TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

TestAmerica Job ID: 280-85511-1
TestAmerica Sample Delivery Group: DN0010
Client Project/Site: A16-006 / S16-007 / W16-007

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

Attn: Mr. Scot Fitzgerald

Authorized for release by:
8/18/2016 1:30:50 PM

Kae Yoder, Senior Project Manager
(303)736-0190
kae.yoder@testamericainc.com

LINKS

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

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

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

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Job ID: 280-85511-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: CH2M Hill Plateau Remediation Company

Job Number: 280-85511-1

SDG #: DN0010
SAF#(s): S16-006 / W16-006

Date SDG Closed: July 18, 2016
Data Deliverable: 30 Day / Summary

With 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. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted. Calculations are performed before rounding to avoid round-off errors in calculated results.

LCS/LCSD = Laboratory Control Sample/Laboratory Control Sample Duplicate
MS/MSD = Matrix Spike/Matrix Spike Duplicate

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

For volatile organic analyses, the laboratory is not able to achieve project specified QC limits for several analytes. Per CHPRC direction, data have been evaluated using laboratory statistical limits in lieu of project specified limits. All analytes met laboratory statistical limits, unless otherwise detailed in the individual section below.

RECEIPT
The samples were received on 7/13/2016 9:30 AM, 7/13/2016 3:00 PM and 7/16/2016 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 0.4º C, 1.4º C and 3.7º C.

Receipt Exceptions

The 1L amber H2SO4 preserved container submitted for sample B35PV6, requesting 9020_TOX: COMMON analysis, was received at the laboratory chipped. The sample did not appear to be compromised; therefore, the sample was transferred to a new container and the laboratory proceeded with the requested analysis. The client was notified on 7/14/2016 via the sample receipt confirmation email.

8260B - Volatile Organic Compounds (GC/MS)
Acetone, a common laboratory contaminant, was detected in method blank MB 280-334917/6 at a level that was above the method detection limit (MDL) but below the reporting limit (RL). The value should be considered an estimate, and has been flagged “J”. Because the concentration in the method blank was not present at a level greater than the RL, corrective action is deemed unnecessary. 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 “B”.

Methylene Chloride, a common laboratory contaminant, was detected in method blank MB 280-334917/6 at a level that was above the RL. Because this common laboratory contaminant was present in the method blank at a level that was less than five times the RL, corrective action is deemed unnecessary. 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 “B”.

The LCS/LCSD associated with analysis batch 334917 exhibited percent recoveries outside the control limits, biased high, for Methylene Chloride, and associated sample results have been flagged “O”. As Methylene Chloride was not present at a level greater than the RL in the associated sample, corrective action is deemed unnecessary.

Job ID: 280-85511-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

Due to analyst oversight, project sample specific MS/MSD analysis was not performed for analysis batch 334917. It can be noted that standard batch MS/MSD analysis was performed and all spike parameters were within control limits, with the exception of Styrene. The MS aliquot of the MS/MSD exhibited the percent recovery outside the control limits, biased low, for Styrene at 61% (lower limit = 65%). Duplicate LCS (LCSD) data has been reported to provide some evidence of batch precision.

No additional analytical or quality issues were noted.

6010C - Total Metals (ICP)
Barium, Calcium, Magnesium and Manganese were detected in method blank MB 280-337343/1-A at levels that were above the method detection limit (MDL) but below the reporting limit (RL). The values should be considered estimates, and have been flagged “B”. Because the concentrations in the method blank were not present at levels greater than half the RL, corrective action is deemed unnecessary. 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 “C”.

No additional analytical or quality issues were noted.

6010C - Dissolved Metals (ICP)
Barium was detected in method blank MB 280-337341/1-A at a level that was above the method detection limit (MDL) but below the reporting limit (RL). The value should be considered an estimate, and has been flagged “B”. Because the concentration in the method blank was not present at a level greater than half the RL, corrective action is deemed unnecessary. 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 “C”.

Iron, a common laboratory contaminant, was detected in method blank MB 280-337341/1-A at a level that was above the MDL but below the RL. The value should be considered an estimate, and has been flagged “B”. Because the concentration in the method blank was not present at a level greater than the RL, corrective action is deemed unnecessary. 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 “C”.

No additional analytical or quality issues were noted.

6020A - Total Metals (ICP/MS)
No analytical or quality issues were noted.

9020B - Total Organic Halogens
Analysis of sample B35PV2 (280-85511-3) was performed 2 days outside the recommended 28 day sample holding time. It can be noted that the analysis was originally performed within the sample holding time (8/5/2016); however, the data was not reportable due to inconsistent results between the replicates (Rep 1 = 99.4 ug/L; Rep 2 = ND at the MDL of 15.4 ug/L). Reanalysis of the sample 2 days outside the recommended sample holding time showed ND at the MDL of 15.4 ug/L for both replicates.

The samples presented in this report exhibited elevated detection limits due to the limited sample volume used. The nominal sample amount could not be used due to the nature of the sample matrix.

Due to analyst oversight, project sample specific MS/MSD analysis was not performed for analysis batch 337162. It can be noted that standard batch MS/MSD analysis was performed and all spike parameters were within control limits. Duplicate LCS (LCSD) data has been reported to provide some evidence of batch precision.

No additional analytical or quality issues were noted.

9060A - Total Organic Carbon
No analytical or quality issues were noted.

Case Narrative

Job ID: 280-85511-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

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

Reviewed and approved:

Kae E. Yoder
Senior Project Manager

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 280-85511-1
SDG Number: DN0010

Login Number: 85511
List Number: 1
Creator: White, Denise E

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.7°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.	False	Refer to Job Narrative for details.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

54165

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **W16-007-123**

Collector	Scott King CHPRC DN0010	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650 JW 7/11/16
SAF No.	W16-007	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071
Project Title	RCRA, JULY 2016	**Logbook No.**	HNF-N-506 846 / 48	**Ice Chest No.**	GWS-563
Shipped To (Lab)	TestAmerica Denver	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.**	7767 1331 6342
Protocol	RCRA	**Priority:**	**30 Days** **PRIORITY**	**Offsite Property No.**	6814

POSSIBLE SAMPLE HAZARDS/REMARKS

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

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

N/A
Special Handling:N/A

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B35PV4	N	W	JUL 10 2016	0844	1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2/Cool <=6C
B35PV4	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2/Cool <=6C
B35P70	N	W			1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2/Cool <=6C
B35P70	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2/Cool <=6C
B35PV2	N	W			1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2/Cool <=6C
B35PV2	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2/Cool <=6C
B35PV6	N	W			1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2/Cool <=6C
B35PV6	N	W	JUL 10 2016	0844	1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2/Cool <=6C

280-85511 Chain of Custody

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Scott King CHPRC			JUL 10 2016 1430	Janelle Zunker CHPRC			JUL 10 2016 1430
Janelle Zunker CHPRC			JUL 10 2016 1500	SSU#9			JUL 10 2016 1500
SSU#1			JUL 11 2016 0935	Lesly Wall /CHPRC			JUL 11 2016 0935
Lesly Wall /CHPRC			JUL 11 2016 1400	FEDEX			

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
SQ	= 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 5/26/2016 FSR ID = FSR32936 A-6004-842 (REV 2)

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST (continued)

