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: 280-102659-1
TestAmerica Sample Delivery Group: DN0250
Client Project/Site: W18-010 / S18-010 / I18-001 / X18-005

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

Attn: Mr. Scot Fitzgerald

Darlene Bandy

Authorized for release by:
11/29/2017 9:57:28 AM

Darlene Bandy, Project Manager I
(303)736-0100
darlene.bandy@testamericainc.com

LINKS

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

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

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

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Job ID: 280-102659-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: CH2M Hill Plateau Remediation Company

Project: W18-010 / S18-010 / I18-001 / X18-005

Report Number: 280-102659-1

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 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, Ethyl Cyanide 8260B, Total Organic Halides 9020B. 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 10/21/2017 8:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 0.8º C, 1.7º C and 2.3º C.

Receipt Exceptions

Due to a laboratory spiking error, the 8082 Pesticides analysis requested on the chain of custody for sample B3D982 is not reportable, and this analysis has been cancelled (SIR18-0148).

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples B3D557 (280-102659-3), B3D817 (280-102659-15) and B3DD55 (280-102659-16) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 10/29/2017.

2-Butanone (MEK) exceeded the RPD limit for the MS/MSD of sample B3D557 (280-102659-3) in batch 280-393143, and the MSD result has been flagged '"y". The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

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

CHLORINATED HERBICIDES

Samples B3D963 (280-102659-5), B3D962 (280-102659-6), B3D960 (280-102659-8), B3D966 (280-102659-14), B3D944 (280-102659-17) and B3D945 (280-102659-18) were analyzed for chlorinated herbicides in accordance with EPA SW-846 Method 8151A. The samples were prepared on 10/26/2017 and 10/27/2017 and analyzed on 11/21/2017 and 11/22/2017.

Dinoseb failed the recovery criteria low for LCS 280-392775/2-A at 59%. All associated results are flagged "o". This is within TestAmerica Denver's standard control limits of 25-132% for Dinoseb, but below the project-specific limits of 70-130%. Re-extraction could not be performed within 2x hold time; therefore, as instructed by the client, the data have been reported (SIR18-0195).

Job ID: 280-102659-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

Dalapon and Dinoseb failed the recovery criteria low for LCS 280-393044/2-A at 69% and 59% respectively. 2,4,5-T, 2,4-DB, Dalapon, Dicamba, Dinoseb and Silvex (2,4,5-TP) failed the recovery criteria low for LCSD 280-393044/3-A at 65%, 68%, 63%, 67%, 41%, and 68% respectively. All associated results are flagged "o". All analytes recovered within TestAmerica Denver's standard control limits, but below the project-specific limits of 70-130%. In addition, 2,4-DB and Dinoseb exceeded the RPD limit, and all associated results are flagged "y". All analytes were non-detect. Re-extraction could not be performed within 2x hold time; therefore, as instructed by the client, the data have been reported (SIR18-0196).

For the matrix spike duplicate performed on sample B3D945 (280-102659-18) for prep batch 280-393044, Silvex recovered below the lower limit on the front column (33% limits 48-127), therefore the data is being reported off the back column which is in control.

The continuing calibration verification (CCV) associated with batch 280-396048 recovered above the upper control limit for 2,4,5-T +23.2%D, 2,4-D +17.1%D, DCAA +18.7%D, MCPP -16.1%D and Silvex (2,4,5-TP) +17.1%D on the front column and dinoseb -25.5%D on the back column. The results for MCPP and dinoseb were reported from the column that met control limits. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported (SIR18-0195). The following samples are impacted: B3D963 (280-102659-5), B3D962 (280-102659-6), B3D962 (280-102659-6[MS]), B3D962 (280-102659-6[MSD]), B3D960 (280-102659-8), B3D966 (280-102659-14), (CCVRT 280-396048/8), (LCS 280-392775/2-A) and (MB 280-392775/1-A).

The continuing calibration verification (CCV) associated with batch 280-396048 recovered above the upper control limit for 2,4-D +36.8%D, 2,4,5-T +42.7%D, Silvex (2,4,5-TP) +32.9%D, DCAA+34.7%D, Dicamba +28.8%D, 2,4-DB 23.6%D, Dalapon 18.6% and Dichlorprop 24.9%D on the front column and dinoseb -16.6%D on the back column. Dinoseb was reported from the column that met control limits. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported (SIR18-0195). The following samples are impacted: B3D963 (280-102659-5), B3D962 (280-102659-6), B3D962 (280-102659-6[MS]), B3D962 (280-102659-6[MSD]), B3D960 (280-102659-8), B3D966 (280-102659-14), (CCV 280-396048/22), (LCS 280-392775/2-A) and (MB 280-392775/1-A).

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

DISSOLVED METALS (ICP)

Samples B3D3K8 (280-102659-2), B3D252 (280-102659-9), B3D3K7 (280-102659-10) and B3D3P1 (280-102659-12) were analyzed for Dissolved Metals (ICP) in accordance with EPA SW846 6010D. The samples were prepared on 10/26/2017 and analyzed on 10/26/2017 and 10/27/2017.

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

TOTAL METALS (ICP)

Samples B3D255 (280-102659-1), B3D248 (280-102659-7), B3D254 (280-102659-11) and B3D982 (280-102659-13) were analyzed for Total Metals (ICP) in accordance with EPA SW846 6010D. The samples were prepared on 10/23/2017 and analyzed on 10/26/2017 and 10/27/2017.

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

DISSOLVED METALS (ICP-MS)

Samples B3D3K8 (280-102659-2), B3D252 (280-102659-9), B3D3K7 (280-102659-10) and B3D3P1 (280-102659-12) were analyzed for Dissolved Metals (ICP-MS) in accordance with SW846 6020B. The samples were prepared on 10/26/2017 and analyzed on 10/26/2017, 10/27/2017 and 10/30/2017.

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 accuracy and precision of Strontium in the MS/MSD performed on sample B3D3K8 (280-102659-2) in prep batch 280-392420 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".

Job ID: 280-102659-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

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

TOTAL METALS (ICP/MS)
Samples B3D255 (280-102659-1), B3D248 (280-102659-7), B3D254 (280-102659-11) and B3D982 (280-102659-13) were analyzed for Total Metals (ICP/MS) in accordance with SW846 6020B. The samples were prepared on 10/26/2017 and analyzed on 10/26/2017 and 10/27/2017.

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 accuracy and precision of Strontium in the MS/MSD performed on sample B3D982 (280-102659-13) in prep batch 280-392417 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.

DISSOLVED MERCURY
Samples B3D3K8 (280-102659-2), B3D252 (280-102659-9), B3D3K7 (280-102659-10) and B3D3P1 (280-102659-12) were analyzed for dissolved mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 11/13/2017.

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

TOTAL MERCURY
Samples B3D255 (280-102659-1), B3D248 (280-102659-7), B3D254 (280-102659-11) and B3D982 (280-102659-13) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 11/13/2017.

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

ALKALINITY
Sample B3D982 (280-102659-13) was analyzed for Alkalinity in accordance with SM20 2320B. The samples were analyzed on 10/24/2017.

Alkalinity as CaCO3 was detected in method blank MB 280-392632/5 at a level that was above the method detection limit but below 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.

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

TOTAL CYANIDE
Sample B3DD47 (280-102659-4) was analyzed for total cyanide in accordance with EPA SW-846 Method 9012B. The samples were prepared on 10/26/2017 and analyzed on 10/29/2017.

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

TOTAL ORGANIC HALIDES
Sample B3DD55 (280-102659-16) was analyzed for total organic halides in accordance with EPA SW846 Method 9020B. The samples were analyzed on 11/09/2017.

It can be noted that the MS/MSD for batch 365887 was performed on sample B3D3K0 (280-102741-6) in SDG DN0252, and all spike parameters were within control limits. The following samples in this SDG are associated with this MS/MSD: B3DD55 (280-102659-16).

Case Narrative

Job ID: 280-102659-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

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

TOTAL ORGANIC CARBON

Sample B3DD47 (280-102659-4) was analyzed for total organic carbon in accordance with EPA SW-846 Method 9060A. The samples were analyzed on 11/14/2017.

No 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

SAMPLE ISSUE RESOLUTION (SIR) REPORT

SIR Number: SIR18-0148
Rev. Number: 0
Date Initiated: 11/21/2017

SAMPLE EVENT INFORMATION

SAF NUM(S): W18-010

LABORATORY: TADN

SAMPLING INFORMATION

NUMBER OF SAMPLES: 1

SAMPLE NUMBERS: B3D982

SAMPLE MATRIX: WATER

SDG NUM(S): DN0250

ISSUE BACKGROUND

CLASS: Laboratory Issue

TYPE: Quality Control Failure

DESCRIPTION: Method 8082A: It was discovered after samples were spiked that the surrogate used for prep batch 280-392737 was made incorrectly. Analysis of 8081/82 Surr_00097 indicated that the standard did not include the appropriate surrogate compounds and actually contained PCB LCS compounds. The expected effects on the data are described below:
The surrogate recoveries have 0% recoveries, as surrogate compounds were omitted from the standard. The samples will be biased high for the PCB that is included in the LCS standard. Affected sample: B3D982 (280-102659-13).
Note: Sample 102659-13 does not have sufficient volume for further re-extraction. We received 4 1-liter ambers. We used the first three as parent, MS, MSD in the original batch. This was sent back for re-prep due to suspected contamination. Then, we used the fourth bottle to re-prep with the same bad surrogate, and then the surrogate issue was identified immediately after the volume was consumed.

RESOLUTION

PROPOSED RESOLUTION: Method 8082A: It was discovered after samples were spiked that the surrogate used for prep batch 280-392737 was made incorrectly. Analysis of 8081/82 Surr_00097 indicated that the standard did not include the appropriate surrogate compounds and actually contained PCB LCS compounds. The expected effects on the data are described below:
The surrogate recoveries have 0% recoveries, as surrogate compounds were omitted from the standard. The samples will be biased high for the PCB that is included in the LCS standard. Affected sample: B3D982 (280-102659-13).
Note: Sample 102659-13 does not have sufficient volume for further re-extraction. We received 4 1-liter ambers. We used the first three as parent, MS, MSD in the original batch. This was sent back for re-prep due to suspected contamination. Then, we used the fourth bottle to re-prep with the same bad surrogate, and then the surrogate issue was identified immediately after the volume was consumed.

FINAL RESOLUTION: Please cancel the analysis.

SUBMITTED BY:

BANDY, DF 11/20/2017

ACCEPTED BY:

MEDLEY, HA 11/21/2017

SAMPLE ISSUE RESOLUTION (SIR) REPORT

SIR Number: SIR18-0195
Rev. Number: 0
Date Initiated: 11/28/2017

SAMPLE EVENT INFORMATION

SAF NUM(S): W18-010

LABORATORY: TADN

SAMPLING INFORMATION

NUMBER OF SAMPLES: 4

SAMPLE NUMBERS: B3D960, B3D962, B3D963, B3D966

SAMPLE MATRIX: WATER

SDG NUM(S): DN0250

ISSUE BACKGROUND

CLASS: Laboratory Issue

TYPE: Quality Control Failure

DESCRIPTION: Method 8151A: The LCS associated with prep batch 392775 exhibited a 55% recovery for Dinoseb. This is within TestAmerica Denver's standard control limits of 25-132% for Dinoseb, but below the project-specific limits of 70-130%.. The samples were non-detect for Dinoseb. The samples are more than 2x out of hold.

In addition, the following two CCV failures were noted:

The continuing calibration verification (CCV) associated with batch 280-396048 recovered above the upper control limit for 2,4,5-T +23.2%D, 2,4-D +17.1%D, DCAA +18.7%D, MCPP -16.1%D and Silvex (2,4,5-TP) +17.1%D on the front column and dinoseb -25.5%D on the back column. The results for MCPP and dinoseb were reported from the column that met control limits. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: B3D963 (280-102659-5), B3D962 (280-102659-6), B3D962 (280-102659-6[MS]), B3D962 (280-102659-6[MSD]), B3D960 (280-102659-8), B3D966 (280-102659-14), (CCVRT 280-396048/8), (LCS 280-392775/2-A) and (MB 280-392775/1-A).

The continuing calibration verification (CCV) associated with batch 280-396048 recovered above the upper control limit for 2,4-D +36.8%D, 2,4,5-T +42.7%D, Silvex (2,4,5-TP) +32.9%D, DCAA+34.7%D, Dicamba +28.8%D, 2,4-DB 23.6%D, Dalapon 18.6% and Dichlorprop 24.9%D on the front column and dinoseb -16.6%D on the back column. Dinoseb was reported from the column that met control limits. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: B3D963 (280-102659-5), B3D962 (280-102659-6), B3D962 (280-102659-6[MS]), B3D962 (280-102659-6 [MSD]), B3D960 (280-102659-8), B3D966 (280-102659-14), (CCV 280-396048/22), (LCS 280-392775/2-A) and (MB 280-392775/1-A).

RESOLUTION

PROPOSED RESOLUTION:	TADN proposes to either report this data with appropriate o flags for the LCS failure and narrate the anomalies, reject the analyses, or re-extract out of hold.
FINAL RESOLUTION:	Please report the data with the appropriate o flags and narrate the anomalies.

SUBMITTED BY:

BANDY, DF 11/29/2017

ACCEPTED BY:

MEDLEY, HA 11/29/2017

SAMPLE ISSUE RESOLUTION (SIR) REPORT

SIR Number: SIR18-0196
Rev. Number: 0
Date Initiated: 11/29/2017

SAMPLE EVENT INFORMATION

SAF NUM(S): W18-010

LABORATORY: TADN

SAMPLING INFORMATION

NUMBER OF SAMPLES: 2

SAMPLE NUMBERS: B3D944, B3D945

SAMPLE MATRIX: WATER

SDG NUM(S): DN0250

ISSUE BACKGROUND

CLASS: Laboratory Issue

TYPE: Quality Control Failure

DESCRIPTION: Method 8151A: The LCS associated with prep batch 393044 exhibited a 69% recovery for Dalapon and a 59% recovery for Dinoseb. The LCSD exhibited a 65% recovery for 2,4,5-T, a 68% recovery for 2,4-DB, a 63% recovery for Dalapon, a 67% recovery for Dicamba, a 41% recovery for Dinoseb, and a 68% recovery for Silvex (2,4,5-TP). This is within TestAmerica Denver's standard control limits of 45-135% for 2,4,5-T; 18-135 % for 2,4-DB; 52-119% for Dalapon; 50-128% for Dicamba; 25-132% for Dinoseb; and 48-127% for Silvex; but below the project-specific limits of 70-130%. In addition, 2,4-DB and Dinoseb exceeded the RPD limit for the LCS/LCSD at 22% and 41% respectively. All sample results were non-detect. The samples are more than 2x out of hold.

RESOLUTION

PROPOSED RESOLUTION: TADN proposes to either report this data with appropriate o flags for the LCS failures and narrate the anomalies, reject the analyses, or re-extract out of hold.

FINAL RESOLUTION: Please report the data with the appropriate o flags and narrate the anomalies.

SUBMITTED BY:

BANDY, DF 11/29/2017

ACCEPTED BY:

MEDLEY, HA 11/29/2017

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 280-102659-1
SDG Number: DN0250

Login Number: 102659
List Number: 1
Creator: Pottruff, Reed W

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	60 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	0.8, 1.7, 2.3 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 85lbs	C.O.C.# W18-010-143 Page 1 of 1

Collector:	Ed Kauer CHPRC DN0250	**Contact/Requester:**	Karen Waters-Husted	**Telephone No.:**	509-376-4650
SAF No.:	W18-010	**Sampling Origin:**	Hanford Site	**Purchase Order/Charge Code:**	300071
Project Title:	RCRA, OCTOBER 2017	**Logbook No.:**	HNF-N-506 -97-7	**Ice Chest No.:**	GLOS-687
Shipped To (Lab):	TestAmerica Denver	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.:**	7705485511 12
Protocol	RCRA	**Priority:**	30 Days	**Offsite Property No.:**	8617

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
B3D255	N	W	OCT 19 2017	1014	1x500-mL G/P	7470_MERCURY_CV: COMMON (AQUEOUS); 6020_METALS_ICPMS: GW 01; 6010_METALS_ICP: GW 04	28 Days	HNO3 to pH <2
B3D3K8	Y	W	OCT 19 2017	1014	1x500-mL G/P	7470_MERCURY_CV: COMMON (AQUEOUS); 6020_METALS_ICPMS: GW 01; 6010_METALS_ICP: GW 04	28 Days	HNO3 to pH <2

280-102659 Chain of Custody

0.7, 1.6, 2.2 ERH 740.1 Transfer RP 10-21-17

Relinquished By	Signature	Date/Time	Received By	Signature	Date/Time
Ed Kauer CHPRC		OCT 19 2017 1207	SSU-1		OCT 19 2017 1207
SSU-1		OCT 20 2017 0700	Lesly Wall /CHPRC		OCT 20 2017 0700
Lesly Wall /CHPRC		OCT 20 2017 1400	FEDEX		
FedEx			Reed Pottruff	Reed Pottruff	10-21-17 083

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:

Printed On 9/5/2017 FSR ID = FSR50600 A-6004-842 (REV 3)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S18-010-315 Page 1 of 1

Collector: Dan Woehle CHPRC DN025D	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: S18-010	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: SURV, OCTOBER 2017	**Logbook No.:** HNF-N-506 - 96-31	**Ice Chest No.:** GWS-687
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 7705 4855 1112
Protocol CERCLA	**Priority:** 30 Days	**Offsite Property No.:** 86017

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
B3D557	N	W	OCT 19 2017	1102	5x40-mL aGs*	8260_VOA_GCMS: COMMON; 8260_VOA_GCMS: GW 01	14 Days	HCl or H2SO4 to pH <2 / Cool <=6C

Relinquished By	Print First and Last Name	Signature	Date/Time	Received By	Print First and Last Name	Signature	Date/Time
Dan Woehle CHPRC			OCT 19 2017 1116	SSU-1			OCT 19 2017 1116
SSU-1			OCT 20 2017 0730	Lesly Wall /CHPRC			OCT 20 2017 0730
Lesly Wall /CHPRC			OCT 20 2017 1400	FEDEX			
FedEx			10-21-17	Reed Poffenroth			10-21-17 0830

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:

Printed On 9/5/2017 FSR ID = FSR50523 A-6004-842 (REV 3)

NOVEMBER 29, 2017 REV.0

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C.# I18-001-099 Page 1 of 1

Collector: MIKE ESPARZA CHPRC DN0250	**Contact/Requester:** WATERS-HUSTED, K	**Telephone No.:** 376-4650
SAF No.: I18-001	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: GW Background Study, October 2	**Logbook No.:** HNF-N-506 94 /161	**Ice Chest No.:** 6605-6807
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 7705485511 12
Protocol SURV	**Priority:** 30 Days	**Offsite Property No.:** 8617

