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: 280-107112-1
TestAmerica Sample Delivery Group: DN0330
Client Project/Site: W18-003 / W18-002 / W18-001

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:
4/9/2018 4:09:35 PM

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

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

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

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

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Job ID: 280-107112-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: CH2M Hill Plateau Remediation Company

Project: W18-003 / W18-002 / W18-001

Report Number: 280-107112-1

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: Arsenic 6010D, Boron 6010D, Beryllium 6020B, Silver 6020B, Tin 6020B, 4,6-Dinitro-2-methyl phenol 8270D, Pentachlorophenol 8270D, Total Organic Halides 9020B. All analytes met statistical limits, unless otherwise detailed in the individual sections below. As instructed by the client, the data is reported.

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.

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 3/7/2018 10:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 1.0º C, 1.5º C and 1.8º C.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples B3FY27 (280-107112-15), B3FTC7 (280-107112-16) and B3FY28 (280-107112-17) were analyzed for semivolatile organic compounds (GC-MS) in accordance with SW-846 8270D. The samples were prepared on 03/12/2018 and analyzed on 03/29/2018.

2,4-Dimethylphenol failed the recovery criteria low for LCS 280-407552/2-A at 58%. This is below the project control limits, but within TestAmerica Denver's standard control limits of 46-100%. The extraction is more than 2x outside of holding time; therefore, as instructed by the client, the data have been qualified and reported (SIR18-0619).

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

TOTAL METALS (ICP)

Samples B3H392 (280-107112-14) and B3FTC7 (280-107112-16) were analyzed for Total Metals (ICP) in accordance with EPA SW846 6010D. The samples were prepared on 03/09/2018 and 03/14/2018 and analyzed on 03/17/2018, 03/21/2018 and 03/22/2018.

Calcium was detected in method blank MB 280-407862/1-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Potassium was detected in method blank MB 280-407862/1-A 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

Job ID: 280-107112-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Chromium failed the recovery criteria low for the MS of sample B3FTC7 (280-107112-16) in batch 280-408303. The acceptable LCS data demonstrate that the analytical system was operating within control; therefore, corrective action is not needed.

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

TOTAL METALS (ICP/MS)

Samples B3H392 (280-107112-14) and B3FTC7 (280-107112-16) were analyzed for Total Metals (ICP/MS) in accordance with SW846 6020B. The samples were prepared on 03/09/2018 and analyzed on 03/13/2018 and 03/15/2018.

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

The chain of custody for sample B3H392 (280-107112-14) requesting “6020_METALS_ICPMS: GW 01” analysis noted "Low Volume Well - Do not use for QC". The MS/MSD performed on sample B3FTC7 (280-107112-16) is reporting only Uranium. A duplicate LCS (LCSD) was analyzed for all other elements.

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

ALKALINITY

Samples B3H891 (280-107112-13) and B3FTC7 (280-107112-16) were analyzed for Alkalinity in accordance with SM20 2320B. The samples were analyzed on 03/13/2018.

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

TOTAL ORGANIC HALIDES

Samples B3HJJ7 (280-107112-1), B3HJJ9 (280-107112-2), B3HJC9 (280-107112-3), B3HK12 (280-107112-4), B3HJK0 (280-107112-5), B3HJJ6 (280-107112-6), B3HJC8 (280-107112-7), B3HJJ8 (280-107112-8), B3HJB3 (280-107112-9), B3HJF5 (280-107112-10), B3HJF6 (280-107112-11) and B3HJF7 (280-107112-12) were analyzed for total organic halides in accordance with EPA SW846 Method 9020B. The samples were analyzed on 03/12/2018.

Due to analyst oversight, project sample specific MS/MSD was not performed for analysis batch 280-407735. Duplicate LCS (LCSD) data has been reported to provide some evidence of batch precision. The following samples are affected: B3HJF6 (280-107112-11) and B3HJF7 (280-107112-12).

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

TOTAL ORGANIC CARBON

Samples B3HJJ7 (280-107112-1), B3HJJ9 (280-107112-2), B3HJC9 (280-107112-3), B3HK12 (280-107112-4), B3HJK0 (280-107112-5), B3HJJ6 (280-107112-6), B3HJC8 (280-107112-7), B3HJJ8 (280-107112-8), B3HJB3 (280-107112-9), B3HJF5 (280-107112-10), B3HJF6 (280-107112-11) and B3HJF7 (280-107112-12) were analyzed for total organic carbon in accordance with EPA SW-846 Method 9060A. The samples were analyzed on 03/13/2018.

Total Organic Carbon - Average was detected in method blank MB 280-407834/37 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, the result has been flagged. Refer to the QC report for details.

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

We certify that this data package is in compliance with the SOW, both technically and for completeness, including a full description of,

Job ID: 280-107112-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

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: SIR18-0619
Rev. Number: 0
Date Initiated: 04/09/2018

SAMPLE EVENT INFORMATION

SAF NUM(S): W18-001

LABORATORY: TADN

SAMPLING INFORMATION

NUMBER OF SAMPLES: 3

SAMPLE NUMBERS: B3FTC7, B3FY27, B3FY28

SAMPLE MATRIX: WATER

SDG NUM(S): DN0330

ISSUE BACKGROUND

CLASS: Laboratory Issue

TYPE: Quality Control Failure

DESCRIPTION: Method 8270D: 2,4-Dimethylphenol recovered low in the LCS for the referenced samples; recovery was 58%, project limits are 70-130%. This analyte recovered within TADN's standard limits of 46-100%. The affected samples are non-detect for the affected analytes. These samples are more than 2x out of hold.

RESOLUTION

PROPOSED RESOLUTION: TADN proposes to re-extract the samples out of hold; there may be insufficient volume to re-extract an MS/MSD.

OR

Report the analysis with flags and narrate the low recoveries in the LCS and LCSD.

FINAL RESOLUTION: Accept second proposed resolution - report and narrate.

SUBMITTED BY:

BANDY, DF 04/09/2018

ACCEPTED BY:

FITZGERALD, SL 04/09/2018

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 280-107112-1
SDG Number: DN0330

Login Number: 107112
List Number: 1
Creator: Gomez, Alyssa I

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	1.5, 1.0, 1.8 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

CH2MHill Plateau Remediation Company	8616 CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W18-003-196 Page 1 of 2

Collector: Larry Rosane CHPRC DN0330	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650	
SAF No.: W18-003	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071	
Project Title: RCRA, MARCH 2018	**Logbook No.:** HNF-N-506 98/51	**Ice Chest No.:** GWS-453	
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771731248743	
Protocol RCRA	**Priority:** 30 Days	**Offsite Property No.:** 9116	

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
B3HJJ7	N	W	3-6-18	0901	1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2 / Cool <=6C
B3HJJ7	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C
B3HJJ9	N	W			1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2 / Cool <=6C
B3HJJ9	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C
B3HJC9	N	W			1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2 / Cool <=6C
B3HJC9	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C
B3HK12	N	W	3-6-18	0901	1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2 / Cool <=6C

280-107112 Chain of Custody

Relinquished By	Received By	Matrix *
Larry Rosane CHPRC — Larry Rosane — MAR 0 6 2018 0910	Troy Bacon CHPRC — Troy L Bacon — MAR 0 6 2018 0910	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
Troy Bacon CHPRC — Troy L Bacon — MAR 0 6 2018 1400	FEDEX	
FedEx	Reed Pothuff — 3-7-18 1015	

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

Printed On 1/15/2018 L6, L1, L9 ER# 98 -0.1 RP 3-7-18 FSR ID = FSR57217 A-6004-842 (REV 3)

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CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W18-003-196 Page 2 of 2

Collector: Larry Rosano CHPRC DW0330	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: W18-003	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: RCRA, MARCH 2018	**Logbook No.:** HNF-N-506 98/51	**Ice Chest No.:** GWS-453
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771731248743
Protocol RCRA	**Priority:** 30 Days	**Offsite Property No.:** 9114

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
B3HK12	N	W	3-6-18	0901	1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C

Relinquished By: Larry Rosano CHPRC Larry Rosano — Print First and Last Name / Signature	MAR 0 6 2018 0910 — Date/Time	Received By: Troy Bacon CHPRC Troy L. Bacon — Print First and Last Name / Signature	MAR 0 6 2018 0910 — Date/Time
Relinquished By: Troy Bacon CHPRC Troy L. Bacon — Print First and Last Name / Signature	MAR 0 6 2018 1400 — Date/Time	Received By: FEDEX — Print First and Last Name / Signature	Date/Time
Relinquished By: FedEx — Print First and Last Name / Signature	Date/Time	Received By: Reed Patterson — Print First and Last Name / Signature	3-7-18 1015 — Date/Time
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 1/15/2018 FSR ID = FSR57217 A-6004-842 (REV 3)

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4/9/2018

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C.# W18-003-195 Page 1 of 2

Collector: Larry Rosane ICHPRC DN0330	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: W18-003	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: RCRA, MARCH 2018	**Logbook No.:** HNF-N-506 98/51	**Ice Chest No.:** GWS-453
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771731248143
Protocol RCRA	**Priority:** 30 Days	**Offsite Property No.:** 9111

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
B3HJK0	N	W	3-6-18	0720	1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2 / Cool <=6C
B3HJK0	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C
B3HJJ6	N	W			1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2 / Cool <=6C
B3HJJ6	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C
B3HJC8	N	W			1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2 / Cool <=6C
B3HJC8	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C
B3HJJ8	N	W	3-6-18	0720	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
Larry Rosane ICHPRC	Larry Rosane	MAR 06 2018 0910	Troy Bacon CHPRC	Troy L. Bacon	MAR 06 2018 0910
Troy Bacon CHPRC	Troy L. Bacon	MAR 06 2018 1400	FEDEX		
FedEx			Reed Pothoff Reed Pothoff		3-7-18 1015

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 1/15/2018 FSR ID = FSR57240 A-6004-842 (REV 3)

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CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W18-003-195 Page 2 of 2

Collector: Larry Rosane CHPRC DN0330	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: W18-003	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: RCRA, MARCH 2018	**Logbook No.:** HNF-N-506 98/51	**Ice Chest No.:** GWS-453
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771731248743
Protocol RCRA	**Priority:** 30 Days	**Offsite Property No.:** 911f

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
B3HJJ8	N	W	3-6-18	0720	1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C

Relinquished By: Larry Rosane CHPRC — Larry Rosane — MAR 0 6 2018 0910	Received By: Troy Bacon CHPRC — Troy L. Bacon — MAR 0 6 2018 0910	Matrix *	
Print First and Last Name — Signature — Date/Time	Print First and Last Name — Signature — Date/Time	S = Soil	DS = Drum Solids
Relinquished By: Troy Bacon CHPRC — Troy L. Bacon — MAR 0 6 2018 1400	Received By: FEDEX	SE = Sediment	DL = Drum Liquid
Print First and Last Name — Signature — Date/Time	Print First and Last Name — Signature — Date/Time	SO = Solid	T = Tissue
Relinquished By: FedEx	Received By: Reed Pothuraf — Reed Po — 3-7-18 1015	SL = Sludge	WI = Wipe
Print First and Last Name — Signature — Date/Time	Print First and Last Name — Signature — Date/Time	W = Water	L = Liquid
Relinquished By:	Received By:	O = Oil	V = Vegetation
Print First and Last Name — Signature — Date/Time	Print First and Last Name — Signature — Date/Time	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 1/15/2018 — FSR ID = FSR57240 — A-6004-842 (REV 3)

04/09/2018

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4/9/2018

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W18-003-191 Page 1 of 2

Collector: Malcom Chunn CHPRC DW0370	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: W18-003	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: RCRA, MARCH 2018	**Logbook No.:** HNF-N-506 - 97-69	**Ice Chest No.:** GWS-719
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771733731120
Protocol RCRA	**Priority:** 30 Days	**Offsite Property No.:** 9119