C.O.C. No. W16-007-123

Page 2 of 2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
FedEX					Denise White	Denise White	7/13/16 0930
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time

3.7+0.0 IR#5 DW 7/13/16

A-6003-962 (03/05)

8/18/2016

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8/18/2016

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776713316342

Ship date:		Actual delivery:
Mon 7/11/2016		**Wed 7/13/2016 9:29 am**
Richland, WA US	**Delivered** *Signed for by: D.WHITE*	ARVADA, CO US

Travel History

Date/Time	Activity	Location
7/13/2016 - Wednesday		
9:29 am	Delivered	ARVADA, CO
9:00 am	On FedEx vehicle for delivery	ARVADA, CO
7:29 am	At local FedEx facility	ARVADA, CO
7/12/2016 - Tuesday		
11:43 pm	At local FedEx facility	DENVER, CO
3:53 pm	At destination sort facility	DENVER, CO
2:52 pm	Departed FedEx location	MEMPHIS, TN
5:32 am	In transit	MEMPHIS, TN
4:33 am	In transit	MEMPHIS, TN
12:39 am	Arrived at FedEx location	MEMPHIS, TN
7/11/2016 - Monday		
5:24 pm	Left FedEx origin facility	PASCO, WA
11:59 am	Shipment information sent to FedEx	
10:47 am	Picked up	PASCO, WA

Shipment Facts

Tracking number	776713316342	**Service**	FedEx Priority Overnight
Weight	54 lbs / 24.49 kgs	**Signature services**	Direct signature required
Delivered To	Shipping/Receiving	**Total pieces**	1
Total shipment weight	54 lbs / 24.49 kgs	**Terms**	Third Party
Shipper reference	ptr# 6814	**Packaging**	Your Packaging
Special handling section	Deliver Weekday, Direct Signature Required		

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Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 280-85512-1
SDG Number: DN0010

Login Number: 85512
List Number: 1
Creator: White, Denise E

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.4°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	

61 lbs

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **W16-007-119**

Collector	J.R. Aguilar/CHPRC DN0010	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	W16-007	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071
Project Title	RCRA, JULY 2016	**Logbook No.**	HNF-N-506 85 / 90	**Ice Chest No.**	GWS-403
Shipped To (Lab)	TestAmerica Denver	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.**	7767 2692 2252
Protocol	RCRA	**Priority:**	**30 Days** **PRIORITY**	**Offsite Property No.**	10820

POSSIBLE SAMPLE HAZARDS/REMARKS

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

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

N/A
Special Handling:N/A

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B35PP0	N	W	JUL 12 2016	1020	1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2/Cool <=6C
B35PP0	N	W	↓	↓	1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2/Cool <=6C
B35PP2	N	W	↓	↓	1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2/Cool <=6C
B35PP2	N	W	↓	↓	1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2/Cool <=6C
B35NX3	N	W	↓	↓	1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2/Cool <=6C
B35NX3	N	W	↓	↓	1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2/Cool <=6C
B35PN8	N	W	↓	↓	1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2/Cool <=6C
B35PN8	N	W	JUL 12 2016	1020	1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2/Cool <=6C

280-85512 Chain of Custody

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.R. Aguilar/CHPRC			JUL 12 2016 1130	Lesly Wall /CHPRC	Lesly Wall		JUL 12 2016 1130
Lesly Wall /CHPRC	Lesly Wall		JUL 12 2016 1400	FEDEX			
FedEx				Denise White			7/13/16 1500

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
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 5/26/2016 **FSR ID = FSR32652** A-6004-842 (REV 2)

0.4+0.0 IR#5 DW 7/13/16

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **A16-006-023**

Collector	J.R. Aguilar/CHPRC DN0010	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	A16-006	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071
Project Title	LLWMA-1 AND LLWMA-4 PA, JULY	**Logbook No.**	HNF-N-506 85 / 90	**Ice Chest No.**	GWS-403
Shipped To (Lab)	TestAmerica Denver	**Method of Shipment**	Commercial Carrier	**Bill of Lading/Air Bill No.**	7767269222 52
Protocol	SURV	**Priority:**	**30 Days** **PRIORITY**	**Offsite Property No.**	6820

POSSIBLE SAMPLE HAZARDS/REMARKS

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

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

N/A
Special Handling:N/A

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B35RM7	N	W	JUL 12 2016	1020	1x500-mL G/P	6020_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.R. Aguilar/CHPRC			JUL 12 2016 1130	Lesly Wall /CHPRC		Lesly Wall	JUL 12 2016 1130
Lesly Wall /CHPRC		Lesly Wall	JUL 12 2016 1400	FEDEX			
FEDEX				Denise White		Denise White	7/13/16 1500

Matrix *

S	= Soil	DS	= Drum Solids		
SE	= Sediment	DL	= Drum Liquids		
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 5/26/2016 **FSR ID = FSR32652** A-6004-842 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S16-007-165
		Page 1 of 1

Collector	J.R. Aguilar/CHPRC DN0010	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	S16-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	SURV, JULY 2016	Logbook No.	HNF-N-506 85 / 90	Ice Chest No.	GWS-403
Shipped To (Lab)	TestAmerica Denver	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	7767 2692 2252
Protocol	SURV	Priority:	30 Days **PRIORITY**	Offsite Property No.	68820

POSSIBLE SAMPLE HAZARDS/REMARKS

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

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

N/A
Special Handling:N/A

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B35TX8	N	W	JUL 12 2016	1020	4x40-mL aGs*	8260_VOA_GCMS_IX: COMMON REV 1	14 Days	HCl or H2SO4 to pH <2/Cool <=6C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.R. Aguilar/CHPRC			JUL 12 2016 1130	Lesly Wall /CHPRC		Lesly Wall	JUL 12 2016 1130
Lesly Wall /CHPRC		Lesly Wall	JUL 12 2016 1400	FEDEX			
Fed Ex				Denise White			7/13/16 1500

Matrix *

S	= Soil	DS	= Drum Solids		
SE	= Sediment	DL	= Drum Liquids		
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 5/26/2016 FSR ID = FSR32652 A-6004-842 (REV 2)

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FedEx ® Tracking

776726922252

Ship date:
Tue 7/12/2016

Richland, WA US

Delivered
Signed for by: D.WHITE

Actual delivery:
Wed 7/13/2016 3:03 pm

ARVADA, CO US

Travel History

Date/Time	Activity	Location
- 7/13/2016 - Wednesday		
3:03 pm	Delivered	ARVADA, CO
2:52 pm	On FedEx vehicle for delivery	ARVADA, CO
12:33 pm	Delivery exception	ARVADA, CO
12:33 pm	At local FedEx facility	ARVADA, CO
12:31 pm	At local FedEx facility	ARVADA, CO
8:42 am	At local FedEx facility	DENVER, CO
7:25 am	In transit	DENVER, CO
7:01 am	At local FedEx facility	DENVER, CO
12:42 am	Arrived at FedEx location	MEMPHIS, TN
- 7/12/2016 - Tuesday		
5:22 pm	Left FedEx origin facility	PASCO, WA
3:28 pm	Picked up	PASCO, WA
2:16 pm	Shipment information sent to FedEx	