POSSIBLE SAMPLE HAZARDS/REMARK
*Contains Radioactive Material at concentrations that are not be 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
B3DD47	N	W	OCT 19 2017	1215	1x250-mL aG	9012_CYANIDE (TOTAL): COMMON	14 Days	NaOH to pH >=12 / Cool <=6C
B3DD47	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C

Relinquished By	Print First and Last Name	Signature	Date/Time	Received By	Print First and Last Name	Signature	Date/Time
MIKE ESPARZA CHPRC			OCT 19 2017 1245	SSU-1			OCT 19 2017 1245
SSU-1			OCT 20 2017 0730	Lesly Wall /CHPRC			OCT 20 2017 0730
Lesly Wall /CHPRC			OCT 20 2017 1400	FEDEX			
FedEx				Reed Hoff			10-21-17 0830

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:

Printed On 9/18/2017 FSR ID = FSR51199 A-6004-842 (REV 3)

NOVEMBER 29, 2017 REV.0

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C.# W18-010-303 Page 1 of 1

Collector: Ed Kauer CHPRC DN0250	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: W18-010	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: RCRA, OCTOBER 2017	**Logbook No.:** HNF-N-506 -97-7	**Ice Chest No.:** GWS-1687
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 770548551112
Protocol RCRA	**Priority:** 30 Days	**Offsite Property No.:** 8617

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
B3D963	N	W	OCT 19 2017	1018	4x1-L aG	8151_HERBICIDE_GC: COMMON	7/40 Days	Cool <=6C

Relinquished By	Signature	Date/Time	Received By	Signature	Date/Time
Ed Kauer CHPRC		OCT 19 2017 1407	SSU-1		OCT 19 2017 1407
SSU-1		OCT 20 2017 0730	Lesly Wall /CHPRC		OCT 20 2017 0730
Lesly Wall /CHPRC		OCT 20 2017 1400	FEDEX		
FedEx			Reed Pottruff		10-21-17 0830

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:

Printed On 9/5/2017 FSR ID = FSR50600 A-6004-842 (REV 3)

NOVEMBER 29, 2017 REV.0

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W18-010-304 Page 1 of 1

Collector:	Ed Kauer CHPRC DN025	**Contact/Requester:**	Karen Waters-Husted	**Telephone No.:**	509-376-4650
SAF No.:	W18-010	**Sampling Origin:**	Hanford Site	**Purchase Order/Charge Code:**	300071
Project Title:	RCRA, OCTOBER 2017	**Logbook No.:**	HNF-N-506 -97-7	**Ice Chest No.:**	6605-687
Shipped To (Lab):	TestAmerica Denver	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.:**	7705485511 12
Protocol	RCRA	**Priority:**	30 Days	**Offsite Property No.:**	8617

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
B3D962	N	W	OCT 19 2017	1018	4x1-L aG	8151_HERBICIDE_GC: COMMON	7/40 Days	Cool <=6C

Relinquished By:	Received By:	Matrix *
Ed Kauer CHPRC — OCT 19 2017 1207 (Print First and Last Name / Signature / Date/Time)	SSU-1 — OCT 19 2017 1207 (Print First and Last Name / Signature / Date/Time)	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
SSU-1 — OCT 20 2017 0730 (Print First and Last Name / Signature / Date/Time)	Lesly Wall /CHPRC — OCT 20 2017 0730 (Print First and Last Name / Signature / Date/Time)	
Lesly Wall /CHPRC — OCT 20 2017 1400 (Print First and Last Name / Signature / Date/Time)	FEDEX (Print First and Last Name / Signature / Date/Time)	
FedEx (Print First and Last Name / Signature / Date/Time)	Reed Potter, AF — 10-21-17 0830 (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:	Date/Time:

Printed On 9/5/2017 FSR ID = FSR50600 A-6004-842 (REV 3)

NOVEMBER 29, 2017 REV.0

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W18-010-141 Page 1 of 1

Collector: Ed Kauer CHPRC DN0250	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: W18-010	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: RCRA, OCTOBER 2017	**Logbook No.:** HNF-N-506 - 97-7	**Ice Chest No.:** GWS-687
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 7705 4855 1112
Protocol RCRA	**Priority:** 30 Days	**Offsite Property No.:** 8617

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
B3D248	N	W	OCT 19 2017	1143	1x500-mL G/P	7470_MERCURY_CV: COMMON (AQUEOUS); 6020_METALS_ICPMS: GW 01; 6010_METALS_ICP: GW 04	28 Days	HNO3 to pH <2
B3D960	N	W	OCT 19 2017	1143	4x1-L aG	8151_HERBICIDE_GC: COMMON	7/40 Days	Cool <=6C
B3D252	Y	W	OCT 19 2017	1143	1x500-mL G/P	7470_MERCURY_CV: COMMON (AQUEOUS); 6020_METALS_ICPMS: GW 01; 6010_METALS_ICP: GW 04	28 Days	HNO3 to pH <2

Relinquished By	Signature	Date/Time	Received By	Signature	Date/Time
Ed Kauer CHPRC		OCT 19 2017 1207	SSU-1		OCT 19 2017 1207
SSU-1		OCT 20 2017 0730	Lesly Wall /CHPRC		OCT 20 2017 0730
Lesly Wall /CHPRC		OCT 20 2017 1400	FEDEX		
FedEx					10-21-17 0830

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:

Printed On 9/5/2017 FSR ID = FSR50599 A-6004-842 (REV 3)

NOVEMBER 29, 2017 REV.0

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W18-010-142 Page 1 of 1

Collector: Ed Kauer CHPRC DN0250	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: W18-010	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: RCRA, OCTOBER 2017	**Logbook No.:** HNF-N-506 - 97-7	**Ice Chest No.:** GWS-687
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 770548551112
Protocol RCRA	**Priority:** 30 Days	**Offsite Property No.:** 86117

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
B3D3K7	Y	W	OCT 19 2017	1018	1x500-mL G/P	7470_MERCURY_CV: COMMON (AQUEOUS); 6020_METALS_ICPMS: GW 01; 6010_METALS_ICP: GW 04	28 Days	HNO3 to pH <2
B3D254	N	W	OCT 19 2017	1018	1x500-mL G/P	7470_MERCURY_CV: COMMON (AQUEOUS); 6020_METALS_ICPMS: GW 01; 6010_METALS_ICP: GW 04	28 Days	HNO3 to pH <2

Relinquished By (Print First and Last Name)	Signature	Date/Time	Received By (Print First and Last Name)	Signature	Date/Time
Ed Kauer CHPRC		OCT 19 2017 1207	SSU-1		OCT 19 2017 1207
SSU-1		OCT 20 2017 0700	Lesly Wall /CHPRC		OCT 20 2017 0700
Lesly Wall /CHPRC		OCT 20 2017 1400	FEDEX		
Fed Ex			Reed Pothroff		10-21-17 0830

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:

Printed On 9/5/2017 FSR ID = FSR50600 A-6004-842 (REV 3)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W18-010-316 Page 1 of 1

Collector: Roger Friesz Jr. /CHPRC DN0250	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: W18-010	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: RCRA, OCTOBER 2017	**Logbook No.:** HNF-N-506 -97/6	**Ice Chest No.:** GWS-626
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 7705 40071885
Protocol RCRA	**Priority:** 30 Days	**Offsite Property No.:** 8612

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
B3D3P1	Y	W	10-18-17	1259	1x500-mL G/P	7470_MERCURY_CV: COMMON (AQUEOUS); 6020_METALS_ICPMS: GW 01; 6010_METALS_ICP: GW 04	28 Days	HNO3 to pH <2
B3D982	N	W			1x500-mL G/P	7470_MERCURY_CV: COMMON (AQUEOUS); 6020_METALS_ICPMS: GW 01; 6010_METALS_ICP: GW 04	28 Days	HNO3 to pH <2
B3D982	N	W			1x250-mL G/P	2320_ALKALINITY: COMMON	14 Days	Cool <=6C
B3D982	N	W	10-18-17	1259	4x1-L aG	8082_PCB_GC: COMMON	None	Cool <=6C

Relinquished By	Print First and Last Name	Signature	Date/Time	Received By	Print First and Last Name	Signature	Date/Time
Roger Friesz Jr. /CHPRC			OCT 18 2017 1400	SSU-1			OCT 18 2017 1400
SSU-1			OCT 19 2017 0720	Lesly Wall /CHPRC			OCT 19 2017 0720
Lesly Wall /CHPRC			OCT 19 2017 1400	FEDEX			
Fed Ex				Reed Rothrock			10-21-17 0830

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:

Printed On 9/14/2017 FSR ID = FSR51128 A-6004-842 (REV 3)

NOVEMBER 29, 2017 REV.0

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W18-010-306 Page 1 of 1

Collector:	Ed Kauer CHPRC DN0250	**Contact/Requester:**	Karen Waters-Husted	**Telephone No.:**	509-376-4650
SAF No.:	W18-010	**Sampling Origin:**	Hanford Site	**Purchase Order/Charge Code:**	300071
Project Title:	RCRA, OCTOBER 2017	**Logbook No.:**	HNF-N-506 -97-7	**Ice Chest No.:**	GWS-626
Shipped To (Lab):	TestAmerica Denver	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.:**	7705 4007 1885
Protocol	RCRA	**Priority:**	30 Days	**Offsite Property No.:**	8612

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
B3D966	N	W	OCT 19 2017	0843	4x1-L aG	8151_HERBICIDE_GC: COMMON	7/40 Days	Cool <=6C

Relinquished By:	Received By:
Ed Kauer CHPRC — Print First and Last Name / Signature / Date/Time: OCT 19 2017 0932	Lesly Wall ICHPRC — Print First and Last Name / Signature / Date/Time: OCT 19 2017 0932
Lesly Wall ICHPRC — Print First and Last Name / Signature / Date/Time: OCT 19 2017 1400	FEDEX — Print First and Last Name / Signature / Date/Time:
FedEx — Print First and Last Name / Signature / Date/Time:	Reed Rothruff — Print First and Last Name / Signature / Date/Time: 10-21-17 0830
Relinquished By: — Print First and Last Name / Signature / Date/Time:	Received By: — Print First and Last Name / Signature / Date/Time:

Matrix *

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

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

Printed On 9/5/2017 FSR ID = FSR50601 A-6004-842 (REV 3)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X18-005-089 Page 1 of 1

Collector: MIKE ESPARZA CHPRC DW0250	**Contact/Requester:** WATERS-HUSTED, K	**Telephone No.:** 376-4650
SAF No.: X18-005	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: Groundwater Background Study,	**Logbook No.:** HNF-N-506 94 /101	**Ice Chest No.:** 6605-6626
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 7705 4007 1885
Protocol SURV	**Priority:** 30 Days	**Offsite Property No.:** 8612

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

SPECIAL INSTRUCTIONS
Batch with A, I, S, and W SAFs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3D817	N	W	OCT 19 2017	0931	5x40-mL aGs*	8260_VOA_GCMS: COMMON	14 Days	HCl or H2SO4 to pH <2 / Cool <=6C

Relinquished By	Print First and Last Name	Signature	Date/Time	Received By	Print First and Last Name	Signature	Date/Time
MIKE ESPARZA CHPRC			OCT 19 2017 1000	Lesly Wall /CHPRC			OCT 19 2017 1000
Lesly Wall /CHPRC			OCT 19 2017 1400	FEDEX			
FedEx				Reed Pottinuff			10-21-17 0830

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:

Printed On 8/24/2017 FSR ID = FSR50022 A-6004-842 (REV 3)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 85165	C.O.C. # I18-001-107 Page 1 of 1

Collector: MIKE ESPARZA CHPRC DN0250	**Contact/Requester:** WATERS-HUSTED, K	**Telephone No.:** 376-4650
SAF No.: I18-001	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: GW Background Study, October 2	**Logbook No.:** HNF-N-506 94 161	**Ice Chest No.:** GWS-626
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 7705 4007 1885
Protocol SURV	**Priority:** 30 Days	**Offsite Property No.:** 8612

POSSIBLE SAMPLE HAZARDS/REMARK
*Contains Radioactive Material at concentrations that are not be 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
B3DD55	N	W	OCT 19 2017	0931	5x40-mL aGs*	8260_VOA_GCMS: COMMON	14 Days	HCl or H2SO4 to pH <2 / Cool <=6C
B3DD55	N	W			1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2 / Cool <=6C

Relinquished By	Print First and Last Name	Signature	Date/Time	Received By	Print First and Last Name	Signature	Date/Time
MIKE ESPARZA CHPRC	Mike Esparza	Mike Esparza	OCT 19 2017 1000	Lesly Wall /CHPRC	Lesly Wall	Lesly Wall	OCT 19 2017 1000
Lesly Wall /CHPRC	Lesly Wall	Lesly Wall	OCT 19 2017 1400	FEDEX			
FedEx				Reed Pottruff	Reed Pottruff	Reed Pottruff	10-21-17 0830

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:

Printed On 9/18/2017 FSR ID = FSR51200 A-6004-842 (REV 3)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 66165	C.O.C. # W18-010-286 Page 1 of 1

Collector: MIKE ESPARZA CHPRC DW0250	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: W18-010	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: RCRA, OCTOBER 2017	**Logbook No.:** HNF-N-506 96132	**Ice Chest No.:** GWS-393
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 770549429331
Protocol RCRA	**Priority:** 30 Days	**Offsite Property No.:** 8620

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
B3D944	N	W	OCT 20 2017	0818	4x1-L aG	8151_HERBICIDE_GC: COMMON	7/40 Days	Cool <=6C

Relinquished By	Print First and Last Name	Signature	Date/Time	Received By	Print First and Last Name	Signature	Date/Time
MIKE ESPARZA CHPRC			OCT 20 2017 0835	Lesly Wall /CHPRC			OCT 20 2017 0835
Lesly Wall /CHPRC			OCT 20 2017 1400	FEDEX			
FedEx					Reed Pottmaff		10-21-17 0830

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:

Printed On 9/19/2017 FSR ID = FSR51217 A-6004-842 (REV 3)

NOVEMBER 29, 2017 REV.0

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C.# W18-010-285 Page 1 of 1

Collector: MIKE ESPARZA CHPRC	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: W18-010	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: RCRA, OCTOBER 2017	**Logbook No.:** HNF-N-506 96132	**Ice Chest No.:** GWS-393
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 770549429331
Protocol RCRA	**Priority:** 30 Days	**Offsite Property No.:** ~~8600~~ 8620

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

DW 10/20/17

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3D945	N	W	OCT 20 2017	0818	4x1-L aG	8151_HERBICIDE_GC: COMMON	7/40 Days	Cool <=6C

Relinquished By	Print First and Last Name	Signature	Date/Time	Received By	Print First and Last Name	Signature	Date/Time
MIKE ESPARZA CHPRC	Mike Esparza	Mike Esparza	OCT 20 2017 0835	Lesly Wall /CHPRC	Lesly Wall	Lesly Wall	OCT 20 2017 0835
Lesly Wall /CHPRC	Lesly Wall	Lesly Wall	OCT 20 2017 1400	FEDEX			
FedEx				Reed Rothman	Reed Rothman	Reed Rothman	10-21-17 0830

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:

Printed On 9/19/2017 FSR ID = FSR51217 A-6004-842 (REV 3)

IMPORTANT!
FedEx has now returned to standard operations in California. Learn More

FedEx® Tracking

770548551112

Ship date:		Actual delivery:
Fri 10/20/2017		**Sat 10/21/2017 8:30 am**
Richland, WA US	**Delivered** *Signed for by: J POTTRAUF*	ARVADA, CO US

Travel History

Date/Time	Activity	Location
10/21/2017 - Saturday		
8:30 am	Delivered	ARVADA, CO
7:53 am	On FedEx vehicle for delivery	ARVADA, CO
7:50 am	At local FedEx facility	ARVADA, CO
5:18 am	At destination sort facility	DENVER, CO
4:16 am	Departed FedEx location	MEMPHIS, TN
12:34 am	Arrived at FedEx location	MEMPHIS, TN
10/20/2017 - Friday		
11:01 am	Picked up	PASCO, WA
10:18 am	Shipment information sent to FedEx	

Shipment Facts

Tracking Number	770548551112	**Service**	FedEx Priority Overnight
Weight	85 lbs / 38.56 kgs	**Signature services**	Direct signature required
Delivered To	Shipping/Receiving	**Total pieces**	1
Total shipment weight	85 lbs / 38.56 kgs	**Terms**	Third Party
Shipper reference	ptr# 8617	**Packaging**	Your Packaging
Special handling section	For Saturday Delivery, Additional Handling Surcharge, Direct Signature Required	**Standard transit**	10/21/2017 by 12:00 pm

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FedEx® Tracking

770540071885

Ship date:		Actual delivery:
Thu 10/19/2017		**Sat 10/21/2017 8:30 am**
Richland, WA US	**Delivered** *Signed for by: J.POTTRAUF*	ARVADA, CO US

Travel History

Date/Time	Activity	Location
10/21/2017 - Saturday		
8:30 am	Delivered	ARVADA, CO
7:48 am	On FedEx vehicle for delivery	ARVADA, CO
7:45 am	At local FedEx facility	ARVADA, CO
10/20/2017 - Friday		
10.09 pm	At local FedEx facility	DENVER, CO
4:56 pm	At destination sort facility	DENVER, CO
3.54 pm	Departed FedEx location	MEMPHIS, TN
3:32 am	In transit	MEMPHIS, TN
12.19 am	Arrived at FedEx location	MEMPHIS, TN
10/19/2017 - Thursday		
12:51 pm	Shipment information sent to FedEx	
11:16 am	Picked up	PASCO, WA

Shipment Facts

Tracking Number	770540071885	**Service**	FedEx Priority Overnight
Weight	85 lbs / 38 56 kgs	**Dimensions**	29x16x16 in.
Signature services	Direct signature required	**Delivered To**	Shipping/Receiving
Total pieces	1	**Total shipment weight**	85 lbs / 38.56 kgs
Terms	Third Party	**Shipper reference**	ptr# 8612
Packaging	Your Packaging	**Special handling section**	Deliver Weekday, Additional Handling Surcharge, Direct Signature Required
Standard transit	10/20/2017 by 10 30 am		

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FedEx® Tracking

770549429331

Ship date.		Actual delivery
Fri 10/20/2017		Sat 10/21/2017 8:30 am
Richland, WA US	**Delivered** *Signed for by: J.POTTRAUF*	ARVADA, CO US

Travel History

Date/Time	Activity	Location
10/21/2017 - Saturday		
8:30 am	Delivered	ARVADA, CO
7:51 am	On FedEx vehicle for delivery	ARVADA, CO
7:48 am	At local FedEx facility	ARVADA, CO
5:18 am	At destination sort facility	DENVER, CO
4:16 am	Departed FedEx location	MEMPHIS TN
12:34 am	Arrived at FedEx location	MEMPHIS, TN
10/20/2017 - Friday		
11:20 am	Shipment information sent to FedEx	
11:01 am	Picked up	PASCO, WA

Shipment Facts

Tracking Number	770549429331	**Service**	FedEx Priority Overnight
Weight	66 lbs / 29.94 kgs	**Signature services**	Direct signature required
Delivered To	Shipping/Receiving	**Total pieces**	1
Total shipment weight	66 lbs / 29.94 kgs	**Terms**	Third Party
Shipper reference	ptr# 8620/COOLER# GWS-393	**Packaging**	Your Packaging
Special handling section	For Saturday Delivery, Direct Signature Required	**Standard transit**	10/21/2017 by 12:00 pm

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Definitions/Glossary

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
y	Duplicate analysis not within control limits.

