCS 280-402178/2-A	Lab Control Sample	Total Recoverable	Water	6020B	402178
280-105592-9 MS	B3FYD9	Total/NA	Water	6020B	402175
280-105592-9 MSD	B3FYD9	Total/NA	Water	6020B	402175

TestAmerica Denver



January 31, 2018
QC Association Summary

Rev 0

Client: CH2M Hill Plateau Remediation Company
Project/Site: S18-001 / I18-004

TestAmerica Job ID: 280-105592-1
SDG: DN0309

Metals (Continued)

Analysis Batch: 402890 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-105592-10 MS	B3FW88	Dissolved	Water	6020B	402178
280-105592-10 MSD	B3FW88	Dissolved	Water	6020B	402178

General Chemistry

Analysis Batch: 402461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-105592-1	B3FW28	Total/NA	Water	SM 2320B	
280-105592-3	B3FW53	Total/NA	Water	SM 2320B	
280-105592-5	B3FW54	Total/NA	Water	SM 2320B	
280-105592-12	B3FYF2	Total/NA	Water	SM 2320B	
MB 280-402461/29	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-402461/28	Lab Control Sample	Total/NA	Water	SM 2320B	
280-105592-3 DU	B3FW53	Total/NA	Water	SM 2320B	