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
B3HJB3	N	W	MAR 0 6 2018	1003	1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2 / Cool <=6C
B3HJB3	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C
B3HJF5	N	W			1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2 / Cool <=6C
B3HJF5	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C
B3HJF6	N	W			1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2 / Cool <=6C
B3HJF6	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C
B3HJF7	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)
Malcom Chunn CHPRC — MAR 0 6 2018 1125	Troy Bacon CHPRC — MAR 0 6 2018 1125
Troy Bacon CHPRC — MAR 0 6 2018 1400	FEDEX
FedEx	Reed Pottmeyer — 3-7-18 1015

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 1/15/2018 FSR ID = FSR57211 A-6004-842 (REV 3)

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CH2MHill Plateau Remediation Company	51165 CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W18-003-191 Page 2 of 2

Collector: Malcom Chunn CHPRC DW0330	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: W18-003	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: RCRA, MARCH 2018	**Logbook No.:** HNF-N-506-97-69	**Ice Chest No.:** GWS-719
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771733731124
Protocol RCRA	**Priority:** 30 Days	**Offsite Property No.:** 9119

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
B3HJF7	N	W	MAR 0 6 2018	1003	1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C

Relinquished By: Malcom Chunn CHPRC — Print First and Last Name; Signature; MAR 0 6 2018 1125 Date/Time	Received By: Troy Bacon CHPRC Troy L. Bacon — Print First and Last Name; Signature; MAR 0 6 2018 1125 Date/Time	Matrix * S = Soil, SE = Sediment, SO = Solid, SL = Sludge, W = Water, O = Oil, A = Air, DS = Drum Solids, DL = Drum Liquid, T = Tissue, WI = Wipe, L = Liquid, V = Vegetation, X = Other
Relinquished By: Troy Bacon CHPRC Troy L. Bacon — Print First and Last Name; Signature; MAR 0 6 2018 1400 Date/Time	Received By: FEDEX — Print First and Last Name; Signature; Date/Time	
Relinquished By: Fed Ex — Print First and Last Name; Signature; Date/Time	Received By: Reed Pottmeyer — Print First and Last Name; Signature; 3-7-18 1015 Date/Time	
Relinquished By: — Print First and Last Name; Signature; Date/Time	Received By: — 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 1/15/2018 FSR ID = FSR57211 A-6004-842 (REV 3)

04/09/2018 REV.0

4/9/2018

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W18-002-176 Page 1 of 1

Collector: ~~Joan Aguilar ICHPRC~~ DN0330	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: W18-002	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: RCRA, February 2018	**Logbook No.:** HNF-N-506-9916	**Ice Chest No.:** GWS-719
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771733731146
Protocol RCRA	**Priority:** 30 Days	**Offsite Property No.:** 9119

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
Low Volume Wells, Do not use for QC

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3H891	N	W	3-6-18	1015	1x125-mL G/P	2320_ALKALINITY: GW 01	14 Days	Cool <=6C

Relinquished By	Print First and Last Name	Signature	Date/Time	Received By	Print First and Last Name	Signature	Date/Time
~~Joan Aguilar ICHPRC~~		MAR 0 6 2018	1150	Troy Bacon CHPRC		Troy L. Bacon	MAR 0 6 2018 1150
Troy Bacon CHPRC		Troy L. Bacon	MAR 0 6 2018 1400	FEDEX			
FedEx				Reed Pottmp		Reed Pottmp	3-7-18 1015

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 1/4/2018 | FSR ID = FSR55846 | A-6004-842 (REV 3)

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04/09/2018

REV.0

4/9/2018

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C.# W18-002-086 Page 1 of 1

Collector: Juan Aguilar /CHPRC DW0330	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: W18-002	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: RCRA, February 2018	**Logbook No.:** HNF-N-506 -9917	**Ice Chest No.:** GWS-719
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 7717 3378 1126
Protocol RCRA	**Priority:** 30 Days	**Offsite Property No.:** 9119

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
Low Volume Wells. Do not use for QC.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3H392	N	W	3-6-18	1105	1x125-mL G/P	6010_METALS_ICP: GW 04; 6020_METALS_ICPMS: GW 01	6 Months	HNO3 to pH <2

Relinquished By: Juan Aguilar /CHPRC	MAR 0 6 2018 1150	Received By: Troy Bacon CHPRC Troy L. Bacon	MAR 0 6 2018 1150	Matrix *	
Print First and Last Name	Signature / Date/Time	Print First and Last Name	Signature / Date/Time	S = Soil	DS = Drum Solids
Relinquished By: Troy Bacon CHPRC Troy L. Bacon	MAR 0 6 2018 1400	Received By: FEDEX		SE = Sediment	DL = Drum Liquid
Print First and Last Name	Signature / Date/Time	Print First and Last Name	Signature / Date/Time	SO = Solid	T = Tissue
Relinquished By: FedEx		Received By: Reed Pottmeyer Reed Pottmeyer	3-7-18 1015	SL = Sludge	WI = Wipe
Print First and Last Name	Signature / Date/Time	Print First and Last Name	Signature / Date/Time	W = Water	L = Liquid
Relinquished By:		Received By:		O = Oil	V = Vegetation
Print First and Last Name	Signature / Date/Time	Print First and Last Name	Signature / Date/Time	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 1/17/2018 FSR ID = FSR57280 A-6004-842 (REV 3)

04/09/2018

REV.0

4/9/2018

CH2MHill Plateau Remediation Company	88150 CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W18-001-360 Page 1 of 1

Collector: Larry Rosane CHPRC DW0330	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: W18-001	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: RCRA, JANUARY 2018	**Logbook No.:** HNF-N-506 98150	**Ice Chest No.:** GWS-593
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 7711 7283 1604
Protocol RCRA	**Priority:** 30 Days	**Offsite Property No.:** 9114

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
B3FY27	N	W	3-5-18	0923	4x1-L aG	8270_PHENOLIC_GC: COMMON	7/40 Days	Cool <=6C

Relinquished By: Larry Rosane CHPRC	Larry Rosane	MAR 05 2018 1310	Received By: SSU-1	MAR 05 2018 1310	Matrix *
Print First and Last Name	Signature	Date/Time	Print First and Last Name	Signature	Date/Time
Relinquished By: SSU-1		MAR 06 2018 0715	Received By: Janelle Zunker CHPRC		MAR 06 2018 0715
Print First and Last Name	Signature	Date/Time	Print First and Last Name	Signature	Date/Time
Relinquished By: Janelle Zunker CHPRC		MAR 06 2018 1400	Received By: FEDEX		
Print First and Last Name	Signature	Date/Time	Print First and Last Name	Signature	Date/Time
Relinquished By: FedEx			Received By: Reed Pottroff		3-7-18 1015
Print First and Last Name	Signature	Date/Time	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

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

Printed On 11/21/2017 FSR ID = FSR53843 A-6004-842 (REV 3)

04/09/2018

REV.0

4/9/2018

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C.# W18-001-140 Page 1 of 1

Collector: Larry Rosane CHPRC DN0330	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: W18-001	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071
Project Title: RCRA, JANUARY 2018	**Logbook No.:** HNF-N-506 98/50	**Ice Chest No.:** GWS-593
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771728317604
Protocol RCRA	**Priority:** 30 Days	**Offsite Property No.:** 9114

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
B3FTC7	N	W	3-5-18	1130	1x500-mL G/P	6010_METALS_ICP: COMMON; 6020_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B3FTC7	N	W	↓	↓	4x1-L aG	8270_PHENOLIC_GC: COMMON	7/40 Days	Cool <=6C
B3FTC7	N	W	3-5-18	1130	1x250-mL G/P	2320_ALKALINITY: COMMON	14 Days	Cool <=6C

Relinquished By	Print First and Last Name	Signature	Date/Time	Received By	Print First and Last Name	Signature	Date/Time
Larry Rosane CHPRC	Larry Rosane	Larry Rosane	MAR 05 2018 1310	SSU-1			MAR 05 2018 1310
SSU-1			MAR 06 2018 0715	Janelle Zunker CHPRC		Janelle Zunker	MAR 06 2018 0715
Janelle Zunker CHPRC		Janelle Zunker	MAR 06 2018 1400	FEDEX			
FedEx				Reed Poffenbarger		Reed Poffenbarger	3-7-18 1015

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

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

Printed On 11/21/2017 FSR ID = FSR53858 A-6004-842 (REV 3)

04/09/2018 REV.0 4/9/2018

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C.# W18-001-359 Page 1 of 1

Collector:	Larry Rosane /CHPRC DN0330	**Contact/Requester:**	Karen Waters-Husted	**Telephone No.:**	509-376-4650
SAF No.:	W18-001	**Sampling Origin:**	Hanford Site	**Purchase Order/Charge Code:**	300071
Project Title:	RCRA, JANUARY 2018	**Logbook No.:**	HNF-N-506 98/50	**Ice Chest No.:**	GWS-593
Shipped To (Lab):	TestAmerica Denver	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.:**	771728317604
Protocol	RCRA	**Priority:**	30 Days	**Offsite Property No.:**	9114

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
B3FY28	N	W	3-5-18	0015	4x1-L aG	8270_PHENOLIC_GC: COMMON	7/40 Days	Cool <=6C

Relinquished By: Larry Rosane (CHPRC)	Larry Rosane	MAR 05 2018 1310	Received By: SSU-1		MAR 05 2018 1310
Print First and Last Name	Signature	Date/Time	Print First and Last Name	Signature	Date/Time
Relinquished By: SSU-1		MAR 06 2018 0715	Received By: Janelle Zunker CHPRC	Janelle Zunker	MAR 06 2018 0715
Print First and Last Name	Signature	Date/Time	Print First and Last Name	Signature	Date/Time
Relinquished By: Janelle Zunker CHPRC		MAR 06 2018 1400	Received By: FEDEX		
Print First and Last Name	Signature	Date/Time	Print First and Last Name FEDEX 423648	Signature	Date/Time
Relinquished By: FedEx			Received By: Reed Rottmuff	Reed Rottmuff	3-7-18 1015
Print First and Last Name	Signature	Date/Time	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 11/21/2017 FSR ID = FSR53842 A-6004-842 (REV 3)

04/09/2018

REV.0

4/9/2018

IMPORTANT!
Winter Storms are causing hazardous conditions across the Northeast U.S. Learn More

FedEx® Tracking

771731248743

Ship date:		Actual delivery:
Tue 3/06/2018		**Wed 3/07/2018 9:47 am**
Richland, WA US	**Delivered**	ARVADA, CO US
	Signed for by: R.POTTRUFF	

Travel History

Date/Time	Activity	Location
- 3/07/2018 - Wednesday		
9:47 am	Delivered	ARVADA, CO
9:47 am	Delivered	ARVADA, CO
8:50 am	On FedEx vehicle for delivery	ARVADA, CO
8:37 am	At local FedEx facility	ARVADA, CO
5:21 am	At destination sort facility	DENVER, CO
4:12 am	Departed FedEx location	MEMPHIS, TN
1:28 am	Arrived at FedEx location	MEMPHIS, TN
- 3/06/2018 - Tuesday		
4:44 pm	Left FedEx origin facility	PASCO, WA
12:24 pm	Shipment information sent to FedEx	
11:08 am	Picked up	PASCO, WA

Shipment Facts

Tracking Number	771731248743	**Service**	FedEx Priority Overnight
Weight	86 lbs / 39.01 kgs	**Signature services**	Direct signature required
Delivered To	Shipping/Receiving	**Total pieces**	1
Total shipment weight	86 lbs / 39.01 kgs	**Terms**	Third Party
Shipper reference	9114	**Packaging**	Your Packaging
Special handling section	Deliver Weekday, Direct Signature Required	**Standard transit**	3/07/2018 by 10:30 am

