TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Denver
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Tel: (303)736-0100

TestAmerica Job ID: 280-107261-1
TestAmerica Sample Delivery Group: DN0334
Client Project/Site: W18-003 / W18-002 / S18-003 / X18-005

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

Attn: Mr. Scot Fitzgerald

Darlene Bandy

Authorized for release by:
4/9/2018 8:36:43 PM

Darlene Bandy, Project Manager I
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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: 280-107261-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: CH2M Hill Plateau Remediation Company

Project: W18-003 / W18-002 / S18-003 / X18-005

Report Number: 280-107261-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

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

The laboratory is not able to achieve project specified Highest Allowable Practical Quantitation Limits (HAPQL limits) for several analytes. These include: Boron 6010D, Beryllium 6020B, Silver 6020B, Tin 6020B, Ethyl Cyanide 8260B, Total Organic Halides 9020B. 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 3/8/2018 10:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.2º C and 5.3º C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples B3HHY2 (280-107261-4), B3HHY1 (280-107261-5) and B3H046 (280-107261-12) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 03/16/2018, 03/17/2018, 03/19/2018 and 03/20/2018.

Sample B3HHY1 (280-107261-5)[4X] required dilution prior to analysis for Methylene Chloride, due to analyte concentration. The reporting limits have been adjusted accordingly.

Several analytes failed the recovery criteria low and /or high for the MS and MSD of sample B3HHY1 (280-107261-5) in batch 280-408512. Methylene Chloride failed the recovery criteria low for the MSD of sample B3HHY1 (280-107261-5), and all associated results have been flagged "T". Only Methylene Chloride was reported from this DL (dilution) analysis batch, and only for sample B3HHY1 (280-107261-5), as this analyte was over the calibration range for this sample in batch 280-408216. 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)

Samples B3H3L0 (280-107261-10) and B3H3K3 (280-107261-13) were analyzed for Total Metals (ICP) in accordance with EPA SW846

Job ID: 280-107261-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

6010D. The samples were prepared on 03/15/2018 and analyzed on 03/17/2018, 03/21/2018 and 03/22/2018.

Calcium and Potassium were detected in method blank MB 280-407760/1-A at levels that were above the method detection limit but below half the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL and the method blank concentration was greater than 5% of the sample concentration, the result has been flagged.

The chains of custody that requested “6010_METALS_ICP: GW 04” analysis indicated "Low volume wells. Do not use for QC." A duplicate LCS (LCSD) was analyzed in place of an MS/MSD. It can be noted that an MS/MSD was performed on sample B3HH42 (280-107268-1) [SDG DN0232] in prep batch 280-407759 and analysis batch 280-408823; Boron failed the recovery criteria high for the MS, and all associated results have been flagged "N". MS = 127%; MSD = 116%; RPD = 9% (control limits: MS/MSD 75-125%; RPD 20). The acceptable LCS/LCSD 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 B3H3L0 (280-107261-10) and B3H3K3 (280-107261-13) were analyzed for Total Metals (ICP/MS) in accordance with SW846 6020B. The samples were prepared on 03/15/2018 and analyzed on 03/16/2018 and 03/19/2018.

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 chains of custody that requested “6020_METALS_ICPMS: GW 01” analysis indicated "Low volume wells. Do not use for QC." A duplicate LCS (LCSD) was analyzed in place of an MS/MSD.

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

ALKALINITY

Samples B3HL08 (280-107261-1), B3H898 (280-107261-2), B3H899 (280-107261-3) and B3H3K9 (280-107261-11) were analyzed for Alkalinity in accordance with SM20 2320B. The samples were analyzed on 03/13/2018 and 03/15/2018.

For samples B3H898 (280-107261-2) B3H899 (280-107261-3), the chains of custody indicated "Low volume wells. Do not use for QC." A duplicate LCS (LCSD) was analyzed in place of a sample duplicate in batch 280-407877.

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

TOTAL ORGANIC HALIDES

Samples B3HJH9 (280-107261-6), B3HJH8 (280-107261-7), B3HJH7 (280-107261-8) and B3HJC2 (280-107261-9) were analyzed for total organic halides in accordance with EPA SW846 Method 9020B. The samples were analyzed on 03/26/2018.

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

TOTAL ORGANIC CARBON

Samples B3HJH9 (280-107261-6), B3HJH8 (280-107261-7), B3HJH7 (280-107261-8) and B3HJC2 (280-107261-9) were analyzed for total organic carbon in accordance with EPA SW-846 Method 9060A. The samples were analyzed on 03/28/2018.

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

We certify that this data package is in compliance with the SOW, both technically and for completeness, including a full description of, explanation of, and corrective actions for, any and all deviations, from either the analyses requested or the case narrative requested. Release of the data contained in this hard copy data package has been authorized by the Laboratory Analytical Manager or designee and

Job ID: 280-107261-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

the laboratory's client services representative as verified by their signature on this report.

Reviewed and approved:

Darlene Bandy
Project Manager

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 280-107261-1
SDG Number: DN0334

Login Number: 107261
List Number: 1
Creator: Pottruff, Reed W

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	60 CPM
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.3, 0.2 C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C.# W18-003-225 Page 1 of 1

67165

Collector: Malcom Chunn CHPRC DW0334	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: W18-003	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071 RW. 3/7/18
Project Title: RCRA, MARCH 2018	**Logbook No.:** HNF-N-506-97-70	**Ice Chest No.:** GWS-422390
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 7717 4433 5816
Protocol RCRA	**Priority:** 30 Days	**Offsite Property No.:** 9129

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
B3HL08	N	W	MAR 07 2018	1055	1x250-mL G/P	2320_ALKALINITY: COMMON	14 Days	Cool <=6C

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280-107261 Chain of Custody

04/09/2018

5.4, 0.3 IRH8 -0.1 Transfer RP 3-8-18

Relinquished By: M-R C	MAR 07 2018 1110	Received By: Barbara Briggs /CHPRC B L Briggs	MAR 07 2018 1110	Matrix *	
Print First and Last Name: Malcom Chunn CHPRC	Signature / Date/Time	Print First and Last Name	Signature / Date/Time	S = Soil	DS = Drum Solids
Relinquished By: B L Briggs	MAR 07 2018 1145	Received By: Lesly Wall /CHPRC Lesly Wall	MAR 07 2018 1145	SE = Sediment	DL = Drum Liquid
Print First and Last Name: Barbara Briggs /CHPRC	Signature / Date/Time	Print First and Last Name	Signature / Date/Time	SO = Solid	T = Tissue
Relinquished By: Lesly Wall /CHPRC Lesly Wall	MAR 07 2018 1400	Received By: FEDEX		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: FedEx		Received By: Reed Pettruff Reed Pettruff	3-8-18 1015	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:

REV.0

4/9/2018

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W18-002-179 Page 1 of 1

Collector: Juan Aguilar /CHPRC DN0334	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650	
SAF No.: W18-002	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071	3/1/18
Project Title: RCRA, February 2018	**Logbook No.:** HNF-N-506-9917	**Ice Chest No.:** GWS-~~422~~-390	
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771744335816	
Protocol RCRA	**Priority:** 30 Days	**Offsite Property No.:** 9129	

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
B3H898	N	W	3-6-18	1357	1x125-mL G/P	2320_ALKALINITY: GW 01	14 Days	Cool <=6C

Relinquished By	Signature	Date/Time	Received By	Signature	Date/Time
Juan Aguilar /CHPRC		MAR 0 6 2018 1440	SSU-1		MAR 0 6 2018 1440
SSU-1		MAR 0 7 2018 0915	Frank Hall /CHPRC		MAR 0 7 2018 0915
Frank Hall /CHPRC		MAR 0 7 2018 1400	FEDEX		
FedEx			Reed Pettmt		3-8-18 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 1/4/2018

FSR ID = FSR55856

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. # W18-002-180 Page 1 of 1

Collector: Juan Aguilar /CHPRC DW0334	Contact/Requester: Karen Waters-Husted	Telephone No.: 509-376-4650
SAF No.: W18-002	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300071 LW. 3/7/18
Project Title: RCRA, February 2018	Logbook No.: HNF-N-506 -9917	Ice Chest No.: GWS-422 390
Shipped To (Lab): TestAmerica Denver	Method of Shipment Commercial Carrier	Bill of Lading/Air Bill No.: 771744335816
Protocol RCRA	Priority: 30 Days	Offsite Property No.: 9129

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
B3H899	N	W	3-6-18	1244	1x125-mL G/P	2320_ALKALINITY: GW 01	14 Days	Cool <=6C

Relinquished By:	Signature	Date/Time	Received By:	Signature	Date/Time
Juan Aguilar /CHPRC		MAR 06 2018 1440	SSU #1		MAR 06 2018 1440
SSU-1		MAR 7 2018 0915	Frank Hall /CHPRC		MAR 7 2018 0915
Frank Hall /CHPRC		MAR 07 2018 1400	FEDEX		
FedEx			Reed Pottruff		3-8-18 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 1/17/2018 FSR ID = FSR57281 A-6004-842 (REV 3)

04/09/2018 REV.0

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S18-003-182 Page 1 of 1

Collector: Larry Rosano /CHPRC DA0334	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: S18-003	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071 RW 3/7/18
Project Title: CERCLA, MARCH 2018	**Logbook No.:** HNF-N-506 98/52	**Ice Chest No.:** GDS-422-390
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771744335816
Protocol CERCLA	**Priority:** 30 Days	**Offsite Property No.:** 9129

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
B3HHY2	N	W	3-7-18	0936	5x40-mL aGs*	8260_VOA_GCMS_IX: COMMON REV 1	14 Days	HCl or H2SO4 to pH <2 / Cool <=6C

Relinquished By / Print First and Last Name	Signature	Date/Time	Received By / Print First and Last Name	Signature	Date/Time
Larry Rosano /CHPRC	Larry Rosano	MAR 07 2018 0945	Frank Hall /CHPRC		MAR 07 2018 0945
Frank Hall /CHPRC		MAR 07 2018 1400	FEDEX		
FedEx			Reed Pathruff	Reed P	3-8-18 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 1/16/2018 FSR ID = FSR57263 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.# S18-003-181 Page 1 of 1

Collector: Larry Rosane /CHPRC DW0334	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650	
SAF No.: S18-003	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071 AD.3/7/18	
Project Title: CERCLA, MARCH 2018	**Logbook No.:** HNF-N-506 98/52	**Ice Chest No.:** GWS-422 390	
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771744335816	
Protocol CERCLA	**Priority:** 30 Days	**Offsite Property No.:** 9129	

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
B3HHY1	N	W	3-7-18	0730	5x40-mL aGs*	8260_VOA_GCMS_IX: COMMON REV 1	14 Days	HCl or H2SO4 to pH <2 / Cool <=6C

Relinquished By: Larry Rosane /CHPRC	Larry Rosane	MAR 07 2018 0845	Received By: Frank Hall /CHPRC		MAR 07 2018 0845
Print First and Last Name	*Signature*	*Date/Time*	*Print First and Last Name*	*Signature*	*Date/Time*
Relinquished By: Frank Hall /CHPRC		MAR 07 2018 0900	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 Pettruff		3-8-18 1015
Print First and Last Name	*Signature*	*Date/Time*	*Print First and Last Name*	*Signature*	*Date/Time*
Relinquished By:			Received By:		
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 1/16/2018 FSR ID = FSR57265 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.# W18-003-072 Page 1 of 2

Collector: Malcom Chunn CHPRC DN0334	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650	
SAF No.: W18-003	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071 po. 3/7/18	
Project Title: RCRA, MARCH 2018	**Logbook No.:** HNF-N-506 - 97-70	**Ice Chest No.:** GWS-422390	
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771744335816	
Protocol RCRA	**Priority:** 30 Days	**Offsite Property No.:** 9129	

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
B3HJH9	N	W	MAR 0 7 2018	0912	1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2 / Cool <=6C
B3HJH9	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C
B3HJH8	N	W			1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2 / Cool <=6C
B3HJH8	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C
B3HJH7	N	W			1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2 / Cool <=6C
B3HJH7	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C
B3HJC2	N	W			1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2 / Cool <=6C

Relinquished By	Received By	Matrix *
Barbara Briggs /CHPRC, Malcom Chunn CHPRC — M. R. Ch — MAR 0 7 2018 1110	Barbara Briggs /CHPRC — B Brigs — MAR 0 7 2018 1110	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
Barbara Briggs /CHPRC — B Brigs — MAR 0 7 2018 1145	Lesly Wall /CHPRC — Lesly Wall — MAR 0 7 2018 1145	
Lesly Wall /CHPRC — Lesly Wall — MAR 0 7 2018 1400	FEDEX	
Fed Ex	Reed Poffenbarger — Reed Poffenbarger — 3-8-18 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 FSR ID = FSR57214 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. # W18-003-072 Page 2 of 2

Collector: Malcom Chunn CHPRC DN0334	**Contact/Requester:** Karen Waters-Husted	**Telephone No.:** 509-376-4650
SAF No.: W18-003	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071 DW.3/7/18
Project Title: RCRA, MARCH 2018	**Logbook No.:** HNF-N-506- 97-70	**Ice Chest No.:** GWS-422 390
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771744335816
Protocol RCRA	**Priority:** 30 Days	**Offsite Property No.:** 9129

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
B3HJC2	N	W	MAR 0 7 2018	0912	1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2 / Cool <=6C

Relinquished By / Print First and Last Name	Signature	Date/Time	Received By / Print First and Last Name	Signature	Date/Time
Malcom Chunn CHPRC DN 3-7-18 / Barbara Briggs /CHPRC		MAR 0 7 2018 1110	Barbara Briggs /CHPRC		MAR 0 7 2018 1110
Barbara Briggs /CHPRC		MAR 0 7 2018 1145	Lesly Wall /CHPRC		MAR 0 7 2018 1145
Lesly Wall /CHPRC		MAR 0 7 2018 1400	FEDEX		
Fed Ex			Reed Pothuff		3-8-18 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 = FSR57214 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.# W18-002-088 Page 1 of 1