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
N	Presumptive evidence of material.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
U	Analyzed for but not detected.
o	LCS, LCSD: Recovery exceeds upper or lower control limits.
y	Duplicate analysis not within control limits.
N	MS, MSD: Spike recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

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

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
8151A	Herbicides (GC)	SW846	TAL DEN
6010D	Metals (ICP)	SW846	TAL DEN
6020B	Metals (ICP/MS)	SW846	TAL DEN
7470A	Mercury (CVAA)	SW846	TAL DEN
9012B	Cyanide, Total andor Amenable	SW846	TAL DEN
9020B	Organic Halides, Total (TOX)	SW846	TAL DEN
9060A	Organic Carbon, Total (TOC)	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

Sample Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-102659-1	B3D255	Water	10/19/17 10:18	10/21/17 08:30
280-102659-2	B3D3K8	Water	10/19/17 10:18	10/21/17 08:30
280-102659-3	B3D557	Water	10/19/17 11:02	10/21/17 08:30
280-102659-4	B3DD47	Water	10/19/17 12:15	10/21/17 08:30
280-102659-5	B3D963	Water	10/19/17 10:18	10/21/17 08:30
280-102659-6	B3D962	Water	10/19/17 10:18	10/21/17 08:30
280-102659-7	B3D248	Water	10/19/17 11:43	10/21/17 08:30
280-102659-8	B3D960	Water	10/19/17 11:43	10/21/17 08:30
280-102659-9	B3D252	Water	10/19/17 11:43	10/21/17 08:30
280-102659-10	B3D3K7	Water	10/19/17 10:18	10/21/17 08:30
280-102659-11	B3D254	Water	10/19/17 10:18	10/21/17 08:30
280-102659-12	B3D3P1	Water	10/18/17 12:59	10/21/17 08:30
280-102659-13	B3D982	Water	10/18/17 12:59	10/21/17 08:30
280-102659-14	B3D966	Water	10/19/17 08:43	10/21/17 08:30
280-102659-15	B3D817	Water	10/19/17 09:31	10/21/17 08:30
280-102659-16	B3DD55	Water	10/19/17 09:31	10/21/17 08:30
280-102659-17	B3D944	Water	10/20/17 08:18	10/21/17 08:30
280-102659-18	B3D945	Water	10/20/17 08:18	10/21/17 08:30

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: B3D557
Date Collected: 10/19/17 11:02
Date Received: 10/21/17 08:30

Lab Sample ID: 280-102659-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.16	U	1.0	0.16	ug/L			10/29/17 11:38	1
1,1,2-Trichloroethane	0.27	U	1.0	0.27	ug/L			10/29/17 11:38	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			10/29/17 11:38	1
1,1-Dichloroethene	0.23	U	1.0	0.23	ug/L			10/29/17 11:38	1
1,2-Dichloroethane	0.13	U	1.0	0.13	ug/L			10/29/17 11:38	1
1,4-Dichlorobenzene	0.16	U	1.0	0.16	ug/L			10/29/17 11:38	1
1-Butanol	17	U	60	17	ug/L			10/29/17 11:38	1
2-Butanone (MEK)	2.0	U	6.0	2.0	ug/L			10/29/17 11:38	1
4-Methyl-2-pentanone (MIBK)	0.98	U	5.0	0.98	ug/L			10/29/17 11:38	1
Acetone	**5.1**	**J**	10	1.9	ug/L			10/29/17 11:38	1
Benzene	0.16	U	1.0	0.16	ug/L			10/29/17 11:38	1
Carbon disulfide	0.45	U	2.0	0.45	ug/L			10/29/17 11:38	1
Carbon tetrachloride	0.19	U	1.0	0.19	ug/L			10/29/17 11:38	1
Chlorobenzene	0.17	U	1.0	0.17	ug/L			10/29/17 11:38	1
Chloroform	0.16	U	1.0	0.16	ug/L			10/29/17 11:38	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			10/29/17 11:38	1
Ethyl Cyanide	3.7	U	20	3.7	ug/L			10/29/17 11:38	1
Ethylbenzene	0.16	U	1.0	0.16	ug/L			10/29/17 11:38	1
Methylene Chloride	0.32	U	2.0	0.32	ug/L			10/29/17 11:38	1
Tetrachloroethene	0.20	U	1.0	0.20	ug/L			10/29/17 11:38	1
Tetrahydrofuran	2.0	U	7.0	2.0	ug/L			10/29/17 11:38	1
Toluene	0.17	U	1.0	0.17	ug/L			10/29/17 11:38	1
trans-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			10/29/17 11:38	1
Trichloroethene	**3.1**		1.0	0.16	ug/L			10/29/17 11:38	1
Vinyl chloride	0.10	U	1.0	0.10	ug/L			10/29/17 11:38	1
Xylenes, Total	0.19	U	2.0	0.19	ug/L			10/29/17 11:38	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Carbon dioxide	*15*	*N J*	*ug/L*		*3.81*	*124-38-9*		*10/29/17 11:38*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 130*		*10/29/17 11:38*	*1*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*10/29/17 11:38*	*1*
Dibromofluoromethane (Surr)	*112*		*70 - 130*		*10/29/17 11:38*	*1*
Toluene-d8 (Surr)	*111*		*70 - 130*		*10/29/17 11:38*	*1*

Client Sample ID: B3D817
Date Collected: 10/19/17 09:31
Date Received: 10/21/17 08:30

Lab Sample ID: 280-102659-15
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.16	U	1.0	0.16	ug/L			10/29/17 12:36	1
1,1,2-Trichloroethane	0.27	U	1.0	0.27	ug/L			10/29/17 12:36	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			10/29/17 12:36	1
1,1-Dichloroethene	0.23	U	1.0	0.23	ug/L			10/29/17 12:36	1
1,2-Dichloroethane	0.13	U	1.0	0.13	ug/L			10/29/17 12:36	1
2-Butanone (MEK)	2.0	U	6.0	2.0	ug/L			10/29/17 12:36	1
4-Methyl-2-pentanone (MIBK)	0.98	U	5.0	0.98	ug/L			10/29/17 12:36	1
Acetone	**2.2**	**J**	10	1.9	ug/L			10/29/17 12:36	1
Benzene	0.16	U	1.0	0.16	ug/L			10/29/17 12:36	1
Carbon disulfide	0.45	U	2.0	0.45	ug/L			10/29/17 12:36	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: B3D817 — **Lab Sample ID: 280-102659-15**
Date Collected: 10/19/17 09:31 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.19	U	1.0	0.19	ug/L			10/29/17 12:36	1
Chlorobenzene	0.17	U	1.0	0.17	ug/L			10/29/17 12:36	1
Chloroform	0.16	U	1.0	0.16	ug/L			10/29/17 12:36	1
Ethylbenzene	0.16	U	1.0	0.16	ug/L			10/29/17 12:36	1
Methylene Chloride	**44**		2.0	0.32	ug/L			10/29/17 12:36	1
Tetrachloroethene	0.20	U	1.0	0.20	ug/L			10/29/17 12:36	1
Toluene	0.17	U	1.0	0.17	ug/L			10/29/17 12:36	1
Trichloroethene	0.16	U	1.0	0.16	ug/L			10/29/17 12:36	1
Vinyl chloride	0.10	U	1.0	0.10	ug/L			10/29/17 12:36	1
Xylenes, Total	0.19	U	2.0	0.19	ug/L			10/29/17 12:36	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
2H-Pyrano[3,2-b]pyridine	*2.5*	*N J*	*ug/L*		*4.42*	*4767-91-3*		*10/29/17 12:36*	*1*
Isopropyl alcohol	*27*	*J*	*ug/L*		*5.41*	*67-63-0*		*10/29/17 12:36*	*1*
sec-Butyl Alcohol	*38*	*J*	*ug/L*		*6.66*	*78-92-2*		*10/29/17 12:36*	*1*
n-Butanol	*89*		*ug/L*		*7.62*	*71-36-3*		*10/29/17 12:36*	*1*
Cyclotrisiloxane, hexamethyl-	*1.3*	*N J*	*ug/L*		*8.90*	*541-05-9*		*10/29/17 12:36*	*1*
Cyclohexanone	*37*	*J*	*ug/L*		*10.74*	*108-94-1*		*10/29/17 12:36*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 130*		*10/29/17 12:36*	*1*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*		*10/29/17 12:36*	*1*
Dibromofluoromethane (Surr)	*108*		*70 - 130*		*10/29/17 12:36*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*10/29/17 12:36*	*1*

Client Sample ID: B3DD55 — **Lab Sample ID: 280-102659-16**
Date Collected: 10/19/17 09:31 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.16	U	1.0	0.16	ug/L			10/29/17 12:56	1
1,1,2-Trichloroethane	0.27	U	1.0	0.27	ug/L			10/29/17 12:56	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			10/29/17 12:56	1
1,1-Dichloroethene	0.23	U	1.0	0.23	ug/L			10/29/17 12:56	1
1,2-Dichloroethane	0.13	U	1.0	0.13	ug/L			10/29/17 12:56	1
2-Butanone (MEK)	2.0	U	6.0	2.0	ug/L			10/29/17 12:56	1
4-Methyl-2-pentanone (MIBK)	0.98	U	5.0	0.98	ug/L			10/29/17 12:56	1
Acetone	**11**		10	1.9	ug/L			10/29/17 12:56	1
Benzene	0.16	U	1.0	0.16	ug/L			10/29/17 12:56	1
Carbon disulfide	0.45	U	2.0	0.45	ug/L			10/29/17 12:56	1
Carbon tetrachloride	0.19	U	1.0	0.19	ug/L			10/29/17 12:56	1
Chlorobenzene	0.17	U	1.0	0.17	ug/L			10/29/17 12:56	1
Chloroform	0.16	U	1.0	0.16	ug/L			10/29/17 12:56	1
Ethylbenzene	0.16	U	1.0	0.16	ug/L			10/29/17 12:56	1
Methylene Chloride	0.32	U	2.0	0.32	ug/L			10/29/17 12:56	1
Tetrachloroethene	0.20	U	1.0	0.20	ug/L			10/29/17 12:56	1
Toluene	0.17	U	1.0	0.17	ug/L			10/29/17 12:56	1
Trichloroethene	0.16	U	1.0	0.16	ug/L			10/29/17 12:56	1
Vinyl chloride	0.10	U	1.0	0.10	ug/L			10/29/17 12:56	1
Xylenes, Total	0.19	U	2.0	0.19	ug/L			10/29/17 12:56	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Carbon dioxide	11	N J	ug/L		3.80	124-38-9		10/29/17 12:56	1
Isopropyl alcohol	110		ug/L		5.40	67-63-0		10/29/17 12:56	1
Vinyl acetate	1.6	J	ug/L		6.14	108-05-4		10/29/17 12:56	1
sec-Butyl Alcohol	28	J	ug/L		6.65	78-92-2		10/29/17 12:56	1
n-Butanol	88		ug/L		7.62	71-36-3		10/29/17 12:56	1
Cyclotrisiloxane, hexamethyl-	1.3	N J	ug/L		8.90	541-05-9		10/29/17 12:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		70 - 130		10/29/17 12:56	1
4-Bromofluorobenzene (Surr)	99		70 - 130		10/29/17 12:56	1
Dibromofluoromethane (Surr)	116		70 - 130		10/29/17 12:56	1
Toluene-d8 (Surr)	106		70 - 130		10/29/17 12:56	1

Method: 8151A - Herbicides (GC)

Client Sample ID: B3D963 — **Lab Sample ID: 280-102659-5**
Date Collected: 10/19/17 10:18 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	0.18	U	0.95	0.18	ug/L		10/26/17 07:23	11/21/17 19:46	1
2,4-D	0.20	U	3.8	0.20	ug/L		10/26/17 07:23	11/21/17 19:46	1
2,4-DB	0.34	U	3.8	0.34	ug/L		10/26/17 07:23	11/21/17 19:46	1
Dalapon	0.86	U	1.9	0.86	ug/L		10/26/17 07:23	11/21/17 19:46	1
Dicamba	0.14	U	1.9	0.14	ug/L		10/26/17 07:23	11/21/17 19:46	1
Dichlorprop	0.61	U	3.8	0.61	ug/L		10/26/17 07:23	11/21/17 19:46	1
Dinoseb	0.43	U o	0.95	0.43	ug/L		10/26/17 07:23	11/21/17 19:46	1
MCPA	16	U	380	16	ug/L		10/26/17 07:23	11/21/17 19:46	1
MCPP	31	U	380	31	ug/L		10/26/17 07:23	11/21/17 19:46	1
Silvex (2,4,5-TP)	0.16	U	0.95	0.16	ug/L		10/26/17 07:23	11/21/17 19:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCAA	110		39 - 135	10/26/17 07:23	11/21/17 19:46	1

Client Sample ID: B3D962 — **Lab Sample ID: 280-102659-6**
Date Collected: 10/19/17 10:18 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	0.18	U	0.95	0.18	ug/L		10/26/17 07:23	11/21/17 20:10	1
2,4-D	0.20	U	3.8	0.20	ug/L		10/26/17 07:23	11/21/17 20:10	1
2,4-DB	0.34	U	3.8	0.34	ug/L		10/26/17 07:23	11/21/17 20:10	1
Dalapon	0.86	U	1.9	0.86	ug/L		10/26/17 07:23	11/21/17 20:10	1
Dicamba	0.14	U	1.9	0.14	ug/L		10/26/17 07:23	11/21/17 20:10	1
Dichlorprop	0.62	U	3.8	0.62	ug/L		10/26/17 07:23	11/21/17 20:10	1
Dinoseb	0.43	U o	0.95	0.43	ug/L		10/26/17 07:23	11/21/17 20:10	1
MCPA	16	U	380	16	ug/L		10/26/17 07:23	11/21/17 20:10	1
MCPP	31	U	380	31	ug/L		10/26/17 07:23	11/21/17 20:10	1
Silvex (2,4,5-TP)	0.16	U	0.95	0.16	ug/L		10/26/17 07:23	11/21/17 20:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCAA	96		39 - 135	10/26/17 07:23	11/21/17 20:10	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

Method: 8151A - Herbicides (GC)

Client Sample ID: B3D960 — **Lab Sample ID: 280-102659-8**
Date Collected: 10/19/17 11:43 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	0.18	U	0.95	0.18	ug/L		10/26/17 07:23	11/21/17 21:20	1
2,4-D	0.20	U	3.8	0.20	ug/L		10/26/17 07:23	11/21/17 21:20	1
2,4-DB	0.34	U	3.8	0.34	ug/L		10/26/17 07:23	11/21/17 21:20	1
Dalapon	0.86	U	1.9	0.86	ug/L		10/26/17 07:23	11/21/17 21:20	1
Dicamba	0.14	U	1.9	0.14	ug/L		10/26/17 07:23	11/21/17 21:20	1
Dichlorprop	0.62	U	3.8	0.62	ug/L		10/26/17 07:23	11/21/17 21:20	1
Dinoseb	0.43	U o	0.95	0.43	ug/L		10/26/17 07:23	11/21/17 21:20	1
MCPA	16	U	380	16	ug/L		10/26/17 07:23	11/21/17 21:20	1
MCPP	31	U	380	31	ug/L		10/26/17 07:23	11/21/17 21:20	1
Silvex (2,4,5-TP)	0.16	U	0.95	0.16	ug/L		10/26/17 07:23	11/21/17 21:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCAA	*93*		*39 - 135*	*10/26/17 07:23*	*11/21/17 21:20*	*1*

Client Sample ID: B3D966 — **Lab Sample ID: 280-102659-14**
Date Collected: 10/19/17 08:43 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	0.18	U	0.95	0.18	ug/L		10/26/17 07:23	11/21/17 21:44	1
2,4-D	0.20	U	3.8	0.20	ug/L		10/26/17 07:23	11/21/17 21:44	1
2,4-DB	0.34	U	3.8	0.34	ug/L		10/26/17 07:23	11/21/17 21:44	1
Dalapon	0.87	U	1.9	0.87	ug/L		10/26/17 07:23	11/21/17 21:44	1
Dicamba	0.14	U	1.9	0.14	ug/L		10/26/17 07:23	11/21/17 21:44	1
Dichlorprop	0.62	U	3.8	0.62	ug/L		10/26/17 07:23	11/21/17 21:44	1
Dinoseb	0.43	U o	0.95	0.43	ug/L		10/26/17 07:23	11/21/17 21:44	1
MCPA	16	U	380	16	ug/L		10/26/17 07:23	11/21/17 21:44	1
MCPP	31	U	380	31	ug/L		10/26/17 07:23	11/21/17 21:44	1
Silvex (2,4,5-TP)	0.16	U	0.95	0.16	ug/L		10/26/17 07:23	11/21/17 21:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCAA	*110*		*39 - 135*	*10/26/17 07:23*	*11/21/17 21:44*	*1*

Client Sample ID: B3D944 — **Lab Sample ID: 280-102659-17**
Date Collected: 10/20/17 08:18 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	0.18	U o	0.94	0.18	ug/L		10/27/17 16:40	11/22/17 18:24	1
2,4-D	0.20	U	3.8	0.20	ug/L		10/27/17 16:40	11/22/17 18:24	1
2,4-DB	0.34	U o y	3.8	0.34	ug/L		10/27/17 16:40	11/22/17 18:24	1
Dalapon	0.86	U o	1.9	0.86	ug/L		10/27/17 16:40	11/22/17 18:24	1
Dicamba	0.14	U o	1.9	0.14	ug/L		10/27/17 16:40	11/22/17 18:24	1
Dichlorprop	0.61	U	3.8	0.61	ug/L		10/27/17 16:40	11/22/17 18:24	1
Dinoseb	0.42	U o y	0.94	0.42	ug/L		10/27/17 16:40	11/22/17 18:24	1
MCPA	16	U	380	16	ug/L		10/27/17 16:40	11/22/17 18:24	1
MCPP	31	U	380	31	ug/L		10/27/17 16:40	11/22/17 18:24	1
Silvex (2,4,5-TP)	0.16	U o N	0.94	0.16	ug/L		10/27/17 16:40	11/22/17 18:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCAA	*65*		*39 - 135*	*10/27/17 16:40*	*11/22/17 18:24*	*1*

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

Method: 8151A - Herbicides (GC)