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FedEx® Tracking

771733731126

Ship date.		Actual delivery.
Tue 3/06/2018		**Wed 3/07/2018 9:47 am**
Richland, WA US	**Delivered**	ARVADA, CO US
	Signed for by: R POTTRUFF	

Travel History

Date/Time	Activity	Location
- 3/07/2018 - Wednesday		
9:47 am	Delivered	ARVADA, CO
9:47 am	Delivered	ARVADA, CO
8:50 am	On FedEx vehicle for delivery	ARVADA, CO
8:35 am	At local FedEx facility	ARVADA, CO
5:21 am	At destination sort facility	DENVER, CO
4:12 am	Departed FedEx location	MEMPHIS, TN
1:28 am	Arrived at FedEx location	MEMPHIS, TN
- 3/06/2018 - Tuesday		
4:44 pm	Left FedEx origin facility	PASCO, WA
3:17 pm	Picked up	PASCO, WA
2:27 pm	Shipment information sent to FedEx	

Shipment Facts

Tracking Number	771733731126	**Service**	FedEx Priority Overnight
Weight	51 lbs / 23.13 kgs	**Signature services**	Direct signature required
Delivered To	Shipping/Receiving	**Total pieces**	1
Total shipment weight	51 lbs / 23.13 kgs	**Terms**	Third Party
Shipper reference	9119	**Packaging**	Your Packaging
Special handling section	Deliver Weekday, Direct Signature Required	**Standard transit**	3/07/2018 by 10:30 am

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FedEx® Tracking

771728317604

Ship date.		Actual delivery.
Tue 3/06/2018		**Wed 3/07/2018 9:47 am**
Richland, WA US	**Delivered**	ARVADA, CO US
	Signed for by: R.POTTRUFF	

Travel History

Date/Time	Activity	Location
- 3/07/2018 - Wednesday		
9 47 am	Delivered	ARVADA, CO
9 47 am	Delivered	ARVADA, CO
8:50 am	On FedEx vehicle for delivery	ARVADA, CO
8:36 am	At local FedEx facility	ARVADA, CO
5:21 am	At destination sort facility	DENVER, CO
4 12 am	Departed FedEx location	MEMPHIS, TN
- 3/06/2018 - Tuesday		
4 44 pm	Left FedEx origin facility	PASCO, WA
11:08 am	Picked up	PASCO, WA
9.31 am	Shipment information sent to FedEx	

Shipment Facts

Tracking Number	771728317604	**Service**	FedEx Priority Overnight
Weight	88 lbs / 39 92 kgs	**Dimensions**	28x16x16 in
Signature services	Direct signature required	**Delivered To**	Shipping/Receiving
Total pieces	1	**Total shipment weight**	88 lbs / 39 92 kgs
Terms	Third Party	**Shipper reference**	9114
Packaging	Your Packaging	**Special handling section**	Deliver Weekday, Additional Handling Surcharge, Direct Signature Required
Standard transit	3/07/2018 by 10 30 am		

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Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
U	Analyzed for but not detected.
o	LCS, LCSD: Recovery exceeds upper or lower control limits.

GC/MS Semi VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
N	Presumptive evidence of material.

Metals

Qualifier	Qualifier Description
B	Estimated result. Result is less than the RL, but greater than MDL
U	Analyzed for but not detected.
C	The analyte was detected in both the sample and the associated QC blank, and the sample concentration was </= 5X the blank concentration.
N	Recovery exceeds upper or lower control limits

General Chemistry

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

Glossary

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

Method Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-003 / W18-002 / W18-001

TestAmerica Job ID: 280-107112-1
SDG: DN0330

Method	Method Description	Protocol	Laboratory
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL DEN
6010D	Metals (ICP)	SW846	TAL DEN
6020B	Metals (ICP/MS)	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: W18-003 / W18-002 / W18-001

TestAmerica Job ID: 280-107112-1
SDG: DN0330

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-107112-1	B3HJJ7	Water	03/06/18 09:01	03/07/18 10:15
280-107112-2	B3HJJ9	Water	03/06/18 09:01	03/07/18 10:15
280-107112-3	B3HJC9	Water	03/06/18 09:01	03/07/18 10:15
280-107112-4	B3HK12	Water	03/06/18 07:20	03/07/18 10:15
280-107112-5	B3HJK0	Water	03/06/18 07:20	03/07/18 10:15
280-107112-6	B3HJJ6	Water	03/06/18 07:20	03/07/18 10:15
280-107112-7	B3HJC8	Water	03/06/18 07:20	03/07/18 10:15
280-107112-8	B3HJJ8	Water	03/06/18 07:20	03/07/18 10:15
280-107112-9	B3HJB3	Water	03/06/18 10:03	03/07/18 10:15
280-107112-10	B3HJF5	Water	03/06/18 10:03	03/07/18 10:15
280-107112-11	B3HJF6	Water	03/06/18 10:03	03/07/18 10:15
280-107112-12	B3HJF7	Water	03/06/18 10:03	03/07/18 10:15
280-107112-13	B3H891	Water	03/06/18 10:11	03/07/18 10:15
280-107112-14	B3H392	Water	03/06/18 11:05	03/07/18 10:15
280-107112-15	B3FY27	Water	03/05/18 09:23	03/07/18 10:15
280-107112-16	B3FTC7	Water	03/05/18 11:30	03/07/18 10:15
280-107112-17	B3FY28	Water	03/05/18 06:15	03/07/18 10:15

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: B3FY27
Date Collected: 03/05/18 09:23
Date Received: 03/07/18 10:15
Lab Sample ID: 280-107112-15
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6-Tetrachlorophenol	1.9	U	48	1.9	ug/L		03/12/18 12:05	03/29/18 19:31	1
2,4,5-Trichlorophenol	0.43	U	9.5	0.43	ug/L		03/12/18 12:05	03/29/18 19:31	1
2,4,6-Trichlorophenol	0.28	U	9.5	0.28	ug/L		03/12/18 12:05	03/29/18 19:31	1
2,4-Dichlorophenol	0.61	U	9.5	0.61	ug/L		03/12/18 12:05	03/29/18 19:31	1
2,4-Dimethylphenol	0.55	U o	9.5	0.55	ug/L		03/12/18 12:05	03/29/18 19:31	1
2,4-Dinitrophenol	9.5	U	29	9.5	ug/L		03/12/18 12:05	03/29/18 19:31	1
2,6-Dichlorophenol	1.3	U	9.5	1.3	ug/L		03/12/18 12:05	03/29/18 19:31	1
2-Chlorophenol	1.9	U	9.5	1.9	ug/L		03/12/18 12:05	03/29/18 19:31	1
2-Methylphenol	0.93	U	9.5	0.93	ug/L		03/12/18 12:05	03/29/18 19:31	1
2-Nitrophenol	0.37	U	9.5	0.37	ug/L		03/12/18 12:05	03/29/18 19:31	1
3 & 4 Methylphenol	0.24	U	9.5	0.24	ug/L		03/12/18 12:05	03/29/18 19:31	1
4,6-Dinitro-2-methylphenol	3.8	U	48	3.8	ug/L		03/12/18 12:05	03/29/18 19:31	1
4-Chloro-3-methylphenol	2.3	U	9.5	2.3	ug/L		03/12/18 12:05	03/29/18 19:31	1
4-Nitrophenol	1.2	U	9.5	1.2	ug/L		03/12/18 12:05	03/29/18 19:31	1
Dinoseb	3.8	U	19	3.8	ug/L		03/12/18 12:05	03/29/18 19:31	1
Pentachlorophenol	19	U	48	19	ug/L		03/12/18 12:05	03/29/18 19:31	1
Phenol	1.9	U	9.5	1.9	ug/L		03/12/18 12:05	03/29/18 19:31	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane	*11*	*N J*	*ug/L*		*1.73*	*110-82-7*	*03/12/18 12:05*	*03/29/18 19:31*	*1*
Unknown	*120*	*N*	*ug/L*		*1.81*		*03/12/18 12:05*	*03/29/18 19:31*	*1*
Unknown	*6.5*	*N*	*ug/L*		*2.68*		*03/12/18 12:05*	*03/29/18 19:31*	*1*
Unknown	*4.8*	*N*	*ug/L*		*2.91*		*03/12/18 12:05*	*03/29/18 19:31*	*1*
Unknown	*72*	*N*	*ug/L*		*3.17*		*03/12/18 12:05*	*03/29/18 19:31*	*1*
Unknown	*6.5*	*N*	*ug/L*		*4.06*		*03/12/18 12:05*	*03/29/18 19:31*	*1*
Unknown	*24*	*N*	*ug/L*		*4.12*		*03/12/18 12:05*	*03/29/18 19:31*	*1*
Unknown	*5.2*	*N*	*ug/L*		*5.25*		*03/12/18 12:05*	*03/29/18 19:31*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*69*		*42 - 131*	*03/12/18 12:05*	*03/29/18 19:31*	*1*
2-Fluorobiphenyl (Surr)	*76*		*48 - 120*	*03/12/18 12:05*	*03/29/18 19:31*	*1*
2-Fluorophenol (Surr)	*78*		*41 - 120*	*03/12/18 12:05*	*03/29/18 19:31*	*1*
Nitrobenzene-d5 (Surr)	*79*		*42 - 120*	*03/12/18 12:05*	*03/29/18 19:31*	*1*
Phenol-d5 (Surr)	*81*		*45 - 124*	*03/12/18 12:05*	*03/29/18 19:31*	*1*
Terphenyl-d14 (Surr)	*92*		*20 - 130*	*03/12/18 12:05*	*03/29/18 19:31*	*1*

Client Sample ID: B3FTC7
Date Collected: 03/05/18 11:30
Date Received: 03/07/18 10:15
Lab Sample ID: 280-107112-16
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6-Tetrachlorophenol	1.9	U	47	1.9	ug/L		03/12/18 12:05	03/29/18 20:00	1
2,4,5-Trichlorophenol	0.43	U	9.5	0.43	ug/L		03/12/18 12:05	03/29/18 20:00	1
2,4,6-Trichlorophenol	0.28	U	9.5	0.28	ug/L		03/12/18 12:05	03/29/18 20:00	1
2,4-Dichlorophenol	0.61	U	9.5	0.61	ug/L		03/12/18 12:05	03/29/18 20:00	1
2,4-Dimethylphenol	0.55	U o	9.5	0.55	ug/L		03/12/18 12:05	03/29/18 20:00	1
2,4-Dinitrophenol	9.5	U	28	9.5	ug/L		03/12/18 12:05	03/29/18 20:00	1
2,6-Dichlorophenol	1.3	U	9.5	1.3	ug/L		03/12/18 12:05	03/29/18 20:00	1
2-Chlorophenol	1.9	U	9.5	1.9	ug/L		03/12/18 12:05	03/29/18 20:00	1
2-Methylphenol	0.93	U	9.5	0.93	ug/L		03/12/18 12:05	03/29/18 20:00	1
2-Nitrophenol	0.37	U	9.5	0.37	ug/L		03/12/18 12:05	03/29/18 20:00	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: B3FTC7
Date Collected: 03/05/18 11:30
Date Received: 03/07/18 10:15
Lab Sample ID: 280-107112-16
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3 & 4 Methylphenol	0.24	U	9.5	0.24	ug/L		03/12/18 12:05	03/29/18 20:00	1
4,6-Dinitro-2-methylphenol	3.8	U	47	3.8	ug/L		03/12/18 12:05	03/29/18 20:00	1
4-Chloro-3-methylphenol	2.3	U	9.5	2.3	ug/L		03/12/18 12:05	03/29/18 20:00	1
4-Nitrophenol	1.2	U	9.5	1.2	ug/L		03/12/18 12:05	03/29/18 20:00	1
Dinoseb	3.8	U	19	3.8	ug/L		03/12/18 12:05	03/29/18 20:00	1
Pentachlorophenol	19	U	47	19	ug/L		03/12/18 12:05	03/29/18 20:00	1
Phenol	1.9	U	9.5	1.9	ug/L		03/12/18 12:05	03/29/18 20:00	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane	*7.0*	*N J*	*ug/L*		*1.73*	*110-82-7*	*03/12/18 12:05*	*03/29/18 20:00*	*1*
Unknown	*84*	*N*	*ug/L*		*1.81*		*03/12/18 12:05*	*03/29/18 20:00*	*1*
Unknown	*19*	*N*	*ug/L*		*2.91*		*03/12/18 12:05*	*03/29/18 20:00*	*1*
Unknown	*55*	*N*	*ug/L*		*3.17*		*03/12/18 12:05*	*03/29/18 20:00*	*1*
1-Propene, 1,2,3-trichloro-, (Z)-	*10*	*N J*	*ug/L*		*4.12*	*13116-57-9*	*03/12/18 12:05*	*03/29/18 20:00*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*70*		*42 - 131*	*03/12/18 12:05*	*03/29/18 20:00*	*1*
2-Fluorobiphenyl (Surr)	*72*		*48 - 120*	*03/12/18 12:05*	*03/29/18 20:00*	*1*
2-Fluorophenol (Surr)	*69*		*41 - 120*	*03/12/18 12:05*	*03/29/18 20:00*	*1*
Nitrobenzene-d5 (Surr)	*70*		*42 - 120*	*03/12/18 12:05*	*03/29/18 20:00*	*1*
Phenol-d5 (Surr)	*73*		*45 - 124*	*03/12/18 12:05*	*03/29/18 20:00*	*1*
Terphenyl-d14 (Surr)	*92*		*20 - 130*	*03/12/18 12:05*	*03/29/18 20:00*	*1*