Shipment Facts

Tracking number	776726922252	Service	FedEx Priority Overnight
Weight	61 lbs / 27.67 kgs	Dimensions	24x15x15 in.
Signature services	Direct signature required	Delivered To	Receptionist/Front Desk
Total pieces	1	Total shipment weight	61 lbs / 27.67 kgs
Terms	Third Party	Shipper reference	6820
Packaging	Your Packaging	Special handling section	Deliver Weekday, Direct Signature Required

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Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 280-85682-1
SDG Number: DN0010

Login Number: 85682
List Number: 1
Creator: Muniz, Ashley T

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.4°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

CH2MHill Plateau Remediation Company

59 lbs

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **W16-007-118**

Collector	J.R. Aguilar/CHPRC DN0010	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	W16-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	RCRA, JULY 2016	Logbook No.	HNF-N-506 82/86	Ice Chest No.	GW5-405
Shipped To (Lab)	TestAmerica Denver	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	7767 6531 5619
Protocol	RCRA	Priority:	30 Days **PRIORITY**	Offsite Property No.	6831

POSSIBLE SAMPLE HAZARDS/REMARKS

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

SPECIAL INSTRUCTIONS **Hold Time**

N/A

Special Handling:N/A

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B35NT7	N	W	JUL 15 2016	0816	1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2/Cool <=6C
B35NT7	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2/Cool <=6C
B35NT7	N	W			1x500-mL G/P	6010_METALS_ICP: COMMON; 6020_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B35PL9	N	W			1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2/Cool <=6C
B35PL9	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2/Cool <=6C
B35PL7	N	W			1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2/Cool <=6C
B35PL7	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2/Cool <=6C
B35NV4	Y	W			1x500-mL G/P	6010_METALS_ICP: COMMON	6 Months	HNO3 to pH <2
B35PM1	N	W			1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2/Cool <=6C
B35PM1	N	W	JUL 15 2016	0816	1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2/Cool <=6C

1.4 IRS-010 10 Jul 16
Transfer

280-85682 Chain of Custody

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.R. Aguilar/CHPRC			JUL 15 2016 0905	Troy Bacon CHPRC	Troy L. Bacon		JUL 15 2016 0905
Troy Bacon CHPRC	Troy L. Bacon		JUL 15 2016 1400	FEDEX			
FedEx				Ashley Muniz			0930 16 Jul 16

S = Soil		DS = Drum Solids	
SE = Sediment		DL = Drum Liquids	
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 6/7/2016 FSR ID = FSR32879 A-6004-842 (REV 2)

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776765315619

Ship date:
Fri 7/15/2016

Actual delivery:
Sat 7/16/2016 9:27 am

Richland, WA US

Delivered
Signed for by: S.WOODWARD

ARVADA, CO US

Travel History

Date/Time	Activity	Location
7/16/2016 - Saturday		
9:27 am	Delivered	ARVADA, CO
8:26 am	On FedEx vehicle for delivery	ARVADA, CO
8:11 am	At local FedEx facility	ARVADA, CO
5:39 am	At destination sort facility	DENVER, CO
4:40 am	Departed FedEx location	MEMPHIS, TN
12:17 am	Arrived at FedEx location	MEMPHIS, TN
7/15/2016 - Friday		
4:59 pm	Left FedEx origin facility	PASCO, WA
3:21 pm	Picked up	PASCO, WA
2:47 pm	Shipment information sent to FedEx	

Shipment Facts

Tracking number	776765315619	**Service**	FedEx Priority Overnight
Weight	59 lbs / 26.76 kgs	**Signature services**	Direct signature required
Delivered To	Shipping/Receiving	**Total pieces**	1
Total shipment weight	59 lbs / 26.76 kgs	**Terms**	Third Party
Shipper reference	ptr# 6831	**Packaging**	Your Packaging
Special handling section	For Saturday Delivery, Direct Signature Required	**Standard transit**	7/16/2016 by 12:00 pm

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Definitions/Glossary

Client: CH2M Hill Plateau Remediation Company
Project/Site: A16-006 / S16-007 / W16-007

TestAmerica Job ID: 280-85511-1
SDG: DN0010

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.
B	Analyte was found in the associated method blank as well as in the sample.
O	LCS, LCSD: Recovery exceeds upper or lower control limits.

GC/MS VOA TICs

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

Metals

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

General Chemistry

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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: A16-006 / S16-007 / W16-007

TestAmerica Job ID: 280-85511-1
SDG: DN0010

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
6010C	Metals (ICP)	SW846	TAL DEN
6020A	Metals (ICP/MS)	SW846	TAL DEN
9020B	Organic Halides, Total (TOX)	SW846	TAL DEN
9060A	Organic Carbon, Total (TOC)	SW846	TAL DEN

Protocol References:

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: A16-006 / S16-007 / W16-007

TestAmerica Job ID: 280-85511-1
SDG: DN0010

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-85511-1	B35PV4	Water	07/10/16 08:44	07/13/16 09:30
280-85511-2	B35P70	Water	07/10/16 08:44	07/13/16 09:30
280-85511-3	B35PV2	Water	07/10/16 08:44	07/13/16 09:30
280-85511-4	B35PV6	Water	07/10/16 08:44	07/13/16 09:30
280-85512-1	B35PP0	Water	07/12/16 10:20	07/13/16 15:00
280-85512-2	B35PP2	Water	07/12/16 10:20	07/13/16 15:00
280-85512-3	B35NX3	Water	07/12/16 10:20	07/13/16 15:00
280-85512-4	B35PN8	Water	07/12/16 10:20	07/13/16 15:00
280-85512-5	B35RM7	Water	07/12/16 10:20	07/13/16 15:00
280-85512-6	B35TX8	Water	07/12/16 10:20	07/13/16 15:00
280-85682-1	B35NT7	Water	07/15/16 08:16	07/16/16 09:30
280-85682-2	B35PL9	Water	07/15/16 08:16	07/16/16 09:30
280-85682-3	B35PL7	Water	07/15/16 08:16	07/16/16 09:30
280-85682-4	B35NV4	Water	07/15/16 08:16	07/16/16 09:30
280-85682-5	B35PM1	Water	07/15/16 08:16	07/16/16 09:30

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: A16-006 / S16-007 / W16-007

TestAmerica Job ID: 280-85511-1
SDG: DN0010

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

Client Sample ID: B35TX8
Date Collected: 07/12/16 10:20
Date Received: 07/13/16 15:00