Client Sample ID: B3D945 — **Lab Sample ID: 280-102659-18**
Date Collected: 10/20/17 08:18 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	0.18	U o	0.94	0.18	ug/L		10/27/17 16:40	11/22/17 18:53	1
2,4-D	0.20	U	3.8	0.20	ug/L		10/27/17 16:40	11/22/17 18:53	1
2,4-DB	0.34	U o y	3.8	0.34	ug/L		10/27/17 16:40	11/22/17 18:53	1
Dalapon	0.86	U o	1.9	0.86	ug/L		10/27/17 16:40	11/22/17 18:53	1
Dicamba	0.14	U o	1.9	0.14	ug/L		10/27/17 16:40	11/22/17 18:53	1
Dichlorprop	0.61	U	3.8	0.61	ug/L		10/27/17 16:40	11/22/17 18:53	1
Dinoseb	0.42	U o y	0.94	0.42	ug/L		10/27/17 16:40	11/22/17 18:53	1
MCPA	16	U	380	16	ug/L		10/27/17 16:40	11/22/17 18:53	1
MCPP	31	U	380	31	ug/L		10/27/17 16:40	11/22/17 18:53	1
Silvex (2,4,5-TP)	0.16	U o N	0.94	0.16	ug/L		10/27/17 16:40	11/22/17 18:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCAA	*79*		*39 - 135*	*10/27/17 16:40*	*11/22/17 18:53*	*1*

Method: 6010D - Metals (ICP)

Client Sample ID: B3D255 — **Lab Sample ID: 280-102659-1**
Date Collected: 10/19/17 10:18 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	25.7	B	100	4.4	ug/L		10/23/17 15:46	10/26/17 22:53	1
Calcium	66700		200	34.5	ug/L		10/23/17 15:46	10/27/17 17:45	1
Iron	39.4	B	100	22.0	ug/L		10/23/17 15:46	10/27/17 17:45	1
Magnesium	16700		200	10.7	ug/L		10/23/17 15:46	10/26/17 22:53	1
Potassium	6250		3000	237	ug/L		10/23/17 15:46	10/26/17 22:53	1
Sodium	21400		1000	117	ug/L		10/23/17 15:46	10/27/17 17:45	1
Vanadium	11.4		10.0	1.1	ug/L		10/23/17 15:46	10/26/17 22:53	1

Client Sample ID: B3D248 — **Lab Sample ID: 280-102659-7**
Date Collected: 10/19/17 11:43 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	16.9	B	100	4.4	ug/L		10/23/17 15:46	10/26/17 22:56	1
Calcium	33000		200	34.5	ug/L		10/23/17 15:46	10/27/17 17:48	1
Iron	42.9	B	100	22.0	ug/L		10/23/17 15:46	10/27/17 17:48	1
Magnesium	9540		200	10.7	ug/L		10/23/17 15:46	10/26/17 22:56	1
Potassium	4450		3000	237	ug/L		10/23/17 15:46	10/26/17 22:56	1
Sodium	14700		1000	117	ug/L		10/23/17 15:46	10/27/17 17:48	1
Vanadium	7.3	B	10.0	1.1	ug/L		10/23/17 15:46	10/26/17 22:56	1

Client Sample ID: B3D254 — **Lab Sample ID: 280-102659-11**
Date Collected: 10/19/17 10:18 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	25.7	B	100	4.4	ug/L		10/23/17 15:46	10/26/17 22:59	1
Calcium	64300		200	34.5	ug/L		10/23/17 15:46	10/27/17 17:50	1
Iron	93.1	B	100	22.0	ug/L		10/23/17 15:46	10/27/17 17:50	1
Magnesium	17400		200	10.7	ug/L		10/23/17 15:46	10/26/17 22:59	1
Potassium	6770		3000	237	ug/L		10/23/17 15:46	10/26/17 22:59	1
Sodium	23300		1000	117	ug/L		10/23/17 15:46	10/27/17 17:50	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

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

Client Sample ID: B3D254 — **Lab Sample ID: 280-102659-11**
Date Collected: 10/19/17 10:18 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vanadium	12.0		10.0	1.1	ug/L		10/23/17 15:46	10/26/17 22:59	1

Client Sample ID: B3D982 — **Lab Sample ID: 280-102659-13**
Date Collected: 10/18/17 12:59 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	22.6	B	100	4.4	ug/L		10/23/17 15:46	10/26/17 23:02	1
Calcium	49300		200	34.5	ug/L		10/23/17 15:46	10/27/17 17:53	1
Iron	29.4	B	100	22.0	ug/L		10/23/17 15:46	10/27/17 17:53	1
Magnesium	14700		200	10.7	ug/L		10/23/17 15:46	10/26/17 23:02	1
Potassium	5980		3000	237	ug/L		10/23/17 15:46	10/26/17 23:02	1
Sodium	20200		1000	117	ug/L		10/23/17 15:46	10/27/17 17:53	1
Vanadium	15.9		10.0	1.1	ug/L		10/23/17 15:46	10/26/17 23:02	1

Method: 6010D - Metals (ICP) - Dissolved

Client Sample ID: B3D3K8 — **Lab Sample ID: 280-102659-2**
Date Collected: 10/19/17 10:18 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	29.6	B	100	4.4	ug/L		10/26/17 07:34	10/26/17 23:35	1
Calcium	69000		200	34.5	ug/L		10/26/17 07:34	10/27/17 17:04	1
Iron	76.4	B	100	22.0	ug/L		10/26/17 07:34	10/27/17 17:04	1
Magnesium	18400		200	10.7	ug/L		10/26/17 07:34	10/26/17 23:35	1
Potassium	7000		3000	237	ug/L		10/26/17 07:34	10/26/17 23:35	1
Sodium	23900		1000	117	ug/L		10/26/17 07:34	10/27/17 17:04	1
Vanadium	12.7		10.0	1.1	ug/L		10/26/17 07:34	10/26/17 23:35	1

Client Sample ID: B3D252 — **Lab Sample ID: 280-102659-9**
Date Collected: 10/19/17 11:43 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	19.3	B	100	4.4	ug/L		10/26/17 07:34	10/26/17 23:50	1
Calcium	33800		200	34.5	ug/L		10/26/17 07:34	10/27/17 17:18	1
Iron	22.0	U	100	22.0	ug/L		10/26/17 07:34	10/27/17 17:18	1
Magnesium	10500		200	10.7	ug/L		10/26/17 07:34	10/26/17 23:50	1
Potassium	5070		3000	237	ug/L		10/26/17 07:34	10/26/17 23:50	1
Sodium	16700		1000	117	ug/L		10/26/17 07:34	10/27/17 17:18	1
Vanadium	8.0	B	10.0	1.1	ug/L		10/26/17 07:34	10/26/17 23:50	1

Client Sample ID: B3D3K7 — **Lab Sample ID: 280-102659-10**
Date Collected: 10/19/17 10:18 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	27.9	B	100	4.4	ug/L		10/26/17 07:34	10/26/17 23:53	1
Calcium	68100		200	34.5	ug/L		10/26/17 07:34	10/27/17 17:21	1
Iron	22.0	U	100	22.0	ug/L		10/26/17 07:34	10/27/17 17:21	1
Magnesium	18500		200	10.7	ug/L		10/26/17 07:34	10/26/17 23:53	1
Potassium	7550		3000	237	ug/L		10/26/17 07:34	10/26/17 23:53	1
Sodium	21900		1000	117	ug/L		10/26/17 07:34	10/27/17 17:21	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

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

Client Sample ID: B3D3K7 — **Lab Sample ID: 280-102659-10**
Date Collected: 10/19/17 10:18 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vanadium	12.9		10.0	1.1	ug/L		10/26/17 07:34	10/26/17 23:53	1

Client Sample ID: B3D3P1 — **Lab Sample ID: 280-102659-12**
Date Collected: 10/18/17 12:59 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	24.0	B	100	4.4	ug/L		10/26/17 07:34	10/26/17 23:56	1
Calcium	47100		200	34.5	ug/L		10/26/17 07:34	10/27/17 17:24	1
Iron	22.0	U	100	22.0	ug/L		10/26/17 07:34	10/27/17 17:24	1
Magnesium	14800		200	10.7	ug/L		10/26/17 07:34	10/26/17 23:56	1
Potassium	5720		3000	237	ug/L		10/26/17 07:34	10/26/17 23:56	1
Sodium	18100		1000	117	ug/L		10/26/17 07:34	10/27/17 17:24	1
Vanadium	16.3		10.0	1.1	ug/L		10/26/17 07:34	10/26/17 23:56	1

Method: 6020B - Metals (ICP/MS)

Client Sample ID: B3D255 — **Lab Sample ID: 280-102659-1**
Date Collected: 10/19/17 10:18 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9.2	U	30.0	9.2	ug/L		10/26/17 07:34	10/26/17 20:18	1
Antimony	0.43	B	2.0	0.40	ug/L		10/26/17 07:34	10/26/17 20:18	1
Arsenic	2.5	B	5.0	0.33	ug/L		10/26/17 07:34	10/26/17 20:18	1
Barium	61.1		1.0	0.29	ug/L		10/26/17 07:34	10/26/17 20:18	1
Beryllium	0.080	U	1.0	0.080	ug/L		10/26/17 07:34	10/26/17 20:18	1
Cadmium	0.27	U	1.0	0.27	ug/L		10/26/17 07:34	10/26/17 20:18	1
Chromium	8.8		2.0	0.50	ug/L		10/26/17 07:34	10/26/17 20:18	1
Cobalt	0.19	B	1.0	0.054	ug/L		10/26/17 07:34	10/26/17 20:18	1
Copper	0.56	U	2.0	0.56	ug/L		10/26/17 07:34	10/26/17 20:18	1
Lead	0.18	U	1.0	0.18	ug/L		10/26/17 07:34	10/26/17 20:18	1
Manganese	3.1		1.0	0.31	ug/L		10/26/17 07:34	10/26/17 20:18	1
Molybdenum	6.1		2.0	0.14	ug/L		10/26/17 07:34	10/26/17 20:18	1
Nickel	0.51	B	2.0	0.30	ug/L		10/26/17 07:34	10/26/17 20:18	1
Selenium	3.5	B	5.0	0.70	ug/L		10/26/17 07:34	10/26/17 20:18	1
Silver	0.033	U	5.0	0.033	ug/L		10/26/17 07:34	10/26/17 20:18	1
Strontium	323		10.0	0.30	ug/L		10/26/17 07:34	10/26/17 20:18	1
Thallium	0.050	U	1.0	0.050	ug/L		10/26/17 07:34	10/26/17 20:18	1
Thorium	1.2	U	1.0	1.2	ug/L		10/26/17 07:34	10/27/17 15:53	1
Tin	0.77	U	10.0	0.77	ug/L		10/26/17 07:34	10/26/17 20:18	1
Uranium	6.8		1.0	0.050	ug/L		10/26/17 07:34	10/27/17 15:53	1
Zinc	5.0	B	10.0	2.0	ug/L		10/26/17 07:34	10/26/17 20:18	1

Client Sample ID: B3D248 — **Lab Sample ID: 280-102659-7**
Date Collected: 10/19/17 11:43 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9.2	U	30.0	9.2	ug/L		10/26/17 07:34	10/26/17 20:22	1
Antimony	0.40	U	2.0	0.40	ug/L		10/26/17 07:34	10/26/17 20:22	1
Arsenic	2.0	B	5.0	0.33	ug/L		10/26/17 07:34	10/26/17 20:22	1
Barium	38.0		1.0	0.29	ug/L		10/26/17 07:34	10/26/17 20:22	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

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

Client Sample ID: B3D248 — **Lab Sample ID: 280-102659-7**
Date Collected: 10/19/17 11:43 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Beryllium	0.080	U	1.0	0.080	ug/L		10/26/17 07:34	10/26/17 20:22	1
Cadmium	0.27	U	1.0	0.27	ug/L		10/26/17 07:34	10/26/17 20:22	1
Chromium	**3.5**		2.0	0.50	ug/L		10/26/17 07:34	10/26/17 20:22	1
Cobalt	0.054	U	1.0	0.054	ug/L		10/26/17 07:34	10/26/17 20:22	1
Copper	0.56	U	2.0	0.56	ug/L		10/26/17 07:34	10/26/17 20:22	1
Lead	0.18	U	1.0	0.18	ug/L		10/26/17 07:34	10/26/17 20:22	1
Manganese	**0.78**	**B**	1.0	0.31	ug/L		10/26/17 07:34	10/26/17 20:22	1
Molybdenum	**8.8**		2.0	0.14	ug/L		10/26/17 07:34	10/26/17 20:22	1
Nickel	**0.31**	**B**	2.0	0.30	ug/L		10/26/17 07:34	10/26/17 20:22	1
Selenium	**1.5**	**B**	5.0	0.70	ug/L		10/26/17 07:34	10/26/17 20:22	1
Silver	0.033	U	5.0	0.033	ug/L		10/26/17 07:34	10/26/17 20:22	1
Strontium	**215**		10.0	0.30	ug/L		10/26/17 07:34	10/26/17 20:22	1
Thallium	0.050	U	1.0	0.050	ug/L		10/26/17 07:34	10/26/17 20:22	1
Thorium	1.2	U	1.0	1.2	ug/L		10/26/17 07:34	10/27/17 15:56	1
Tin	0.77	U	10.0	0.77	ug/L		10/26/17 07:34	10/26/17 20:22	1
Uranium	**3.6**		1.0	0.050	ug/L		10/26/17 07:34	10/27/17 15:56	1
Zinc	2.0	U	10.0	2.0	ug/L		10/26/17 07:34	10/26/17 20:22	1

Client Sample ID: B3D254 — **Lab Sample ID: 280-102659-11**
Date Collected: 10/19/17 10:18 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9.2	U	30.0	9.2	ug/L		10/26/17 07:34	10/26/17 20:26	1
Antimony	0.40	U	2.0	0.40	ug/L		10/26/17 07:34	10/26/17 20:26	1
Arsenic	**2.6**	**B**	5.0	0.33	ug/L		10/26/17 07:34	10/26/17 20:26	1
Barium	**55.8**		1.0	0.29	ug/L		10/26/17 07:34	10/26/17 20:26	1
Beryllium	0.080	U	1.0	0.080	ug/L		10/26/17 07:34	10/26/17 20:26	1
Cadmium	0.27	U	1.0	0.27	ug/L		10/26/17 07:34	10/26/17 20:26	1
Chromium	**8.5**		2.0	0.50	ug/L		10/26/17 07:34	10/26/17 20:26	1
Cobalt	**0.16**	**B**	1.0	0.054	ug/L		10/26/17 07:34	10/26/17 20:26	1
Copper	**1.4**	**B**	2.0	0.56	ug/L		10/26/17 07:34	10/26/17 20:26	1
Lead	0.18	U	1.0	0.18	ug/L		10/26/17 07:34	10/26/17 20:26	1
Manganese	**3.3**		1.0	0.31	ug/L		10/26/17 07:34	10/26/17 20:26	1
Molybdenum	**5.8**		2.0	0.14	ug/L		10/26/17 07:34	10/26/17 20:26	1
Nickel	**0.66**	**B**	2.0	0.30	ug/L		10/26/17 07:34	10/26/17 20:26	1
Selenium	**2.9**	**B**	5.0	0.70	ug/L		10/26/17 07:34	10/26/17 20:26	1
Silver	0.033	U	5.0	0.033	ug/L		10/26/17 07:34	10/26/17 20:26	1
Strontium	**312**		10.0	0.30	ug/L		10/26/17 07:34	10/26/17 20:26	1
Thallium	0.050	U	1.0	0.050	ug/L		10/26/17 07:34	10/26/17 20:26	1
Thorium	1.2	U	1.0	1.2	ug/L		10/26/17 07:34	10/27/17 16:00	1
Tin	0.77	U	10.0	0.77	ug/L		10/26/17 07:34	10/26/17 20:26	1
Uranium	**6.6**		1.0	0.050	ug/L		10/26/17 07:34	10/27/17 16:00	1
Zinc	**5.3**	**B**	10.0	2.0	ug/L		10/26/17 07:34	10/26/17 20:26	1

Client Sample ID: B3D982 — **Lab Sample ID: 280-102659-13**
Date Collected: 10/18/17 12:59 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9.2	U	30.0	9.2	ug/L		10/26/17 07:34	10/26/17 20:30	1
Antimony	0.40	U	2.0	0.40	ug/L		10/26/17 07:34	10/26/17 20:30	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

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

Client Sample ID: B3D982
Date Collected: 10/18/17 12:59
Date Received: 10/21/17 08:30

Lab Sample ID: 280-102659-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**3.5**	**B**	5.0	0.33	ug/L		10/26/17 07:34	10/26/17 20:30	1
Barium	**48.1**		1.0	0.29	ug/L		10/26/17 07:34	10/26/17 20:30	1
Beryllium	0.080	U	1.0	0.080	ug/L		10/26/17 07:34	10/26/17 20:30	1
Cadmium	0.27	U	1.0	0.27	ug/L		10/26/17 07:34	10/26/17 20:30	1
Chromium	**10.4**		2.0	0.50	ug/L		10/26/17 07:34	10/26/17 20:30	1
Cobalt	0.054	U	1.0	0.054	ug/L		10/26/17 07:34	10/26/17 20:30	1
Copper	**3.9**		2.0	0.56	ug/L		10/26/17 07:34	10/26/17 20:30	1
Lead	0.18	U	1.0	0.18	ug/L		10/26/17 07:34	10/26/17 20:30	1
Manganese	**0.42**	**B**	1.0	0.31	ug/L		10/26/17 07:34	10/26/17 20:30	1
Molybdenum	**6.3**		2.0	0.14	ug/L		10/26/17 07:34	10/26/17 20:30	1
Nickel	**1.8**	**B**	2.0	0.30	ug/L		10/26/17 07:34	10/26/17 20:30	1
Selenium	**2.7**	**B**	5.0	0.70	ug/L		10/26/17 07:34	10/26/17 20:30	1
Silver	0.033	U	5.0	0.033	ug/L		10/26/17 07:34	10/26/17 20:30	1
Strontium	**240**		10.0	0.30	ug/L		10/26/17 07:34	10/26/17 20:30	1
Thallium	0.050	U	1.0	0.050	ug/L		10/26/17 07:34	10/26/17 20:30	1
Thorium	1.2	U	1.0	1.2	ug/L		10/26/17 07:34	10/27/17 16:04	1
Tin	0.77	U	10.0	0.77	ug/L		10/26/17 07:34	10/26/17 20:30	1
Uranium	**4.5**		1.0	0.050	ug/L		10/26/17 07:34	10/27/17 16:04	1
Zinc	2.0	U	10.0	2.0	ug/L		10/26/17 07:34	10/26/17 20:30	1

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

Client Sample ID: B3D3K8
Date Collected: 10/19/17 10:18
Date Received: 10/21/17 08:30