Client Sample ID: B3FY28
Date Collected: 03/05/18 06:15
Date Received: 03/07/18 10:15
Lab Sample ID: 280-107112-17
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6-Tetrachlorophenol	1.9	U	48	1.9	ug/L		03/12/18 12:05	03/29/18 21:27	1
2,4,5-Trichlorophenol	0.43	U	9.6	0.43	ug/L		03/12/18 12:05	03/29/18 21:27	1
2,4,6-Trichlorophenol	0.28	U	9.6	0.28	ug/L		03/12/18 12:05	03/29/18 21:27	1
2,4-Dichlorophenol	0.61	U	9.6	0.61	ug/L		03/12/18 12:05	03/29/18 21:27	1
2,4-Dimethylphenol	0.56	U o	9.6	0.56	ug/L		03/12/18 12:05	03/29/18 21:27	1
2,4-Dinitrophenol	9.6	U	29	9.6	ug/L		03/12/18 12:05	03/29/18 21:27	1
2,6-Dichlorophenol	1.3	U	9.6	1.3	ug/L		03/12/18 12:05	03/29/18 21:27	1
2-Chlorophenol	1.9	U	9.6	1.9	ug/L		03/12/18 12:05	03/29/18 21:27	1
2-Methylphenol	0.94	U	9.6	0.94	ug/L		03/12/18 12:05	03/29/18 21:27	1
2-Nitrophenol	0.37	U	9.6	0.37	ug/L		03/12/18 12:05	03/29/18 21:27	1
3 & 4 Methylphenol	0.24	U	9.6	0.24	ug/L		03/12/18 12:05	03/29/18 21:27	1
4,6-Dinitro-2-methylphenol	3.8	U	48	3.8	ug/L		03/12/18 12:05	03/29/18 21:27	1
4-Chloro-3-methylphenol	2.3	U	9.6	2.3	ug/L		03/12/18 12:05	03/29/18 21:27	1
4-Nitrophenol	1.2	U	9.6	1.2	ug/L		03/12/18 12:05	03/29/18 21:27	1
Dinoseb	3.8	U	19	3.8	ug/L		03/12/18 12:05	03/29/18 21:27	1
Pentachlorophenol	19	U	48	19	ug/L		03/12/18 12:05	03/29/18 21:27	1
Phenol	1.9	U	9.6	1.9	ug/L		03/12/18 12:05	03/29/18 21:27	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*9.9*	*N*	*ug/L*		*1.73*		*03/12/18 12:05*	*03/29/18 21:27*	*1*
Unknown	*120*	*N*	*ug/L*		*1.81*		*03/12/18 12:05*	*03/29/18 21:27*	*1*
Unknown	*61*	*N*	*ug/L*		*3.17*		*03/12/18 12:05*	*03/29/18 21:27*	*1*
Unknown	*6.6*	*N*	*ug/L*		*4.06*		*03/12/18 12:05*	*03/29/18 21:27*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: B3FY28
Date Collected: 03/05/18 06:15
Date Received: 03/07/18 10:15
Lab Sample ID: 280-107112-17
Matrix: Water

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
1-Propene, 1,2,3-trichloro-, (Z)-	20	N J	ug/L		4.12	13116-57-9	03/12/18 12:05	03/29/18 21:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	63		42 - 131	03/12/18 12:05	03/29/18 21:27	1
2-Fluorobiphenyl (Surr)	72		48 - 120	03/12/18 12:05	03/29/18 21:27	1
2-Fluorophenol (Surr)	73		41 - 120	03/12/18 12:05	03/29/18 21:27	1
Nitrobenzene-d5 (Surr)	74		42 - 120	03/12/18 12:05	03/29/18 21:27	1
Phenol-d5 (Surr)	73		45 - 124	03/12/18 12:05	03/29/18 21:27	1
Terphenyl-d14 (Surr)	88		20 - 130	03/12/18 12:05	03/29/18 21:27	1

Method: 6010D - Metals (ICP)

Client Sample ID: B3H392
Date Collected: 03/06/18 11:05
Date Received: 03/07/18 10:15
Lab Sample ID: 280-107112-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**11.4**	**B**	100	4.4	ug/L		03/14/18 10:25	03/17/18 03:19	1
Calcium	**37100**		200	34.5	ug/L		03/14/18 10:25	03/17/18 03:19	1
Iron	**397**		100	22.0	ug/L		03/09/18 14:22	03/22/18 00:49	1
Magnesium	**12400**		200	10.7	ug/L		03/14/18 10:25	03/17/18 03:19	1
Potassium	**4930**	**C**	3000	237	ug/L		03/14/18 10:25	03/21/18 00:43	1
Sodium	**120000**		1000	117	ug/L		03/14/18 10:25	03/17/18 03:19	1
Vanadium	**29.7**		10.0	1.1	ug/L		03/14/18 10:25	03/17/18 03:19	1

Client Sample ID: B3FTC7
Date Collected: 03/05/18 11:30
Date Received: 03/07/18 10:15
Lab Sample ID: 280-107112-16
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	5.2	U	20.0	5.2	ug/L		03/14/18 10:25	03/17/18 03:22	1
Arsenic	4.4	U	15.0	4.4	ug/L		03/14/18 10:25	03/17/18 03:22	1
Barium	**88.2**		10.0	0.82	ug/L		03/14/18 10:25	03/17/18 03:22	1
Cadmium	0.45	U	5.0	0.45	ug/L		03/14/18 10:25	03/17/18 03:22	1
Calcium	**52400**		200	34.5	ug/L		03/14/18 10:25	03/17/18 03:22	1
Chromium	**89.2**	**N**	10.0	0.66	ug/L		03/14/18 10:25	03/17/18 03:22	1
Cobalt	1.2	U	10.0	1.2	ug/L		03/14/18 10:25	03/17/18 03:22	1
Copper	4.2	U	15.0	4.2	ug/L		03/14/18 10:25	03/17/18 03:22	1
Iron	**1370**		100	22.0	ug/L		03/09/18 14:22	03/22/18 00:51	1
Magnesium	**17200**		200	10.7	ug/L		03/14/18 10:25	03/17/18 03:22	1
Manganese	**110**		10.0	0.26	ug/L		03/14/18 10:25	03/17/18 03:22	1
Nickel	**5.9**	**B**	40.0	2.6	ug/L		03/14/18 10:25	03/17/18 03:22	1
Potassium	**4930**	**C**	3000	237	ug/L		03/14/18 10:25	03/21/18 00:46	1
Silver	**1.1**	**B**	10.0	0.93	ug/L		03/14/18 10:25	03/17/18 03:22	1
Sodium	**26000**		1000	117	ug/L		03/14/18 10:25	03/17/18 03:22	1
Vanadium	**27.6**		10.0	1.1	ug/L		03/14/18 10:25	03/17/18 03:22	1
Zinc	4.5	U	20.0	4.5	ug/L		03/14/18 10:25	03/17/18 03:22	1

Method: 6020B - Metals (ICP/MS)

Client Sample ID: B3H392
Date Collected: 03/06/18 11:05
Date Received: 03/07/18 10:15
Lab Sample ID: 280-107112-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**84.7**		50.0	9.2	ug/L		03/09/18 14:24	03/15/18 14:08	1
Antimony	**0.46**	**B**	2.0	0.40	ug/L		03/09/18 14:24	03/13/18 12:36	1
Arsenic	**2.0**	**B**	5.0	0.33	ug/L		03/09/18 14:24	03/13/18 12:36	1
Barium	**58.0**		1.0	0.29	ug/L		03/09/18 14:24	03/13/18 12:36	1
Beryllium	0.080	U	1.0	0.080	ug/L		03/09/18 14:24	03/13/18 12:36	1
Cadmium	0.27	U	1.0	0.27	ug/L		03/09/18 14:24	03/13/18 12:36	1
Chromium	**45.7**		2.0	0.50	ug/L		03/09/18 14:24	03/13/18 12:36	1
Cobalt	**1.1**		1.0	0.054	ug/L		03/09/18 14:24	03/13/18 12:36	1
Copper	**0.66**	**B**	2.0	0.56	ug/L		03/09/18 14:24	03/15/18 14:08	1
Lead	**1.4**		1.0	0.18	ug/L		03/09/18 14:24	03/13/18 12:36	1
Manganese	**3.1**		1.0	0.31	ug/L		03/09/18 14:24	03/13/18 12:36	1
Molybdenum	**5.6**		2.0	0.14	ug/L		03/09/18 14:24	03/13/18 12:36	1
Nickel	**2.7**		2.0	0.30	ug/L		03/09/18 14:24	03/13/18 12:36	1
Selenium	**3.4**	**B**	5.0	0.70	ug/L		03/09/18 14:24	03/13/18 12:36	1
Silver	**0.087**	**B**	5.0	0.033	ug/L		03/09/18 14:24	03/13/18 12:36	1
Strontium	**198**		10.0	0.30	ug/L		03/09/18 14:24	03/15/18 20:13	1
Thallium	0.050	U	1.0	0.050	ug/L		03/09/18 14:24	03/13/18 12:36	1
Thorium	1.2	U	5.0	1.2	ug/L		03/09/18 14:24	03/15/18 14:08	1
Tin	0.77	U	10.0	0.77	ug/L		03/09/18 14:24	03/13/18 12:36	1
Uranium	**1.2**		1.0	0.050	ug/L		03/09/18 14:24	03/13/18 12:36	1
Zinc	**141**		10.0	2.0	ug/L		03/09/18 14:24	03/13/18 12:36	1

Client Sample ID: B3FTC7
Date Collected: 03/05/18 11:30
Date Received: 03/07/18 10:15
Lab Sample ID: 280-107112-16
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	**3.0**		1.0	0.050	ug/L		03/09/18 14:24	03/13/18 12:49	1