Lab Sample ID: 280-85512-6
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			07/25/16 16:46	1
1,1,1-Trichloroethane	0.16	U	1.0	0.16	ug/L			07/25/16 16:46	1
1,1,2,2-Tetrachloroethane	0.21	U	1.0	0.21	ug/L			07/25/16 16:46	1
1,1,2-Trichloroethane	0.27	U	1.0	0.27	ug/L			07/25/16 16:46	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			07/25/16 16:46	1
1,1-Dichloroethene	0.23	U	1.0	0.23	ug/L			07/25/16 16:46	1
1,2,3-Trichloropropane	0.33	U	2.5	0.33	ug/L			07/25/16 16:46	1
1,2-Dibromo-3-Chloropropane	0.47	U	5.0	0.47	ug/L			07/25/16 16:46	1
1,2-Dibromoethane	0.18	U	1.0	0.18	ug/L			07/25/16 16:46	1
1,2-Dichloroethane	0.13	U	1.0	0.13	ug/L			07/25/16 16:46	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			07/25/16 16:46	1
1,4-Dichlorobenzene	0.16	U	1.0	0.16	ug/L			07/25/16 16:46	1
2-Butanone (MEK)	2.0	U	6.0	2.0	ug/L			07/25/16 16:46	1
2-Hexanone	1.7	U	5.0	1.7	ug/L			07/25/16 16:46	1
4-Methyl-2-pentanone (MIBK)	0.98	U	5.0	0.98	ug/L			07/25/16 16:46	1
Acetone	1.9	U	10	1.9	ug/L			07/25/16 16:46	1
Acetonitrile	9.6	U	30	9.6	ug/L			07/25/16 16:46	1
Acrolein	2.8	U	20	2.8	ug/L			07/25/16 16:46	1
Acrylonitrile	1.4	U	20	1.4	ug/L			07/25/16 16:46	1
Allyl chloride	0.17	U	2.0	0.17	ug/L			07/25/16 16:46	1
Benzene	0.16	U	1.0	0.16	ug/L			07/25/16 16:46	1
Bromodichloromethane	0.17	U	1.0	0.17	ug/L			07/25/16 16:46	1
Bromoform	0.19	U	1.0	0.19	ug/L			07/25/16 16:46	1
Bromomethane	0.21	U	2.0	0.21	ug/L			07/25/16 16:46	1
Carbon disulfide	0.45	U	2.0	0.45	ug/L			07/25/16 16:46	1
Carbon tetrachloride	**38**		1.0	0.19	ug/L			07/25/16 16:46	1
Chlorobenzene	0.17	U	1.0	0.17	ug/L			07/25/16 16:46	1
Chloroethane	0.41	U	2.0	0.41	ug/L			07/25/16 16:46	1
Chloroform	**0.65**	**J**	1.0	0.16	ug/L			07/25/16 16:46	1
Chloromethane	0.30	U	2.0	0.30	ug/L			07/25/16 16:46	1
Chloroprene	0.21	U	1.0	0.21	ug/L			07/25/16 16:46	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			07/25/16 16:46	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			07/25/16 16:46	1
Dibromochloromethane	0.17	U	1.0	0.17	ug/L			07/25/16 16:46	1
Dibromomethane	0.17	U	1.0	0.17	ug/L			07/25/16 16:46	1
Dichlorodifluoromethane	0.31	U	2.0	0.31	ug/L			07/25/16 16:46	1
Ethyl Cyanide	3.7	U	20	3.7	ug/L			07/25/16 16:46	1
Ethyl methacrylate	0.86	U	3.0	0.86	ug/L			07/25/16 16:46	1
Ethylbenzene	0.16	U	1.0	0.16	ug/L			07/25/16 16:46	1
Iodomethane	0.23	U	1.0	0.23	ug/L			07/25/16 16:46	1
Isobutyl alcohol	37	U	110	37	ug/L			07/25/16 16:46	1
Methacrylonitrile	1.6	U	10	1.6	ug/L			07/25/16 16:46	1
Methyl methacrylate	1.1	U	4.0	1.1	ug/L			07/25/16 16:46	1
Methylene Chloride	**0.41**	**J O B**	2.0	0.32	ug/L			07/25/16 16:46	1
Styrene	0.17	U	1.0	0.17	ug/L			07/25/16 16:46	1
Tetrachloroethene	0.20	U	1.0	0.20	ug/L			07/25/16 16:46	1
Toluene	0.17	U	1.0	0.17	ug/L			07/25/16 16:46	1
trans-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			07/25/16 16:46	1
trans-1,3-Dichloropropene	0.19	U	3.0	0.19	ug/L			07/25/16 16:46	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: A16-006 / S16-007 / W16-007

TestAmerica Job ID: 280-85511-1
SDG: DN0010

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

Client Sample ID: B35TX8
Date Collected: 07/12/16 10:20
Date Received: 07/13/16 15:00

Lab Sample ID: 280-85512-6
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			07/25/16 16:46	1
Trichloroethene	0.16	U	1.0	0.16	ug/L			07/25/16 16:46	1
Trichlorofluoromethane	0.29	U	2.0	0.29	ug/L			07/25/16 16:46	1
Vinyl acetate	0.94	U	3.0	0.94	ug/L			07/25/16 16:46	1
Vinyl chloride	0.10	U	1.0	0.10	ug/L			07/25/16 16:46	1
Xylenes, Total	0.19	U	2.0	0.19	ug/L			07/25/16 16:46	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
sec-Butyl Alcohol	*90*		*ug/L*		*6.54*	*78-92-2*		*07/25/16 16:46*	*1*
n-Butanol	*38*	*J*	*ug/L*		*7.59*	*71-36-3*		*07/25/16 16:46*	*1*
Cyclohexanone	*37*	*J*	*ug/L*		*11.29*	*108-94-1*		*07/25/16 16:46*	*1*
Tentatively Identified Compound	*None*		*ug/L*					*07/25/16 16:46*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 130*		*07/25/16 16:46*	*1*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*		*07/25/16 16:46*	*1*
Dibromofluoromethane (Surr)	*107*		*70 - 130*		*07/25/16 16:46*	*1*
Toluene-d8 (Surr)	*110*		*70 - 130*		*07/25/16 16:46*	*1*

Method: 6010C - Metals (ICP)

Client Sample ID: B35NT7
Date Collected: 07/15/16 08:16
Date Received: 07/16/16 09:30

Lab Sample ID: 280-85682-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	3.1	U	20.0	3.1	ug/L		08/11/16 09:00	08/12/16 18:11	1
Arsenic	**7.9**	**B**	15.0	4.4	ug/L		08/11/16 09:00	08/12/16 18:11	1
Barium	**55.1**		10.0	0.58	ug/L		08/11/16 09:00	08/12/16 18:11	1
Cadmium	0.45	U	5.0	0.45	ug/L		08/11/16 09:00	08/12/16 18:11	1
Calcium	**47100**		200	34.5	ug/L		08/11/16 09:00	08/12/16 18:11	1
Chromium	**53.5**		10.0	0.66	ug/L		08/11/16 09:00	08/12/16 18:11	1
Cobalt	1.2	U	10.0	1.2	ug/L		08/11/16 09:00	08/12/16 18:11	1
Copper	4.2	U	15.0	4.2	ug/L		08/11/16 09:00	08/12/16 18:11	1
Iron	**242**		100	22.0	ug/L		08/11/16 09:00	08/12/16 18:11	1
Magnesium	**14000**		200	10.7	ug/L		08/11/16 09:00	08/12/16 18:11	1
Manganese	**4.8**	**B C**	10.0	0.25	ug/L		08/11/16 09:00	08/12/16 18:11	1
Nickel	**25.2**	**B**	40.0	1.3	ug/L		08/11/16 09:00	08/12/16 18:11	1
Potassium	**7860**		3000	237	ug/L		08/11/16 09:00	08/12/16 18:11	1
Silver	0.93	U	10.0	0.93	ug/L		08/11/16 09:00	08/12/16 18:11	1
Sodium	**26400**		1000	91.6	ug/L		08/11/16 09:00	08/12/16 18:11	1
Vanadium	**17.0**		10.0	1.1	ug/L		08/11/16 09:00	08/12/16 18:11	1
Zinc	4.5	U	20.0	4.5	ug/L		08/11/16 09:00	08/12/16 18:11	1