Collector: Juan Aguilar /CHPRC DN0334	**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-506-9919	**Ice Chest No.:** GWS-728
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771745688007
Protocol RCRA	**Priority:** 30 Days	**Offsite Property No.:** 9131

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
B3H3L0	N	W	3-7-18	0907	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 07 2018 1240	Received By: Daniel Klug CHPRC	MAR 07 2018 1240
Print First and Last Name / Signature / Date/Time		Print First and Last Name / Signature / Date/Time	
Relinquished By: Troy Bacon CHPRC Troy L. Bacon	MAR 07 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 Pettruff Reed Pettruff	3-8-18 1015
Print First and Last Name / Signature / Date/Time		Print First and Last Name / Signature / Date/Time	
Relinquished By:		Received By:	
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 1/4/2018

FSR ID = FSR55858

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.# W18-002-083 Page 1 of 1

Collector: Juan Aguilar /CHPRC DN0334	**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-506-9919	**Ice Chest No.:** GWS-728
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771745688047
Protocol RCRA	**Priority:** 30 Days	**Offsite Property No.:** 9131

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
B3H3K9	N	W	3-7-18	0907	1x125-mL G/P	2320_ALKALINITY: GW 01	14 Days	Cool <=6C

Relinquished By: Juan Aguilar /CHPRC	MAR 0 7 2018 1240	Received By: Daniel Klug CHPRC	MAR 0 7 2018 1248
Print First and Last Name / Signature / Date/Time		Print First and Last Name / Signature / Date/Time	
Relinquished By: Troy Bacon CHPRC	MAR 0 7 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 Pottruff	3-8-18 1105
Print First and Last Name / Signature / Date/Time		Print First and Last Name / Signature / Date/Time	
Relinquished By:		Received By:	
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 1/4/2018 FSR ID = FSR55858 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. # X18-005-142 Page 1 of 1

Collector: Larry Rosane /CHPRC DA0334	**Contact/Requester:** WATERS-HUSTED, K	**Telephone No.:** 376-4650	
SAF No.: X18-005	**Sampling Origin:** Hanford Site	**Purchase Order/Charge Code:** 300071	
Project Title: Groundwater Background Study,	**Logbook No.:** HNF-N-506 98/52	**Ice Chest No.:** GWS-728	
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771745688067	
Protocol SURV	**Priority:** 30 Days	**Offsite Property No.:** 9131	

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

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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B3H046	N	W	3-7-18	1041	5x40-mL aGs*	8260_VOA_GCMS: COMMON	14 Days	HCl or H2SO4 to pH <2 / Cool <=6C

Relinquished By: Larry Rosane /CHPRC	Larry Rosane	MAR 07 2018 1250	Received By: Lesly Wall /CHPRC	Lesly Wall	MAR 07 2018 1250
Print First and Last Name	Signature	Date/Time	Print First and Last Name	Signature	Date/Time
Relinquished By: Lesly Wall /CHPRC	Lesly Wall	MAR 07 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 Pothruff	Reed Pothruff	3-8-18 1015
Print First and Last Name	Signature	Date/Time	Print First and Last Name	Signature	Date/Time
Relinquished By:			Received By:		
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 = FSR54034 A-6004-842 (REV 3)

04/09/2018

REV.0

4/9/2018

CH2MHill Plateau Remediation Company	57 LBS	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C.# W18-002-017 Page 1 of 1

Collector: Juan Aguilar /CHPRC DN0334	**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-506-9919	**Ice Chest No.:** GWS-728	
Shipped To (Lab): TestAmerica Denver	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.:** 771745688067	
Protocol RCRA	**Priority:** 30 Days	**Offsite Property No.:** 9131	

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
B3H3K3	N	W	3-7-18	1030	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	Signature	MAR 07 2018 1240	Received By: Daniel Klug CHPRC	Signature	MAR 07 2018 1240
Relinquished By: Troy Bacon CHPRC	Signature	MAR 07 2018 1400	Received By: FEDEX	Signature	
Relinquished By: FedEx	Signature		Received By: Reed Pottroff	Signature	3-8-18 1015
Relinquished By:	Signature		Received By:	Signature	

Matrix *

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

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 = FSR55849 A-6004-842 (REV 3)

04/09/2018

REV.0

4/9/2018

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FedEx® Tracking

771744335816

Ship date		Actual delivery:
Wed 3/07/2018		**Thu 3/08/2018 9:59 am**
Richland, WA US	**Delivered**	ARVADA, CO US
	Signed for by: B.BURTNESS	

Travel History

Date/Time	Activity	Location
- 3/08/2018 - Thursday		
9:59 am	Delivered	ARVADA, CO
8:58 am	On FedEx vehicle for delivery	ARVADA, CO
7:37 am	At local FedEx facility	ARVADA, CO
5:07 am	At destination sort facility	DENVER, CO
4:02 am	Departed FedEx location	MEMPHIS, TN
12:21 am	Arrived at FedEx location	MEMPHIS, TN
- 3/07/2018 - Wednesday		
4:51 pm	Left FedEx origin facility	PASCO, WA
2:05 pm	Shipment information sent to FedEx	
12:38 pm	Picked up	PASCO, WA

Shipment Facts

Tracking Number	771744335816	**Service**	FedEx Priority Overnight
Weight	67 lbs / 30.39 kgs	**Signature services**	Direct signature required
Delivered To	Shipping/Receiving	**Total pieces**	1
Total shipment weight	67 lbs / 30.39 kgs	**Terms**	Third Party
Shipper reference	ptr# 9129/cooler# gws-390	**Packaging**	Your Packaging
Special handling section	Deliver Weekday, Direct Signature Required	**Standard transit**	3/08/2018 by 10:30 am

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FedEx® Tracking

771745688067

Ship date:		Actual delivery:
Wed 3/07/2018		**Thu 3/08/2018 9:59 am**
Richland, WA US	**Delivered**	ARVADA, CO US
	Signed for by: B.BURTNESS	

Travel History

Date/Time	Activity	Location
- 3/08/2018 - Thursday		
9:59 am	Delivered	ARVADA, CO
8:58 am	On FedEx vehicle for delivery	ARVADA, CO
7:37 am	At local FedEx facility	ARVADA, CO
5:07 am	At destination sort facility	DENVER, CO
4:02 am	Departed FedEx location	MEMPHIS, TN
12:21 am	Arrived at FedEx location	MEMPHIS, TN
- 3/07/2018 - Wednesday		
4:51 pm	Left FedEx origin facility	PASCO, WA
3:19 pm	Shipment information sent to FedEx	
3:17 pm	Picked up	PASCO, WA

Shipment Facts

Tracking Number	771745688067	**Service**	FedEx Priority Overnight
Weight	57 lbs / 25.85 kgs	**Signature services**	Direct signature required
Delivered To	Shipping/Receiving	**Total pieces**	1
Total shipment weight	57 lbs / 25.85 kgs	**Terms**	Third Party
Shipper reference	ptr# 9131/cooler# gws-728	**Packaging**	Your Packaging
Special handling section	Deliver Weekday, Direct Signature Required	**Standard transit**	3/08/2018 by 10:30 am

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
T	MS, MSD: Recovery exceeds upper or lower control limits.

GC/MS VOA TICs

Qualifier	Qualifier Description
N	Presumptive evidence of material.

Metals

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

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 / S18-003 / X18-005

TestAmerica Job ID: 280-107261-1
SDG: DN0334

Method	Method Description	Protocol	Laboratory
8260B	Volatile 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 / S18-003 / X18-005

TestAmerica Job ID: 280-107261-1
SDG: DN0334

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-107261-1	B3HL08	Water	03/07/18 10:55	03/08/18 10:15
280-107261-2	B3H898	Water	03/06/18 13:57	03/08/18 10:15
280-107261-3	B3H899	Water	03/06/18 12:44	03/08/18 10:15
280-107261-4	B3HHY2	Water	03/07/18 08:36	03/08/18 10:15
280-107261-5	B3HHY1	Water	03/07/18 07:30	03/08/18 10:15
280-107261-6	B3HJH9	Water	03/07/18 09:12	03/08/18 10:15
280-107261-7	B3HJH8	Water	03/07/18 09:12	03/08/18 10:15
280-107261-8	B3HJH7	Water	03/07/18 09:12	03/08/18 10:15
280-107261-9	B3HJC2	Water	03/07/18 09:12	03/08/18 10:15
280-107261-10	B3H3L0	Water	03/07/18 09:07	03/08/18 10:15
280-107261-11	B3H3K9	Water	03/07/18 09:07	03/08/18 10:15
280-107261-12	B3H046	Water	03/07/18 10:47	03/08/18 10:15
280-107261-13	B3H3K3	Water	03/07/18 10:30	03/08/18 10:15

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

Client Sample ID: B3HHY2
Date Collected: 03/07/18 08:36
Date Received: 03/08/18 10:15

Lab Sample ID: 280-107261-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.21	U	1.0	0.21	ug/L			03/16/18 21:41	1
1,1,1-Trichloroethane	0.16	U	1.0	0.16	ug/L			03/16/18 21:41	1
1,1,2,2-Tetrachloroethane	0.21	U	1.0	0.21	ug/L			03/16/18 21:41	1
1,1,2-Trichloroethane	0.27	U	1.0	0.27	ug/L			03/16/18 21:41	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			03/16/18 21:41	1
1,1-Dichloroethene	0.23	U	1.0	0.23	ug/L			03/16/18 21:41	1
1,2,3-Trichloropropane	0.33	U	2.5	0.33	ug/L			03/16/18 21:41	1
1,2-Dibromo-3-Chloropropane	0.47	U	5.0	0.47	ug/L			03/16/18 21:41	1
1,2-Dibromoethane	0.18	U	1.0	0.18	ug/L			03/16/18 21:41	1
1,2-Dichloroethane	0.13	U	1.0	0.13	ug/L			03/16/18 21:41	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			03/16/18 21:41	1
1,4-Dichlorobenzene	0.16	U	1.0	0.16	ug/L			03/16/18 21:41	1
2-Butanone (MEK)	2.0	U	6.0	2.0	ug/L			03/16/18 21:41	1
2-Hexanone	1.7	U	5.0	1.7	ug/L			03/16/18 21:41	1
4-Methyl-2-pentanone (MIBK)	0.98	U	5.0	0.98	ug/L			03/16/18 21:41	1
Acetone	1.9	U	10	1.9	ug/L			03/16/18 21:41	1
Acetonitrile	9.6	U	30	9.6	ug/L			03/16/18 21:41	1
Acrolein	2.8	U	20	2.8	ug/L			03/16/18 21:41	1
Acrylonitrile	1.4	U	20	1.4	ug/L			03/16/18 21:41	1
Allyl chloride	0.17	U	2.0	0.17	ug/L			03/16/18 21:41	1
Benzene	0.16	U	1.0	0.16	ug/L			03/16/18 21:41	1
Bromodichloromethane	0.17	U	1.0	0.17	ug/L			03/16/18 21:41	1
Bromoform	0.19	U	1.0	0.19	ug/L			03/16/18 21:41	1
Bromomethane	0.21	U	2.0	0.21	ug/L			03/16/18 21:41	1
Carbon disulfide	0.45	U	2.0	0.45	ug/L			03/16/18 21:41	1
Carbon tetrachloride	**2.9**		1.0	0.19	ug/L			03/16/18 21:41	1
Chlorobenzene	0.17	U	1.0	0.17	ug/L			03/16/18 21:41	1
Chloroethane	0.41	U	2.0	0.41	ug/L			03/16/18 21:41	1
Chloroform	**0.64**	**J**	1.0	0.16	ug/L			03/16/18 21:41	1
Chloromethane	0.30	U	2.0	0.30	ug/L			03/16/18 21:41	1
Chloroprene	0.21	U	1.0	0.21	ug/L			03/16/18 21:41	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			03/16/18 21:41	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			03/16/18 21:41	1
Dibromochloromethane	0.17	U	1.0	0.17	ug/L			03/16/18 21:41	1
Dibromomethane	0.17	U	1.0	0.17	ug/L			03/16/18 21:41	1
Dichlorodifluoromethane	0.31	U	2.0	0.31	ug/L			03/16/18 21:41	1
Ethyl Cyanide	3.7	U	20	3.7	ug/L			03/16/18 21:41	1
Ethyl methacrylate	0.86	U	3.0	0.86	ug/L			03/16/18 21:41	1
Ethylbenzene	0.16	U	1.0	0.16	ug/L			03/16/18 21:41	1
Iodomethane	0.23	U	1.0	0.23	ug/L			03/16/18 21:41	1
Isobutyl alcohol	37	U	110	37	ug/L			03/16/18 21:41	1
Methacrylonitrile	1.6	U	10	1.6	ug/L			03/16/18 21:41	1
Methyl methacrylate	1.1	U	4.0	1.1	ug/L			03/16/18 21:41	1
Methylene Chloride	0.32	U	2.0	0.32	ug/L			03/16/18 21:41	1
Styrene	0.17	U	1.0	0.17	ug/L			03/16/18 21:41	1
Tetrachloroethene	0.20	U	1.0	0.20	ug/L			03/16/18 21:41	1
Toluene	0.17	U	1.0	0.17	ug/L			03/16/18 21:41	1
trans-1,2-Dichloroethylene	0.15	U	1.0	0.15	ug/L			03/16/18 21:41	1
trans-1,3-Dichloropropene	0.19	U	3.0	0.19	ug/L			03/16/18 21:41	1

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

Client Sample ID: B3HHY2
Date Collected: 03/07/18 08:36
Date Received: 03/08/18 10:15
Lab Sample ID: 280-107261-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,4-Dichloro-2-butene	0.80	U	3.0	0.80	ug/L			03/16/18 21:41	1
Trichloroethene	0.16	U	1.0	0.16	ug/L			03/16/18 21:41	1
Trichloromonofluoromethane	0.29	U	2.0	0.29	ug/L			03/16/18 21:41	1
Vinyl acetate	0.94	U	3.0	0.94	ug/L			03/16/18 21:41	1
Vinyl chloride	0.10	U	1.0	0.10	ug/L			03/16/18 21:41	1
Xylenes, Total	0.19	U	2.0	0.19	ug/L			03/16/18 21:41	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Isopropyl alcohol	*44*		*ug/L*		*4.97*	*67-63-0*		*03/16/18 21:41*	*1*
Tentatively Identified Compound	*None*		*ug/L*					*03/16/18 21:41*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*87*		*70 - 130*		*03/16/18 21:41*	*1*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*		*03/16/18 21:41*	*1*
Dibromofluoromethane (Surr)	*95*		*70 - 130*		*03/16/18 21:41*	*1*
Toluene-d8 (Surr)	*106*		*70 - 130*		*03/16/18 21:41*	*1*