General Chemistry

Client Sample ID: B3HJJ7
Date Collected: 03/06/18 09:01
Date Received: 03/07/18 10:15
Lab Sample ID: 280-107112-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	7.7	U	30.0	7.7	ug/L			03/12/18 05:27	1
Total Organic Carbon - Average	**474**	**B C**	1000	155	ug/L			03/13/18 01:03	1

Client Sample ID: B3HJJ9
Date Collected: 03/06/18 09:01
Date Received: 03/07/18 10:15
Lab Sample ID: 280-107112-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	7.7	U	30.0	7.7	ug/L			03/12/18 05:27	1
Total Organic Carbon - Average	**488**	**B C**	1000	155	ug/L			03/13/18 01:47	1

Client Sample ID: B3HJC9
Date Collected: 03/06/18 09:01
Date Received: 03/07/18 10:15
Lab Sample ID: 280-107112-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	7.7	U	30.0	7.7	ug/L			03/12/18 05:27	1
Total Organic Carbon - Average	**496**	**B C**	1000	155	ug/L			03/13/18 02:01	1

General Chemistry

Client Sample ID: B3HK12 — **Lab Sample ID: 280-107112-4**
Date Collected: 03/06/18 07:20 — **Matrix: Water**
Date Received: 03/07/18 10:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	7.7	U	30.0	7.7	ug/L			03/12/18 05:27	1
Total Organic Carbon - Average	**488**	**B C**	1000	155	ug/L			03/13/18 02:16	1

Client Sample ID: B3HJK0 — **Lab Sample ID: 280-107112-5**
Date Collected: 03/06/18 07:20 — **Matrix: Water**
Date Received: 03/07/18 10:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	7.7	U	30.0	7.7	ug/L			03/12/18 05:27	1
Total Organic Carbon - Average	**177**	**B C**	1000	155	ug/L			03/13/18 02:31	1

Client Sample ID: B3HJJ6 — **Lab Sample ID: 280-107112-6**
Date Collected: 03/06/18 07:20 — **Matrix: Water**
Date Received: 03/07/18 10:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	7.7	U	30.0	7.7	ug/L			03/12/18 05:27	1
Total Organic Carbon - Average	**174**	**B C**	1000	155	ug/L			03/13/18 02:45	1

Client Sample ID: B3HJC8 — **Lab Sample ID: 280-107112-7**
Date Collected: 03/06/18 07:20 — **Matrix: Water**
Date Received: 03/07/18 10:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	7.7	U	30.0	7.7	ug/L			03/12/18 05:27	1
Total Organic Carbon - Average	**167**	**B C**	1000	155	ug/L			03/13/18 03:00	1

Client Sample ID: B3HJJ8 — **Lab Sample ID: 280-107112-8**
Date Collected: 03/06/18 07:20 — **Matrix: Water**
Date Received: 03/07/18 10:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	7.7	U	30.0	7.7	ug/L			03/12/18 05:27	1
Total Organic Carbon - Average	**168**	**B C**	1000	155	ug/L			03/13/18 03:44	1

Client Sample ID: B3HJB3 — **Lab Sample ID: 280-107112-9**
Date Collected: 03/06/18 10:03 — **Matrix: Water**
Date Received: 03/07/18 10:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	7.7	U	30.0	7.7	ug/L			03/12/18 05:27	1
Total Organic Carbon - Average	**834**	**B C**	1000	155	ug/L			03/13/18 04:29	1

Client Sample ID: B3HJF5 — **Lab Sample ID: 280-107112-10**
Date Collected: 03/06/18 10:03 — **Matrix: Water**
Date Received: 03/07/18 10:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	**18.2**	**B**	30.0	7.7	ug/L			03/12/18 05:27	1
Total Organic Carbon - Average	**827**	**B C**	1000	155	ug/L			03/13/18 04:43	1

Client Sample ID: B3HJF6 — **Lab Sample ID: 280-107112-11**
Date Collected: 03/06/18 10:03 — **Matrix: Water**
Date Received: 03/07/18 10:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	7.7	U	30.0	7.7	ug/L			03/12/18 05:55	1
Total Organic Carbon - Average	**833**	**B C**	1000	155	ug/L			03/13/18 04:58	1

General Chemistry

Client Sample ID: B3HJF7
Date Collected: 03/06/18 10:03
Date Received: 03/07/18 10:15
Lab Sample ID: 280-107112-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	7.7	U	30.0	7.7	ug/L			03/12/18 05:55	1
Total Organic Carbon - Average	**834**	**B C**	1000	155	ug/L			03/13/18 05:13	1

Client Sample ID: B3H891
Date Collected: 03/06/18 10:11
Date Received: 03/07/18 10:15
Lab Sample ID: 280-107112-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**131000**		5000	1070	ug/L			03/13/18 23:18	1
Bicarbonate Alkalinity as CaCO3	**131000**		5000	1070	ug/L			03/13/18 23:18	1
Carbonate Alkalinity as CaCO3	1070	U	5000	1070	ug/L			03/13/18 23:18	1
Hydroxide Alkalinity as CaCO3	1070	U	5000	1070	ug/L			03/13/18 23:18	1

Client Sample ID: B3FTC7
Date Collected: 03/05/18 11:30
Date Received: 03/07/18 10:15
Lab Sample ID: 280-107112-16
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**120000**		5000	1070	ug/L			03/13/18 23:06	1

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-003 / W18-002 / W18-001

TestAmerica Job ID: 280-107112-1
SDG: DN0330

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-407552/1-A
Matrix: Water
Analysis Batch: 409544

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 407552

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,4,6-Tetrachlorophenol	2.0	U	50	2.0	ug/L		03/12/18 12:05	03/29/18 17:35	1
2,4,5-Trichlorophenol	0.45	U	10	0.45	ug/L		03/12/18 12:05	03/29/18 17:35	1
2,4,6-Trichlorophenol	0.29	U	10	0.29	ug/L		03/12/18 12:05	03/29/18 17:35	1
2,4-Dichlorophenol	0.64	U	10	0.64	ug/L		03/12/18 12:05	03/29/18 17:35	1
2,4-Dimethylphenol	0.58	U	10	0.58	ug/L		03/12/18 12:05	03/29/18 17:35	1
2,4-Dinitrophenol	10	U	30	10	ug/L		03/12/18 12:05	03/29/18 17:35	1
2,6-Dichlorophenol	1.4	U	10	1.4	ug/L		03/12/18 12:05	03/29/18 17:35	1
2-Chlorophenol	2.0	U	10	2.0	ug/L		03/12/18 12:05	03/29/18 17:35	1
2-Methylphenol	0.98	U	10	0.98	ug/L		03/12/18 12:05	03/29/18 17:35	1
2-Nitrophenol	0.39	U	10	0.39	ug/L		03/12/18 12:05	03/29/18 17:35	1
3 & 4 Methylphenol	0.25	U	10	0.25	ug/L		03/12/18 12:05	03/29/18 17:35	1
4,6-Dinitro-2-methylphenol	4.0	U	50	4.0	ug/L		03/12/18 12:05	03/29/18 17:35	1
4-Chloro-3-methylphenol	2.4	U	10	2.4	ug/L		03/12/18 12:05	03/29/18 17:35	1
4-Nitrophenol	1.2	U	10	1.2	ug/L		03/12/18 12:05	03/29/18 17:35	1
Dinoseb	4.0	U	20	4.0	ug/L		03/12/18 12:05	03/29/18 17:35	1
Pentachlorophenol	20	U	50	20	ug/L		03/12/18 12:05	03/29/18 17:35	1
Phenol	2.0	U	10	2.0	ug/L		03/12/18 12:05	03/29/18 17:35	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Cyclohexane	*9.79*	*N J*	*ug/L*		*1.73*	*110-82-7*	*03/12/18 12:05*	*03/29/18 17:35*	*1*
Unknown	*105*	*N*	*ug/L*		*1.81*		*03/12/18 12:05*	*03/29/18 17:35*	*1*
Unknown	*7.34*	*N*	*ug/L*		*2.91*		*03/12/18 12:05*	*03/29/18 17:35*	*1*
Unknown	*70.9*	*N*	*ug/L*		*3.17*		*03/12/18 12:05*	*03/29/18 17:35*	*1*
Unknown	*10.7*	*N*	*ug/L*		*4.06*		*03/12/18 12:05*	*03/29/18 17:35*	*1*
1-Propene, 1,2,3-trichloro-, (Z)-	*35.2*	*N J*	*ug/L*		*4.12*	*13116-57-9*	*03/12/18 12:05*	*03/29/18 17:35*	*1*
Unknown	*5.29*	*N*	*ug/L*		*5.25*		*03/12/18 12:05*	*03/29/18 17:35*	*1*
Unknown	*6.16*	*N*	*ug/L*		*7.39*		*03/12/18 12:05*	*03/29/18 17:35*	*1*

Surrogate	MB %Recovery	MB Qualifier	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*63*		*42 - 131*	*03/12/18 12:05*	*03/29/18 17:35*	*1*
2-Fluorobiphenyl (Surr)	*69*		*48 - 120*	*03/12/18 12:05*	*03/29/18 17:35*	*1*
2-Fluorophenol (Surr)	*75*		*41 - 120*	*03/12/18 12:05*	*03/29/18 17:35*	*1*
Nitrobenzene-d5 (Surr)	*74*		*42 - 120*	*03/12/18 12:05*	*03/29/18 17:35*	*1*
Phenol-d5 (Surr)	*78*		*45 - 124*	*03/12/18 12:05*	*03/29/18 17:35*	*1*
Terphenyl-d14 (Surr)	*81*		*20 - 130*	*03/12/18 12:05*	*03/29/18 17:35*	*1*

Lab Sample ID: LCS 280-407552/2-A
Matrix: Water
Analysis Batch: 409544

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 407552

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,4,6-Tetrachlorophenol	80.0	64.3		ug/L		80	70 - 130
2,4,5-Trichlorophenol	80.0	63.4		ug/L		79	70 - 130
2,4,6-Trichlorophenol	80.0	67.9		ug/L		85	70 - 130
2,4-Dichlorophenol	80.0	64.7		ug/L		81	70 - 130
2,4-Dimethylphenol	80.0	46.8	o	ug/L		58	70 - 130
2,4-Dinitrophenol	160	116		ug/L		72	70 - 130

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-407552/2-A
Matrix: Water
Analysis Batch: 409544

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 407552

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,6-Dichlorophenol	80.0	64.3		ug/L		80	70 - 130
2-Chlorophenol	80.0	65.6		ug/L		82	70 - 130
2-Methylphenol	80.0	64.4		ug/L		81	70 - 130
2-Nitrophenol	80.0	68.9		ug/L		86	70 - 130
3 & 4 Methylphenol	80.0	59.3		ug/L		74	70 - 130
4,6-Dinitro-2-methylphenol	160	118		ug/L		74	70 - 130
4-Chloro-3-methylphenol	80.0	67.3		ug/L		84	70 - 130
4-Nitrophenol	160	116		ug/L		73	70 - 130
Pentachlorophenol	160	112		ug/L		70	70 - 130
Phenol	80.0	64.0		ug/L		80	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*71*		*42 - 131*
2-Fluorobiphenyl (Surr)	*72*		*48 - 120*
2-Fluorophenol (Surr)	*76*		*41 - 120*
Nitrobenzene-d5 (Surr)	*76*		*42 - 120*
Phenol-d5 (Surr)	*76*		*45 - 124*
Terphenyl-d14 (Surr)	*82*		*20 - 130*