Lab Sample ID: 280-102659-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9.2	U	30.0	9.2	ug/L		10/26/17 07:34	10/26/17 21:04	1
Antimony	**0.68**	**B**	2.0	0.40	ug/L		10/26/17 07:34	10/26/17 21:04	1
Arsenic	**2.5**	**B**	5.0	0.33	ug/L		10/26/17 07:34	10/26/17 21:04	1
Barium	**56.0**		1.0	0.29	ug/L		10/26/17 07:34	10/26/17 21:04	1
Beryllium	0.080	U	1.0	0.080	ug/L		10/26/17 07:34	10/26/17 21:04	1
Cadmium	0.27	U	1.0	0.27	ug/L		10/26/17 07:34	10/26/17 21:04	1
Chromium	**7.8**		2.0	0.50	ug/L		10/26/17 07:34	10/26/17 21:04	1
Cobalt	**0.22**	**B**	1.0	0.054	ug/L		10/26/17 07:34	10/26/17 21:04	1
Copper	0.56	U	2.0	0.56	ug/L		10/26/17 07:34	10/26/17 21:04	1
Lead	0.18	U	1.0	0.18	ug/L		10/26/17 07:34	10/26/17 21:04	1
Manganese	**2.5**		1.0	0.31	ug/L		10/26/17 07:34	10/26/17 21:04	1
Molybdenum	**5.2**		2.0	0.14	ug/L		10/26/17 07:34	10/26/17 21:04	1
Nickel	0.30	U	2.0	0.30	ug/L		10/26/17 07:34	10/26/17 21:04	1
Selenium	**2.9**	**B**	5.0	0.70	ug/L		10/26/17 07:34	10/26/17 21:04	1
Silver	0.033	U	5.0	0.033	ug/L		10/26/17 07:34	10/26/17 21:04	1
Strontium	**291**		10.0	0.30	ug/L		10/26/17 07:34	10/26/17 21:04	1
Thallium	0.050	U	1.0	0.050	ug/L		10/26/17 07:34	10/26/17 21:04	1
Thorium	1.2	U	1.0	1.2	ug/L		10/26/17 07:34	10/30/17 12:39	1
Tin	0.77	U	10.0	0.77	ug/L		10/26/17 07:34	10/26/17 21:04	1
Uranium	**5.6**		1.0	0.050	ug/L		10/26/17 07:34	10/30/17 12:39	1
Zinc	**5.2**	**B**	10.0	2.0	ug/L		10/26/17 07:34	10/26/17 21:04	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

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

Client Sample ID: B3D252 — **Lab Sample ID: 280-102659-9**
Date Collected: 10/19/17 11:43 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9.2	U	30.0	9.2	ug/L		10/26/17 07:34	10/26/17 21:23	1
Antimony	**0.50**	**B**	2.0	0.40	ug/L		10/26/17 07:34	10/26/17 21:23	1
Arsenic	**2.3**	**B**	5.0	0.33	ug/L		10/26/17 07:34	10/26/17 21:23	1
Barium	**37.3**		1.0	0.29	ug/L		10/26/17 07:34	10/26/17 21:23	1
Beryllium	**0.084**	**B**	1.0	0.080	ug/L		10/26/17 07:34	10/26/17 21:23	1
Cadmium	0.27	U	1.0	0.27	ug/L		10/26/17 07:34	10/26/17 21:23	1
Chromium	**3.4**		2.0	0.50	ug/L		10/26/17 07:34	10/26/17 21:23	1
Cobalt	**0.054**	**B**	1.0	0.054	ug/L		10/26/17 07:34	10/26/17 21:23	1
Copper	0.56	U	2.0	0.56	ug/L		10/26/17 07:34	10/26/17 21:23	1
Lead	0.18	U	1.0	0.18	ug/L		10/26/17 07:34	10/26/17 21:23	1
Manganese	0.31	U	1.0	0.31	ug/L		10/26/17 07:34	10/26/17 21:23	1
Molybdenum	**8.2**		2.0	0.14	ug/L		10/26/17 07:34	10/26/17 21:23	1
Nickel	0.30	U	2.0	0.30	ug/L		10/26/17 07:34	10/26/17 21:23	1
Selenium	**1.5**	**B**	5.0	0.70	ug/L		10/26/17 07:34	10/26/17 21:23	1
Silver	0.033	U	5.0	0.033	ug/L		10/26/17 07:34	10/26/17 21:23	1
Strontium	**200**		10.0	0.30	ug/L		10/26/17 07:34	10/26/17 21:23	1
Thallium	0.050	U	1.0	0.050	ug/L		10/26/17 07:34	10/26/17 21:23	1
Thorium	1.2	U	1.0	1.2	ug/L		10/26/17 07:34	10/27/17 15:26	1
Tin	0.77	U	10.0	0.77	ug/L		10/26/17 07:34	10/26/17 21:23	1
Uranium	**3.4**		1.0	0.050	ug/L		10/26/17 07:34	10/27/17 15:26	1
Zinc	2.0	U	10.0	2.0	ug/L		10/26/17 07:34	10/26/17 21:23	1

Client Sample ID: B3D3K7 — **Lab Sample ID: 280-102659-10**
Date Collected: 10/19/17 10:18 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9.2	U	30.0	9.2	ug/L		10/26/17 07:34	10/26/17 21:26	1
Antimony	0.40	U	2.0	0.40	ug/L		10/26/17 07:34	10/26/17 21:26	1
Arsenic	**2.4**	**B**	5.0	0.33	ug/L		10/26/17 07:34	10/26/17 21:26	1
Barium	**57.4**		1.0	0.29	ug/L		10/26/17 07:34	10/26/17 21:26	1
Beryllium	0.080	U	1.0	0.080	ug/L		10/26/17 07:34	10/26/17 21:26	1
Cadmium	0.27	U	1.0	0.27	ug/L		10/26/17 07:34	10/26/17 21:26	1
Chromium	**7.9**		2.0	0.50	ug/L		10/26/17 07:34	10/26/17 21:26	1
Cobalt	**0.17**	**B**	1.0	0.054	ug/L		10/26/17 07:34	10/26/17 21:26	1
Copper	0.56	U	2.0	0.56	ug/L		10/26/17 07:34	10/26/17 21:26	1
Lead	0.18	U	1.0	0.18	ug/L		10/26/17 07:34	10/26/17 21:26	1
Manganese	**2.0**		1.0	0.31	ug/L		10/26/17 07:34	10/26/17 21:26	1
Molybdenum	**5.6**		2.0	0.14	ug/L		10/26/17 07:34	10/26/17 21:26	1
Nickel	0.30	U	2.0	0.30	ug/L		10/26/17 07:34	10/26/17 21:26	1
Selenium	**3.1**	**B**	5.0	0.70	ug/L		10/26/17 07:34	10/26/17 21:26	1
Silver	0.033	U	5.0	0.033	ug/L		10/26/17 07:34	10/26/17 21:26	1
Strontium	**306**		10.0	0.30	ug/L		10/26/17 07:34	10/26/17 21:26	1
Thallium	0.050	U	1.0	0.050	ug/L		10/26/17 07:34	10/26/17 21:26	1
Thorium	1.2	U	1.0	1.2	ug/L		10/26/17 07:34	10/27/17 15:30	1
Tin	0.77	U	10.0	0.77	ug/L		10/26/17 07:34	10/26/17 21:26	1
Uranium	**6.3**		1.0	0.050	ug/L		10/26/17 07:34	10/27/17 15:30	1
Zinc	**4.4**	**B**	10.0	2.0	ug/L		10/26/17 07:34	10/26/17 21:26	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

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

Client Sample ID: B3D3P1 — **Lab Sample ID: 280-102659-12**
Date Collected: 10/18/17 12:59 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9.2	U	30.0	9.2	ug/L		10/26/17 07:34	10/26/17 21:30	1
Antimony	0.40	U	2.0	0.40	ug/L		10/26/17 07:34	10/26/17 21:30	1
Arsenic	**3.6**	**B**	5.0	0.33	ug/L		10/26/17 07:34	10/26/17 21:30	1
Barium	**53.9**		1.0	0.29	ug/L		10/26/17 07:34	10/26/17 21:30	1
Beryllium	0.080	U	1.0	0.080	ug/L		10/26/17 07:34	10/26/17 21:30	1
Cadmium	0.27	U	1.0	0.27	ug/L		10/26/17 07:34	10/26/17 21:30	1
Chromium	**7.5**		2.0	0.50	ug/L		10/26/17 07:34	10/26/17 21:30	1
Cobalt	**0.094**	**B**	1.0	0.054	ug/L		10/26/17 07:34	10/26/17 21:30	1
Copper	0.56	U	2.0	0.56	ug/L		10/26/17 07:34	10/26/17 21:30	1
Lead	0.18	U	1.0	0.18	ug/L		10/26/17 07:34	10/26/17 21:30	1
Manganese	**0.52**	**B**	1.0	0.31	ug/L		10/26/17 07:34	10/26/17 21:30	1
Molybdenum	**6.4**		2.0	0.14	ug/L		10/26/17 07:34	10/26/17 21:30	1
Nickel	**0.81**	**B**	2.0	0.30	ug/L		10/26/17 07:34	10/26/17 21:30	1
Selenium	**2.7**	**B**	5.0	0.70	ug/L		10/26/17 07:34	10/26/17 21:30	1
Silver	0.033	U	5.0	0.033	ug/L		10/26/17 07:34	10/26/17 21:30	1
Strontium	**257**		10.0	0.30	ug/L		10/26/17 07:34	10/26/17 21:30	1
Thallium	0.050	U	1.0	0.050	ug/L		10/26/17 07:34	10/26/17 21:30	1
Thorium	1.2	U	1.0	1.2	ug/L		10/26/17 07:34	10/27/17 15:34	1
Tin	0.77	U	10.0	0.77	ug/L		10/26/17 07:34	10/26/17 21:30	1
Uranium	**4.9**		1.0	0.050	ug/L		10/26/17 07:34	10/27/17 15:34	1
Zinc	2.0	U	10.0	2.0	ug/L		10/26/17 07:34	10/26/17 21:30	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: B3D255 — **Lab Sample ID: 280-102659-1**
Date Collected: 10/19/17 10:18 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.027	U	0.20	0.027	ug/L		11/13/17 12:22	11/13/17 21:58	1

Client Sample ID: B3D248 — **Lab Sample ID: 280-102659-7**
Date Collected: 10/19/17 11:43 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.027	U	0.20	0.027	ug/L		11/13/17 12:22	11/13/17 22:01	1

Client Sample ID: B3D254 — **Lab Sample ID: 280-102659-11**
Date Collected: 10/19/17 10:18 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.027	U	0.20	0.027	ug/L		11/13/17 12:22	11/13/17 22:03	1

Client Sample ID: B3D982 — **Lab Sample ID: 280-102659-13**
Date Collected: 10/18/17 12:59 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.027	U	0.20	0.027	ug/L		11/13/17 12:22	11/13/17 22:05	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

Method: 7470A - Mercury (CVAA) - Dissolved

Client Sample ID: B3D3K8 — **Lab Sample ID: 280-102659-2**
Date Collected: 10/19/17 10:18 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.027	U	0.20	0.027	ug/L		11/13/17 12:22	11/13/17 21:36	1

Client Sample ID: B3D252 — **Lab Sample ID: 280-102659-9**
Date Collected: 10/19/17 11:43 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.027	U	0.20	0.027	ug/L		11/13/17 12:22	11/13/17 21:43	1

Client Sample ID: B3D3K7 — **Lab Sample ID: 280-102659-10**
Date Collected: 10/19/17 10:18 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.027	U	0.20	0.027	ug/L		11/13/17 12:22	11/13/17 21:45	1

Client Sample ID: B3D3P1 — **Lab Sample ID: 280-102659-12**
Date Collected: 10/18/17 12:59 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.027	U	0.20	0.027	ug/L		11/13/17 12:22	11/13/17 21:47	1

General Chemistry

Client Sample ID: B3DD47 — **Lab Sample ID: 280-102659-4**
Date Collected: 10/19/17 12:15 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide	2.0	U	10.0	2.0	ug/L		10/26/17 15:17	10/29/17 22:31	1
Total Organic Carbon - Average	155	U	1000	155	ug/L			11/14/17 06:03	1

Client Sample ID: B3D982 — **Lab Sample ID: 280-102659-13**
Date Collected: 10/18/17 12:59 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**164000**		5000	1070	ug/L			10/24/17 20:43	1

Client Sample ID: B3DD55 — **Lab Sample ID: 280-102659-16**
Date Collected: 10/19/17 09:31 — **Matrix: Water**
Date Received: 10/21/17 08:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	7.7	U	30.0	7.7	ug/L			11/09/17 07:28	1

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-393143/6
Matrix: Water
Analysis Batch: 393143

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.16	U	1.0	0.16	ug/L			10/29/17 11:17	1
1,1,2-Trichloroethane	0.27	U	1.0	0.27	ug/L			10/29/17 11:17	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			10/29/17 11:17	1
1,1-Dichloroethene	0.23	U	1.0	0.23	ug/L			10/29/17 11:17	1
1,2-Dichloroethane	0.13	U	1.0	0.13	ug/L			10/29/17 11:17	1
1,4-Dichlorobenzene	0.16	U	1.0	0.16	ug/L			10/29/17 11:17	1
1-Butanol	17	U	60	17	ug/L			10/29/17 11:17	1
2-Butanone (MEK)	2.0	U	6.0	2.0	ug/L			10/29/17 11:17	1
4-Methyl-2-pentanone (MIBK)	0.98	U	5.0	0.98	ug/L			10/29/17 11:17	1
Acetone	1.9	U	10	1.9	ug/L			10/29/17 11:17	1
Benzene	0.16	U	1.0	0.16	ug/L			10/29/17 11:17	1
Carbon disulfide	0.45	U	2.0	0.45	ug/L			10/29/17 11:17	1
Carbon tetrachloride	0.19	U	1.0	0.19	ug/L			10/29/17 11:17	1
Chlorobenzene	0.17	U	1.0	0.17	ug/L			10/29/17 11:17	1
Chloroform	0.16	U	1.0	0.16	ug/L			10/29/17 11:17	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			10/29/17 11:17	1
Ethyl Cyanide	3.7	U	20	3.7	ug/L			10/29/17 11:17	1
Ethylbenzene	0.16	U	1.0	0.16	ug/L			10/29/17 11:17	1
Methylene Chloride	0.32	U	2.0	0.32	ug/L			10/29/17 11:17	1
Tetrachloroethene	0.20	U	1.0	0.20	ug/L			10/29/17 11:17	1
Tetrahydrofuran	2.0	U	7.0	2.0	ug/L			10/29/17 11:17	1
Toluene	0.17	U	1.0	0.17	ug/L			10/29/17 11:17	1
trans-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			10/29/17 11:17	1
Trichloroethene	0.16	U	1.0	0.16	ug/L			10/29/17 11:17	1
Vinyl chloride	0.10	U	1.0	0.10	ug/L			10/29/17 11:17	1
Xylenes, Total	0.19	U	2.0	0.19	ug/L			10/29/17 11:17	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
2,4(1H,3H)-Pyrimidinedione, 6-chloro-5-nitro-	*1.27*	*N J*	*ug/L*		*4.83*	*6630-30-4*		*10/29/17 11:17*	*1*
Cyclobutane, 2-ethyl-1-methyl-3-propyl-	*1.49*	*N J*	*ug/L*		*12.71*	*61233-72-5*		*10/29/17 11:17*	*1*
Guaifenesin di-tms derivative	*1.27*	*N J*	*ug/L*		*14.12*	*1000137-06-7*		*10/29/17 11:17*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*125*		*70 - 130*		*10/29/17 11:17*	*1*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*		*10/29/17 11:17*	*1*
Dibromofluoromethane (Surr)	*120*		*70 - 130*		*10/29/17 11:17*	*1*
Toluene-d8 (Surr)	*109*		*70 - 130*		*10/29/17 11:17*	*1*

Lab Sample ID: LCS 280-393143/4
Matrix: Water
Analysis Batch: 393143

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	5.00	5.43		ug/L		109	70 - 130
1,1,2-Trichloroethane	5.00	5.42		ug/L		108	70 - 130

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-393143/4
Matrix: Water
Analysis Batch: 393143

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	5.00	5.12		ug/L		102	70 - 130
1,1-Dichloroethene	5.00	5.22		ug/L		104	70 - 130
1,2-Dichloroethane	5.00	5.09		ug/L		102	70 - 130
1,4-Dichlorobenzene	5.00	5.33		ug/L		107	70 - 130
2-Butanone (MEK)	20.0	20.8		ug/L		104	70 - 130
4-Methyl-2-pentanone (MIBK)	20.0	17.7		ug/L		89	70 - 130
Acetone	20.0	20.9		ug/L		105	70 - 130
Benzene	5.00	5.32		ug/L		106	70 - 130
Carbon disulfide	5.00	5.49		ug/L		110	70 - 130
Carbon tetrachloride	5.00	5.39		ug/L		108	70 - 130
Chlorobenzene	5.00	5.29		ug/L		106	70 - 130
Chloroform	5.00	5.18		ug/L		104	70 - 130
cis-1,2-Dichloroethene	5.00	5.06		ug/L		101	70 - 130
Ethylbenzene	5.00	5.60		ug/L		112	70 - 130
Methylene Chloride	5.00	5.36		ug/L		107	70 - 130
Tetrachloroethene	5.00	5.76		ug/L		115	70 - 130
Toluene	5.00	5.71		ug/L		114	70 - 130
trans-1,2-Dichloroethene	5.00	5.43		ug/L		109	70 - 130
Trichloroethene	5.00	4.96		ug/L		99	70 - 130
Vinyl chloride	5.00	5.61		ug/L		112	70 - 130
Xylenes, Total	10.0	10.5		ug/L		105	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*116*		*70 - 130*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*
Dibromofluoromethane (Surr)	*111*		*70 - 130*
Toluene-d8 (Surr)	*110*		*70 - 130*

Lab Sample ID: 280-102659-3 MS
Matrix: Water
Analysis Batch: 393143

Client Sample ID: B3D557
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.16	U	5.00	5.50		ug/L		110	70 - 130
1,1,2-Trichloroethane	0.27	U	5.00	4.69		ug/L		94	70 - 130
1,1-Dichloroethane	0.22	U	5.00	5.22		ug/L		104	70 - 130
1,1-Dichloroethene	0.23	U	5.00	5.11		ug/L		102	70 - 130
1,2-Dichloroethane	0.13	U	5.00	5.06		ug/L		101	70 - 130
1,4-Dichlorobenzene	0.16	U	5.00	5.52		ug/L		110	70 - 130
2-Butanone (MEK)	2.0	U	20.0	16.6		ug/L		83	70 - 130
4-Methyl-2-pentanone (MIBK)	0.98	U	20.0	15.4		ug/L		77	70 - 130
Acetone	5.1	J	20.0	19.5		ug/L		72	70 - 130
Benzene	0.16	U	5.00	5.23		ug/L		105	70 - 130
Carbon disulfide	0.45	U	5.00	5.48		ug/L		110	70 - 130
Carbon tetrachloride	0.19	U	5.00	5.47		ug/L		109	70 - 130
Chlorobenzene	0.17	U	5.00	5.15		ug/L		103	70 - 130
Chloroform	0.16	U	5.00	5.18		ug/L		104	70 - 130
cis-1,2-Dichloroethene	0.15	U	5.00	4.96		ug/L		99	70 - 130