Client Sample ID: B3HHY1
Date Collected: 03/07/18 07:30
Date Received: 03/08/18 10:15
Lab Sample ID: 280-107261-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.21	U	1.0	0.21	ug/L			03/16/18 23:56	1
1,1,1-Trichloroethane	0.16	U	1.0	0.16	ug/L			03/16/18 23:56	1
1,1,2,2-Tetrachloroethane	0.21	U	1.0	0.21	ug/L			03/16/18 23:56	1
1,1,2-Trichloroethane	0.27	U	1.0	0.27	ug/L			03/16/18 23:56	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			03/16/18 23:56	1
1,1-Dichloroethene	0.23	U	1.0	0.23	ug/L			03/16/18 23:56	1
1,2,3-Trichloropropane	0.33	U	2.5	0.33	ug/L			03/16/18 23:56	1
1,2-Dibromo-3-Chloropropane	0.47	U	5.0	0.47	ug/L			03/16/18 23:56	1
1,2-Dibromoethane	0.18	U	1.0	0.18	ug/L			03/16/18 23:56	1
1,2-Dichloroethane	0.13	U	1.0	0.13	ug/L			03/16/18 23:56	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			03/16/18 23:56	1
1,4-Dichlorobenzene	0.16	U	1.0	0.16	ug/L			03/16/18 23:56	1
2-Butanone (MEK)	2.0	U	6.0	2.0	ug/L			03/16/18 23:56	1
2-Hexanone	1.7	U	5.0	1.7	ug/L			03/16/18 23:56	1
4-Methyl-2-pentanone (MIBK)	0.98	U	5.0	0.98	ug/L			03/16/18 23:56	1
Acetone	1.9	U	10	1.9	ug/L			03/16/18 23:56	1
Acetonitrile	9.6	U	30	9.6	ug/L			03/16/18 23:56	1
Acrolein	2.8	U	20	2.8	ug/L			03/16/18 23:56	1
Acrylonitrile	1.4	U	20	1.4	ug/L			03/16/18 23:56	1
Allyl chloride	0.17	U	2.0	0.17	ug/L			03/16/18 23:56	1
Benzene	0.16	U	1.0	0.16	ug/L			03/16/18 23:56	1
Bromodichloromethane	0.17	U	1.0	0.17	ug/L			03/16/18 23:56	1
Bromoform	0.19	U	1.0	0.19	ug/L			03/16/18 23:56	1
Bromomethane	0.21	U	2.0	0.21	ug/L			03/16/18 23:56	1
Carbon disulfide	0.45	U	2.0	0.45	ug/L			03/16/18 23:56	1
Carbon tetrachloride	0.19	U	1.0	0.19	ug/L			03/16/18 23:56	1
Chlorobenzene	0.17	U	1.0	0.17	ug/L			03/16/18 23:56	1
Chloroethane	0.41	U	2.0	0.41	ug/L			03/16/18 23:56	1
Chloroform	0.16	U	1.0	0.16	ug/L			03/16/18 23:56	1

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

Client Sample ID: B3HHY1
Date Collected: 03/07/18 07:30
Date Received: 03/08/18 10:15
Lab Sample ID: 280-107261-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.30	U	2.0	0.30	ug/L			03/16/18 23:56	1
Chloroprene	0.21	U	1.0	0.21	ug/L			03/16/18 23:56	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			03/16/18 23:56	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			03/16/18 23:56	1
Dibromochloromethane	0.17	U	1.0	0.17	ug/L			03/16/18 23:56	1
Dibromomethane	0.17	U	1.0	0.17	ug/L			03/16/18 23:56	1
Dichlorodifluoromethane	0.31	U	2.0	0.31	ug/L			03/16/18 23:56	1
Ethyl Cyanide	3.7	U	20	3.7	ug/L			03/16/18 23:56	1
Ethyl methacrylate	0.86	U	3.0	0.86	ug/L			03/16/18 23:56	1
Ethylbenzene	0.16	U	1.0	0.16	ug/L			03/16/18 23:56	1
Iodomethane	0.23	U	1.0	0.23	ug/L			03/16/18 23:56	1
Isobutyl alcohol	37	U	110	37	ug/L			03/16/18 23:56	1
Methacrylonitrile	1.6	U	10	1.6	ug/L			03/16/18 23:56	1
Methyl methacrylate	1.1	U	4.0	1.1	ug/L			03/16/18 23:56	1
Styrene	0.17	U	1.0	0.17	ug/L			03/16/18 23:56	1
Tetrachloroethene	0.20	U	1.0	0.20	ug/L			03/16/18 23:56	1
Toluene	0.17	U	1.0	0.17	ug/L			03/16/18 23:56	1
trans-1,2-Dichloroethylene	0.15	U	1.0	0.15	ug/L			03/16/18 23:56	1
trans-1,3-Dichloropropene	0.19	U	3.0	0.19	ug/L			03/16/18 23:56	1
trans-1,4-Dichloro-2-butene	0.80	U	3.0	0.80	ug/L			03/16/18 23:56	1
Trichloroethene	0.16	U	1.0	0.16	ug/L			03/16/18 23:56	1
Trichloromonofluoromethane	0.29	U	2.0	0.29	ug/L			03/16/18 23:56	1
Vinyl acetate	0.94	U	3.0	0.94	ug/L			03/16/18 23:56	1
Vinyl chloride	0.10	U	1.0	0.10	ug/L			03/16/18 23:56	1
Xylenes, Total	0.19	U	2.0	0.19	ug/L			03/16/18 23:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 130*		*03/16/18 23:56*	*1*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*		*03/16/18 23:56*	*1*
Dibromofluoromethane (Surr)	*94*		*70 - 130*		*03/16/18 23:56*	*1*
Toluene-d8 (Surr)	*89*		*70 - 130*		*03/16/18 23:56*	*1*

Client Sample ID: B3H046
Date Collected: 03/07/18 10:47
Date Received: 03/08/18 10:15
Lab Sample ID: 280-107261-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.16	U	1.0	0.16	ug/L			03/17/18 00:15	1
1,1,2-Trichloroethane	0.27	U	1.0	0.27	ug/L			03/17/18 00:15	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			03/17/18 00:15	1
1,1-Dichloroethene	0.23	U	1.0	0.23	ug/L			03/17/18 00:15	1
1,2-Dichloroethane	0.13	U	1.0	0.13	ug/L			03/17/18 00:15	1
2-Butanone (MEK)	2.0	U	6.0	2.0	ug/L			03/17/18 00:15	1
4-Methyl-2-pentanone (MIBK)	0.98	U	5.0	0.98	ug/L			03/17/18 00:15	1
Acetone	1.9	U	10	1.9	ug/L			03/17/18 00:15	1
Benzene	0.16	U	1.0	0.16	ug/L			03/17/18 00:15	1
Carbon disulfide	0.45	U	2.0	0.45	ug/L			03/17/18 00:15	1
Carbon tetrachloride	0.19	U	1.0	0.19	ug/L			03/17/18 00:15	1
Chlorobenzene	0.17	U	1.0	0.17	ug/L			03/17/18 00:15	1
Chloroform	0.16	U	1.0	0.16	ug/L			03/17/18 00:15	1
Ethylbenzene	0.16	U	1.0	0.16	ug/L			03/17/18 00:15	1

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

Client Sample ID: B3H046
Date Collected: 03/07/18 10:47
Date Received: 03/08/18 10:15
Lab Sample ID: 280-107261-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	2.2		2.0	0.32	ug/L			03/17/18 00:15	1
Tetrachloroethene	0.20	U	1.0	0.20	ug/L			03/17/18 00:15	1
Toluene	0.17	U	1.0	0.17	ug/L			03/17/18 00:15	1
Trichloroethene	0.16	U	1.0	0.16	ug/L			03/17/18 00:15	1
Vinyl chloride	0.10	U	1.0	0.10	ug/L			03/17/18 00:15	1
Xylenes, Total	0.19	U	2.0	0.19	ug/L			03/17/18 00:15	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*03/17/18 00:15*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*81*		*70 - 130*		*03/17/18 00:15*	*1*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*		*03/17/18 00:15*	*1*
Dibromofluoromethane (Surr)	*93*		*70 - 130*		*03/17/18 00:15*	*1*
Toluene-d8 (Surr)	*97*		*70 - 130*		*03/17/18 00:15*	*1*

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

Client Sample ID: B3HHY1
Date Collected: 03/07/18 07:30
Date Received: 03/08/18 10:15
Lab Sample ID: 280-107261-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	120	D T	8.0	1.3	ug/L			03/20/18 19:24	4

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*03/20/18 19:24*	*4*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*		*03/20/18 19:24*	*4*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*03/20/18 19:24*	*4*
Dibromofluoromethane (Surr)	*101*		*70 - 130*		*03/20/18 19:24*	*4*
Toluene-d8 (Surr)	*104*		*70 - 130*		*03/20/18 19:24*	*4*

Method: 6010D - Metals (ICP)

Client Sample ID: B3H3L0
Date Collected: 03/07/18 09:07
Date Received: 03/08/18 10:15
Lab Sample ID: 280-107261-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	16.7	B N	100	4.4	ug/L		03/15/18 08:26	03/22/18 22:05	1
Calcium	50600		200	34.5	ug/L		03/15/18 08:26	03/17/18 05:28	1
Iron	912		100	22.0	ug/L		03/15/18 08:26	03/17/18 05:28	1
Magnesium	17200		200	10.7	ug/L		03/15/18 08:26	03/17/18 05:28	1
Potassium	5020	C	3000	237	ug/L		03/15/18 08:26	03/21/18 03:08	1
Sodium	14000		1000	117	ug/L		03/15/18 08:26	03/17/18 05:28	1
Vanadium	30.7		10.0	1.1	ug/L		03/15/18 08:26	03/17/18 05:28	1

Method: 6010D - Metals (ICP)

Client Sample ID: B3H3K3
Date Collected: 03/07/18 10:30
Date Received: 03/08/18 10:15
Lab Sample ID: 280-107261-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	16.7	B N	100	4.4	ug/L		03/15/18 08:26	03/22/18 22:08	1
Calcium	51600		200	34.5	ug/L		03/15/18 08:26	03/17/18 05:31	1
Iron	465		100	22.0	ug/L		03/15/18 08:26	03/17/18 05:31	1
Magnesium	16400		200	10.7	ug/L		03/15/18 08:26	03/17/18 05:31	1
Potassium	4960	C	3000	237	ug/L		03/15/18 08:26	03/21/18 03:11	1
Sodium	25600		1000	117	ug/L		03/15/18 08:26	03/17/18 05:31	1
Vanadium	27.2		10.0	1.1	ug/L		03/15/18 08:26	03/17/18 05:31	1

Method: 6020B - Metals (ICP/MS)

Client Sample ID: B3H3L0
Date Collected: 03/07/18 09:07
Date Received: 03/08/18 10:15
Lab Sample ID: 280-107261-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	179		50.0	9.2	ug/L		03/15/18 08:26	03/19/18 17:24	1
Antimony	0.40	U	2.0	0.40	ug/L		03/15/18 08:26	03/16/18 02:42	1
Arsenic	1.8	B	5.0	0.33	ug/L		03/15/18 08:26	03/16/18 02:42	1
Barium	50.9		1.0	0.29	ug/L		03/15/18 08:26	03/16/18 02:42	1
Beryllium	0.080	U	1.0	0.080	ug/L		03/15/18 08:26	03/16/18 02:42	1
Cadmium	0.27	U	1.0	0.27	ug/L		03/15/18 08:26	03/16/18 02:42	1
Chromium	38.9		2.0	0.50	ug/L		03/15/18 08:26	03/16/18 02:42	1
Cobalt	0.40	B	1.0	0.054	ug/L		03/15/18 08:26	03/16/18 02:42	1
Copper	0.70	B	2.0	0.56	ug/L		03/15/18 08:26	03/16/18 02:42	1
Lead	0.39	B	1.0	0.18	ug/L		03/15/18 08:26	03/16/18 02:42	1
Manganese	21.8		1.0	0.31	ug/L		03/15/18 08:26	03/16/18 02:42	1
Molybdenum	4.9		2.0	0.14	ug/L		03/15/18 08:26	03/16/18 02:42	1
Nickel	2.6		2.0	0.30	ug/L		03/15/18 08:26	03/16/18 02:42	1
Selenium	2.4	B	5.0	0.70	ug/L		03/15/18 08:26	03/16/18 02:42	1
Silver	0.033	U	5.0	0.033	ug/L		03/15/18 08:26	03/16/18 02:42	1
Strontium	232		10.0	0.30	ug/L		03/15/18 08:26	03/16/18 02:42	1
Thallium	0.055	B	1.0	0.050	ug/L		03/15/18 08:26	03/16/18 02:42	1
Thorium	1.2	U	5.0	1.2	ug/L		03/15/18 08:26	03/16/18 02:42	1
Tin	0.77	U	10.0	0.77	ug/L		03/15/18 08:26	03/16/18 02:42	1
Uranium	0.86	B	1.0	0.050	ug/L		03/15/18 08:26	03/16/18 02:42	1
Zinc	29.1		10.0	2.0	ug/L		03/15/18 08:26	03/16/18 02:42	1