Lab Sample ID: 280-107112-16 MS
Matrix: Water
Analysis Batch: 409544

Client Sample ID: B3FTC7
Prep Type: Total/NA
Prep Batch: 407552

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,4,6-Tetrachlorophenol	1.9	U	77.7	64.2		ug/L		83	60 - 122
2,4,5-Trichlorophenol	0.43	U	77.7	64.1		ug/L		82	59 - 120
2,4,6-Trichlorophenol	0.28	U	77.7	68.0		ug/L		88	59 - 121
2,4-Dichlorophenol	0.61	U	77.7	64.6		ug/L		83	59 - 120
2,4-Dimethylphenol	0.55	U o	77.7	46.7		ug/L		60	43 - 120
2,4-Dinitrophenol	9.5	U	155	114		ug/L		74	48 - 129
2,6-Dichlorophenol	1.3	U	77.7	64.0		ug/L		82	30 - 150
2-Chlorophenol	1.9	U	77.7	62.5		ug/L		80	56 - 120
2-Methylphenol	0.93	U	77.7	62.1		ug/L		80	56 - 120
2-Nitrophenol	0.37	U	77.7	67.6		ug/L		87	56 - 121
3 & 4 Methylphenol	0.24	U	77.7	57.7		ug/L		74	58 - 120
4,6-Dinitro-2-methylphenol	3.8	U	155	118		ug/L		76	60 - 126
4-Chloro-3-methylphenol	2.3	U	77.7	66.5		ug/L		86	61 - 120
4-Nitrophenol	1.2	U	155	109		ug/L		70	59 - 129
Pentachlorophenol	19	U	155	111		ug/L		72	43 - 126
Phenol	1.9	U	77.7	60.4		ug/L		78	57 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*71*		*42 - 131*
2-Fluorobiphenyl (Surr)	*76*		*48 - 120*
2-Fluorophenol (Surr)	*71*		*41 - 120*
Nitrobenzene-d5 (Surr)	*76*		*42 - 120*
Phenol-d5 (Surr)	*73*		*45 - 124*

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-003 / W18-002 / W18-001

TestAmerica Job ID: 280-107112-1
SDG: DN0330

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 280-107112-16 MS
Matrix: Water
Analysis Batch: 409544

Client Sample ID: B3FTC7
Prep Type: Total/NA
Prep Batch: 407552

Surrogate	MS %Recovery	MS Qualifier	Limits
Terphenyl-d14 (Surr)	*83*		*20 - 130*

Lab Sample ID: 280-107112-16 MSD
Matrix: Water
Analysis Batch: 409544

Client Sample ID: B3FTC7
Prep Type: Total/NA
Prep Batch: 407552

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,4,6-Tetrachlorophenol	1.9	U	76.7	65.2		ug/L		85	60 - 122	2	20
2,4,5-Trichlorophenol	0.43	U	76.7	67.1		ug/L		88	59 - 120	5	20
2,4,6-Trichlorophenol	0.28	U	76.7	69.4		ug/L		90	59 - 121	2	20
2,4-Dichlorophenol	0.61	U	76.7	67.1		ug/L		88	59 - 120	4	20
2,4-Dimethylphenol	0.55	U o	76.7	48.7		ug/L		63	43 - 120	4	20
2,4-Dinitrophenol	9.5	U	153	121		ug/L		79	48 - 129	5	20
2,6-Dichlorophenol	1.3	U	76.7	67.1		ug/L		87	30 - 150	5	20
2-Chlorophenol	1.9	U	76.7	66.2		ug/L		86	56 - 120	6	20
2-Methylphenol	0.93	U	76.7	64.7		ug/L		84	56 - 120	4	20
2-Nitrophenol	0.37	U	76.7	70.4		ug/L		92	56 - 121	4	20
3 & 4 Methylphenol	0.24	U	76.7	60.9		ug/L		79	58 - 120	5	20
4,6-Dinitro-2-methylphenol	3.8	U	153	127		ug/L		83	60 - 126	7	20
4-Chloro-3-methylphenol	2.3	U	76.7	70.1		ug/L		91	61 - 120	5	20
4-Nitrophenol	1.2	U	153	118		ug/L		77	59 - 129	8	20
Pentachlorophenol	19	U	153	123		ug/L		80	43 - 126	10	20
Phenol	1.9	U	76.7	64.3		ug/L		84	57 - 120	6	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	*75*		*42 - 131*
2-Fluorobiphenyl (Surr)	*77*		*48 - 120*
2-Fluorophenol (Surr)	*76*		*41 - 120*
Nitrobenzene-d5 (Surr)	*82*		*42 - 120*
Phenol-d5 (Surr)	*78*		*45 - 124*
Terphenyl-d14 (Surr)	*87*		*20 - 130*

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 280-407421/1-A
Matrix: Water
Analysis Batch: 408691

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 407421

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	22.0	U	100	22.0	ug/L		03/09/18 14:22	03/22/18 00:42	1

Lab Sample ID: LCS 280-407421/2-A
Matrix: Water
Analysis Batch: 408691

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 407421

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	1000	942.5		ug/L		94	80 - 120

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

Lab Sample ID: LCSD 280-407421/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 408691 — **Prep Batch: 407421**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron			1000	926.4		ug/L		93	80 - 120	2	20

Lab Sample ID: 280-107112-16 MS — **Client Sample ID: B3FTC7**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 408691 — **Prep Batch: 407421**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	1370		1000	2429		ug/L		106	75 - 125

Lab Sample ID: 280-107112-16 MSD — **Client Sample ID: B3FTC7**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 408691 — **Prep Batch: 407421**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	1370		1000	2497		ug/L		113	75 - 125	3	20

Lab Sample ID: MB 280-407862/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 408303 — **Prep Batch: 407862**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	5.2	U	20.0	5.2	ug/L		03/14/18 10:25	03/17/18 03:10	1
Arsenic	4.4	U	15.0	4.4	ug/L		03/14/18 10:25	03/17/18 03:10	1
Barium	0.82	U	10.0	0.82	ug/L		03/14/18 10:25	03/17/18 03:10	1
Boron	4.4	U	100	4.4	ug/L		03/14/18 10:25	03/17/18 03:10	1
Cadmium	0.45	U	5.0	0.45	ug/L		03/14/18 10:25	03/17/18 03:10	1
Calcium	39.82	B	200	34.5	ug/L		03/14/18 10:25	03/17/18 03:10	1
Chromium	0.66	U	10.0	0.66	ug/L		03/14/18 10:25	03/17/18 03:10	1
Cobalt	1.2	U	10.0	1.2	ug/L		03/14/18 10:25	03/17/18 03:10	1
Copper	4.2	U	15.0	4.2	ug/L		03/14/18 10:25	03/17/18 03:10	1
Magnesium	10.7	U	200	10.7	ug/L		03/14/18 10:25	03/17/18 03:10	1
Manganese	1.69	B	10.0	0.26	ug/L		03/14/18 10:25	03/17/18 03:10	1
Nickel	2.6	U	40.0	2.6	ug/L		03/14/18 10:25	03/17/18 03:10	1
Silver	0.93	U	10.0	0.93	ug/L		03/14/18 10:25	03/17/18 03:10	1
Sodium	117	U	1000	117	ug/L		03/14/18 10:25	03/17/18 03:10	1
Vanadium	1.1	U	10.0	1.1	ug/L		03/14/18 10:25	03/17/18 03:10	1
Zinc	4.5	U	20.0	4.5	ug/L		03/14/18 10:25	03/17/18 03:10	1

Lab Sample ID: MB 280-407862/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 408554 — **Prep Batch: 407862**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	468.5	B	3000	237	ug/L		03/14/18 10:25	03/21/18 00:22	1

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-003 / W18-002 / W18-001

TestAmerica Job ID: 280-107112-1
SDG: DN0330

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

Lab Sample ID: LCS 280-407862/2-A
Matrix: Water
Analysis Batch: 408303

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 407862

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	500	492.7		ug/L		99	80 - 120
Arsenic	1000	953.5		ug/L		95	80 - 120
Barium	2000	1993		ug/L		100	80 - 120
Boron	1000	974.7		ug/L		97	80 - 120
Cadmium	100	96.00		ug/L		96	80 - 120
Calcium	50000	48560		ug/L		97	80 - 120
Chromium	200	196.0		ug/L		98	80 - 120
Cobalt	500	464.9		ug/L		93	80 - 120
Copper	250	237.3		ug/L		95	80 - 120
Magnesium	50000	48410		ug/L		97	80 - 120
Manganese	500	485.2		ug/L		97	80 - 120
Nickel	500	466.2		ug/L		93	80 - 120
Silver	50.0	50.87		ug/L		102	80 - 120
Sodium	50000	51520		ug/L		103	80 - 120
Vanadium	500	490.1		ug/L		98	80 - 120
Zinc	500	476.0		ug/L		95	80 - 120

Lab Sample ID: LCS 280-407862/2-A
Matrix: Water
Analysis Batch: 408554

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 407862

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	50000	48340		ug/L		97	80 - 120

Lab Sample ID: LCSD 280-407862/3-A
Matrix: Water
Analysis Batch: 408303

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 407862

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	500	518.5		ug/L		104	80 - 120	5	20
Arsenic	1000	997.0		ug/L		100	80 - 120	4	20
Barium	2000	2125		ug/L		106	80 - 120	6	20
Boron	1000	1020		ug/L		102	80 - 120	5	20
Cadmium	100	100.3		ug/L		100	80 - 120	4	20
Calcium	50000	52040		ug/L		104	80 - 120	7	20
Chromium	200	204.9		ug/L		102	80 - 120	4	20
Cobalt	500	482.0		ug/L		96	80 - 120	4	20
Copper	250	248.4		ug/L		99	80 - 120	5	20
Magnesium	50000	50640		ug/L		101	80 - 120	5	20
Manganese	500	505.8		ug/L		101	80 - 120	4	20
Nickel	500	486.9		ug/L		97	80 - 120	4	20
Silver	50.0	52.73		ug/L		105	80 - 120	4	20
Sodium	50000	55040		ug/L		110	80 - 120	7	20
Vanadium	500	512.0		ug/L		102	80 - 120	4	20
Zinc	500	499.2		ug/L		100	80 - 120	5	20

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

Lab Sample ID: LCSD 280-407862/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 408554 — **Prep Batch: 407862**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Potassium	50000	50930		ug/L		102	80 - 120	5	20

Lab Sample ID: 280-107112-16 MS — **Client Sample ID: B3FTC7**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 408303 — **Prep Batch: 407862**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	5.2	U	500	499.6		ug/L		100	75 - 125
Arsenic	4.4	U	1000	965.3		ug/L		97	75 - 125
Barium	88.2		2000	2041		ug/L		98	75 - 125
Boron	17.2	B	1000	1002		ug/L		99	75 - 125
Cadmium	0.45	U	100	94.92		ug/L		95	75 - 125
Calcium	52400		50000	99460		ug/L		94	75 - 125
Chromium	89.2	N	200	209.9	N	ug/L		60	75 - 125
Cobalt	1.2	U	500	459.2		ug/L		92	75 - 125
Copper	4.2	U	250	240.7		ug/L		96	75 - 125
Magnesium	17200		50000	64990		ug/L		96	75 - 125
Manganese	110		500	549.2		ug/L		88	75 - 125
Nickel	5.9	B	500	466.8		ug/L		92	75 - 125
Silver	1.1	B	50.0	51.49		ug/L		101	75 - 125
Sodium	26000		50000	79000		ug/L		106	75 - 125
Vanadium	27.6		500	513.1		ug/L		97	75 - 125
Zinc	4.5	U	500	476.0		ug/L		95	75 - 125

Lab Sample ID: 280-107112-16 MS — **Client Sample ID: B3FTC7**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 408554 — **Prep Batch: 407862**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	4930	C	50000	54830		ug/L		100	75 - 125