Method: 6010C - Metals (ICP) - Dissolved

Client Sample ID: B35NV4
Date Collected: 07/15/16 08:16
Date Received: 07/16/16 09:30

Lab Sample ID: 280-85682-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	3.1	U	20.0	3.1	ug/L		08/11/16 09:00	08/12/16 17:44	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: A16-006 / S16-007 / W16-007

TestAmerica Job ID: 280-85511-1
SDG: DN0010

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

Client Sample ID: B35NV4 — **Lab Sample ID: 280-85682-4**
Date Collected: 07/15/16 08:16 — **Matrix: Water**
Date Received: 07/16/16 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.3	B	15.0	4.4	ug/L		08/11/16 09:00	08/12/16 17:44	1
Barium	53.5		10.0	0.58	ug/L		08/11/16 09:00	08/12/16 17:44	1
Cadmium	0.45	U	5.0	0.45	ug/L		08/11/16 09:00	08/12/16 17:44	1
Calcium	45700		200	34.5	ug/L		08/11/16 09:00	08/12/16 17:44	1
Chromium	6.0	B	10.0	0.66	ug/L		08/11/16 09:00	08/12/16 17:44	1
Cobalt	1.2	U	10.0	1.2	ug/L		08/11/16 09:00	08/12/16 17:44	1
Copper	4.2	U	15.0	4.2	ug/L		08/11/16 09:00	08/12/16 17:44	1
Iron	44.0	B C	100	22.0	ug/L		08/11/16 09:00	08/12/16 17:44	1
Magnesium	13700		200	10.7	ug/L		08/11/16 09:00	08/12/16 17:44	1
Manganese	0.83	B	10.0	0.25	ug/L		08/11/16 09:00	08/12/16 17:44	1
Nickel	2.4	B	40.0	1.3	ug/L		08/11/16 09:00	08/12/16 17:44	1
Potassium	7610		3000	237	ug/L		08/11/16 09:00	08/12/16 17:44	1
Silver	0.93	U	10.0	0.93	ug/L		08/11/16 09:00	08/12/16 17:44	1
Sodium	25700		1000	91.6	ug/L		08/11/16 09:00	08/12/16 17:44	1
Vanadium	16.7		10.0	1.1	ug/L		08/11/16 09:00	08/12/16 17:44	1
Zinc	4.5	U	20.0	4.5	ug/L		08/11/16 09:00	08/12/16 17:44	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: B35RM7 — **Lab Sample ID: 280-85512-5**
Date Collected: 07/12/16 10:20 — **Matrix: Water**
Date Received: 07/13/16 15:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	0.98	B	1.0	0.050	ug/L		08/03/16 08:05	08/08/16 13:05	1

Client Sample ID: B35NT7 — **Lab Sample ID: 280-85682-1**
Date Collected: 07/15/16 08:16 — **Matrix: Water**
Date Received: 07/16/16 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	11.0		1.0	0.050	ug/L		08/03/16 08:05	08/08/16 12:47	1

General Chemistry

Client Sample ID: B35PV4 — **Lab Sample ID: 280-85511-1**
Date Collected: 07/10/16 08:44 — **Matrix: Water**
Date Received: 07/13/16 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	19.2	B	60.0	15.4	ug/L			08/05/16 11:00	1
Total Organic Carbon - Average	291	B	1000	155	ug/L			07/23/16 06:56	1

Client Sample ID: B35P70 — **Lab Sample ID: 280-85511-2**
Date Collected: 07/10/16 08:44 — **Matrix: Water**
Date Received: 07/13/16 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	15.4	U	60.0	15.4	ug/L			08/05/16 11:00	1
Total Organic Carbon - Average	268	B	1000	155	ug/L			07/23/16 07:41	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: A16-006 / S16-007 / W16-007

TestAmerica Job ID: 280-85511-1
SDG: DN0010

General Chemistry

Client Sample ID: B35PV2 — **Lab Sample ID: 280-85511-3**
Date Collected: 07/10/16 08:44 — **Matrix: Water**
Date Received: 07/13/16 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	15.4	U	60.0	15.4	ug/L			08/09/16 13:23	1
Total Organic Carbon - Average	**294**	**B**	1000	155	ug/L			07/23/16 07:55	1

Client Sample ID: B35PV6 — **Lab Sample ID: 280-85511-4**
Date Collected: 07/10/16 08:44 — **Matrix: Water**
Date Received: 07/13/16 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	15.4	U	60.0	15.4	ug/L			08/05/16 11:00	1
Total Organic Carbon - Average	**264**	**B**	1000	155	ug/L			07/23/16 08:10	1

Client Sample ID: B35PP0 — **Lab Sample ID: 280-85512-1**
Date Collected: 07/12/16 10:20 — **Matrix: Water**
Date Received: 07/13/16 15:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	**28.5**	**B**	60.0	15.4	ug/L			08/05/16 11:00	1
Total Organic Carbon - Average	**333**	**B**	1000	155	ug/L			07/23/16 08:25	1

Client Sample ID: B35PP2 — **Lab Sample ID: 280-85512-2**
Date Collected: 07/12/16 10:20 — **Matrix: Water**
Date Received: 07/13/16 15:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	**28.7**	**B**	60.0	15.4	ug/L			08/05/16 11:00	1
Total Organic Carbon - Average	**341**	**B**	1000	155	ug/L			07/23/16 09:11	1

Client Sample ID: B35NX3 — **Lab Sample ID: 280-85512-3**
Date Collected: 07/12/16 10:20 — **Matrix: Water**
Date Received: 07/13/16 15:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	**27.5**	**B**	60.0	15.4	ug/L			08/05/16 11:00	1
Total Organic Carbon - Average	**302**	**B**	1000	155	ug/L			07/23/16 09:26	1

Client Sample ID: B35PN8 — **Lab Sample ID: 280-85512-4**
Date Collected: 07/12/16 10:20 — **Matrix: Water**
Date Received: 07/13/16 15:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	**26.9**	**B**	60.0	15.4	ug/L			08/05/16 11:00	1
Total Organic Carbon - Average	**293**	**B**	1000	155	ug/L			07/23/16 09:41	1

Client Sample ID: B35NT7 — **Lab Sample ID: 280-85682-1**
Date Collected: 07/15/16 08:16 — **Matrix: Water**
Date Received: 07/16/16 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	15.4	U	60.0	15.4	ug/L			08/09/16 13:23	1
Total Organic Carbon - Average	155	U	1000	155	ug/L			07/23/16 09:56	1

Client Sample ID: B35PL9 — **Lab Sample ID: 280-85682-2**
Date Collected: 07/15/16 08:16 — **Matrix: Water**
Date Received: 07/16/16 09:30

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	15.4	U	60.0	15.4	ug/L			08/09/16 13:23	1
Total Organic Carbon - Average	155	U	1000	155	ug/L			07/23/16 10:10	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: A16-006 / S16-007 / W16-007

TestAmerica Job ID: 280-85511-1
SDG: DN0010

General Chemistry

Client Sample ID: B35PL7
Date Collected: 07/15/16 08:16
Date Received: 07/16/16 09:30

Lab Sample ID: 280-85682-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	15.4	U	60.0	15.4	ug/L			08/09/16 13:23	1
Total Organic Carbon - Average	155	U	1000	155	ug/L			07/23/16 10:25	1