Client Sample ID: B3H3K3
Date Collected: 03/07/18 10:30
Date Received: 03/08/18 10:15
Lab Sample ID: 280-107261-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	151		50.0	9.2	ug/L		03/15/18 08:26	03/19/18 17:28	1
Antimony	0.40	U	2.0	0.40	ug/L		03/15/18 08:26	03/16/18 02:46	1
Arsenic	1.2	B	5.0	0.33	ug/L		03/15/18 08:26	03/16/18 02:46	1
Barium	59.5		1.0	0.29	ug/L		03/15/18 08:26	03/16/18 02:46	1
Beryllium	0.080	U	1.0	0.080	ug/L		03/15/18 08:26	03/16/18 02:46	1
Cadmium	0.27	U	1.0	0.27	ug/L		03/15/18 08:26	03/16/18 02:46	1
Chromium	10.8		2.0	0.50	ug/L		03/15/18 08:26	03/16/18 02:46	1
Cobalt	0.14	B	1.0	0.054	ug/L		03/15/18 08:26	03/16/18 02:46	1
Copper	0.56	U	2.0	0.56	ug/L		03/15/18 08:26	03/16/18 02:46	1
Lead	0.18	U	1.0	0.18	ug/L		03/15/18 08:26	03/16/18 02:46	1

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

Client Sample ID: B3H3K3 — **Lab Sample ID: 280-107261-13**
Date Collected: 03/07/18 10:30 — **Matrix: Water**
Date Received: 03/08/18 10:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	5.3		1.0	0.31	ug/L		03/15/18 08:26	03/16/18 02:46	1
Molybdenum	5.6		2.0	0.14	ug/L		03/15/18 08:26	03/16/18 02:46	1
Nickel	1.2	B	2.0	0.30	ug/L		03/15/18 08:26	03/16/18 02:46	1
Selenium	2.3	B	5.0	0.70	ug/L		03/15/18 08:26	03/16/18 02:46	1
Silver	0.033	U	5.0	0.033	ug/L		03/15/18 08:26	03/16/18 02:46	1
Strontium	239		10.0	0.30	ug/L		03/15/18 08:26	03/16/18 02:46	1
Thallium	0.050	U	1.0	0.050	ug/L		03/15/18 08:26	03/16/18 02:46	1
Thorium	1.2	U	5.0	1.2	ug/L		03/15/18 08:26	03/16/18 02:46	1
Tin	0.77	U	10.0	0.77	ug/L		03/15/18 08:26	03/16/18 02:46	1
Uranium	0.98	B	1.0	0.050	ug/L		03/15/18 08:26	03/16/18 02:46	1
Zinc	15.6		10.0	2.0	ug/L		03/15/18 08:26	03/16/18 02:46	1

General Chemistry

Client Sample ID: B3HL08 — **Lab Sample ID: 280-107261-1**
Date Collected: 03/07/18 10:55 — **Matrix: Water**
Date Received: 03/08/18 10:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	90600		5000	1070	ug/L			03/15/18 23:33	1

Client Sample ID: B3H898 — **Lab Sample ID: 280-107261-2**
Date Collected: 03/06/18 13:57 — **Matrix: Water**
Date Received: 03/08/18 10:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	112000		5000	1070	ug/L			03/13/18 23:41	1
Bicarbonate Alkalinity as CaCO3	112000		5000	1070	ug/L			03/13/18 23:41	1
Carbonate Alkalinity as CaCO3	1070	U	5000	1070	ug/L			03/13/18 23:41	1
Hydroxide Alkalinity as CaCO3	1070	U	5000	1070	ug/L			03/13/18 23:41	1

Client Sample ID: B3H899 — **Lab Sample ID: 280-107261-3**
Date Collected: 03/06/18 12:44 — **Matrix: Water**
Date Received: 03/08/18 10:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	113000		5000	1070	ug/L			03/13/18 23:46	1
Bicarbonate Alkalinity as CaCO3	113000		5000	1070	ug/L			03/13/18 23:46	1
Carbonate Alkalinity as CaCO3	1070	U	5000	1070	ug/L			03/13/18 23:46	1
Hydroxide Alkalinity as CaCO3	1070	U	5000	1070	ug/L			03/13/18 23:46	1

Client Sample ID: B3HJH9 — **Lab Sample ID: 280-107261-6**
Date Collected: 03/07/18 09:12 — **Matrix: Water**
Date Received: 03/08/18 10:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	8.6	B	30.0	7.7	ug/L			03/26/18 10:39	1
Total Organic Carbon - Average	468	B	1000	155	ug/L			03/28/18 18:10	1

Client Sample ID: B3HJH8 — **Lab Sample ID: 280-107261-7**
Date Collected: 03/07/18 09:12 — **Matrix: Water**
Date Received: 03/08/18 10:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	9.8	B	30.0	7.7	ug/L			03/26/18 10:39	1
Total Organic Carbon - Average	470	B	1000	155	ug/L			03/28/18 16:54	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-003 / W18-002 / S18-003 / X18-005

TestAmerica Job ID: 280-107261-1
SDG: DN0334

Client Sample ID: B3HJH7
Date Collected: 03/07/18 09:12
Date Received: 03/08/18 10:15

Lab Sample ID: 280-107261-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	**12.5**	**B**	30.0	7.7	ug/L			03/26/18 10:39	1
Total Organic Carbon - Average	**482**	**B**	1000	155	ug/L			03/28/18 16:39	1

Client Sample ID: B3HJC2
Date Collected: 03/07/18 09:12
Date Received: 03/08/18 10:15

Lab Sample ID: 280-107261-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	**8.1**	**B**	30.0	7.7	ug/L			03/26/18 10:39	1
Total Organic Carbon - Average	**475**	**B**	1000	155	ug/L			03/28/18 16:23	1

Client Sample ID: B3H3K9
Date Collected: 03/07/18 09:07
Date Received: 03/08/18 10:15

Lab Sample ID: 280-107261-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**117000**		5000	1070	ug/L			03/15/18 23:43	1
Bicarbonate Alkalinity as CaCO3	**117000**		5000	1070	ug/L			03/15/18 23:43	1
Carbonate Alkalinity as CaCO3	1070	U	5000	1070	ug/L			03/15/18 23:43	1
Hydroxide Alkalinity as CaCO3	1070	U	5000	1070	ug/L			03/15/18 23:43	1

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-003 / W18-002 / S18-003 / X18-005

TestAmerica Job ID: 280-107261-1
SDG: DN0334

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

Lab Sample ID: MB 280-408216/6
Matrix: Water
Analysis Batch: 408216

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.21	U	1.0	0.21	ug/L			03/16/18 20:57	1
1,1,1-Trichloroethane	0.16	U	1.0	0.16	ug/L			03/16/18 20:57	1
1,1,2,2-Tetrachloroethane	0.21	U	1.0	0.21	ug/L			03/16/18 20:57	1
1,1,2-Trichloroethane	0.27	U	1.0	0.27	ug/L			03/16/18 20:57	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			03/16/18 20:57	1
1,1-Dichloroethene	0.23	U	1.0	0.23	ug/L			03/16/18 20:57	1
1,2,3-Trichloropropane	0.33	U	2.5	0.33	ug/L			03/16/18 20:57	1
1,2-Dibromo-3-Chloropropane	0.47	U	5.0	0.47	ug/L			03/16/18 20:57	1
1,2-Dibromoethane	0.18	U	1.0	0.18	ug/L			03/16/18 20:57	1
1,2-Dichloroethane	0.13	U	1.0	0.13	ug/L			03/16/18 20:57	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			03/16/18 20:57	1
1,4-Dichlorobenzene	0.16	U	1.0	0.16	ug/L			03/16/18 20:57	1
2-Butanone (MEK)	2.0	U	6.0	2.0	ug/L			03/16/18 20:57	1
2-Hexanone	1.7	U	5.0	1.7	ug/L			03/16/18 20:57	1
4-Methyl-2-pentanone (MIBK)	0.98	U	5.0	0.98	ug/L			03/16/18 20:57	1
Acetone	1.9	U	10	1.9	ug/L			03/16/18 20:57	1
Acetonitrile	9.6	U	30	9.6	ug/L			03/16/18 20:57	1
Acrolein	2.8	U	20	2.8	ug/L			03/16/18 20:57	1
Acrylonitrile	1.4	U	20	1.4	ug/L			03/16/18 20:57	1
Allyl chloride	0.17	U	2.0	0.17	ug/L			03/16/18 20:57	1
Benzene	0.16	U	1.0	0.16	ug/L			03/16/18 20:57	1
Bromodichloromethane	0.17	U	1.0	0.17	ug/L			03/16/18 20:57	1
Bromoform	0.19	U	1.0	0.19	ug/L			03/16/18 20:57	1
Bromomethane	0.21	U	2.0	0.21	ug/L			03/16/18 20:57	1
Carbon disulfide	0.45	U	2.0	0.45	ug/L			03/16/18 20:57	1
Carbon tetrachloride	0.19	U	1.0	0.19	ug/L			03/16/18 20:57	1
Chlorobenzene	0.17	U	1.0	0.17	ug/L			03/16/18 20:57	1
Chloroethane	0.41	U	2.0	0.41	ug/L			03/16/18 20:57	1
Chloroform	0.16	U	1.0	0.16	ug/L			03/16/18 20:57	1
Chloromethane	0.30	U	2.0	0.30	ug/L			03/16/18 20:57	1
Chloroprene	0.21	U	1.0	0.21	ug/L			03/16/18 20:57	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			03/16/18 20:57	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			03/16/18 20:57	1
Dibromochloromethane	0.17	U	1.0	0.17	ug/L			03/16/18 20:57	1
Dibromomethane	0.17	U	1.0	0.17	ug/L			03/16/18 20:57	1
Dichlorodifluoromethane	0.31	U	2.0	0.31	ug/L			03/16/18 20:57	1
Ethyl Cyanide	3.7	U	20	3.7	ug/L			03/16/18 20:57	1
Ethyl methacrylate	0.86	U	3.0	0.86	ug/L			03/16/18 20:57	1
Ethylbenzene	0.16	U	1.0	0.16	ug/L			03/16/18 20:57	1
Iodomethane	0.23	U	1.0	0.23	ug/L			03/16/18 20:57	1
Isobutyl alcohol	37	U	110	37	ug/L			03/16/18 20:57	1
Methacrylonitrile	1.6	U	10	1.6	ug/L			03/16/18 20:57	1
Methyl methacrylate	1.1	U	4.0	1.1	ug/L			03/16/18 20:57	1
Methylene Chloride	0.32	U	2.0	0.32	ug/L			03/16/18 20:57	1
Styrene	0.17	U	1.0	0.17	ug/L			03/16/18 20:57	1
Tetrachloroethene	0.20	U	1.0	0.20	ug/L			03/16/18 20:57	1
Toluene	0.17	U	1.0	0.17	ug/L			03/16/18 20:57	1
trans-1,2-Dichloroethylene	0.15	U	1.0	0.15	ug/L			03/16/18 20:57	1

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

Lab Sample ID: MB 280-408216/6
Matrix: Water
Analysis Batch: 408216

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	0.19	U	3.0	0.19	ug/L			03/16/18 20:57	1
trans-1,4-Dichloro-2-butene	0.80	U	3.0	0.80	ug/L			03/16/18 20:57	1
Trichloroethene	0.16	U	1.0	0.16	ug/L			03/16/18 20:57	1
Trichloromonofluoromethane	0.29	U	2.0	0.29	ug/L			03/16/18 20:57	1
Vinyl acetate	0.94	U	3.0	0.94	ug/L			03/16/18 20:57	1
Vinyl chloride	0.10	U	1.0	0.10	ug/L			03/16/18 20:57	1
Xylenes, Total	0.19	U	2.0	0.19	ug/L			03/16/18 20:57	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*2.43*	*N*	*ug/L*		*10.21*			*03/16/18 20:57*	*1*
Unknown	*1.35*	*N*	*ug/L*		*11.68*			*03/16/18 20:57*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*03/16/18 20:57*	*1*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*03/16/18 20:57*	*1*
Dibromofluoromethane (Surr)	*102*		*70 - 130*		*03/16/18 20:57*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*		*03/16/18 20:57*	*1*

Lab Sample ID: LCS 280-408216/10
Matrix: Water
Analysis Batch: 408216

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetonitrile	50.0	60.7		ug/L		121	70 - 130
Chloroprene	5.00	5.71		ug/L		114	70 - 130
Ethyl Cyanide	50.0	59.5		ug/L		119	70 - 130
Methacrylonitrile	50.0	57.4		ug/L		115	70 - 130
Methyl methacrylate	10.0	9.08		ug/L		91	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*
Dibromofluoromethane (Surr)	*99*		*70 - 130*
Toluene-d8 (Surr)	*100*		*70 - 130*

Lab Sample ID: LCS 280-408216/4
Matrix: Water
Analysis Batch: 408216

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	5.00	5.55		ug/L		111	70 - 130
1,1,1-Trichloroethane	5.00	6.08		ug/L		122	70 - 130
1,1,2,2-Tetrachloroethane	5.00	4.90		ug/L		98	70 - 130
1,1,2-Trichloroethane	5.00	5.17		ug/L		103	70 - 130
1,1-Dichloroethane	5.00	5.57		ug/L		111	70 - 130
1,1-Dichloroethene	5.00	5.44		ug/L		109	70 - 130
1,2,3-Trichloropropane	5.00	5.00		ug/L		100	70 - 130