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-102659-3 MS
Matrix: Water
Analysis Batch: 393143

Client Sample ID: B3D557
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene	0.16	U	5.00	5.51		ug/L		110	70 - 130
Methylene Chloride	0.32	U	5.00	4.53		ug/L		91	70 - 130
Tetrachloroethene	0.20	U	5.00	5.79		ug/L		116	70 - 130
Toluene	0.17	U	5.00	5.69		ug/L		114	70 - 130
trans-1,2-Dichloroethene	0.15	U	5.00	5.55		ug/L		111	70 - 130
Trichloroethene	3.1		5.00	8.00		ug/L		98	70 - 130
Vinyl chloride	0.10	U	5.00	5.40		ug/L		108	70 - 130
Xylenes, Total	0.19	U	10.0	10.4		ug/L		104	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
Dibromofluoromethane (Surr)	*103*		*70 - 130*
Toluene-d8 (Surr)	*103*		*70 - 130*

Lab Sample ID: 280-102659-3 MSD
Matrix: Water
Analysis Batch: 393143

Client Sample ID: B3D557
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	0.16	U	5.00	5.60		ug/L		112	70 - 130	2	20
1,1,2-Trichloroethane	0.27	U	5.00	5.16		ug/L		103	70 - 130	10	20
1,1-Dichloroethane	0.22	U	5.00	5.33		ug/L		107	70 - 130	2	20
1,1-Dichloroethene	0.23	U	5.00	5.49		ug/L		110	70 - 130	7	20
1,2-Dichloroethane	0.13	U	5.00	5.30		ug/L		106	70 - 130	5	20
1,4-Dichlorobenzene	0.16	U	5.00	5.46		ug/L		109	70 - 130	1	20
2-Butanone (MEK)	2.0	U	20.0	22.2	y	ug/L		111	70 - 130	29	20
4-Methyl-2-pentanone (MIBK)	0.98	U	20.0	18.1		ug/L		90	70 - 130	16	20
Acetone	5.1	J	20.0	22.9		ug/L		89	70 - 130	16	20
Benzene	0.16	U	5.00	5.39		ug/L		108	70 - 130	3	20
Carbon disulfide	0.45	U	5.00	5.69		ug/L		114	70 - 130	4	20
Carbon tetrachloride	0.19	U	5.00	5.61		ug/L		112	70 - 130	3	20
Chlorobenzene	0.17	U	5.00	5.22		ug/L		104	70 - 130	1	20
Chloroform	0.16	U	5.00	5.26		ug/L		105	70 - 130	2	20
cis-1,2-Dichloroethene	0.15	U	5.00	5.20		ug/L		104	70 - 130	5	20
Ethylbenzene	0.16	U	5.00	5.39		ug/L		108	70 - 130	2	20
Methylene Chloride	0.32	U	5.00	5.14		ug/L		103	70 - 130	13	20
Tetrachloroethene	0.20	U	5.00	5.55		ug/L		111	70 - 130	4	20
Toluene	0.17	U	5.00	5.88		ug/L		118	70 - 130	3	20
trans-1,2-Dichloroethene	0.15	U	5.00	5.66		ug/L		113	70 - 130	2	20
Trichloroethene	3.1		5.00	8.04		ug/L		99	70 - 130	0	20
Vinyl chloride	0.10	U	5.00	6.17		ug/L		123	70 - 130	13	20
Xylenes, Total	0.19	U	10.0	10.6		ug/L		106	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 130*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-102659-3 MSD
Matrix: Water
Analysis Batch: 393143

Client Sample ID: B3D557
Prep Type: Total/NA

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*106*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 280-392775/1-A
Matrix: Water
Analysis Batch: 396048

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 392775

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	0.19	U	1.0	0.19	ug/L		10/26/17 07:23	11/21/17 18:58	1
2,4-D	0.21	U	4.0	0.21	ug/L		10/26/17 07:23	11/21/17 18:58	1
2,4-DB	0.36	U	4.0	0.36	ug/L		10/26/17 07:23	11/21/17 18:58	1
Dalapon	0.91	U	2.0	0.91	ug/L		10/26/17 07:23	11/21/17 18:58	1
Dicamba	0.15	U	2.0	0.15	ug/L		10/26/17 07:23	11/21/17 18:58	1
Dichlorprop	0.65	U	4.0	0.65	ug/L		10/26/17 07:23	11/21/17 18:58	1
Dinoseb	0.45	U	1.0	0.45	ug/L		10/26/17 07:23	11/21/17 18:58	1
MCPA	17	U	400	17	ug/L		10/26/17 07:23	11/21/17 18:58	1
MCPP	33	U	400	33	ug/L		10/26/17 07:23	11/21/17 18:58	1
Silvex (2,4,5-TP)	0.17	U	1.0	0.17	ug/L		10/26/17 07:23	11/21/17 18:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCAA	*92*		*39 - 135*	*10/26/17 07:23*	*11/21/17 18:58*	*1*

Lab Sample ID: LCS 280-392775/2-A
Matrix: Water
Analysis Batch: 396048

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 392775

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	5.00	5.07		ug/L		101	70 - 130
2,4-D	5.00	5.09		ug/L		102	70 - 130
2,4-DB	5.00	4.17		ug/L		83	70 - 130
Dalapon	5.00	5.11		ug/L		102	70 - 130
Dicamba	5.00	4.91		ug/L		98	70 - 130
Dichlorprop	5.00	4.66		ug/L		93	70 - 130
Dinoseb	5.00	2.75	o	ug/L		55	70 - 130
MCPA	500	377	J	ug/L		75	70 - 130
MCPP	500	391	J	ug/L		78	70 - 130
Silvex (2,4,5-TP)	5.00	5.04		ug/L		101	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCAA	*99*		*39 - 135*

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: 280-102659-6 MS — **Client Sample ID: B3D962**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 396048 — **Prep Batch: 392775**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	0.18	U	4.74	4.97		ug/L		105	45 - 135
2,4-D	0.20	U	4.74	4.99		ug/L		105	46 - 126
2,4-DB	0.34	U	4.74	4.34		ug/L		92	18 - 135
Dalapon	0.86	U	4.74	4.76		ug/L		101	52 - 119
Dicamba	0.14	U	4.74	4.59		ug/L		97	50 - 128
Dichlorprop	0.62	U	4.74	4.36		ug/L		92	44 - 121
Dinoseb	0.43	U o	4.74	2.91		ug/L		61	25 - 132
MCPA	16	U	474	344	J	ug/L		73	43 - 118
MCPP	31	U	474	356	J	ug/L		75	45 - 121
Silvex (2,4,5-TP)	0.16	U	4.74	4.77		ug/L		101	48 - 127

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCAA	*100*		*39 - 135*

Lab Sample ID: 280-102659-6 MSD — **Client Sample ID: B3D962**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 396048 — **Prep Batch: 392775**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	0.18	U	4.82	5.02		ug/L		104	45 - 135	1	20
2,4-D	0.20	U	4.82	5.10		ug/L		106	46 - 126	2	20
2,4-DB	0.34	U	4.82	4.41		ug/L		91	18 - 135	1	20
Dalapon	0.86	U	4.82	4.63		ug/L		96	52 - 119	3	20
Dicamba	0.14	U	4.82	4.66		ug/L		97	50 - 128	2	20
Dichlorprop	0.62	U	4.82	4.48		ug/L		93	44 - 121	3	20
Dinoseb	0.43	U o	4.82	2.99		ug/L		62	25 - 132	3	20
MCPA	16	U	482	355	J	ug/L		74	43 - 118	3	20
MCPP	31	U	482	371	J	ug/L		77	45 - 121	4	20
Silvex (2,4,5-TP)	0.16	U	4.82	4.84		ug/L		100	48 - 127	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCAA	*102*		*39 - 135*

Lab Sample ID: MB 280-393044/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 396208 — **Prep Batch: 393044**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	0.19	U	1.0	0.19	ug/L		10/27/17 16:40	11/22/17 16:52	1
2,4-D	0.21	U	4.0	0.21	ug/L		10/27/17 16:40	11/22/17 16:52	1
2,4-DB	0.36	U	4.0	0.36	ug/L		10/27/17 16:40	11/22/17 16:52	1
Dalapon	0.91	U	2.0	0.91	ug/L		10/27/17 16:40	11/22/17 16:52	1
Dicamba	0.15	U	2.0	0.15	ug/L		10/27/17 16:40	11/22/17 16:52	1
Dichlorprop	0.65	U	4.0	0.65	ug/L		10/27/17 16:40	11/22/17 16:52	1
Dinoseb	0.45	U	1.0	0.45	ug/L		10/27/17 16:40	11/22/17 16:52	1
MCPA	17	U	400	17	ug/L		10/27/17 16:40	11/22/17 16:52	1
MCPP	33	U	400	33	ug/L		10/27/17 16:40	11/22/17 16:52	1

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: MB 280-393044/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 396208 — **Prep Batch: 393044**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silvex (2,4,5-TP)	0.17	U	1.0	0.17	ug/L		10/27/17 16:40	11/22/17 16:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCAA	*74*		*39 - 135*	*10/27/17 16:40*	*11/22/17 16:52*	*1*

Lab Sample ID: LCS 280-393044/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 396208 — **Prep Batch: 393044**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	5.00	3.71		ug/L		74	70 - 130
2,4-D	5.00	4.04		ug/L		81	70 - 130
2,4-DB	5.00	4.21		ug/L		84	70 - 130
Dalapon	5.00	3.47	o	ug/L		69	70 - 130
Dicamba	5.00	3.59		ug/L		72	70 - 130
Dichlorprop	5.00	3.90	J	ug/L		78	70 - 130
Dinoseb	5.00	2.96	o	ug/L		59	70 - 130
MCPA	500	378	J	ug/L		76	70 - 130
MCPP	500	440		ug/L		88	70 - 130
Silvex (2,4,5-TP)	5.00	3.90		ug/L		78	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCAA	*79*		*39 - 135*

Lab Sample ID: LCSD 280-393044/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 396208 — **Prep Batch: 393044**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	5.00	3.26	o	ug/L		65	70 - 130	13	20
2,4-D	5.00	3.73	J	ug/L		75	70 - 130	8	20
2,4-DB	5.00	3.38	J o y	ug/L		68	70 - 130	22	20
Dalapon	5.00	3.16	o	ug/L		63	70 - 130	9	20
Dicamba	5.00	3.33	o	ug/L		67	70 - 130	7	20
Dichlorprop	5.00	3.56	J	ug/L		71	70 - 130	9	20
Dinoseb	5.00	2.06	o y	ug/L		41	70 - 130	36	20
MCPA	500	350	J	ug/L		70	70 - 130	8	20
MCPP	500	397	J	ug/L		79	70 - 130	10	20
Silvex (2,4,5-TP)	5.00	3.40	o	ug/L		68	70 - 130	14	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCAA	*72*		*39 - 135*

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: 280-102659-18 MS — **Client Sample ID: B3D945**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 396208 — **Prep Batch: 393044**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	0.18	U o	4.69	3.15		ug/L		67	45 - 135
2,4-D	0.20	U	4.69	3.47	J	ug/L		74	46 - 126
2,4-DB	0.34	U o y	4.69	2.87	J	ug/L		61	18 - 135
Dalapon	0.86	U o	4.69	2.79		ug/L		59	52 - 119
Dicamba	0.14	U o	4.69	2.98		ug/L		64	50 - 128
Dichlorprop	0.61	U	4.69	3.26	J	ug/L		69	44 - 121
Dinoseb	0.42	U o y	4.69	1.98		ug/L		42	25 - 132
MCPA	16	U	469	322	J	ug/L		69	43 - 118
MCPP	31	U	469	360	J	ug/L		77	45 - 121
Silvex (2,4,5-TP)	0.16	U o N	4.69	3.17		ug/L		68	48 - 127

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCAA	*72*		*39 - 135*

Lab Sample ID: 280-102659-18 MSD — **Client Sample ID: B3D945**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 396208 — **Prep Batch: 393044**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	0.18	U o	4.68	3.26		ug/L		70	45 - 135	3	20
2,4-D	0.20	U	4.68	3.67	J	ug/L		78	46 - 126	6	20
2,4-DB	0.34	U o y	4.68	3.04	J	ug/L		65	18 - 135	5	20
Dalapon	0.86	U o	4.68	2.66		ug/L		57	52 - 119	5	20
Dicamba	0.14	U o	4.68	3.14		ug/L		67	50 - 128	5	20
Dichlorprop	0.61	U	4.68	3.45	J	ug/L		74	44 - 121	6	20
Dinoseb	0.42	U o y	4.68	1.94		ug/L		41	25 - 132	2	20
MCPA	16	U	468	325	J	ug/L		69	43 - 118	1	20
MCPP	31	U	468	381		ug/L		81	45 - 121	5	20
Silvex (2,4,5-TP)	0.16	U o N	4.68	3.32		ug/L		71	48 - 127	5	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCAA	*77*		*39 - 135*

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 280-392421/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 392959 — **Prep Batch: 392421**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.4	U	100	4.4	ug/L		10/23/17 15:46	10/26/17 22:47	1
Magnesium	10.7	U	200	10.7	ug/L		10/23/17 15:46	10/26/17 22:47	1
Potassium	237	U	3000	237	ug/L		10/23/17 15:46	10/26/17 22:47	1
Vanadium	1.1	U	10.0	1.1	ug/L		10/23/17 15:46	10/26/17 22:47	1

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

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

Lab Sample ID: MB 280-392421/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 393082 — **Prep Batch: 392421**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	34.5	U	200	34.5	ug/L		10/23/17 15:46	10/27/17 17:39	1
Iron	22.0	U	100	22.0	ug/L		10/23/17 15:46	10/27/17 17:39	1
Sodium	117	U	1000	117	ug/L		10/23/17 15:46	10/27/17 17:39	1

Lab Sample ID: LCS 280-392421/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 392959 — **Prep Batch: 392421**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1000	1039		ug/L		104	80 - 120
Magnesium	50000	52120		ug/L		104	80 - 120
Potassium	50000	52920		ug/L		106	80 - 120
Vanadium	500	529.9		ug/L		106	80 - 120

Lab Sample ID: LCS 280-392421/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 393082 — **Prep Batch: 392421**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	50000	46130		ug/L		92	80 - 120
Iron	1000	952.0		ug/L		95	80 - 120
Sodium	50000	46850		ug/L		94	80 - 120

Lab Sample ID: 280-102659-13 MS — **Client Sample ID: B3D982**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 392959 — **Prep Batch: 392421**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	22.6	B	1000	999.9		ug/L		98	75 - 125
Magnesium	14700		50000	61470		ug/L		94	75 - 125
Potassium	5980		50000	56940		ug/L		102	75 - 125
Vanadium	15.9		500	502.1		ug/L		97	75 - 125

Lab Sample ID: 280-102659-13 MS — **Client Sample ID: B3D982**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 393082 — **Prep Batch: 392421**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	49300		50000	98760		ug/L		99	75 - 125
Iron	29.4	B	1000	1033		ug/L		100	75 - 125
Sodium	20200		50000	71030		ug/L		102	75 - 125

Lab Sample ID: 280-102659-13 MSD — **Client Sample ID: B3D982**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 392959 — **Prep Batch: 392421**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	22.6	B	1000	1077		ug/L		105	75 - 125	7	20
Magnesium	14700		50000	65960		ug/L		103	75 - 125	7	20

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

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

Lab Sample ID: 280-102659-13 MSD — **Client Sample ID: B3D982**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 392959 — **Prep Batch: 392421**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Potassium	5980		50000	59380		ug/L		107	75 - 125	4	20
Vanadium	15.9		500	542.9		ug/L		105	75 - 125	8	20

Lab Sample ID: 280-102659-13 MSD — **Client Sample ID: B3D982**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 393082 — **Prep Batch: 392421**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	49300		50000	92540		ug/L		87	75 - 125	7	20
Iron	29.4	B	1000	979.6		ug/L		95	75 - 125	5	20
Sodium	20200		50000	67500		ug/L		95	75 - 125	5	20

Lab Sample ID: MB 280-392418/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 392959 — **Prep Batch: 392418**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.4	U	100	4.4	ug/L		10/26/17 07:34	10/26/17 23:29	1
Magnesium	10.7	U	200	10.7	ug/L		10/26/17 07:34	10/26/17 23:29	1
Potassium	237	U	3000	237	ug/L		10/26/17 07:34	10/26/17 23:29	1
Vanadium	1.1	U	10.0	1.1	ug/L		10/26/17 07:34	10/26/17 23:29	1

Lab Sample ID: MB 280-392418/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 393082 — **Prep Batch: 392418**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	34.5	U	200	34.5	ug/L		10/26/17 07:34	10/27/17 16:58	1
Iron	22.0	U	100	22.0	ug/L		10/26/17 07:34	10/27/17 16:58	1
Sodium	117	U	1000	117	ug/L		10/26/17 07:34	10/27/17 16:58	1

Lab Sample ID: LCS 280-392418/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 392959 — **Prep Batch: 392418**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1000	1109		ug/L		111	80 - 120
Magnesium	50000	54630		ug/L		109	80 - 120
Potassium	50000	55190		ug/L		110	80 - 120
Vanadium	500	553.5		ug/L		111	80 - 120

Lab Sample ID: LCS 280-392418/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 393082 — **Prep Batch: 392418**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	50000	47480		ug/L		95	80 - 120
Iron	1000	971.4		ug/L		97	80 - 120
Sodium	50000	49500		ug/L		99	80 - 120

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

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

Lab Sample ID: 280-102659-2 MS — **Client Sample ID: B3D3K8**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 392959 — **Prep Batch: 392418**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	29.6	B	1000	1141		ug/L		111	75 - 125
Magnesium	18400		50000	72010		ug/L		107	75 - 125
Potassium	7000		50000	59300		ug/L		105	75 - 125
Vanadium	12.7		500	561.5		ug/L		110	75 - 125

Lab Sample ID: 280-102659-2 MS — **Client Sample ID: B3D3K8**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 393082 — **Prep Batch: 392418**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	69000		50000	110200		ug/L		82	75 - 125
Iron	76.4	B	1000	957.0		ug/L		88	75 - 125
Sodium	23900		50000	70710		ug/L		94	75 - 125

Lab Sample ID: 280-102659-2 MSD — **Client Sample ID: B3D3K8**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 392959 — **Prep Batch: 392418**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	29.6	B	1000	1142		ug/L		111	75 - 125	0	20
Magnesium	18400		50000	71410		ug/L		106	75 - 125	1	20
Potassium	7000		50000	62760		ug/L		112	75 - 125	6	20
Vanadium	12.7		500	560.6		ug/L		110	75 - 125	0	20