Lab Sample ID: 280-107112-16 MSD — **Client Sample ID: B3FTC7**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 408303 — **Prep Batch: 407862**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	5.2	U	500	523.4		ug/L		105	75 - 125	5	20
Arsenic	4.4	U	1000	1007		ug/L		101	75 - 125	4	20
Barium	88.2		2000	2038		ug/L		98	75 - 125	0	20
Boron	17.2	B	1000	1047		ug/L		103	75 - 125	4	20
Cadmium	0.45	U	100	99.48		ug/L		99	75 - 125	5	20
Calcium	52400		50000	99320		ug/L		94	75 - 125	0	20
Chromium	89.2	N	200	256.3		ug/L		84	75 - 125	20	20
Cobalt	1.2	U	500	478.3		ug/L		96	75 - 125	4	20
Copper	4.2	U	250	252.6		ug/L		101	75 - 125	5	20
Magnesium	17200		50000	67970		ug/L		102	75 - 125	4	20
Manganese	110		500	598.3		ug/L		98	75 - 125	9	20
Nickel	5.9	B	500	490.6		ug/L		97	75 - 125	5	20
Silver	1.1	B	50.0	53.54		ug/L		105	75 - 125	4	20

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

Lab Sample ID: 280-107112-16 MSD
Matrix: Water
Analysis Batch: 408303

Client Sample ID: B3FTC7
Prep Type: Total/NA
Prep Batch: 407862

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sodium	26000		50000	79270		ug/L		106	75 - 125	0	20
Vanadium	27.6		500	539.5		ug/L		102	75 - 125	5	20
Zinc	4.5	U	500	496.8		ug/L		99	75 - 125	4	20

Lab Sample ID: 280-107112-16 MSD
Matrix: Water
Analysis Batch: 408554

Client Sample ID: B3FTC7
Prep Type: Total/NA
Prep Batch: 407862

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Potassium	4930	C	50000	57160		ug/L		104	75 - 125	4	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 280-407424/1-A
Matrix: Water
Analysis Batch: 407804

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 407424

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.40	U	2.0	0.40	ug/L		03/09/18 14:24	03/13/18 12:26	1
Arsenic	0.33	U	5.0	0.33	ug/L		03/09/18 14:24	03/13/18 12:26	1
Barium	0.29	U	1.0	0.29	ug/L		03/09/18 14:24	03/13/18 12:26	1
Beryllium	0.080	U	1.0	0.080	ug/L		03/09/18 14:24	03/13/18 12:26	1
Cadmium	0.27	U	1.0	0.27	ug/L		03/09/18 14:24	03/13/18 12:26	1
Chromium	0.50	U	2.0	0.50	ug/L		03/09/18 14:24	03/13/18 12:26	1
Cobalt	0.054	U	1.0	0.054	ug/L		03/09/18 14:24	03/13/18 12:26	1
Lead	0.18	U	1.0	0.18	ug/L		03/09/18 14:24	03/13/18 12:26	1
Manganese	0.31	U	1.0	0.31	ug/L		03/09/18 14:24	03/13/18 12:26	1
Molybdenum	0.14	U	2.0	0.14	ug/L		03/09/18 14:24	03/13/18 12:26	1
Nickel	0.30	U	2.0	0.30	ug/L		03/09/18 14:24	03/13/18 12:26	1
Selenium	0.70	U	5.0	0.70	ug/L		03/09/18 14:24	03/13/18 12:26	1
Silver	0.033	U	5.0	0.033	ug/L		03/09/18 14:24	03/13/18 12:26	1
Thallium	0.050	U	1.0	0.050	ug/L		03/09/18 14:24	03/13/18 12:26	1
Tin	0.77	U	10.0	0.77	ug/L		03/09/18 14:24	03/13/18 12:26	1
Uranium	0.050	U	1.0	0.050	ug/L		03/09/18 14:24	03/13/18 12:26	1
Zinc	2.0	U	10.0	2.0	ug/L		03/09/18 14:24	03/13/18 12:26	1

Lab Sample ID: MB 280-407424/1-A
Matrix: Water
Analysis Batch: 407968

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 407424

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9.2	U	50.0	9.2	ug/L		03/09/18 14:24	03/14/18 12:16	1
Copper	0.56	U	2.0	0.56	ug/L		03/09/18 14:24	03/14/18 12:16	1
Strontium	0.30	U	10.0	0.30	ug/L		03/09/18 14:24	03/14/18 12:16	1
Thorium	1.2	U	5.0	1.2	ug/L		03/09/18 14:24	03/14/18 12:16	1

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-003 / W18-002 / W18-001

TestAmerica Job ID: 280-107112-1
SDG: DN0330

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

Lab Sample ID: LCS 280-407424/2-A
Matrix: Water
Analysis Batch: 407804

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 407424

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	40.0	39.97		ug/L		100	80 - 120
Arsenic	40.0	35.67		ug/L		89	80 - 120
Barium	40.0	40.40		ug/L		101	80 - 120
Beryllium	40.0	37.66		ug/L		94	80 - 120
Cadmium	40.0	38.35		ug/L		96	80 - 120
Chromium	40.0	38.13		ug/L		95	80 - 120
Cobalt	40.0	39.46		ug/L		99	80 - 120
Lead	40.0	41.87		ug/L		105	80 - 120
Manganese	40.0	40.65		ug/L		102	80 - 120
Molybdenum	40.0	38.92		ug/L		97	80 - 120
Nickel	40.0	39.08		ug/L		98	80 - 120
Selenium	40.0	36.79		ug/L		92	80 - 120
Silver	40.0	39.18		ug/L		98	80 - 120
Thallium	40.0	42.49		ug/L		106	80 - 120
Tin	40.0	40.66		ug/L		102	80 - 120
Uranium	40.0	42.39		ug/L		106	80 - 120
Zinc	40.0	39.14		ug/L		98	80 - 120

Lab Sample ID: LCS 280-407424/2-A
Matrix: Water
Analysis Batch: 407968

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 407424

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	400	459.7		ug/L		115	80 - 120
Copper	40.0	40.33		ug/L		101	80 - 120
Strontium	40.0	43.48		ug/L		109	80 - 120
Thorium	40.0	40.45		ug/L		101	80 - 120

Lab Sample ID: LCSD 280-407424/3-A
Matrix: Water
Analysis Batch: 407804

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 407424

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	40.0	38.49		ug/L		96	80 - 120	4	20
Arsenic	40.0	35.93		ug/L		90	80 - 120	1	20
Barium	40.0	42.03		ug/L		105	80 - 120	4	20
Beryllium	40.0	39.38		ug/L		98	80 - 120	4	20
Cadmium	40.0	36.86		ug/L		92	80 - 120	4	20
Chromium	40.0	38.89		ug/L		97	80 - 120	2	20
Cobalt	40.0	39.68		ug/L		99	80 - 120	1	20
Lead	40.0	42.52		ug/L		106	80 - 120	2	20
Manganese	40.0	42.05		ug/L		105	80 - 120	3	20
Molybdenum	40.0	38.04		ug/L		95	80 - 120	2	20
Nickel	40.0	39.34		ug/L		98	80 - 120	1	20
Selenium	40.0	37.46		ug/L		94	80 - 120	2	20
Silver	40.0	38.50		ug/L		96	80 - 120	2	20
Thallium	40.0	42.38		ug/L		106	80 - 120	0	20
Tin	40.0	39.45		ug/L		99	80 - 120	3	20

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

Lab Sample ID: LCSD 280-407424/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 407804 — **Prep Batch: 407424**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Uranium			40.0	42.05		ug/L		105	80 - 120	1	20
Zinc			40.0	38.77		ug/L		97	80 - 120	1	20

Lab Sample ID: LCSD 280-407424/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 407968 — **Prep Batch: 407424**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum			400	404.8		ug/L		101	80 - 120	13	20
Copper			40.0	39.99		ug/L		100	80 - 120	1	20
Strontium			40.0	45.35		ug/L		113	80 - 120	4	20
Thorium			40.0	40.21		ug/L		101	80 - 120	1	20

Lab Sample ID: 280-107112-16 MS — **Client Sample ID: B3FTC7**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 407804 — **Prep Batch: 407424**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Uranium	3.0		40.0	46.06		ug/L		108	75 - 125		

Lab Sample ID: 280-107112-16 MSD — **Client Sample ID: B3FTC7**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 407804 — **Prep Batch: 407424**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Uranium	3.0		40.0	47.21		ug/L		111	75 - 125	2	20

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

Lab Sample ID: MB 280-407725/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 407725

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			03/12/18 05:27	1

Lab Sample ID: LCS 280-407725/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 407725

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Halogens - Dup			100	102.5		ug/L		103	80 - 120		

Lab Sample ID: 280-107112-1 MS — **Client Sample ID: B3HJJ7**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 407725

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Halogens - Dup	7.7	U	100	101.6		ug/L		102	75 - 125		

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

Lab Sample ID: 280-107112-1 MSD — **Client Sample ID: B3HJJ7**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 407725

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	110.5		ug/L		111	75 - 125	8	20

Lab Sample ID: MB 280-407735/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 407735

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			03/12/18 05:55	1

Lab Sample ID: LCS 280-407735/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 407735

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Halogens - Dup	100	99.16		ug/L		99	80 - 120

Lab Sample ID: LCSD 280-407735/5 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 407735

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Halogens - Dup	100	91.65		ug/L		92	80 - 120	8	20

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

Lab Sample ID: MB 280-407834/37 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 407834

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average	185.7	B	1000	155	ug/L			03/12/18 23:35	1

Lab Sample ID: LCS 280-407834/35 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 407834

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Average	25000	26110		ug/L		104	80 - 120

Lab Sample ID: LCSD 280-407834/36 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 407834

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Average	25000	25980		ug/L		104	80 - 120	0	20

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

Lab Sample ID: 280-107112-1 MS — **Client Sample ID: B3HJJ7**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 407834

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Average	474	B C	25000	26880		ug/L		106	75 - 125

Lab Sample ID: 280-107112-1 MSD — **Client Sample ID: B3HJJ7**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 407834

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Average	474	B C	25000	27050		ug/L		106	75 - 125	1	20

Lab Sample ID: 280-107112-8 MS — **Client Sample ID: B3HJJ8**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 407834

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Average	168	B C	25000	26340		ug/L		105	75 - 125

Lab Sample ID: 280-107112-8 MSD — **Client Sample ID: B3HJJ8**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 407834

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Average	168	B C	25000	26440		ug/L		105	75 - 125	0	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 280-407877/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 407877

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	1070	U	5000	1070	ug/L			03/13/18 22:50	1
Bicarbonate Alkalinity as CaCO3	1070	U	5000	1070	ug/L			03/13/18 22:50	1
Carbonate Alkalinity as CaCO3	1070	U	5000	1070	ug/L			03/13/18 22:50	1
Hydroxide Alkalinity as CaCO3	1070	U	5000	1070	ug/L			03/13/18 22:50	1

Lab Sample ID: LCS 280-407877/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 407877

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3	200000	200300		ug/L		100	80 - 120

Lab Sample ID: LCSD 280-407877/5 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 407877

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Alkalinity as CaCO3	200000	200800		ug/L		100	80 - 120	0	20

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-003 / W18-002 / W18-001

TestAmerica Job ID: 280-107112-1
SDG: DN0330

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: 280-107112-16 DU
Matrix: Water
Analysis Batch: 407877

Client Sample ID: B3FTC7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity as CaCO3	120000			124300		ug/L				4	20

GC/MS Semi VOA

Prep Batch: 407552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107112-15	B3FY27	Total/NA	Water	3520C	
280-107112-16	B3FTC7	Total/NA	Water	3520C	
280-107112-17	B3FY28	Total/NA	Water	3520C	
MB 280-407552/1-A	Method Blank	Total/NA	Water	3520C	
LCS 280-407552/2-A	Lab Control Sample	Total/NA	Water	3520C	
280-107112-16 MS	B3FTC7	Total/NA	Water	3520C	
280-107112-16 MSD	B3FTC7	Total/NA	Water	3520C	