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

Lab Sample ID: LCS 280-408216/4
Matrix: Water
Analysis Batch: 408216

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	5.00	4.22	J	ug/L		84	70 - 130
1,2-Dibromoethane	5.00	4.87		ug/L		97	70 - 130
1,2-Dichloroethane	5.00	5.51		ug/L		110	70 - 130
1,2-Dichloropropane	5.00	5.38		ug/L		108	70 - 130
1,4-Dichlorobenzene	5.00	5.35		ug/L		107	70 - 130
2-Butanone (MEK)	20.0	19.5		ug/L		97	70 - 130
2-Hexanone	20.0	18.4		ug/L		92	70 - 130
4-Methyl-2-pentanone (MIBK)	20.0	18.7		ug/L		93	70 - 130
Acetone	20.0	22.8		ug/L		114	70 - 130
Acrolein	50.0	47.3		ug/L		95	70 - 130
Acrylonitrile	50.0	50.1		ug/L		100	70 - 130
Allyl chloride	5.00	5.79		ug/L		116	70 - 130
Benzene	5.00	5.43		ug/L		109	70 - 130
Bromodichloromethane	5.00	5.30		ug/L		106	70 - 130
Bromoform	5.00	4.52		ug/L		90	70 - 130
Bromomethane	5.00	5.61		ug/L		112	70 - 130
Carbon disulfide	5.00	5.46		ug/L		109	70 - 130
Carbon tetrachloride	5.00	6.29		ug/L		126	70 - 130
Chlorobenzene	5.00	5.34		ug/L		107	70 - 130
Chloroethane	5.00	5.44		ug/L		109	70 - 130
Chloroform	5.00	5.53		ug/L		111	70 - 130
Chloromethane	5.00	5.62		ug/L		112	70 - 130
cis-1,2-Dichloroethene	5.00	5.24		ug/L		105	70 - 130
cis-1,3-Dichloropropene	5.00	4.95		ug/L		99	70 - 130
Dibromochloromethane	5.00	4.81		ug/L		96	70 - 130
Dibromomethane	5.00	5.18		ug/L		104	70 - 130
Dichlorodifluoromethane	5.00	5.95		ug/L		119	70 - 130
Ethyl methacrylate	5.00	4.29		ug/L		86	70 - 130
Ethylbenzene	5.00	5.39		ug/L		108	70 - 130
Iodomethane	5.00	5.39		ug/L		108	70 - 130
Isobutyl alcohol	125	131		ug/L		105	70 - 130
Methylene Chloride	5.00	5.31		ug/L		106	70 - 130
Styrene	5.00	4.99		ug/L		100	70 - 130
Tetrachloroethene	5.00	5.78		ug/L		116	70 - 130
Toluene	5.00	5.46		ug/L		109	70 - 130
trans-1,2-Dichloroethylene	5.00	5.66		ug/L		113	70 - 130
trans-1,3-Dichloropropene	5.00	4.84		ug/L		97	70 - 130
trans-1,4-Dichloro-2-butene	5.00	5.42		ug/L		108	70 - 130
Trichloroethene	5.00	5.29		ug/L		106	70 - 130
Trichloromonofluoromethane	5.00	6.44		ug/L		129	70 - 130
Vinyl acetate	10.0	10.4		ug/L		104	70 - 130
Vinyl chloride	5.00	5.75		ug/L		115	70 - 130
Xylenes, Total	10.0	10.8		ug/L		108	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
Dibromofluoromethane (Surr)	*102*		*70 - 130*

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

Lab Sample ID: LCS 280-408216/4
Matrix: Water
Analysis Batch: 408216

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	104		70 - 130

Lab Sample ID: 280-107261-4 MS
Matrix: Water
Analysis Batch: 408216

Client Sample ID: B3HHY2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	0.21	U	5.00	5.26		ug/L		105	70 - 130
1,1,1-Trichloroethane	0.16	U	5.00	5.69		ug/L		114	70 - 130
1,1,2,2-Tetrachloroethane	0.21	U	5.00	4.34		ug/L		87	70 - 130
1,1,2-Trichloroethane	0.27	U	5.00	4.41		ug/L		88	70 - 130
1,1-Dichloroethane	0.22	U	5.00	5.23		ug/L		105	70 - 130
1,1-Dichloroethene	0.23	U	5.00	4.99		ug/L		100	70 - 130
1,2,3-Trichloropropane	0.33	U	5.00	4.42		ug/L		88	70 - 130
1,2-Dibromo-3-Chloropropane	0.47	U	5.00	3.80	J	ug/L		76	70 - 130
1,2-Dibromoethane	0.18	U	5.00	4.34		ug/L		87	70 - 130
1,2-Dichloroethane	0.13	U	5.00	4.88		ug/L		98	70 - 130
1,2-Dichloropropane	0.18	U	5.00	4.76		ug/L		95	70 - 130
1,4-Dichlorobenzene	0.16	U	5.00	5.09		ug/L		102	70 - 130
2-Butanone (MEK)	2.0	U	20.0	16.0		ug/L		80	70 - 130
2-Hexanone	1.7	U	20.0	14.8		ug/L		74	70 - 130
4-Methyl-2-pentanone (MIBK)	0.98	U	20.0	15.4		ug/L		77	70 - 130
Acetone	1.9	U	20.0	18.4		ug/L		92	70 - 130
Acrolein	2.8	U	50.0	42.4		ug/L		85	70 - 130
Acrylonitrile	1.4	U	50.0	42.4		ug/L		85	70 - 130
Allyl chloride	0.17	U	5.00	5.33		ug/L		107	70 - 130
Benzene	0.16	U	5.00	5.04		ug/L		101	70 - 130
Bromodichloromethane	0.17	U	5.00	4.80		ug/L		96	70 - 130
Bromoform	0.19	U	5.00	3.95		ug/L		79	70 - 130
Bromomethane	0.21	U	5.00	5.30		ug/L		106	70 - 130
Carbon disulfide	0.45	U	5.00	5.02		ug/L		100	70 - 130
Carbon tetrachloride	2.9		5.00	8.77		ug/L		117	70 - 130
Chlorobenzene	0.17	U	5.00	5.05		ug/L		101	70 - 130
Chloroethane	0.41	U	5.00	5.11		ug/L		102	70 - 130
Chloroform	0.64	J	5.00	5.84		ug/L		104	70 - 130
Chloromethane	0.30	U	5.00	5.33		ug/L		107	70 - 130
cis-1,2-Dichloroethene	0.15	U	5.00	4.77		ug/L		95	70 - 103
cis-1,3-Dichloropropene	0.16	U	5.00	4.42		ug/L		88	70 - 130
Dibromochloromethane	0.17	U	5.00	4.33		ug/L		87	70 - 130
Dibromomethane	0.17	U	5.00	4.56		ug/L		91	70 - 130
Dichlorodifluoromethane	0.31	U	5.00	5.54		ug/L		111	70 - 130
Ethyl methacrylate	0.86	U	5.00	3.57		ug/L		71	70 - 130
Ethylbenzene	0.16	U	5.00	5.23		ug/L		105	70 - 130
Iodomethane	0.23	U	5.00	4.95		ug/L		99	70 - 130
Isobutyl alcohol	37	U	125	121		ug/L		97	70 - 130
Methylene Chloride	0.32	U	5.00	4.55		ug/L		91	70 - 130
Styrene	0.17	U	5.00	4.66		ug/L		93	70 - 130
Tetrachloroethene	0.20	U	5.00	5.44		ug/L		109	70 - 130

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

Lab Sample ID: 280-107261-4 MS — **Client Sample ID: B3HHY2**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 408216

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	0.17	U	5.00	5.11		ug/L		102	70 - 130
trans-1,2-Dichloroethylene	0.15	U	5.00	5.29		ug/L		106	70 - 130
trans-1,3-Dichloropropene	0.19	U	5.00	4.13		ug/L		83	70 - 130
trans-1,4-Dichloro-2-butene	0.80	U	5.00	4.77		ug/L		95	70 - 130
Trichloroethene	0.16	U	5.00	5.05		ug/L		101	70 - 130
Trichloromonofluoromethane	0.29	U	5.00	6.29		ug/L		126	70 - 130
Vinyl acetate	0.94	U	10.0	9.25		ug/L		92	70 - 130
Vinyl chloride	0.10	U	5.00	5.34		ug/L		107	70 - 130
Xylenes, Total	0.19	U	10.0	10.4		ug/L		104	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*86*		*70 - 130*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*
Dibromofluoromethane (Surr)	*94*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*

Lab Sample ID: 280-107261-4 MS — **Client Sample ID: B3HHY2**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 408216

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetonitrile	9.6	U	50.0	60.3		ug/L		121	70 - 130
Chloroprene	0.21	U	5.00	5.19		ug/L		104	70 - 130
Ethyl Cyanide	3.7	U	50.0	57.8		ug/L		116	70 - 130
Methacrylonitrile	1.6	U	50.0	56.8		ug/L		114	70 - 130
Methyl methacrylate	1.1	U	10.0	8.92		ug/L		89	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
Dibromofluoromethane (Surr)	*98*		*70 - 130*
Toluene-d8 (Surr)	*96*		*70 - 130*

Lab Sample ID: 280-107261-4 MSD — **Client Sample ID: B3HHY2**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 408216

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	0.21	U	5.00	5.27		ug/L		105	70 - 130	0	20
1,1,1-Trichloroethane	0.16	U	5.00	5.62		ug/L		112	70 - 130	1	20
1,1,2,2-Tetrachloroethane	0.21	U	5.00	4.39		ug/L		88	70 - 130	1	20
1,1,2-Trichloroethane	0.27	U	5.00	4.68		ug/L		94	70 - 130	6	20
1,1-Dichloroethane	0.22	U	5.00	5.19		ug/L		104	70 - 130	1	20
1,1-Dichloroethene	0.23	U	5.00	4.93		ug/L		99	70 - 130	1	20
1,2,3-Trichloropropane	0.33	U	5.00	4.67		ug/L		93	70 - 130	5	20
1,2-Dibromo-3-Chloropropane	0.47	U	5.00	4.00	J	ug/L		80	70 - 130	5	20
1,2-Dibromoethane	0.18	U	5.00	4.48		ug/L		90	70 - 130	3	20
1,2-Dichloroethane	0.13	U	5.00	5.04		ug/L		101	70 - 130	3	20

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

Lab Sample ID: 280-107261-4 MSD
Matrix: Water
Analysis Batch: 408216

Client Sample ID: B3HHY2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dichloropropane	0.18	U	5.00	4.89		ug/L		98	70 - 130	3	20
1,4-Dichlorobenzene	0.16	U	5.00	5.05		ug/L		101	70 - 130	1	20
2-Butanone (MEK)	2.0	U	20.0	18.1		ug/L		90	70 - 130	12	20
2-Hexanone	1.7	U	20.0	16.4		ug/L		82	70 - 130	11	20
4-Methyl-2-pentanone (MIBK)	0.98	U	20.0	16.9		ug/L		85	70 - 130	10	20
Acetone	1.9	U	20.0	20.1		ug/L		100	70 - 130	9	20
Acrolein	2.8	U	50.0	44.9		ug/L		90	70 - 130	6	20
Acrylonitrile	1.4	U	50.0	45.9		ug/L		92	70 - 130	8	20
Allyl chloride	0.17	U	5.00	5.28		ug/L		106	70 - 130	1	20
Benzene	0.16	U	5.00	5.10		ug/L		102	70 - 130	1	20
Bromodichloromethane	0.17	U	5.00	4.96		ug/L		99	70 - 130	3	20
Bromoform	0.19	U	5.00	4.14		ug/L		83	70 - 130	5	20
Bromomethane	0.21	U	5.00	5.26		ug/L		105	70 - 130	1	20
Carbon disulfide	0.45	U	5.00	4.94		ug/L		99	70 - 130	2	20
Carbon tetrachloride	2.9		5.00	8.53		ug/L		112	70 - 130	3	20
Chlorobenzene	0.17	U	5.00	4.97		ug/L		99	70 - 130	1	20
Chloroethane	0.41	U	5.00	5.04		ug/L		101	70 - 130	1	20
Chloroform	0.64	J	5.00	5.85		ug/L		104	70 - 130	0	20
Chloromethane	0.30	U	5.00	5.28		ug/L		106	70 - 130	1	20
cis-1,2-Dichloroethene	0.15	U	5.00	4.87		ug/L		97	70 - 103	2	20
cis-1,3-Dichloropropene	0.16	U	5.00	4.40		ug/L		88	70 - 130	1	20
Dibromochloromethane	0.17	U	5.00	4.41		ug/L		88	70 - 130	2	20
Dibromomethane	0.17	U	5.00	4.76		ug/L		95	70 - 130	4	20
Dichlorodifluoromethane	0.31	U	5.00	5.29		ug/L		106	70 - 130	5	20
Ethyl methacrylate	0.86	U	5.00	3.73		ug/L		75	70 - 130	4	20
Ethylbenzene	0.16	U	5.00	5.09		ug/L		102	70 - 130	3	20
Iodomethane	0.23	U	5.00	5.02		ug/L		100	70 - 130	1	20
Isobutyl alcohol	37	U	125	123		ug/L		98	70 - 130	2	20
Methylene Chloride	0.32	U	5.00	4.66		ug/L		93	70 - 130	2	20
Styrene	0.17	U	5.00	4.71		ug/L		94	70 - 130	1	20
Tetrachloroethene	0.20	U	5.00	5.32		ug/L		106	70 - 130	2	20
Toluene	0.17	U	5.00	5.09		ug/L		102	70 - 130	0	20
trans-1,2-Dichloroethylene	0.15	U	5.00	5.22		ug/L		104	70 - 130	1	20
trans-1,3-Dichloropropene	0.19	U	5.00	4.44		ug/L		89	70 - 130	7	20
trans-1,4-Dichloro-2-butene	0.80	U	5.00	4.86		ug/L		97	70 - 130	2	20
Trichloroethene	0.16	U	5.00	5.01		ug/L		100	70 - 130	1	20
Trichloromonofluoromethane	0.29	U	5.00	6.02		ug/L		120	70 - 130	4	20
Vinyl acetate	0.94	U	10.0	10.0		ug/L		100	70 - 130	8	20
Vinyl chloride	0.10	U	5.00	5.22		ug/L		104	70 - 130	2	20
Xylenes, Total	0.19	U	10.0	10.2		ug/L		102	70 - 130	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*90*		*70 - 130*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*
Dibromofluoromethane (Surr)	*96*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-003 / W18-002 / S18-003 / X18-005