Lab Sample ID: 280-102659-2 MSD — **Client Sample ID: B3D3K8**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 393082 — **Prep Batch: 392418**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	69000		50000	115600		ug/L		93	75 - 125	5	20
Iron	76.4	B	1000	1015		ug/L		94	75 - 125	6	20
Sodium	23900		50000	74930		ug/L		102	75 - 125	6	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 280-392417/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 392960 — **Prep Batch: 392417**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9.2	U	30.0	9.2	ug/L		10/26/17 07:34	10/26/17 20:11	1
Antimony	0.40	U	2.0	0.40	ug/L		10/26/17 07:34	10/26/17 20:11	1
Arsenic	0.33	U	5.0	0.33	ug/L		10/26/17 07:34	10/26/17 20:11	1
Barium	0.29	U	1.0	0.29	ug/L		10/26/17 07:34	10/26/17 20:11	1
Beryllium	0.080	U	1.0	0.080	ug/L		10/26/17 07:34	10/26/17 20:11	1
Cadmium	0.27	U	1.0	0.27	ug/L		10/26/17 07:34	10/26/17 20:11	1
Chromium	0.50	U	2.0	0.50	ug/L		10/26/17 07:34	10/26/17 20:11	1
Cobalt	0.054	U	1.0	0.054	ug/L		10/26/17 07:34	10/26/17 20:11	1
Copper	0.56	U	2.0	0.56	ug/L		10/26/17 07:34	10/26/17 20:11	1

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

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

Lab Sample ID: MB 280-392417/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 392960 — **Prep Batch: 392417**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.18	U	1.0	0.18	ug/L		10/26/17 07:34	10/26/17 20:11	1
Manganese	0.31	U	1.0	0.31	ug/L		10/26/17 07:34	10/26/17 20:11	1
Molybdenum	0.14	U	2.0	0.14	ug/L		10/26/17 07:34	10/26/17 20:11	1
Nickel	0.30	U	2.0	0.30	ug/L		10/26/17 07:34	10/26/17 20:11	1
Selenium	0.70	U	5.0	0.70	ug/L		10/26/17 07:34	10/26/17 20:11	1
Silver	0.033	U	5.0	0.033	ug/L		10/26/17 07:34	10/26/17 20:11	1
Strontium	0.30	U	10.0	0.30	ug/L		10/26/17 07:34	10/26/17 20:11	1
Thallium	0.050	U	1.0	0.050	ug/L		10/26/17 07:34	10/26/17 20:11	1
Tin	0.77	U	10.0	0.77	ug/L		10/26/17 07:34	10/26/17 20:11	1
Zinc	2.0	U	10.0	2.0	ug/L		10/26/17 07:34	10/26/17 20:11	1

Lab Sample ID: MB 280-392417/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 393181 — **Prep Batch: 392417**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.2	U	1.0	1.2	ug/L		10/26/17 07:34	10/27/17 15:45	1
Uranium	0.050	U	1.0	0.050	ug/L		10/26/17 07:34	10/27/17 15:45	1

Lab Sample ID: LCS 280-392417/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 392960 — **Prep Batch: 392417**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	400	441.2		ug/L		110	80 - 120
Antimony	40.0	41.53		ug/L		104	80 - 120
Arsenic	40.0	38.58		ug/L		96	80 - 120
Barium	40.0	40.84		ug/L		102	80 - 120
Beryllium	40.0	39.06		ug/L		98	80 - 120
Cadmium	40.0	40.13		ug/L		100	80 - 120
Chromium	40.0	41.59		ug/L		104	80 - 120
Cobalt	40.0	40.83		ug/L		102	80 - 120
Copper	40.0	41.68		ug/L		104	80 - 120
Lead	40.0	41.93		ug/L		105	80 - 120
Manganese	40.0	41.93		ug/L		105	80 - 120
Molybdenum	40.0	40.25		ug/L		101	80 - 120
Nickel	40.0	41.89		ug/L		105	80 - 120
Selenium	40.0	38.03		ug/L		95	80 - 120
Silver	40.0	40.72		ug/L		102	80 - 120
Strontium	40.0	42.61		ug/L		107	80 - 120
Thallium	40.0	40.88		ug/L		102	80 - 120
Tin	40.0	41.03		ug/L		103	80 - 120
Zinc	40.0	39.18		ug/L		98	80 - 120

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

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

Lab Sample ID: LCS 280-392417/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 393181 — **Prep Batch: 392417**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Thorium	40.0	42.28		ug/L		106	80 - 120
Uranium	40.0	40.85		ug/L		102	80 - 120

Lab Sample ID: 280-102659-13 MS — **Client Sample ID: B3D982**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 392960 — **Prep Batch: 392417**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	9.2	U	400	389.2		ug/L		97	75 - 125
Antimony	0.40	U	40.0	41.25		ug/L		103	75 - 125
Arsenic	3.5	B	40.0	40.40		ug/L		92	75 - 125
Barium	48.1		40.0	94.59		ug/L		116	75 - 125
Beryllium	0.080	U	40.0	42.19		ug/L		105	75 - 125
Cadmium	0.27	U	40.0	39.50		ug/L		99	75 - 125
Chromium	10.4		40.0	48.97		ug/L		96	75 - 125
Cobalt	0.054	U	40.0	39.05		ug/L		98	75 - 125
Copper	3.9		40.0	44.51		ug/L		102	75 - 125
Lead	0.18	U	40.0	40.35		ug/L		101	75 - 125
Manganese	0.42	B	40.0	41.29		ug/L		102	75 - 125
Molybdenum	6.3		40.0	47.26		ug/L		102	75 - 125
Nickel	1.8	B	40.0	40.33		ug/L		96	75 - 125
Selenium	2.7	B	40.0	40.38		ug/L		94	75 - 125
Silver	0.033	U	40.0	38.63		ug/L		97	75 - 125
Strontium	240		40.0	297.8	X	ug/L		145	75 - 125
Thallium	0.050	U	40.0	39.31		ug/L		98	75 - 125
Tin	0.77	U	40.0	41.06		ug/L		103	75 - 125
Zinc	2.0	U	40.0	36.99		ug/L		92	75 - 125

Lab Sample ID: 280-102659-13 MS — **Client Sample ID: B3D982**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 393181 — **Prep Batch: 392417**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Thorium	1.2	U	40.0	42.59		ug/L		106	75 - 125
Uranium	4.5		40.0	46.12		ug/L		104	75 - 125

Lab Sample ID: 280-102659-13 MSD — **Client Sample ID: B3D982**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 392960 — **Prep Batch: 392417**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	9.2	U	400	428.4		ug/L		107	75 - 125	10	20
Antimony	0.40	U	40.0	41.48		ug/L		104	75 - 125	1	20
Arsenic	3.5	B	40.0	42.35		ug/L		97	75 - 125	5	20
Barium	48.1		40.0	93.68		ug/L		114	75 - 125	1	20
Beryllium	0.080	U	40.0	42.56		ug/L		106	75 - 125	1	20
Cadmium	0.27	U	40.0	39.34		ug/L		98	75 - 125	0	20
Chromium	10.4		40.0	51.06		ug/L		102	75 - 125	4	20
Cobalt	0.054	U	40.0	40.33		ug/L		101	75 - 125	3	20

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

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

Lab Sample ID: 280-102659-13 MSD **Client Sample ID: B3D982**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 392960 **Prep Batch: 392417**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Copper	3.9		40.0	41.49		ug/L		94	75 - 125	7	20
Lead	0.18	U	40.0	40.83		ug/L		102	75 - 125	1	20
Manganese	0.42	B	40.0	40.90		ug/L		101	75 - 125	1	20
Molybdenum	6.3		40.0	47.23		ug/L		102	75 - 125	0	20
Nickel	1.8	B	40.0	41.28		ug/L		99	75 - 125	2	20
Selenium	2.7	B	40.0	41.39		ug/L		97	75 - 125	2	20
Silver	0.033	U	40.0	39.29		ug/L		98	75 - 125	2	20
Strontium	240		40.0	308.9	X	ug/L		172	75 - 125	4	20
Thallium	0.050	U	40.0	40.02		ug/L		100	75 - 125	2	20
Tin	0.77	U	40.0	41.06		ug/L		103	75 - 125	0	20
Zinc	2.0	U	40.0	36.16		ug/L		90	75 - 125	2	20

Lab Sample ID: 280-102659-13 MSD **Client Sample ID: B3D982**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 393181 **Prep Batch: 392417**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Thorium	1.2	U	40.0	42.77		ug/L		107	75 - 125	0	20
Uranium	4.5		40.0	46.58		ug/L		105	75 - 125	1	20

Lab Sample ID: MB 280-392420/1-A **Client Sample ID: Method Blank**
Matrix: Water **Prep Type: Total Recoverable**
Analysis Batch: 392960 **Prep Batch: 392420**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9.2	U	30.0	9.2	ug/L		10/26/17 07:34	10/26/17 20:56	1
Antimony	0.40	U	2.0	0.40	ug/L		10/26/17 07:34	10/26/17 20:56	1
Arsenic	0.33	U	5.0	0.33	ug/L		10/26/17 07:34	10/26/17 20:56	1
Barium	0.29	U	1.0	0.29	ug/L		10/26/17 07:34	10/26/17 20:56	1
Beryllium	0.080	U	1.0	0.080	ug/L		10/26/17 07:34	10/26/17 20:56	1
Cadmium	0.27	U	1.0	0.27	ug/L		10/26/17 07:34	10/26/17 20:56	1
Chromium	0.50	U	2.0	0.50	ug/L		10/26/17 07:34	10/26/17 20:56	1
Cobalt	0.054	U	1.0	0.054	ug/L		10/26/17 07:34	10/26/17 20:56	1
Copper	0.56	U	2.0	0.56	ug/L		10/26/17 07:34	10/26/17 20:56	1
Lead	0.18	U	1.0	0.18	ug/L		10/26/17 07:34	10/26/17 20:56	1
Manganese	0.31	U	1.0	0.31	ug/L		10/26/17 07:34	10/26/17 20:56	1
Molybdenum	0.14	U	2.0	0.14	ug/L		10/26/17 07:34	10/26/17 20:56	1
Nickel	0.30	U	2.0	0.30	ug/L		10/26/17 07:34	10/26/17 20:56	1
Selenium	0.70	U	5.0	0.70	ug/L		10/26/17 07:34	10/26/17 20:56	1
Silver	0.033	U	5.0	0.033	ug/L		10/26/17 07:34	10/26/17 20:56	1
Strontium	0.30	U	10.0	0.30	ug/L		10/26/17 07:34	10/26/17 20:56	1
Thallium	0.050	U	1.0	0.050	ug/L		10/26/17 07:34	10/26/17 20:56	1
Tin	0.77	U	10.0	0.77	ug/L		10/26/17 07:34	10/26/17 20:56	1
Zinc	2.0	U	10.0	2.0	ug/L		10/26/17 07:34	10/26/17 20:56	1

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

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

Lab Sample ID: MB 280-392420/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 393181 — **Prep Batch: 392420**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thorium	1.2	U	1.0	1.2	ug/L		10/26/17 07:34	10/27/17 14:59	1
Uranium	0.050	U	1.0	0.050	ug/L		10/26/17 07:34	10/27/17 14:59	1

Lab Sample ID: LCS 280-392420/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 392960 — **Prep Batch: 392420**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	400	438.4		ug/L		110	80 - 120
Antimony	40.0	40.19		ug/L		100	80 - 120
Arsenic	40.0	38.77		ug/L		97	80 - 120
Barium	40.0	41.16		ug/L		103	80 - 120
Beryllium	40.0	39.79		ug/L		99	80 - 120
Cadmium	40.0	40.87		ug/L		102	80 - 120
Chromium	40.0	40.34		ug/L		101	80 - 120
Cobalt	40.0	40.05		ug/L		100	80 - 120
Copper	40.0	41.38		ug/L		103	80 - 120
Lead	40.0	41.03		ug/L		103	80 - 120
Manganese	40.0	40.86		ug/L		102	80 - 120
Molybdenum	40.0	41.34		ug/L		103	80 - 120
Nickel	40.0	41.13		ug/L		103	80 - 120
Selenium	40.0	38.47		ug/L		96	80 - 120
Silver	40.0	40.01		ug/L		100	80 - 120
Strontium	40.0	42.58		ug/L		106	80 - 120
Thallium	40.0	40.18		ug/L		100	80 - 120
Tin	40.0	40.71		ug/L		102	80 - 120
Zinc	40.0	39.89		ug/L		100	80 - 120

Lab Sample ID: LCS 280-392420/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 393181 — **Prep Batch: 392420**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Thorium	40.0	41.67		ug/L		104	80 - 120
Uranium	40.0	40.41		ug/L		101	80 - 120

Lab Sample ID: 280-102659-2 MS — **Client Sample ID: B3D3K8**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 392960 — **Prep Batch: 392420**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	9.2	U	400	433.5		ug/L		108	75 - 125
Antimony	0.68	B	40.0	41.77		ug/L		103	75 - 125
Arsenic	2.5	B	40.0	40.72		ug/L		96	75 - 125
Barium	56.0		40.0	97.77		ug/L		105	75 - 125
Beryllium	0.080	U	40.0	41.61		ug/L		104	75 - 125
Cadmium	0.27	U	40.0	37.60		ug/L		94	75 - 125
Chromium	7.8		40.0	47.03		ug/L		98	75 - 125
Cobalt	0.22	B	40.0	38.09		ug/L		95	75 - 125

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

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

Lab Sample ID: 280-102659-2 MS **Client Sample ID: B3D3K8**
Matrix: Water **Prep Type: Dissolved**
Analysis Batch: 392960 **Prep Batch: 392420**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Copper	0.56	U	40.0	38.44		ug/L		96	75 - 125
Lead	0.18	U	40.0	39.23		ug/L		98	75 - 125
Manganese	2.5		40.0	41.58		ug/L		98	75 - 125
Molybdenum	5.2		40.0	46.06		ug/L		102	75 - 125
Nickel	0.30	U	40.0	38.29		ug/L		96	75 - 125
Selenium	2.9	B	40.0	40.03		ug/L		93	75 - 125
Silver	0.033	U	40.0	38.04		ug/L		95	75 - 125
Strontium	291		40.0	340.1	X	ug/L		122	75 - 125
Thallium	0.050	U	40.0	38.68		ug/L		97	75 - 125
Tin	0.77	U	40.0	39.85		ug/L		100	75 - 125
Zinc	5.2	B	40.0	45.40		ug/L		100	75 - 125

Lab Sample ID: 280-102659-2 MS **Client Sample ID: B3D3K8**
Matrix: Water **Prep Type: Dissolved**
Analysis Batch: 393181 **Prep Batch: 392420**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Thorium	1.2	U	40.0	40.60		ug/L		102	75 - 125
Uranium	5.6		40.0	45.65		ug/L		100	75 - 125

Lab Sample ID: 280-102659-2 MSD **Client Sample ID: B3D3K8**
Matrix: Water **Prep Type: Dissolved**
Analysis Batch: 392960 **Prep Batch: 392420**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	9.2	U	400	434.5		ug/L		109	75 - 125	0	20
Antimony	0.68	B	40.0	42.62		ug/L		105	75 - 125	2	20
Arsenic	2.5	B	40.0	43.33		ug/L		102	75 - 125	6	20
Barium	56.0		40.0	100.8		ug/L		112	75 - 125	3	20
Beryllium	0.080	U	40.0	42.77		ug/L		107	75 - 125	3	20
Cadmium	0.27	U	40.0	38.80		ug/L		97	75 - 125	3	20
Chromium	7.8		40.0	47.80		ug/L		100	75 - 125	2	20
Cobalt	0.22	B	40.0	39.34		ug/L		98	75 - 125	3	20
Copper	0.56	U	40.0	42.36		ug/L		106	75 - 125	10	20
Lead	0.18	U	40.0	40.11		ug/L		100	75 - 125	2	20
Manganese	2.5		40.0	42.34		ug/L		100	75 - 125	2	20
Molybdenum	5.2		40.0	47.76		ug/L		106	75 - 125	4	20
Nickel	0.30	U	40.0	38.88		ug/L		97	75 - 125	2	20
Selenium	2.9	B	40.0	41.28		ug/L		96	75 - 125	3	20
Silver	0.033	U	40.0	38.48		ug/L		96	75 - 125	1	20
Strontium	291		40.0	354.9	X	ug/L		159	75 - 125	4	20
Thallium	0.050	U	40.0	39.45		ug/L		99	75 - 125	2	20
Tin	0.77	U	40.0	39.86		ug/L		100	75 - 125	0	20
Zinc	5.2	B	40.0	42.96		ug/L		94	75 - 125	6	20

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

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

Lab Sample ID: 280-102659-2 MSD — **Client Sample ID: B3D3K8**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 393181 — **Prep Batch: 392420**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Thorium	1.2	U	40.0	41.99		ug/L		105	75 - 125	3	20
Uranium	5.6		40.0	47.32		ug/L		104	75 - 125	4	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 280-395047/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 395159 — **Prep Batch: 395047**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.027	U	0.20	0.027	ug/L		11/13/17 12:22	11/13/17 21:16	1

Lab Sample ID: LCS 280-395047/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 395159 — **Prep Batch: 395047**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.83		ug/L		97	80 - 120

Lab Sample ID: LCSD 280-395047/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 395159 — **Prep Batch: 395047**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	5.00	4.75		ug/L		95	80 - 120	2	20

Lab Sample ID: MB 280-395048/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 395159 — **Prep Batch: 395048**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.027	U	0.20	0.027	ug/L		11/13/17 12:22	11/13/17 21:54	1

Lab Sample ID: LCS 280-395048/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 395159 — **Prep Batch: 395048**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.91		ug/L		98	80 - 120

Lab Sample ID: 280-102659-13 MS — **Client Sample ID: B3D982**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 395159 — **Prep Batch: 395048**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.027	U	5.00	4.94		ug/L		99	75 - 125

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 280-102659-13 MSD — **Client Sample ID: B3D982**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 395159 — **Prep Batch: 395048**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.027	U	5.00	5.00		ug/L		100	75 - 125	1	20

Lab Sample ID: 280-102659-2 MS — **Client Sample ID: B3D3K8**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 395159 — **Prep Batch: 395047**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	0.027	U	5.00	4.88		ug/L		98	75 - 125		

Lab Sample ID: 280-102659-2 MSD — **Client Sample ID: B3D3K8**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 395159 — **Prep Batch: 395047**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.027	U	5.00	4.86		ug/L		97	75 - 125	1	20

Method: 9012B - Cyanide, Total andor Amenable

Lab Sample ID: MB 280-392896/4-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 393164 — **Prep Batch: 392896**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide	2.0	U	10.0	2.0	ug/L		10/26/17 15:17	10/29/17 22:29	1

Lab Sample ID: HLCS 280-392896/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 393164 — **Prep Batch: 392896**

Analyte			Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide			350	356.4		ug/L		102	80 - 120		