Client Sample ID: B35PM1
Date Collected: 07/15/16 08:16
Date Received: 07/16/16 09:30

Lab Sample ID: 280-85682-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Halogens - Dup	15.4	U	60.0	15.4	ug/L			08/09/16 13:23	1
Total Organic Carbon - Average	155	U	1000	155	ug/L			07/23/16 10:40	1

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: A16-006 / S16-007 / W16-007

TestAmerica Job ID: 280-85511-1
SDG: DN0010

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

Lab Sample ID: MB 280-334917/6
Matrix: Water
Analysis Batch: 334917

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			07/25/16 10:28	1
1,1,1-Trichloroethane	0.16	U	1.0	0.16	ug/L			07/25/16 10:28	1
1,1,2,2-Tetrachloroethane	0.21	U	1.0	0.21	ug/L			07/25/16 10:28	1
1,1,2-Trichloroethane	0.27	U	1.0	0.27	ug/L			07/25/16 10:28	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			07/25/16 10:28	1
1,1-Dichloroethene	0.23	U	1.0	0.23	ug/L			07/25/16 10:28	1
1,2,3-Trichloropropane	0.33	U	2.5	0.33	ug/L			07/25/16 10:28	1
1,2-Dibromo-3-Chloropropane	0.47	U	5.0	0.47	ug/L			07/25/16 10:28	1
1,2-Dibromoethane	0.18	U	1.0	0.18	ug/L			07/25/16 10:28	1
1,2-Dichloroethane	0.13	U	1.0	0.13	ug/L			07/25/16 10:28	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			07/25/16 10:28	1
1,4-Dichlorobenzene	0.16	U	1.0	0.16	ug/L			07/25/16 10:28	1
2-Butanone (MEK)	2.0	U	6.0	2.0	ug/L			07/25/16 10:28	1
2-Hexanone	1.7	U	5.0	1.7	ug/L			07/25/16 10:28	1
4-Methyl-2-pentanone (MIBK)	0.98	U	5.0	0.98	ug/L			07/25/16 10:28	1
Acetone	2.71	J	10	1.9	ug/L			07/25/16 10:28	1
Acetonitrile	9.6	U	30	9.6	ug/L			07/25/16 10:28	1
Acrolein	2.8	U	20	2.8	ug/L			07/25/16 10:28	1
Acrylonitrile	1.4	U	20	1.4	ug/L			07/25/16 10:28	1
Allyl chloride	0.17	U	2.0	0.17	ug/L			07/25/16 10:28	1
Benzene	0.16	U	1.0	0.16	ug/L			07/25/16 10:28	1
Bromodichloromethane	0.17	U	1.0	0.17	ug/L			07/25/16 10:28	1
Bromoform	0.19	U	1.0	0.19	ug/L			07/25/16 10:28	1
Bromomethane	0.21	U	2.0	0.21	ug/L			07/25/16 10:28	1
Carbon disulfide	0.45	U	2.0	0.45	ug/L			07/25/16 10:28	1
Carbon tetrachloride	0.19	U	1.0	0.19	ug/L			07/25/16 10:28	1
Chlorobenzene	0.17	U	1.0	0.17	ug/L			07/25/16 10:28	1
Chloroethane	0.41	U	2.0	0.41	ug/L			07/25/16 10:28	1
Chloroform	0.16	U	1.0	0.16	ug/L			07/25/16 10:28	1
Chloromethane	0.30	U	2.0	0.30	ug/L			07/25/16 10:28	1
Chloroprene	0.21	U	1.0	0.21	ug/L			07/25/16 10:28	1
cis-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			07/25/16 10:28	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			07/25/16 10:28	1
Dibromochloromethane	0.17	U	1.0	0.17	ug/L			07/25/16 10:28	1
Dibromomethane	0.17	U	1.0	0.17	ug/L			07/25/16 10:28	1
Dichlorodifluoromethane	0.31	U	2.0	0.31	ug/L			07/25/16 10:28	1
Ethyl Cyanide	3.7	U	20	3.7	ug/L			07/25/16 10:28	1
Ethyl methacrylate	0.86	U	3.0	0.86	ug/L			07/25/16 10:28	1
Ethylbenzene	0.16	U	1.0	0.16	ug/L			07/25/16 10:28	1
Iodomethane	0.23	U	1.0	0.23	ug/L			07/25/16 10:28	1
Isobutyl alcohol	37	U	110	37	ug/L			07/25/16 10:28	1
Methacrylonitrile	1.6	U	10	1.6	ug/L			07/25/16 10:28	1
Methyl methacrylate	1.1	U	4.0	1.1	ug/L			07/25/16 10:28	1
Methylene Chloride	3.05		2.0	0.32	ug/L			07/25/16 10:28	1
Styrene	0.17	U	1.0	0.17	ug/L			07/25/16 10:28	1
Tetrachloroethene	0.20	U	1.0	0.20	ug/L			07/25/16 10:28	1
Toluene	0.17	U	1.0	0.17	ug/L			07/25/16 10:28	1
trans-1,2-Dichloroethene	0.15	U	1.0	0.15	ug/L			07/25/16 10:28	1

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: A16-006 / S16-007 / W16-007

TestAmerica Job ID: 280-85511-1
SDG: DN0010

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

Lab Sample ID: MB 280-334917/6
Matrix: Water
Analysis Batch: 334917

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			07/25/16 10:28	1
trans-1,4-Dichloro-2-butene	0.80	U	3.0	0.80	ug/L			07/25/16 10:28	1
Trichloroethene	0.16	U	1.0	0.16	ug/L			07/25/16 10:28	1
Trichlorofluoromethane	0.29	U	2.0	0.29	ug/L			07/25/16 10:28	1
Vinyl acetate	0.94	U	3.0	0.94	ug/L			07/25/16 10:28	1
Vinyl chloride	0.10	U	1.0	0.10	ug/L			07/25/16 10:28	1
Xylenes, Total	0.19	U	2.0	0.19	ug/L			07/25/16 10:28	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*1.85*	*N*	*ug/L*		*6.52*			*07/25/16 10:28*	*1*
1,2,4-Trichlorobenzene	*0.516*	*J*	*ug/L*		*14.43*	*120-82-1*		*07/25/16 10:28*	*1*
1,2,3-Trichlorobenzene	*0.343*	*J*	*ug/L*		*15.09*	*87-61-6*		*07/25/16 10:28*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*		*07/25/16 10:28*	*1*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*		*07/25/16 10:28*	*1*
Dibromofluoromethane (Surr)	*109*		*70 - 130*		*07/25/16 10:28*	*1*
Toluene-d8 (Surr)	*108*		*70 - 130*		*07/25/16 10:28*	*1*