TestAmerica Job ID: 280-107261-1
SDG: DN0334

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

Lab Sample ID: 280-107261-4 MSD
Matrix: Water
Analysis Batch: 408216

Client Sample ID: B3HHY2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetonitrile	9.6	U	50.0	62.1		ug/L		124	70 - 130	3	20
Chloroprene	0.21	U	5.00	5.17		ug/L		103	70 - 130	1	20
Ethyl Cyanide	3.7	U	50.0	58.6		ug/L		117	70 - 130	1	20
Methacrylonitrile	1.6	U	50.0	58.5		ug/L		117	70 - 130	3	20
Methyl methacrylate	1.1	U	10.0	9.22		ug/L		92	70 - 130	3	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	93		*70 - 130*
4-Bromofluorobenzene (Surr)	97		*70 - 130*
Dibromofluoromethane (Surr)	97		*70 - 130*
Toluene-d8 (Surr)	96		*70 - 130*

Lab Sample ID: MB 280-408512/6
Matrix: Water
Analysis Batch: 408512

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.21	U	1.0	0.21	ug/L			03/20/18 19:05	1
1,1,1-Trichloroethane	0.16	U	1.0	0.16	ug/L			03/20/18 19:05	1
1,1,2,2-Tetrachloroethane	0.21	U	1.0	0.21	ug/L			03/20/18 19:05	1
1,1,2-Trichloroethane	0.27	U	1.0	0.27	ug/L			03/20/18 19:05	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			03/20/18 19:05	1
1,1-Dichloroethene	0.23	U	1.0	0.23	ug/L			03/20/18 19:05	1
1,2,3-Trichloropropane	0.33	U	2.5	0.33	ug/L			03/20/18 19:05	1
1,2-Dibromo-3-Chloropropane	0.47	U	5.0	0.47	ug/L			03/20/18 19:05	1
1,2-Dibromoethane	0.18	U	1.0	0.18	ug/L			03/20/18 19:05	1
1,2-Dichloroethane	0.13	U	1.0	0.13	ug/L			03/20/18 19:05	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			03/20/18 19:05	1
1,4-Dichlorobenzene	0.16	U	1.0	0.16	ug/L			03/20/18 19:05	1
2-Butanone (MEK)	2.0	U	6.0	2.0	ug/L			03/20/18 19:05	1
2-Hexanone	1.7	U	5.0	1.7	ug/L			03/20/18 19:05	1
4-Methyl-2-pentanone (MIBK)	0.98	U	5.0	0.98	ug/L			03/20/18 19:05	1
Acetone	1.9	U	10	1.9	ug/L			03/20/18 19:05	1
Acetonitrile	9.6	U	30	9.6	ug/L			03/20/18 19:05	1
Acrolein	2.8	U	20	2.8	ug/L			03/20/18 19:05	1
Acrylonitrile	1.4	U	20	1.4	ug/L			03/20/18 19:05	1
Allyl chloride	0.17	U	2.0	0.17	ug/L			03/20/18 19:05	1
Benzene	0.16	U	1.0	0.16	ug/L			03/20/18 19:05	1
Bromodichloromethane	0.17	U	1.0	0.17	ug/L			03/20/18 19:05	1
Bromoform	0.19	U	1.0	0.19	ug/L			03/20/18 19:05	1
Bromomethane	0.21	U	2.0	0.21	ug/L			03/20/18 19:05	1
Carbon disulfide	0.45	U	2.0	0.45	ug/L			03/20/18 19:05	1
Carbon tetrachloride	0.19	U	1.0	0.19	ug/L			03/20/18 19:05	1
Chlorobenzene	0.17	U	1.0	0.17	ug/L			03/20/18 19:05	1
Chloroethane	0.41	U	2.0	0.41	ug/L			03/20/18 19:05	1
Chloroform	0.16	U	1.0	0.16	ug/L			03/20/18 19:05	1
Chloromethane	0.30	U	2.0	0.30	ug/L			03/20/18 19:05	1
Chloroprene	0.21	U	1.0	0.21	ug/L			03/20/18 19:05	1

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-003 / W18-002 / S18-003 / X18-005

TestAmerica Job ID: 280-107261-1
SDG: DN0334

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

Lab Sample ID: MB 280-408512/6
Matrix: Water
Analysis Batch: 408512

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			03/20/18 19:05	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			03/20/18 19:05	1
Dibromochloromethane	0.17	U	1.0	0.17	ug/L			03/20/18 19:05	1
Dibromomethane	0.17	U	1.0	0.17	ug/L			03/20/18 19:05	1
Dichlorodifluoromethane	0.31	U	2.0	0.31	ug/L			03/20/18 19:05	1
Ethyl Cyanide	3.7	U	20	3.7	ug/L			03/20/18 19:05	1
Ethyl methacrylate	0.86	U	3.0	0.86	ug/L			03/20/18 19:05	1
Ethylbenzene	0.16	U	1.0	0.16	ug/L			03/20/18 19:05	1
Iodomethane	0.23	U	1.0	0.23	ug/L			03/20/18 19:05	1
Isobutyl alcohol	37	U	110	37	ug/L			03/20/18 19:05	1
Methacrylonitrile	1.6	U	10	1.6	ug/L			03/20/18 19:05	1
Methyl methacrylate	1.1	U	4.0	1.1	ug/L			03/20/18 19:05	1
Methylene Chloride	0.32	U	2.0	0.32	ug/L			03/20/18 19:05	1
Styrene	0.17	U	1.0	0.17	ug/L			03/20/18 19:05	1
Tetrachloroethene	0.20	U	1.0	0.20	ug/L			03/20/18 19:05	1
Toluene	0.17	U	1.0	0.17	ug/L			03/20/18 19:05	1
trans-1,2-Dichloroethylene	0.15	U	1.0	0.15	ug/L			03/20/18 19:05	1
trans-1,3-Dichloropropene	0.19	U	3.0	0.19	ug/L			03/20/18 19:05	1
trans-1,4-Dichloro-2-butene	0.80	U	3.0	0.80	ug/L			03/20/18 19:05	1
Trichloroethene	0.16	U	1.0	0.16	ug/L			03/20/18 19:05	1
Trichloromonofluoromethane	0.29	U	2.0	0.29	ug/L			03/20/18 19:05	1
Vinyl acetate	0.94	U	3.0	0.94	ug/L			03/20/18 19:05	1
Vinyl chloride	0.10	U	1.0	0.10	ug/L			03/20/18 19:05	1
Xylenes, Total	0.19	U	2.0	0.19	ug/L			03/20/18 19:05	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*11.2*	*N*	*ug/L*		*3.27*			*03/20/18 19:05*	*1*
Unknown	*14.3*	*N*	*ug/L*		*3.39*			*03/20/18 19:05*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*03/20/18 19:05*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*03/20/18 19:05*	*1*
Dibromofluoromethane (Surr)	*102*		*70 - 130*		*03/20/18 19:05*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*03/20/18 19:05*	*1*

Lab Sample ID: LCS 280-408512/4
Matrix: Water
Analysis Batch: 408512

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	5.00	5.05		ug/L		101	70 - 130
1,1,1-Trichloroethane	5.00	5.80		ug/L		116	70 - 130
1,1,2,2-Tetrachloroethane	5.00	4.41		ug/L		88	70 - 130
1,1,2-Trichloroethane	5.00	4.76		ug/L		95	70 - 130
1,1-Dichloroethane	5.00	5.39		ug/L		108	70 - 130
1,1-Dichloroethene	5.00	5.03		ug/L		101	70 - 130
1,2,3-Trichloropropane	5.00	4.72		ug/L		94	70 - 130

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

Lab Sample ID: LCS 280-408512/4
Matrix: Water
Analysis Batch: 408512

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	5.00	3.84	J	ug/L		77	70 - 130
1,2-Dibromoethane	5.00	4.35		ug/L		87	70 - 130
1,2-Dichloroethane	5.00	5.28		ug/L		106	70 - 130
1,2-Dichloropropane	5.00	4.89		ug/L		98	70 - 130
1,4-Dichlorobenzene	5.00	4.80		ug/L		96	70 - 130
2-Butanone (MEK)	20.0	18.3		ug/L		92	70 - 130
2-Hexanone	20.0	16.1		ug/L		81	70 - 130
4-Methyl-2-pentanone (MIBK)	20.0	18.1		ug/L		91	70 - 130
Acetone	20.0	22.0		ug/L		110	70 - 130
Acrolein	50.0	47.9		ug/L		96	70 - 130
Acrylonitrile	50.0	48.1		ug/L		96	70 - 130
Allyl chloride	5.00	5.57		ug/L		111	70 - 130
Benzene	5.00	5.10		ug/L		102	70 - 130
Bromodichloromethane	5.00	5.13		ug/L		103	70 - 130
Bromoform	5.00	4.14		ug/L		83	70 - 130
Bromomethane	5.00	6.19		ug/L		124	70 - 130
Carbon disulfide	5.00	5.17		ug/L		103	70 - 130
Carbon tetrachloride	5.00	6.12		ug/L		122	70 - 130
Chlorobenzene	5.00	4.87		ug/L		97	70 - 130
Chloroethane	5.00	6.05		ug/L		121	70 - 130
Chloroform	5.00	5.34		ug/L		107	70 - 130
Chloromethane	5.00	6.35		ug/L		127	70 - 130
cis-1,2-Dichloroethene	5.00	4.93		ug/L		99	70 - 130
cis-1,3-Dichloropropene	5.00	4.33		ug/L		87	70 - 130
Dibromochloromethane	5.00	4.51		ug/L		90	70 - 130
Dibromomethane	5.00	4.90		ug/L		98	70 - 130
Dichlorodifluoromethane	5.00	6.40		ug/L		128	70 - 130
Ethyl methacrylate	5.00	3.72		ug/L		74	70 - 130
Ethylbenzene	5.00	4.93		ug/L		99	70 - 130
Iodomethane	5.00	4.89		ug/L		98	70 - 130
Isobutyl alcohol	125	120		ug/L		96	70 - 130
Methylene Chloride	5.00	5.05		ug/L		101	70 - 130
Styrene	5.00	4.52		ug/L		90	70 - 130
Tetrachloroethene	5.00	4.99		ug/L		100	70 - 130
Toluene	5.00	5.16		ug/L		103	70 - 130
trans-1,2-Dichloroethylene	5.00	5.27		ug/L		105	70 - 130
trans-1,3-Dichloropropene	5.00	4.49		ug/L		90	70 - 130
trans-1,4-Dichloro-2-butene	5.00	5.04		ug/L		101	70 - 130
Trichloroethene	5.00	4.92		ug/L		98	70 - 130
Vinyl acetate	10.0	10.4		ug/L		104	70 - 130
Vinyl chloride	5.00	6.35		ug/L		127	70 - 130
Xylenes, Total	10.0	9.83		ug/L		98	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*
Dibromofluoromethane (Surr)	*101*		*70 - 130*
Toluene-d8 (Surr)	*99*		*70 - 130*

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-003 / W18-002 / S18-003 / X18-005

TestAmerica Job ID: 280-107261-1
SDG: DN0334

Lab Sample ID: 280-107261-5 MS
Matrix: Water
Analysis Batch: 408512

Client Sample ID: B3HHY1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	0.84	U D	20.0	21.0	D	ug/L		105	70 - 130
1,1,1-Trichloroethane	0.64	U D	20.0	23.5	D	ug/L		118	70 - 130
1,1,2,2-Tetrachloroethane	0.84	U D	20.0	18.0	D	ug/L		90	70 - 130
1,1,2-Trichloroethane	1.1	U D	20.0	19.0	D	ug/L		95	70 - 130
1,1-Dichloroethane	0.88	U D	20.0	21.9	D	ug/L		110	70 - 130
1,1-Dichloroethene	0.92	U D	20.0	20.2	D	ug/L		101	70 - 130
1,2,3-Trichloropropane	1.3	U D	20.0	19.3	D	ug/L		96	70 - 130
1,2-Dibromo-3-Chloropropane	1.9	U D	20.0	16.4	J D	ug/L		82	70 - 130
1,2-Dibromoethane	0.72	U D	20.0	18.1	D	ug/L		91	70 - 130
1,2-Dichloroethane	0.52	U D	20.0	21.1	D	ug/L		106	70 - 130
1,2-Dichloropropane	0.72	U D	20.0	20.4	D	ug/L		102	70 - 130
1,4-Dichlorobenzene	0.64	U D	20.0	20.0	D	ug/L		100	70 - 130
2-Butanone (MEK)	8.0	U D	80.0	72.5	D	ug/L		91	70 - 130
2-Hexanone	6.8	U D	80.0	67.0	D	ug/L		84	70 - 130
4-Methyl-2-pentanone (MIBK)	3.9	U D	80.0	73.5	D	ug/L		92	70 - 130
Acetone	7.6	U D	80.0	84.0	D	ug/L		105	70 - 130
Acrolein	11	U D	200	187	D	ug/L		93	70 - 130
Acrylonitrile	5.6	U D	200	190	D	ug/L		95	70 - 130
Allyl chloride	0.68	U D	20.0	21.3	D	ug/L		106	70 - 130
Benzene	0.64	U D	20.0	21.1	D	ug/L		106	70 - 130
Bromodichloromethane	0.68	U D	20.0	20.6	D	ug/L		103	70 - 130
Bromoform	0.76	U D	20.0	16.6	D	ug/L		83	70 - 130
Bromomethane	0.84	U D	20.0	25.5	D	ug/L		127	70 - 130
Carbon disulfide	1.8	U D	20.0	20.6	D	ug/L		103	70 - 130
Carbon tetrachloride	0.76	U D	20.0	24.6	D	ug/L		123	70 - 130
Chlorobenzene	0.68	U D	20.0	20.2	D	ug/L		101	70 - 130
Chloroethane	1.6	U D	20.0	24.7	D	ug/L		124	70 - 130
Chloroform	0.64	U D	20.0	21.5	D	ug/L		108	70 - 130
Chloromethane	1.2	U D T	20.0	26.4	D T	ug/L		132	70 - 130
cis-1,2-Dichloroethene	0.60	U D	20.0	20.0	D	ug/L		100	70 - 103
cis-1,3-Dichloropropene	0.64	U D	20.0	17.8	D	ug/L		89	70 - 130
Dibromochloromethane	0.68	U D	20.0	18.3	D	ug/L		91	70 - 130
Dibromomethane	0.68	U D	20.0	19.7	D	ug/L		99	70 - 130
Dichlorodifluoromethane	1.2	U D T	20.0	26.3	D T	ug/L		131	70 - 130
Ethyl methacrylate	3.4	U D	20.0	15.4	D	ug/L		77	70 - 130
Ethylbenzene	0.64	U D	20.0	20.5	D	ug/L		103	70 - 130
Iodomethane	0.92	U D	20.0	20.0	D	ug/L		100	70 - 130
Isobutyl alcohol	150	U D	500	524	D	ug/L		105	70 - 130
Methylene Chloride	120	D T	20.0	130	D	ug/L		71	70 - 130
Styrene	0.68	U D	20.0	18.6	D	ug/L		93	70 - 130
Tetrachloroethene	0.80	U D	20.0	21.4	D	ug/L		107	70 - 130
Toluene	0.68	U D	20.0	21.0	D	ug/L		105	70 - 130
trans-1,2-Dichloroethylene	0.60	U D	20.0	21.6	D	ug/L		108	70 - 130
trans-1,3-Dichloropropene	0.76	U D	20.0	18.0	D	ug/L		90	70 - 130
trans-1,4-Dichloro-2-butene	3.2	U D	20.0	19.9	D	ug/L		100	70 - 130
Trichloroethene	0.64	U D	20.0	20.4	D	ug/L		102	70 - 130
Trichloromonofluoromethane	1.2	U D T o	20.0	28.1	D T	ug/L		141	70 - 130
Vinyl acetate	3.8	U D	40.0	40.8	D	ug/L		102	70 - 130
Vinyl chloride	0.40	U D T	20.0	26.3	D T	ug/L		132	70 - 130
Xylenes, Total	0.76	U D	40.0	41.0		ug/L		103	70 - 130