Analysis Batch: 409544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107112-15	B3FY27	Total/NA	Water	8270D	407552
280-107112-16	B3FTC7	Total/NA	Water	8270D	407552
280-107112-17	B3FY28	Total/NA	Water	8270D	407552
MB 280-407552/1-A	Method Blank	Total/NA	Water	8270D	407552
LCS 280-407552/2-A	Lab Control Sample	Total/NA	Water	8270D	407552
280-107112-16 MS	B3FTC7	Total/NA	Water	8270D	407552
280-107112-16 MSD	B3FTC7	Total/NA	Water	8270D	407552

Metals

Prep Batch: 407421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107112-14	B3H392	Total/NA	Water	3010A	
280-107112-16	B3FTC7	Total/NA	Water	3010A	
MB 280-407421/1-A	Method Blank	Total/NA	Water	3010A	
LCS 280-407421/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 280-407421/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	
280-107112-16 MS	B3FTC7	Total/NA	Water	3010A	
280-107112-16 MSD	B3FTC7	Total/NA	Water	3010A	

Prep Batch: 407424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107112-14	B3H392	Total/NA	Water	3020A	
280-107112-16	B3FTC7	Total/NA	Water	3020A	
MB 280-407424/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-407424/2-A	Lab Control Sample	Total/NA	Water	3020A	
LCSD 280-407424/3-A	Lab Control Sample Dup	Total/NA	Water	3020A	
280-107112-16 MS	B3FTC7	Total/NA	Water	3020A	
280-107112-16 MSD	B3FTC7	Total/NA	Water	3020A	

Analysis Batch: 407804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107112-14	B3H392	Total/NA	Water	6020B	407424
280-107112-16	B3FTC7	Total/NA	Water	6020B	407424
MB 280-407424/1-A	Method Blank	Total/NA	Water	6020B	407424
LCS 280-407424/2-A	Lab Control Sample	Total/NA	Water	6020B	407424
LCSD 280-407424/3-A	Lab Control Sample Dup	Total/NA	Water	6020B	407424
280-107112-16 MS	B3FTC7	Total/NA	Water	6020B	407424
280-107112-16 MSD	B3FTC7	Total/NA	Water	6020B	407424

Metals (Continued)

Prep Batch: 407862

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107112-14	B3H392	Total/NA	Water	3010A	
280-107112-16	B3FTC7	Total/NA	Water	3010A	
MB 280-407862/1-A	Method Blank	Total/NA	Water	3010A	
LCS 280-407862/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 280-407862/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	
280-107112-16 MS	B3FTC7	Total/NA	Water	3010A	
280-107112-16 MSD	B3FTC7	Total/NA	Water	3010A	

Analysis Batch: 407968

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-407424/1-A	Method Blank	Total/NA	Water	6020B	407424
LCS 280-407424/2-A	Lab Control Sample	Total/NA	Water	6020B	407424
LCSD 280-407424/3-A	Lab Control Sample Dup	Total/NA	Water	6020B	407424

Analysis Batch: 408031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107112-14	B3H392	Total/NA	Water	6020B	407424

Analysis Batch: 408289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107112-14	B3H392	Total/NA	Water	6020B	407424

Analysis Batch: 408303

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107112-14	B3H392	Total/NA	Water	6010D	407862
280-107112-16	B3FTC7	Total/NA	Water	6010D	407862
MB 280-407862/1-A	Method Blank	Total/NA	Water	6010D	407862
LCS 280-407862/2-A	Lab Control Sample	Total/NA	Water	6010D	407862
LCSD 280-407862/3-A	Lab Control Sample Dup	Total/NA	Water	6010D	407862
280-107112-16 MS	B3FTC7	Total/NA	Water	6010D	407862
280-107112-16 MSD	B3FTC7	Total/NA	Water	6010D	407862

Analysis Batch: 408554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107112-14	B3H392	Total/NA	Water	6010D	407862
280-107112-16	B3FTC7	Total/NA	Water	6010D	407862
MB 280-407862/1-A	Method Blank	Total/NA	Water	6010D	407862
LCS 280-407862/2-A	Lab Control Sample	Total/NA	Water	6010D	407862
LCSD 280-407862/3-A	Lab Control Sample Dup	Total/NA	Water	6010D	407862
280-107112-16 MS	B3FTC7	Total/NA	Water	6010D	407862
280-107112-16 MSD	B3FTC7	Total/NA	Water	6010D	407862

Analysis Batch: 408691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107112-14	B3H392	Total/NA	Water	6010D	407421
280-107112-16	B3FTC7	Total/NA	Water	6010D	407421
MB 280-407421/1-A	Method Blank	Total/NA	Water	6010D	407421
LCS 280-407421/2-A	Lab Control Sample	Total/NA	Water	6010D	407421
LCSD 280-407421/3-A	Lab Control Sample Dup	Total/NA	Water	6010D	407421
280-107112-16 MS	B3FTC7	Total/NA	Water	6010D	407421
280-107112-16 MSD	B3FTC7	Total/NA	Water	6010D	407421

General Chemistry

Analysis Batch: 407725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107112-1	B3HJJ7	Total/NA	Water	9020B	
280-107112-2	B3HJJ9	Total/NA	Water	9020B	
280-107112-3	B3HJC9	Total/NA	Water	9020B	
280-107112-4	B3HK12	Total/NA	Water	9020B	
280-107112-5	B3HJK0	Total/NA	Water	9020B	
280-107112-6	B3HJJ6	Total/NA	Water	9020B	
280-107112-7	B3HJC8	Total/NA	Water	9020B	
280-107112-8	B3HJJ8	Total/NA	Water	9020B	
280-107112-9	B3HJB3	Total/NA	Water	9020B	
280-107112-10	B3HJF5	Total/NA	Water	9020B	
MB 280-407725/2	Method Blank	Total/NA	Water	9020B	
LCS 280-407725/4	Lab Control Sample	Total/NA	Water	9020B	
280-107112-1 MS	B3HJJ7	Total/NA	Water	9020B	
280-107112-1 MSD	B3HJJ7	Total/NA	Water	9020B	

Analysis Batch: 407735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107112-11	B3HJF6	Total/NA	Water	9020B	
280-107112-12	B3HJF7	Total/NA	Water	9020B	
MB 280-407735/2	Method Blank	Total/NA	Water	9020B	
LCS 280-407735/4	Lab Control Sample	Total/NA	Water	9020B	
LCSD 280-407735/5	Lab Control Sample Dup	Total/NA	Water	9020B	

Analysis Batch: 407834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107112-1	B3HJJ7	Total/NA	Water	9060A	
280-107112-2	B3HJJ9	Total/NA	Water	9060A	
280-107112-3	B3HJC9	Total/NA	Water	9060A	
280-107112-4	B3HK12	Total/NA	Water	9060A	
280-107112-5	B3HJK0	Total/NA	Water	9060A	
280-107112-6	B3HJJ6	Total/NA	Water	9060A	
280-107112-7	B3HJC8	Total/NA	Water	9060A	
280-107112-8	B3HJJ8	Total/NA	Water	9060A	
280-107112-9	B3HJB3	Total/NA	Water	9060A	
280-107112-10	B3HJF5	Total/NA	Water	9060A	
280-107112-11	B3HJF6	Total/NA	Water	9060A	
280-107112-12	B3HJF7	Total/NA	Water	9060A	
MB 280-407834/37	Method Blank	Total/NA	Water	9060A	
LCS 280-407834/35	Lab Control Sample	Total/NA	Water	9060A	
LCSD 280-407834/36	Lab Control Sample Dup	Total/NA	Water	9060A	
280-107112-1 MS	B3HJJ7	Total/NA	Water	9060A	
280-107112-1 MSD	B3HJJ7	Total/NA	Water	9060A	
280-107112-8 MS	B3HJJ8	Total/NA	Water	9060A	
280-107112-8 MSD	B3HJJ8	Total/NA	Water	9060A	

Analysis Batch: 407877

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107112-13	B3H891	Total/NA	Water	SM 2320B	
280-107112-16	B3FTC7	Total/NA	Water	SM 2320B	
MB 280-407877/6	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-407877/4	Lab Control Sample	Total/NA	Water	SM 2320B	

General Chemistry (Continued)

Analysis Batch: 407877 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 280-407877/5	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
280-107112-16 DU	B3FTC7	Total/NA	Water	SM 2320B	

Surrogate Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-003 / W18-002 / W18-001

TestAmerica Job ID: 280-107112-1
SDG: DN0330

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

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

		Percent Surrogate Recovery (Acceptance Limits)							
		TBP	FBP	2FP	NBZ	PHL	TPHL		
Lab Sample ID	Client Sample ID	(42-131)	(48-120)	(41-120)	(42-120)	(45-124)	(20-130)		
280-107112-15	B3FY27	69	76	78	79	81	92		
280-107112-16	B3FTC7	70	72	69	70	73	92		
280-107112-16 MS	B3FTC7	71	76	71	76	73	83		
280-107112-16 MSD	B3FTC7	75	77	76	82	78	87		
280-107112-17	B3FY28	63	72	73	74	73	88		
LCS 280-407552/2-A	Lab Control Sample	71	72	76	76	76	82		
MB 280-407552/1-A	Method Blank	63	69	75	74	78	81		

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)

DN0330

SAMP NUM	WMU Code	WELL NAME	SITE TYPE	PARENT WMU	DESCRIPTION
B3HJB3	1301-N	199-N-3	TSD	1301-N	1301-N Liquid Waste Disposal Facility
B3HJF5	1301-N	199-N-3	TSD	1301-N	1301-N Liquid Waste Disposal Facility
B3HJF6	1301-N	199-N-3	TSD	1301-N	1301-N Liquid Waste Disposal Facility
B3HJF7	1301-N	199-N-3	TSD	1301-N	1301-N Liquid Waste Disposal Facility
B3HJC9	1324-N	199-N-73	TSD	1324-N	120-N-2 (1324-N Surface Impoundment) Liquid Waste Disposal Facilities
B3HJJ7	1324-N	199-N-73	TSD	1324-N	120-N-2 (1324-N Surface Impoundment) Liquid Waste Disposal Facilities
B3HJJ9	1324-N	199-N-73	TSD	1324-N	120-N-2 (1324-N Surface Impoundment) Liquid Waste Disposal Facilities
B3HK12	1324-N	199-N-73	TSD	1324-N	120-N-2 (1324-N Surface Impoundment) Liquid Waste Disposal Facilities
B3HJC9	1324-NA	199-N-73	TSD	1324-NA	120-N-1 (1324-NA Percolation Pond)
B3HJJ7	1324-NA	199-N-73	TSD	1324-NA	120-N-1 (1324-NA Percolation Pond)
B3HJJ9	1324-NA	199-N-73	TSD	1324-NA	120-N-1 (1324-NA Percolation Pond)
B3HK12	1324-NA	199-N-73	TSD	1324-NA	120-N-1 (1324-NA Percolation Pond)
B3FTC7	218-W-4B	299-W15-152	TSD	218-W-4B	218-W-4B Burial Ground
B3FY27	218-W-4B	299-W15-30	TSD	218-W-4B	218-W-4B Burial Ground
B3FTC7	218-W-4C	299-W15-152	TSD	218-W-4C	218-W-4C Burial Ground
B3FY27	218-W-4C	299-W15-30	TSD	218-W-4C	218-W-4C Burial Ground
B3H392	241TX	299-W10-26	WMU	SST	200 West Area Underground Waste Storage Tank Farm
B3H891	241TX	299-W10-27	WMU	SST	200 West Area Underground Waste Storage Tank Farm
B3H392	241TY	299-W10-26	WMU	SST	200 West Area Underground Waste Storage Tank Farm
B3H891	241TY	299-W10-27	WMU	SST	200 West Area Underground Waste Storage Tank Farm