Lab Sample ID: LCS 280-334917/4
Matrix: Water
Analysis Batch: 334917

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	4.85		ug/L		97	65 - 135
1,1,1-Trichloroethane	5.00	5.76		ug/L		115	65 - 135
1,1,2,2-Tetrachloroethane	5.00	4.96		ug/L		99	58 - 135
1,1,2-Trichloroethane	5.00	5.62		ug/L		112	64 - 135
1,1-Dichloroethane	5.00	5.57		ug/L		111	65 - 135
1,1-Dichloroethene	5.00	5.46		ug/L		109	65 - 136
1,2,3-Trichloropropane	5.00	4.88		ug/L		98	65 - 135
1,2-Dibromo-3-Chloropropane	5.00	4.76	J	ug/L		95	57 - 135
1,2-Dibromoethane	5.00	4.82		ug/L		96	65 - 135
1,2-Dichloroethane	5.00	5.73		ug/L		115	65 - 135
1,2-Dichloropropane	5.00	5.89		ug/L		118	64 - 135
1,4-Dichlorobenzene	5.00	4.87		ug/L		97	65 - 135
2-Butanone (MEK)	20.0	22.5		ug/L		112	44 - 177
2-Hexanone	20.0	16.2		ug/L		81	57 - 139
4-Methyl-2-pentanone (MIBK)	20.0	18.8		ug/L		94	60 - 150
Acetone	20.0	27.4		ug/L		137	39 - 156
Benzene	5.00	5.45		ug/L		109	65 - 135
Bromodichloromethane	5.00	5.64		ug/L		113	65 - 135
Bromoform	5.00	4.87		ug/L		97	62 - 135
Bromomethane	5.00	5.12		ug/L		102	45 - 135
Carbon disulfide	5.00	5.13		ug/L		103	55 - 143
Carbon tetrachloride	5.00	5.53		ug/L		111	65 - 135
Chlorobenzene	5.00	4.98		ug/L		100	65 - 135

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: A16-006 / S16-007 / W16-007

TestAmerica Job ID: 280-85511-1
SDG: DN0010

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

Lab Sample ID: LCS 280-334917/4
Matrix: Water
Analysis Batch: 334917

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroethane	5.00	5.12		ug/L		102	46 - 136
Chloroform	5.00	5.85		ug/L		117	65 - 135
Chloromethane	5.00	4.48		ug/L		90	34 - 145
cis-1,2-Dichloroethene	5.00	5.68		ug/L		114	65 - 135
cis-1,3-Dichloropropene	5.00	4.79		ug/L		96	65 - 135
Dibromochloromethane	5.00	4.88		ug/L		98	65 - 135
Dibromomethane	5.00	5.51		ug/L		110	65 - 135
Dichlorodifluoromethane	5.00	5.42		ug/L		108	43 - 142
Ethylbenzene	5.00	4.67		ug/L		93	65 - 135
Methylene Chloride	5.00	8.73	O	ug/L		175	54 - 141
Styrene	5.00	3.82		ug/L		76	65 - 135
Tetrachloroethene	5.00	4.82		ug/L		96	65 - 135
Toluene	5.00	5.73		ug/L		115	65 - 135
trans-1,2-Dichloroethene	5.00	5.74		ug/L		115	65 - 135
trans-1,3-Dichloropropene	5.00	5.38		ug/L		108	65 - 135
Trichloroethene	5.00	5.65		ug/L		113	65 - 135
Trichlorofluoromethane	5.00	5.39		ug/L		108	53 - 137
Vinyl acetate	10.0	10.8		ug/L		108	11 - 187
Vinyl chloride	5.00	4.87		ug/L		97	40 - 137
Xylenes, Total	10.0	9.84		ug/L		98	65 - 135

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*
Dibromofluoromethane (Surr)	*103*		*70 - 130*
Toluene-d8 (Surr)	*106*		*70 - 130*

Lab Sample ID: LCSD 280-334917/5
Matrix: Water
Analysis Batch: 334917

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
1,1,1,2-Tetrachloroethane	5.00	4.84		ug/L		97	65 - 135	0	20
1,1,1-Trichloroethane	5.00	5.52		ug/L		110	65 - 135	4	20
1,1,2,2-Tetrachloroethane	5.00	5.06		ug/L		101	58 - 135	2	20
1,1,2-Trichloroethane	5.00	5.59		ug/L		112	64 - 135	1	27
1,1-Dichloroethane	5.00	5.47		ug/L		109	65 - 135	2	21
1,1-Dichloroethene	5.00	5.30		ug/L		106	65 - 136	3	20
1,2,3-Trichloropropane	5.00	5.04		ug/L		101	65 - 135	3	23
1,2-Dibromo-3-Chloropropane	5.00	4.27	J	ug/L		85	57 - 135	11	22
1,2-Dibromoethane	5.00	4.96		ug/L		99	65 - 135	3	27
1,2-Dichloroethane	5.00	5.84		ug/L		117	65 - 135	2	20
1,2-Dichloropropane	5.00	5.91		ug/L		118	64 - 135	0	20
1,4-Dichlorobenzene	5.00	4.93		ug/L		99	65 - 135	1	23
2-Butanone (MEK)	20.0	24.6		ug/L		123	44 - 177	9	32
2-Hexanone	20.0	17.4		ug/L		87	57 - 139	7	25
4-Methyl-2-pentanone (MIBK)	20.0	20.0		ug/L		100	60 - 150	6	22
Acetone	20.0	27.1		ug/L		136	39 - 156	1	23

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: A16-006 / S16-007 / W16-007

TestAmerica Job ID: 280-85511-1
SDG: DN0010

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

Lab Sample ID: LCSD 280-334917/5
Matrix: Water
Analysis Batch: 334917

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
Benzene	5.00	5.25		ug/L		105	65 - 135	4	20
Bromodichloromethane	5.00	6.07		ug/L		121	65 - 135	7	20
Bromoform	5.00	4.79		ug/L		96	62 - 135	2	27
Bromomethane	5.00	5.22		ug/L		104	45 - 135	2	33
Carbon disulfide	5.00	5.04		ug/L		101	55 - 143	2	20
Carbon tetrachloride	5.00	5.41		ug/L		108	65 - 135	2	21
Chlorobenzene	5.00	4.95		ug/L		99	65 - 135	1	20
Chloroethane	5.00	5.14		ug/L		103	46 - 136	0	25
Chloroform	5.00	5.68		ug/L		114	65 - 135	3	20
Chloromethane	5.00	4.40		ug/L		88	34 - 145	2	24
cis-1,2-Dichloroethene	5.00	5.57		ug/L		111	65 - 135	2	20
cis-1,3-Dichloropropene	5.00	4.68		ug/L		94	65 - 135	2	26
Dibromochloromethane	5.00	4.97		ug/L		99	65 - 135	2	20
Dibromomethane	5.00	5.83		ug/L		117	65 - 135	6	26
Dichlorodifluoromethane	5.00	5.41		ug/L		108	43 - 142	0	30
Ethylbenzene	5.00	4.74		ug/L		95	65 - 135	2	20
Methylene Chloride	5.00	9.68	O	ug/L		194	54 - 141	10	26
Styrene	5.00	3.75		ug/L		75	65 - 135	2	26
Tetrachloroethene	5.00	4.71		ug/L		94	65 - 135	2	20
Toluene	5.00	5.54		ug/L		111	65 - 135	3	20
trans-1,2-Dichloroethene	5.00	5.63		ug/L		113	65 - 135	2	24
trans-1,3-Dichloropropene	5.00	5.18		ug/L		104	65 - 135	4	26
Trichloroethene	5.00	5.46		ug/L		109	65 - 135	3	20
Trichlorofluoromethane	5.00	5.80		ug/L		116	53 - 137	7	27
Vinyl acetate	10.0	10.8		ug/L		108	11 - 187	0	24
Vinyl chloride	5.00	4.81		ug/L		96	40 - 137	1	24
Xylenes, Total	10.0	9.66		ug/L		97	65 - 135	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 130*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*
Dibromofluoromethane (Surr)	*102*		*70 - 130*
Toluene-d8 (Surr)	*106*		*70 - 130*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 280-337343/1-A
Matrix: Water
Analysis Batch: 337780