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

Lab Sample ID: 280-107261-5 MS
Matrix: Water
Analysis Batch: 408512

Client Sample ID: B3HHY1
Prep Type: Total/NA

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		70 - 130
4-Bromofluorobenzene (Surr)	99		70 - 130
Dibromofluoromethane (Surr)	101		70 - 130
Toluene-d8 (Surr)	104		70 - 130

Lab Sample ID: 280-107261-5 MSD
Matrix: Water
Analysis Batch: 408512

Client Sample ID: B3HHY1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	0.84	U D	20.0	21.5	D	ug/L		108	70 - 130	2	20
1,1,1-Trichloroethane	0.64	U D	20.0	23.6	D	ug/L		118	70 - 130	0	20
1,1,2,2-Tetrachloroethane	0.84	U D	20.0	18.2	D	ug/L		91	70 - 130	1	20
1,1,2-Trichloroethane	1.1	U D	20.0	19.3	D	ug/L		97	70 - 130	2	20
1,1-Dichloroethane	0.88	U D	20.0	22.0	D	ug/L		110	70 - 130	0	20
1,1-Dichloroethene	0.92	U D	20.0	20.7	D	ug/L		104	70 - 130	2	20
1,2,3-Trichloropropane	1.3	U D	20.0	19.0	D	ug/L		95	70 - 130	1	20
1,2-Dibromo-3-Chloropropane	1.9	U D	20.0	15.4	J D	ug/L		77	70 - 130	6	20
1,2-Dibromoethane	0.72	U D	20.0	18.1	D	ug/L		91	70 - 130	0	20
1,2-Dichloroethane	0.52	U D	20.0	21.3	D	ug/L		106	70 - 130	1	20
1,2-Dichloropropane	0.72	U D	20.0	20.8	D	ug/L		104	70 - 130	2	20
1,4-Dichlorobenzene	0.64	U D	20.0	20.1	D	ug/L		100	70 - 130	0	20
2-Butanone (MEK)	8.0	U D	80.0	79.0	D	ug/L		99	70 - 130	9	20
2-Hexanone	6.8	U D	80.0	70.9	D	ug/L		89	70 - 130	6	20
4-Methyl-2-pentanone (MIBK)	3.9	U D	80.0	74.4	D	ug/L		93	70 - 130	1	20
Acetone	7.6	U D	80.0	86.9	D	ug/L		109	70 - 130	3	20
Acrolein	11	U D	200	186	D	ug/L		93	70 - 130	0	20
Acrylonitrile	5.6	U D	200	196	D	ug/L		98	70 - 130	3	20
Allyl chloride	0.68	U D	20.0	21.5	D	ug/L		108	70 - 130	1	20
Benzene	0.64	U D	20.0	21.3	D	ug/L		107	70 - 130	1	20
Bromodichloromethane	0.68	U D	20.0	20.7	D	ug/L		104	70 - 130	0	20
Bromoform	0.76	U D	20.0	17.0	D	ug/L		85	70 - 130	3	20
Bromomethane	0.84	U D	20.0	25.7	D	ug/L		129	70 - 130	1	20
Carbon disulfide	1.8	U D	20.0	20.8	D	ug/L		104	70 - 130	1	20
Carbon tetrachloride	0.76	U D	20.0	24.8	D	ug/L		124	70 - 130	1	20
Chlorobenzene	0.68	U D	20.0	20.6	D	ug/L		103	70 - 130	2	20
Chloroethane	1.6	U D	20.0	25.2	D	ug/L		126	70 - 130	2	20
Chloroform	0.64	U D	20.0	21.8	D	ug/L		109	70 - 130	1	20
Chloromethane	1.2	U D T	20.0	26.7	D T	ug/L		134	70 - 130	1	20
cis-1,2-Dichloroethene	0.60	U D	20.0	20.4	D	ug/L		102	70 - 103	2	20
cis-1,3-Dichloropropene	0.64	U D	20.0	18.2	D	ug/L		91	70 - 130	2	20
Dibromochloromethane	0.68	U D	20.0	18.4	D	ug/L		92	70 - 130	1	20
Dibromomethane	0.68	U D	20.0	20.1	D	ug/L		100	70 - 130	2	20
Dichlorodifluoromethane	1.2	U D T	20.0	26.3	D T	ug/L		131	70 - 130	0	20
Ethyl methacrylate	3.4	U D	20.0	15.8	D	ug/L		79	70 - 130	3	20
Ethylbenzene	0.64	U D	20.0	20.9	D	ug/L		105	70 - 130	2	20
Iodomethane	0.92	U D	20.0	20.5	D	ug/L		102	70 - 130	2	20
Isobutyl alcohol	150	U D	500	504	D	ug/L		101	70 - 130	4	20

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

Lab Sample ID: 280-107261-5 MSD
Matrix: Water
Analysis Batch: 408512

Client Sample ID: B3HHY1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methylene Chloride	120	D T	20.0	128	D T	ug/L		59	70 - 130	2	20
Styrene	0.68	U D	20.0	19.1	D	ug/L		95	70 - 130	2	20
Tetrachloroethene	0.80	U D	20.0	21.7	D	ug/L		109	70 - 130	2	20
Toluene	0.68	U D	20.0	21.2	D	ug/L		106	70 - 130	1	20
trans-1,2-Dichloroethylene	0.60	U D	20.0	21.8	D	ug/L		109	70 - 130	1	20
trans-1,3-Dichloropropene	0.76	U D	20.0	18.3	D	ug/L		92	70 - 130	2	20
trans-1,4-Dichloro-2-butene	3.2	U D	20.0	20.0	D	ug/L		100	70 - 130	0	20
Trichloroethene	0.64	U D	20.0	20.6	D	ug/L		103	70 - 130	1	20
Trichloromonofluoromethane	1.2	U D T o	20.0	28.3	D T	ug/L		142	70 - 130	1	20
Vinyl acetate	3.8	U D	40.0	40.6	D	ug/L		102	70 - 130	0	20
Vinyl chloride	0.40	U D T	20.0	26.6	D T	ug/L		133	70 - 130	1	20
Xylenes, Total	0.76	U D	40.0	41.6		ug/L		104	70 - 130	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
Dibromofluoromethane (Surr)	*100*		*70 - 130*
Toluene-d8 (Surr)	*103*		*70 - 130*

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 280-407760/1-A
Matrix: Water
Analysis Batch: 408303

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 407760

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	90.09	B	200	34.5	ug/L		03/15/18 08:26	03/17/18 05:19	1
Iron	22.0	U	100	22.0	ug/L		03/15/18 08:26	03/17/18 05:19	1
Magnesium	10.7	U	200	10.7	ug/L		03/15/18 08:26	03/17/18 05:19	1
Sodium	117	U	1000	117	ug/L		03/15/18 08:26	03/17/18 05:19	1
Vanadium	1.1	U	10.0	1.1	ug/L		03/15/18 08:26	03/17/18 05:19	1

Lab Sample ID: MB 280-407760/1-A
Matrix: Water
Analysis Batch: 408554

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 407760

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	516.2	B	3000	237	ug/L		03/15/18 08:26	03/21/18 02:59	1

Lab Sample ID: MB 280-407760/1-A
Matrix: Water
Analysis Batch: 408823

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 407760

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	4.4	U	100	4.4	ug/L		03/15/18 08:26	03/22/18 21:56	1

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

Lab Sample ID: LCS 280-407760/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 408303 — **Prep Batch: 407760**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	50000	48840		ug/L		98	80 - 120
Iron	1000	979.7		ug/L		98	80 - 120
Magnesium	50000	48990		ug/L		98	80 - 120
Sodium	50000	52290		ug/L		105	80 - 120
Vanadium	500	497.1		ug/L		99	80 - 120

Lab Sample ID: LCS 280-407760/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 408554 — **Prep Batch: 407760**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	50000	51760		ug/L		104	80 - 120

Lab Sample ID: LCS 280-407760/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 408823 — **Prep Batch: 407760**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1000	1161		ug/L		116	80 - 120

Lab Sample ID: LCSD 280-407760/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 408303 — **Prep Batch: 407760**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	50000	50170		ug/L		100	80 - 120	3	20
Iron	1000	1007		ug/L		101	80 - 120	3	20
Magnesium	50000	49710		ug/L		99	80 - 120	1	20
Sodium	50000	53590		ug/L		107	80 - 120	2	20
Vanadium	500	503.7		ug/L		101	80 - 120	1	20

Lab Sample ID: LCSD 280-407760/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 408554 — **Prep Batch: 407760**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Potassium	50000	52290		ug/L		105	80 - 120	1	20

Lab Sample ID: LCSD 280-407760/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 408823 — **Prep Batch: 407760**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	1000	1163		ug/L		116	80 - 120	0	20

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-003 / W18-002 / S18-003 / X18-005

TestAmerica Job ID: 280-107261-1
SDG: DN0334

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 280-407759/1-A
Matrix: Water
Analysis Batch: 408289

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 407759

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.40	U	2.0	0.40	ug/L		03/15/18 08:26	03/16/18 02:31	1
Arsenic	0.33	U	5.0	0.33	ug/L		03/15/18 08:26	03/16/18 02:31	1
Barium	0.29	U	1.0	0.29	ug/L		03/15/18 08:26	03/16/18 02:31	1
Beryllium	0.080	U	1.0	0.080	ug/L		03/15/18 08:26	03/16/18 02:31	1
Cadmium	0.27	U	1.0	0.27	ug/L		03/15/18 08:26	03/16/18 02:31	1
Chromium	0.50	U	2.0	0.50	ug/L		03/15/18 08:26	03/16/18 02:31	1
Cobalt	0.054	U	1.0	0.054	ug/L		03/15/18 08:26	03/16/18 02:31	1
Copper	0.56	U	2.0	0.56	ug/L		03/15/18 08:26	03/16/18 02:31	1
Lead	0.18	U	1.0	0.18	ug/L		03/15/18 08:26	03/16/18 02:31	1
Manganese	0.31	U	1.0	0.31	ug/L		03/15/18 08:26	03/16/18 02:31	1
Molybdenum	0.14	U	2.0	0.14	ug/L		03/15/18 08:26	03/16/18 02:31	1
Nickel	0.30	U	2.0	0.30	ug/L		03/15/18 08:26	03/16/18 02:31	1
Selenium	0.70	U	5.0	0.70	ug/L		03/15/18 08:26	03/16/18 02:31	1
Silver	0.033	U	5.0	0.033	ug/L		03/15/18 08:26	03/16/18 02:31	1
Strontium	0.30	U	10.0	0.30	ug/L		03/15/18 08:26	03/16/18 02:31	1
Thallium	0.050	U	1.0	0.050	ug/L		03/15/18 08:26	03/16/18 02:31	1
Thorium	1.2	U	5.0	1.2	ug/L		03/15/18 08:26	03/16/18 02:31	1
Tin	0.77	U	10.0	0.77	ug/L		03/15/18 08:26	03/16/18 02:31	1
Uranium	0.050	U	1.0	0.050	ug/L		03/15/18 08:26	03/16/18 02:31	1
Zinc	2.0	U	10.0	2.0	ug/L		03/15/18 08:26	03/16/18 02:31	1

Lab Sample ID: MB 280-407759/1-A
Matrix: Water
Analysis Batch: 408407

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 407759

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9.2	U	50.0	9.2	ug/L		03/15/18 08:26	03/19/18 17:12	1

Lab Sample ID: LCS 280-407759/2-A
Matrix: Water
Analysis Batch: 408289

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 407759

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	40.0	37.34		ug/L		93	80 - 120
Arsenic	40.0	37.58		ug/L		94	80 - 120
Barium	40.0	38.33		ug/L		96	80 - 120
Beryllium	40.0	43.12		ug/L		108	80 - 120
Cadmium	40.0	40.14		ug/L		100	80 - 120
Chromium	40.0	39.35		ug/L		98	80 - 120
Cobalt	40.0	38.78		ug/L		97	80 - 120
Copper	40.0	38.65		ug/L		97	80 - 120
Lead	40.0	40.26		ug/L		101	80 - 120
Manganese	40.0	41.00		ug/L		102	80 - 120
Molybdenum	40.0	40.01		ug/L		100	80 - 120
Nickel	40.0	37.72		ug/L		94	80 - 120
Selenium	40.0	39.05		ug/L		98	80 - 120
Silver	40.0	38.87		ug/L		97	80 - 120
Strontium	40.0	42.49		ug/L		106	80 - 120