Lab Sample ID: LCS 280-392896/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 393164 — **Prep Batch: 392896**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide			105	109.5		ug/L		105	80 - 120		

Lab Sample ID: LLCS 280-392896/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 393164 — **Prep Batch: 392896**

Analyte			Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide			100	93.04		ug/L		93	44 - 167		

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

Method: 9012B - Cyanide, Total andor Amenable (Continued)

Lab Sample ID: 280-102659-4 MS — **Client Sample ID: B3DD47**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 393164 — **Prep Batch: 392896**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide	2.0	U	105	109.5		ug/L		105	75 - 125		

Lab Sample ID: 280-102659-4 MSD — **Client Sample ID: B3DD47**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 393164 — **Prep Batch: 392896**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide	2.0	U	105	108.1		ug/L		103	75 - 125	1	20

Method: 9020B - Organic Halides, Total (TOX)

Lab Sample ID: MB 280-394753/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 394753

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	7.7	U	30.0	7.7	ug/L			11/09/17 07:28	1

Lab Sample ID: LCS 280-394753/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 394753

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Halogens - Dup	100	100.5		ug/L		101	80 - 120

Lab Sample ID: 280-102741-E-6 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 394753

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Halogens - Dup	7.7	U	100	101.2		ug/L		101	75 - 125		

Lab Sample ID: 280-102741-E-6 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 394753

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Halogens - Dup	7.7	U	100	100.4		ug/L		100	75 - 125	1	20

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 280-395250/38 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 395250

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average	155	U	1000	155	ug/L			11/14/17 02:17	1

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

Method: 9060A - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCS 280-395250/36 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 395250

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Average	25000	24340		ug/L		97	80 - 120

Lab Sample ID: LCSD 280-395250/37 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 395250

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Average	25000	24480		ug/L		98	80 - 120	1	20

Lab Sample ID: 280-102659-4 MS — **Client Sample ID: B3DD47**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 395250

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Average	155	U	25000	24660		ug/L		99	75 - 125

Lab Sample ID: 280-102659-4 MSD — **Client Sample ID: B3DD47**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 395250

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Average	155	U	25000	24570		ug/L		98	75 - 125	0	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-392632/5 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 392632

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	3430	B	5000	1070	ug/L			10/24/17 20:17	1

Lab Sample ID: LCS 280-392632/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 392632

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3	200000	191500		ug/L		96	80 - 120

Lab Sample ID: 280-102659-13 DU — **Client Sample ID: B3D982**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 392632

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity as CaCO3	164000		164000		ug/L		0.2	20

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

GC/MS VOA

Analysis Batch: 393143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-102659-3	B3D557	Total/NA	Water	8260B	
280-102659-15	B3D817	Total/NA	Water	8260B	
280-102659-16	B3DD55	Total/NA	Water	8260B	
MB 280-393143/6	Method Blank	Total/NA	Water	8260B	
LCS 280-393143/4	Lab Control Sample	Total/NA	Water	8260B	
280-102659-3 MS	B3D557	Total/NA	Water	8260B	
280-102659-3 MSD	B3D557	Total/NA	Water	8260B	

GC Semi VOA

Prep Batch: 392775

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-102659-5	B3D963	Total/NA	Water	8151A	
280-102659-6	B3D962	Total/NA	Water	8151A	
280-102659-8	B3D960	Total/NA	Water	8151A	
280-102659-14	B3D966	Total/NA	Water	8151A	
MB 280-392775/1-A	Method Blank	Total/NA	Water	8151A	
LCS 280-392775/2-A	Lab Control Sample	Total/NA	Water	8151A	
280-102659-6 MS	B3D962	Total/NA	Water	8151A	
280-102659-6 MSD	B3D962	Total/NA	Water	8151A	

Prep Batch: 393044

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-102659-17	B3D944	Total/NA	Water	8151A	
280-102659-18	B3D945	Total/NA	Water	8151A	
MB 280-393044/1-A	Method Blank	Total/NA	Water	8151A	
LCS 280-393044/2-A	Lab Control Sample	Total/NA	Water	8151A	
LCSD 280-393044/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	
280-102659-18 MS	B3D945	Total/NA	Water	8151A	
280-102659-18 MSD	B3D945	Total/NA	Water	8151A	

Analysis Batch: 396048

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-102659-5	B3D963	Total/NA	Water	8151A	392775
280-102659-6	B3D962	Total/NA	Water	8151A	392775
280-102659-8	B3D960	Total/NA	Water	8151A	392775
280-102659-14	B3D966	Total/NA	Water	8151A	392775
MB 280-392775/1-A	Method Blank	Total/NA	Water	8151A	392775
LCS 280-392775/2-A	Lab Control Sample	Total/NA	Water	8151A	392775
280-102659-6 MS	B3D962	Total/NA	Water	8151A	392775
280-102659-6 MSD	B3D962	Total/NA	Water	8151A	392775

Analysis Batch: 396208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-102659-17	B3D944	Total/NA	Water	8151A	393044
280-102659-18	B3D945	Total/NA	Water	8151A	393044
MB 280-393044/1-A	Method Blank	Total/NA	Water	8151A	393044
LCS 280-393044/2-A	Lab Control Sample	Total/NA	Water	8151A	393044
LCSD 280-393044/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	393044
280-102659-18 MS	B3D945	Total/NA	Water	8151A	393044

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

GC Semi VOA (Continued)

Analysis Batch: 396208 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-102659-18 MSD	B3D945	Total/NA	Water	8151A	393044

Metals

Prep Batch: 392417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-102659-1	B3D255	Total/NA	Water	3020A	
280-102659-7	B3D248	Total/NA	Water	3020A	
280-102659-11	B3D254	Total/NA	Water	3020A	
280-102659-13	B3D982	Total/NA	Water	3020A	
MB 280-392417/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-392417/2-A	Lab Control Sample	Total/NA	Water	3020A	
280-102659-13 MS	B3D982	Total/NA	Water	3020A	
280-102659-13 MSD	B3D982	Total/NA	Water	3020A	

Prep Batch: 392418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-102659-2	B3D3K8	Dissolved	Water	3005A	
280-102659-9	B3D252	Dissolved	Water	3005A	
280-102659-10	B3D3K7	Dissolved	Water	3005A	
280-102659-12	B3D3P1	Dissolved	Water	3005A	
MB 280-392418/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 280-392418/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-102659-2 MS	B3D3K8	Dissolved	Water	3005A	
280-102659-2 MSD	B3D3K8	Dissolved	Water	3005A	

Prep Batch: 392420

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-102659-2	B3D3K8	Dissolved	Water	3005A	
280-102659-9	B3D252	Dissolved	Water	3005A	
280-102659-10	B3D3K7	Dissolved	Water	3005A	
280-102659-12	B3D3P1	Dissolved	Water	3005A	
MB 280-392420/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 280-392420/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-102659-2 MS	B3D3K8	Dissolved	Water	3005A	
280-102659-2 MSD	B3D3K8	Dissolved	Water	3005A	

Prep Batch: 392421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-102659-1	B3D255	Total/NA	Water	3010A	
280-102659-7	B3D248	Total/NA	Water	3010A	
280-102659-11	B3D254	Total/NA	Water	3010A	
280-102659-13	B3D982	Total/NA	Water	3010A	
MB 280-392421/1-A	Method Blank	Total/NA	Water	3010A	
LCS 280-392421/2-A	Lab Control Sample	Total/NA	Water	3010A	
280-102659-13 MS	B3D982	Total/NA	Water	3010A	
280-102659-13 MSD	B3D982	Total/NA	Water	3010A	

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

Metals (Continued)

Analysis Batch: 392959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-102659-1	B3D255	Total/NA	Water	6010D	392421
280-102659-2	B3D3K8	Dissolved	Water	6010D	392418
280-102659-7	B3D248	Total/NA	Water	6010D	392421
280-102659-9	B3D252	Dissolved	Water	6010D	392418
280-102659-10	B3D3K7	Dissolved	Water	6010D	392418
280-102659-11	B3D254	Total/NA	Water	6010D	392421
280-102659-12	B3D3P1	Dissolved	Water	6010D	392418
280-102659-13	B3D982	Total/NA	Water	6010D	392421
MB 280-392418/1-A	Method Blank	Total Recoverable	Water	6010D	392418
MB 280-392421/1-A	Method Blank	Total/NA	Water	6010D	392421
LCS 280-392418/2-A	Lab Control Sample	Total Recoverable	Water	6010D	392418
LCS 280-392421/2-A	Lab Control Sample	Total/NA	Water	6010D	392421
280-102659-2 MS	B3D3K8	Dissolved	Water	6010D	392418
280-102659-2 MSD	B3D3K8	Dissolved	Water	6010D	392418
280-102659-13 MS	B3D982	Total/NA	Water	6010D	392421
280-102659-13 MSD	B3D982	Total/NA	Water	6010D	392421

Analysis Batch: 392960

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-102659-1	B3D255	Total/NA	Water	6020B	392417
280-102659-2	B3D3K8	Dissolved	Water	6020B	392420
280-102659-7	B3D248	Total/NA	Water	6020B	392417
280-102659-9	B3D252	Dissolved	Water	6020B	392420
280-102659-10	B3D3K7	Dissolved	Water	6020B	392420
280-102659-11	B3D254	Total/NA	Water	6020B	392417
280-102659-12	B3D3P1	Dissolved	Water	6020B	392420
280-102659-13	B3D982	Total/NA	Water	6020B	392417
MB 280-392417/1-A	Method Blank	Total/NA	Water	6020B	392417
MB 280-392420/1-A	Method Blank	Total Recoverable	Water	6020B	392420
LCS 280-392417/2-A	Lab Control Sample	Total/NA	Water	6020B	392417
LCS 280-392420/2-A	Lab Control Sample	Total Recoverable	Water	6020B	392420
280-102659-2 MS	B3D3K8	Dissolved	Water	6020B	392420
280-102659-2 MSD	B3D3K8	Dissolved	Water	6020B	392420
280-102659-13 MS	B3D982	Total/NA	Water	6020B	392417
280-102659-13 MSD	B3D982	Total/NA	Water	6020B	392417

Analysis Batch: 393082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-102659-1	B3D255	Total/NA	Water	6010D	392421
280-102659-2	B3D3K8	Dissolved	Water	6010D	392418
280-102659-7	B3D248	Total/NA	Water	6010D	392421
280-102659-9	B3D252	Dissolved	Water	6010D	392418
280-102659-10	B3D3K7	Dissolved	Water	6010D	392418
280-102659-11	B3D254	Total/NA	Water	6010D	392421
280-102659-12	B3D3P1	Dissolved	Water	6010D	392418
280-102659-13	B3D982	Total/NA	Water	6010D	392421
MB 280-392418/1-A	Method Blank	Total Recoverable	Water	6010D	392418
MB 280-392421/1-A	Method Blank	Total/NA	Water	6010D	392421
LCS 280-392418/2-A	Lab Control Sample	Total Recoverable	Water	6010D	392418
LCS 280-392421/2-A	Lab Control Sample	Total/NA	Water	6010D	392421
280-102659-2 MS	B3D3K8	Dissolved	Water	6010D	392418

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

Metals (Continued)

Analysis Batch: 393082 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-102659-2 MSD	B3D3K8	Dissolved	Water	6010D	392418
280-102659-13 MS	B3D982	Total/NA	Water	6010D	392421
280-102659-13 MSD	B3D982	Total/NA	Water	6010D	392421

Analysis Batch: 393181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-102659-1	B3D255	Total/NA	Water	6020B	392417
280-102659-7	B3D248	Total/NA	Water	6020B	392417
280-102659-9	B3D252	Dissolved	Water	6020B	392420
280-102659-10	B3D3K7	Dissolved	Water	6020B	392420
280-102659-11	B3D254	Total/NA	Water	6020B	392417
280-102659-12	B3D3P1	Dissolved	Water	6020B	392420
280-102659-13	B3D982	Total/NA	Water	6020B	392417
MB 280-392417/1-A	Method Blank	Total/NA	Water	6020B	392417
MB 280-392420/1-A	Method Blank	Total Recoverable	Water	6020B	392420
LCS 280-392417/2-A	Lab Control Sample	Total/NA	Water	6020B	392417
LCS 280-392420/2-A	Lab Control Sample	Total Recoverable	Water	6020B	392420
280-102659-2 MS	B3D3K8	Dissolved	Water	6020B	392420
280-102659-2 MSD	B3D3K8	Dissolved	Water	6020B	392420
280-102659-13 MS	B3D982	Total/NA	Water	6020B	392417
280-102659-13 MSD	B3D982	Total/NA	Water	6020B	392417

Analysis Batch: 393284

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-102659-2	B3D3K8	Dissolved	Water	6020B	392420

Prep Batch: 395047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-102659-2	B3D3K8	Dissolved	Water	7470A	
280-102659-9	B3D252	Dissolved	Water	7470A	
280-102659-10	B3D3K7	Dissolved	Water	7470A	
280-102659-12	B3D3P1	Dissolved	Water	7470A	
MB 280-395047/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-395047/2-A	Lab Control Sample	Total/NA	Water	7470A	
LCSD 280-395047/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	
280-102659-2 MS	B3D3K8	Dissolved	Water	7470A	
280-102659-2 MSD	B3D3K8	Dissolved	Water	7470A	

Prep Batch: 395048

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-102659-1	B3D255	Total/NA	Water	7470A	
280-102659-7	B3D248	Total/NA	Water	7470A	
280-102659-11	B3D254	Total/NA	Water	7470A	
280-102659-13	B3D982	Total/NA	Water	7470A	
MB 280-395048/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-395048/2-A	Lab Control Sample	Total/NA	Water	7470A	
280-102659-13 MS	B3D982	Total/NA	Water	7470A	
280-102659-13 MSD	B3D982	Total/NA	Water	7470A	

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

Metals (Continued)

Analysis Batch: 395159

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-102659-1	B3D255	Total/NA	Water	7470A	395048
280-102659-2	B3D3K8	Dissolved	Water	7470A	395047
280-102659-7	B3D248	Total/NA	Water	7470A	395048
280-102659-9	B3D252	Dissolved	Water	7470A	395047
280-102659-10	B3D3K7	Dissolved	Water	7470A	395047
280-102659-11	B3D254	Total/NA	Water	7470A	395048
280-102659-12	B3D3P1	Dissolved	Water	7470A	395047
280-102659-13	B3D982	Total/NA	Water	7470A	395048
MB 280-395047/1-A	Method Blank	Total/NA	Water	7470A	395047
MB 280-395048/1-A	Method Blank	Total/NA	Water	7470A	395048
LCS 280-395047/2-A	Lab Control Sample	Total/NA	Water	7470A	395047
LCS 280-395048/2-A	Lab Control Sample	Total/NA	Water	7470A	395048
LCSD 280-395047/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	395047
280-102659-2 MS	B3D3K8	Dissolved	Water	7470A	395047
280-102659-2 MSD	B3D3K8	Dissolved	Water	7470A	395047
280-102659-13 MS	B3D982	Total/NA	Water	7470A	395048
280-102659-13 MSD	B3D982	Total/NA	Water	7470A	395048

General Chemistry

Analysis Batch: 392632

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-102659-13	B3D982	Total/NA	Water	SM 2320B	
MB 280-392632/5	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-392632/4	Lab Control Sample	Total/NA	Water	SM 2320B	
280-102659-13 DU	B3D982	Total/NA	Water	SM 2320B	

Prep Batch: 392896

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-102659-4	B3DD47	Total/NA	Water	9012B	
MB 280-392896/4-A	Method Blank	Total/NA	Water	9012B	
HLCS 280-392896/1-A	Lab Control Sample	Total/NA	Water	9012B	
LCS 280-392896/3-A	Lab Control Sample	Total/NA	Water	9012B	
LLCS 280-392896/2-A	Lab Control Sample	Total/NA	Water	9012B	
280-102659-4 MS	B3DD47	Total/NA	Water	9012B	
280-102659-4 MSD	B3DD47	Total/NA	Water	9012B	

Analysis Batch: 393164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-102659-4	B3DD47	Total/NA	Water	9012B	392896
MB 280-392896/4-A	Method Blank	Total/NA	Water	9012B	392896
HLCS 280-392896/1-A	Lab Control Sample	Total/NA	Water	9012B	392896
LCS 280-392896/3-A	Lab Control Sample	Total/NA	Water	9012B	392896
LLCS 280-392896/2-A	Lab Control Sample	Total/NA	Water	9012B	392896
280-102659-4 MS	B3DD47	Total/NA	Water	9012B	392896
280-102659-4 MSD	B3DD47	Total/NA	Water	9012B	392896

Analysis Batch: 394753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-102659-16	B3DD55	Total/NA	Water	9020B	

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

General Chemistry (Continued)

Analysis Batch: 394753 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-394753/2	Method Blank	Total/NA	Water	9020B	
LCS 280-394753/4	Lab Control Sample	Total/NA	Water	9020B	
280-102741-E-6 MS	Matrix Spike	Total/NA	Water	9020B	
280-102741-E-6 MSD	Matrix Spike Duplicate	Total/NA	Water	9020B	

Analysis Batch: 395250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-102659-4	B3DD47	Total/NA	Water	9060A	
MB 280-395250/38	Method Blank	Total/NA	Water	9060A	
LCS 280-395250/36	Lab Control Sample	Total/NA	Water	9060A	
LCSD 280-395250/37	Lab Control Sample Dup	Total/NA	Water	9060A	
280-102659-4 MS	B3DD47	Total/NA	Water	9060A	
280-102659-4 MSD	B3DD47	Total/NA	Water	9060A	

Surrogate Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-010 / S18-010 / I18-001 / X18-005

TestAmerica Job ID: 280-102659-1
SDG: DN0250

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)	(70-130)
280-102659-3	B3D557	109	96	112	111
280-102659-3 MS	B3D557	104	93	103	103
280-102659-3 MSD	B3D557	108	89	106	99
280-102659-15	B3D817	111	96	108	104
280-102659-16	B3DD55	120	99	116	106
LCS 280-393143/4	Lab Control Sample	116	94	111	110
MB 280-393143/6	Method Blank	125	106	120	109

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8151A - Herbicides (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		DCPA1
Lab Sample ID	Client Sample ID	(39-135)
280-102659-5	B3D963	110
280-102659-6	B3D962	96
280-102659-6 MS	B3D962	100
280-102659-6 MSD	B3D962	102
280-102659-8	B3D960	93
280-102659-14	B3D966	110
280-102659-17	B3D944	65
280-102659-18	B3D945	79
280-102659-18 MS	B3D945	72
280-102659-18 MSD	B3D945	77
LCS 280-392775/2-A	Lab Control Sample	99
LCS 280-393044/2-A	Lab Control Sample	79
LCSD 280-393044/3-A	Lab Control Sample Dup	72
MB 280-392775/1-A	Method Blank	92
MB 280-393044/1-A	Method Blank	74

Surrogate Legend

DCPA = DCAA