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

Lab Sample ID: LCS 280-407759/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 408289 — **Prep Batch: 407759**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Thallium	40.0	40.65		ug/L		102	80 - 120
Thorium	40.0	40.50		ug/L		101	80 - 120
Tin	40.0	40.63		ug/L		102	80 - 120
Uranium	40.0	40.53		ug/L		101	80 - 120
Zinc	40.0	44.68		ug/L		112	80 - 120

Lab Sample ID: LCS 280-407759/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 408407 — **Prep Batch: 407759**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	400	462.5		ug/L		116	80 - 120

Lab Sample ID: LCSD 280-407759/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 408289 — **Prep Batch: 407759**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	40.0	38.58		ug/L		96	80 - 120	3	20
Arsenic	40.0	37.25		ug/L		93	80 - 120	1	20
Barium	40.0	39.85		ug/L		100	80 - 120	4	20
Beryllium	40.0	45.24		ug/L		113	80 - 120	5	20
Cadmium	40.0	40.55		ug/L		101	80 - 120	1	20
Chromium	40.0	38.36		ug/L		96	80 - 120	3	20
Cobalt	40.0	38.55		ug/L		96	80 - 120	1	20
Copper	40.0	41.47		ug/L		104	80 - 120	7	20
Lead	40.0	40.90		ug/L		102	80 - 120	2	20
Manganese	40.0	42.27		ug/L		106	80 - 120	3	20
Molybdenum	40.0	39.26		ug/L		98	80 - 120	2	20
Nickel	40.0	39.98		ug/L		100	80 - 120	6	20
Selenium	40.0	39.47		ug/L		99	80 - 120	1	20
Silver	40.0	38.08		ug/L		95	80 - 120	2	20
Strontium	40.0	45.77		ug/L		114	80 - 120	7	20
Thallium	40.0	41.12		ug/L		103	80 - 120	1	20
Thorium	40.0	39.87		ug/L		100	80 - 120	2	20
Tin	40.0	38.88		ug/L		97	80 - 120	4	20
Uranium	40.0	40.31		ug/L		101	80 - 120	1	20
Zinc	40.0	38.72		ug/L		97	80 - 120	14	20

Lab Sample ID: LCSD 280-407759/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 408407 — **Prep Batch: 407759**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	400	427.4		ug/L		107	80 - 120	8	20

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-003 / W18-002 / S18-003 / X18-005

TestAmerica Job ID: 280-107261-1
SDG: DN0334

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

Lab Sample ID: MB 280-409182/2
Matrix: Water
Analysis Batch: 409182

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

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			03/26/18 10:39	1

Lab Sample ID: LCS 280-409182/4
Matrix: Water
Analysis Batch: 409182

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Halogens - Dup	100	99.21		ug/L		99	80 - 120

Lab Sample ID: 280-107261-6 MS
Matrix: Water
Analysis Batch: 409182

Client Sample ID: B3HJH9
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Halogens - Dup	8.6	B	100	114.7		ug/L		106	75 - 125

Lab Sample ID: 280-107261-6 MSD
Matrix: Water
Analysis Batch: 409182

Client Sample ID: B3HJH9
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Halogens - Dup	8.6	B	100	114.6		ug/L		106	75 - 125	0	20

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

Lab Sample ID: MB 280-409524/4
Matrix: Water
Analysis Batch: 409524

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average	155	U	1000	155	ug/L			03/28/18 14:50	1

Lab Sample ID: LCS 280-409524/3
Matrix: Water
Analysis Batch: 409524

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Average	25000	24970		ug/L		100	80 - 120

Lab Sample ID: 280-107261-6 MS
Matrix: Water
Analysis Batch: 409524

Client Sample ID: B3HJH9
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Average	468	B	25000	25180		ug/L		99	75 - 125

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

Lab Sample ID: 280-107261-6 MSD — **Client Sample ID: B3HJH9**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 409524

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Average	468	B	25000	26260		ug/L		103	75 - 125	4	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
Hydroxide 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
Bicarbonate 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

Lab Sample ID: MB 280-408183/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 408183

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	1070	U	5000	1070	ug/L			03/15/18 22:57	1
Hydroxide Alkalinity as CaCO3	1070	U	5000	1070	ug/L			03/15/18 22:57	1
Carbonate Alkalinity as CaCO3	1070	U	5000	1070	ug/L			03/15/18 22:57	1
Bicarbonate Alkalinity as CaCO3	1070	U	5000	1070	ug/L			03/15/18 22:57	1

Lab Sample ID: LCS 280-408183/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 408183

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3	200000	218000		ug/L		109	80 - 120

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-003 / W18-002 / S18-003 / X18-005

TestAmerica Job ID: 280-107261-1
SDG: DN0334

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCSD 280-408183/5
Matrix: Water
Analysis Batch: 408183

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Alkalinity as CaCO3			200000	217400		ug/L		109	80 - 120	0	20

Lab Sample ID: 280-107261-1 DU
Matrix: Water
Analysis Batch: 408183

Client Sample ID: B3HL08
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity as CaCO3	90600			89710		ug/L				0.9	20

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-003 / W18-002 / S18-003 / X18-005

TestAmerica Job ID: 280-107261-1
SDG: DN0334

GC/MS VOA

Analysis Batch: 408216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107261-4	B3HHY2	Total/NA	Water	8260B	
280-107261-5	B3HHY1	Total/NA	Water	8260B	
280-107261-12	B3H046	Total/NA	Water	8260B	
MB 280-408216/6	Method Blank	Total/NA	Water	8260B	
LCS 280-408216/10	Lab Control Sample	Total/NA	Water	8260B	
LCS 280-408216/4	Lab Control Sample	Total/NA	Water	8260B	
280-107261-4 MS	B3HHY2	Total/NA	Water	8260B	
280-107261-4 MS	B3HHY2	Total/NA	Water	8260B	
280-107261-4 MSD	B3HHY2	Total/NA	Water	8260B	
280-107261-4 MSD	B3HHY2	Total/NA	Water	8260B	

Analysis Batch: 408512

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107261-5 - DL	B3HHY1	Total/NA	Water	8260B	
MB 280-408512/6	Method Blank	Total/NA	Water	8260B	
LCS 280-408512/4	Lab Control Sample	Total/NA	Water	8260B	
280-107261-5 MS	B3HHY1	Total/NA	Water	8260B	
280-107261-5 MSD	B3HHY1	Total/NA	Water	8260B	

Metals

Prep Batch: 407759

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107261-10	B3H3L0	Total/NA	Water	3020A	
280-107261-13	B3H3K3	Total/NA	Water	3020A	
MB 280-407759/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-407759/2-A	Lab Control Sample	Total/NA	Water	3020A	
LCSD 280-407759/3-A	Lab Control Sample Dup	Total/NA	Water	3020A	

Prep Batch: 407760

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107261-10	B3H3L0	Total/NA	Water	3010A	
280-107261-13	B3H3K3	Total/NA	Water	3010A	
MB 280-407760/1-A	Method Blank	Total/NA	Water	3010A	
LCS 280-407760/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 280-407760/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	

Analysis Batch: 408289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107261-10	B3H3L0	Total/NA	Water	6020B	407759
280-107261-13	B3H3K3	Total/NA	Water	6020B	407759
MB 280-407759/1-A	Method Blank	Total/NA	Water	6020B	407759
LCS 280-407759/2-A	Lab Control Sample	Total/NA	Water	6020B	407759
LCSD 280-407759/3-A	Lab Control Sample Dup	Total/NA	Water	6020B	407759

Analysis Batch: 408303

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107261-10	B3H3L0	Total/NA	Water	6010D	407760
280-107261-13	B3H3K3	Total/NA	Water	6010D	407760
MB 280-407760/1-A	Method Blank	Total/NA	Water	6010D	407760

Metals (Continued)

Analysis Batch: 408303 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 280-407760/2-A	Lab Control Sample	Total/NA	Water	6010D	407760
LCSD 280-407760/3-A	Lab Control Sample Dup	Total/NA	Water	6010D	407760

Analysis Batch: 408407

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107261-10	B3H3L0	Total/NA	Water	6020B	407759
280-107261-13	B3H3K3	Total/NA	Water	6020B	407759
MB 280-407759/1-A	Method Blank	Total/NA	Water	6020B	407759
LCS 280-407759/2-A	Lab Control Sample	Total/NA	Water	6020B	407759
LCSD 280-407759/3-A	Lab Control Sample Dup	Total/NA	Water	6020B	407759

Analysis Batch: 408554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107261-10	B3H3L0	Total/NA	Water	6010D	407760
280-107261-13	B3H3K3	Total/NA	Water	6010D	407760
MB 280-407760/1-A	Method Blank	Total/NA	Water	6010D	407760
LCS 280-407760/2-A	Lab Control Sample	Total/NA	Water	6010D	407760
LCSD 280-407760/3-A	Lab Control Sample Dup	Total/NA	Water	6010D	407760

Analysis Batch: 408823

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107261-10	B3H3L0	Total/NA	Water	6010D	407760
280-107261-13	B3H3K3	Total/NA	Water	6010D	407760
MB 280-407760/1-A	Method Blank	Total/NA	Water	6010D	407760
LCS 280-407760/2-A	Lab Control Sample	Total/NA	Water	6010D	407760
LCSD 280-407760/3-A	Lab Control Sample Dup	Total/NA	Water	6010D	407760

General Chemistry

Analysis Batch: 407877

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107261-2	B3H898	Total/NA	Water	SM 2320B	
280-107261-3	B3H899	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	
LCSD 280-407877/5	Lab Control Sample Dup	Total/NA	Water	SM 2320B	

Analysis Batch: 408183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107261-1	B3HL08	Total/NA	Water	SM 2320B	
280-107261-11	B3H3K9	Total/NA	Water	SM 2320B	
MB 280-408183/6	Method Blank	Total/NA	Water	SM 2320B	
LCS 280-408183/4	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 280-408183/5	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
280-107261-1 DU	B3HL08	Total/NA	Water	SM 2320B	

Analysis Batch: 409182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107261-6	B3HJH9	Total/NA	Water	9020B	
280-107261-7	B3HJH8	Total/NA	Water	9020B	

General Chemistry (Continued)

Analysis Batch: 409182 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107261-8	B3HJH7	Total/NA	Water	9020B	
280-107261-9	B3HJC2	Total/NA	Water	9020B	
MB 280-409182/2	Method Blank	Total/NA	Water	9020B	
LCS 280-409182/4	Lab Control Sample	Total/NA	Water	9020B	
280-107261-6 MS	B3HJH9	Total/NA	Water	9020B	
280-107261-6 MSD	B3HJH9	Total/NA	Water	9020B	

Analysis Batch: 409524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-107261-6	B3HJH9	Total/NA	Water	9060A	
280-107261-7	B3HJH8	Total/NA	Water	9060A	
280-107261-8	B3HJH7	Total/NA	Water	9060A	
280-107261-9	B3HJC2	Total/NA	Water	9060A	
MB 280-409524/4	Method Blank	Total/NA	Water	9060A	
LCS 280-409524/3	Lab Control Sample	Total/NA	Water	9060A	
280-107261-6 MS	B3HJH9	Total/NA	Water	9060A	
280-107261-6 MSD	B3HJH9	Total/NA	Water	9060A	

Surrogate Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: W18-003 / W18-002 / S18-003 / X18-005

TestAmerica Job ID: 280-107261-1
SDG: DN0334

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)	(70-130)
280-107261-4	B3HHY2	87	98	95	106
280-107261-4 MS	B3HHY2	86	93	94	101
280-107261-4 MS	B3HHY2	94	96	98	96
280-107261-4 MSD	B3HHY2	90	91	96	99
280-107261-4 MSD	B3HHY2	93	97	97	96
280-107261-5	B3HHY1	84	90	94	89
280-107261-5 - DL	B3HHY1	96	103	101	104
280-107261-5 MS	B3HHY1	97	99	101	104
280-107261-5 MSD	B3HHY1	95	97	100	103
280-107261-12	B3H046	81	93	93	97
LCS 280-408216/10	Lab Control Sample	94	101	99	100
LCS 280-408216/4	Lab Control Sample	100	99	102	104
LCS 280-408512/4	Lab Control Sample	97	96	101	99
MB 280-408216/6	Method Blank	100	104	102	105
MB 280-408512/6	Method Blank	100	102	102	103

Surrogate Legend

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

DN0334

SAMP NUM	WMU Code	WELL NAME	SITE TYPE	PARENT WMU	DESCRIPTION
B3HJC2	1301-N	199-N-57	TSD	1301-N	1301-N Liquid Waste Disposal Facility
B3HJH7	1301-N	199-N-57	TSD	1301-N	1301-N Liquid Waste Disposal Facility
B3HJH8	1301-N	199-N-57	TSD	1301-N	1301-N Liquid Waste Disposal Facility
B3HJH9	1301-N	199-N-57	TSD	1301-N	1301-N Liquid Waste Disposal Facility
B3HL08	1325-N	199-N-32	TSD	1325-N	1325-N Liquid Waste Disposal Facility
B3H3K3	241TX	299-W14-19	WMU	SST	200 West Area Underground Waste Storage Tank Farm
B3H3K9	241TX	299-W15-44	WMU	SST	200 West Area Underground Waste Storage Tank Farm
B3H3L0	241TX	299-W15-44	WMU	SST	200 West Area Underground Waste Storage Tank Farm
B3H898	241TX	299-W14-13	WMU	SST	200 West Area Underground Waste Storage Tank Farm
B3H899	241TX	299-W14-18	WMU	SST	200 West Area Underground Waste Storage Tank Farm
B3H3K3	241TY	299-W14-19	WMU	SST	200 West Area Underground Waste Storage Tank Farm
B3H3K9	241TY	299-W15-44	WMU	SST	200 West Area Underground Waste Storage Tank Farm
B3H3L0	241TY	299-W15-44	WMU	SST	200 West Area Underground Waste Storage Tank Farm
B3H898	241TY	299-W14-13	WMU	SST	200 West Area Underground Waste Storage Tank Farm
B3H899	241TY	299-W14-18	WMU	SST	200 West Area Underground Waste Storage Tank Farm