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 337343

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	3.1	U	20.0	3.1	ug/L		08/11/16 09:00	08/12/16 18:06	1
Arsenic	4.4	U	15.0	4.4	ug/L		08/11/16 09:00	08/12/16 18:06	1
Barium	0.840	B	10.0	0.58	ug/L		08/11/16 09:00	08/12/16 18:06	1
Cadmium	0.45	U	5.0	0.45	ug/L		08/11/16 09:00	08/12/16 18:06	1
Calcium	66.34	B	200	34.5	ug/L		08/11/16 09:00	08/12/16 18:06	1
Chromium	0.66	U	10.0	0.66	ug/L		08/11/16 09:00	08/12/16 18:06	1
Cobalt	1.2	U	10.0	1.2	ug/L		08/11/16 09:00	08/12/16 18:06	1

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: A16-006 / S16-007 / W16-007

TestAmerica Job ID: 280-85511-1
SDG: DN0010

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

Lab Sample ID: MB 280-337343/1-A
Matrix: Water
Analysis Batch: 337780

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 337343

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	4.2	U	15.0	4.2	ug/L		08/11/16 09:00	08/12/16 18:06	1
Iron	22.0	U	100	22.0	ug/L		08/11/16 09:00	08/12/16 18:06	1
Magnesium	10.73	B	200	10.7	ug/L		08/11/16 09:00	08/12/16 18:06	1
Manganese	0.390	B	10.0	0.25	ug/L		08/11/16 09:00	08/12/16 18:06	1
Nickel	1.3	U	40.0	1.3	ug/L		08/11/16 09:00	08/12/16 18:06	1
Potassium	237	U	3000	237	ug/L		08/11/16 09:00	08/12/16 18:06	1
Silver	0.93	U	10.0	0.93	ug/L		08/11/16 09:00	08/12/16 18:06	1
Sodium	91.6	U	1000	91.6	ug/L		08/11/16 09:00	08/12/16 18:06	1
Vanadium	1.1	U	10.0	1.1	ug/L		08/11/16 09:00	08/12/16 18:06	1
Zinc	4.5	U	20.0	4.5	ug/L		08/11/16 09:00	08/12/16 18:06	1

Lab Sample ID: LCS 280-337343/2-A
Matrix: Water
Analysis Batch: 337780

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 337343

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	500	510.5		ug/L		102	80 - 120
Arsenic	1000	1037		ug/L		104	80 - 120
Barium	2000	2045		ug/L		102	80 - 120
Cadmium	100	99.06		ug/L		99	80 - 120
Calcium	50000	50580		ug/L		101	80 - 120
Chromium	200	203.3		ug/L		102	80 - 120
Cobalt	500	498.0		ug/L		100	80 - 120
Copper	250	244.0		ug/L		98	80 - 120
Iron	1000	992.7		ug/L		99	80 - 120
Magnesium	50000	48400		ug/L		97	80 - 120
Manganese	500	476.3		ug/L		95	80 - 120
Nickel	500	495.5		ug/L		99	80 - 120
Potassium	50000	53270		ug/L		107	80 - 120
Silver	50.0	49.87		ug/L		100	80 - 120
Sodium	50000	52310		ug/L		105	80 - 120
Vanadium	500	479.6		ug/L		96	80 - 120
Zinc	500	464.1		ug/L		93	80 - 120

Lab Sample ID: 280-85682-1 MS
Matrix: Water
Analysis Batch: 337780

Client Sample ID: B35NT7
Prep Type: Total/NA
Prep Batch: 337343

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	3.1	U	500	509.8		ug/L		102	75 - 125
Arsenic	7.9	B	1000	1057		ug/L		105	75 - 125
Barium	55.1		2000	2135		ug/L		104	75 - 125
Cadmium	0.45	U	100	99.29		ug/L		99	75 - 125
Calcium	47100		50000	96730		ug/L		99	75 - 125
Chromium	53.5		200	264.6		ug/L		106	75 - 125
Cobalt	1.2	U	500	495.3		ug/L		99	75 - 125
Copper	4.2	U	250	248.3		ug/L		99	75 - 125
Iron	242		1000	1250		ug/L		101	75 - 125
Magnesium	14000		50000	62210		ug/L		96	75 - 125

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: A16-006 / S16-007 / W16-007

TestAmerica Job ID: 280-85511-1
SDG: DN0010

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

Lab Sample ID: 280-85682-1 MS
Matrix: Water
Analysis Batch: 337780

Client Sample ID: B35NT7
Prep Type: Total/NA
Prep Batch: 337343

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	4.8	B C	500	483.9		ug/L		96	75 - 125
Nickel	25.2	B	500	522.4		ug/L		99	75 - 125
Potassium	7860		50000	61530		ug/L		107	75 - 125
Silver	0.93	U	50.0	50.41		ug/L		101	75 - 125
Sodium	26400		50000	77320		ug/L		102	75 - 125
Vanadium	17.0		500	504.0		ug/L		97	75 - 125
Zinc	4.5	U	500	466.8		ug/L		93	75 - 125

Lab Sample ID: 280-85682-1 MSD
Matrix: Water
Analysis Batch: 337780

Client Sample ID: B35NT7
Prep Type: Total/NA
Prep Batch: 337343

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	3.1	U	500	502.5		ug/L		101	75 - 125	1	20
Arsenic	7.9	B	1000	1038		ug/L		103	75 - 125	2	20
Barium	55.1		2000	2088		ug/L		102	75 - 125	2	20
Cadmium	0.45	U	100	97.71		ug/L		98	75 - 125	2	20
Calcium	47100		50000	95480		ug/L		97	75 - 125	1	20
Chromium	53.5		200	257.7		ug/L		102	75 - 125	3	20
Cobalt	1.2	U	500	486.9		ug/L		97	75 - 125	2	20
Copper	4.2	U	250	240.9		ug/L		96	75 - 125	3	20
Iron	242		1000	1231		ug/L		99	75 - 125	2	20
Magnesium	14000		50000	60660		ug/L		93	75 - 125	3	20
Manganese	4.8	B C	500	472.1		ug/L		93	75 - 125	2	20
Nickel	25.2	B	500	511.3		ug/L		97	75 - 125	2	20
Potassium	7860		50000	60570		ug/L		105	75 - 125	2	20
Silver	0.93	U	50.0	49.51		ug/L		99	75 - 125	2	20
Sodium	26400		50000	75820		ug/L		99	75 - 125	2	20
Vanadium	17.0		500	490.6		ug/L		95	75 - 125	3	20
Zinc	4.5	U	500	452.6		ug/L		91	75 - 125	3	20

Lab Sample ID: MB 280-337341/1-A
Matrix: Water
Analysis Batch: 337780

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 337341

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	3.1	U	20.0	3.1	ug/L		08/11/16 09:00	08/12/16 17:39	1
Arsenic	4.4	U	15.0	4.4	ug/L		08/11/16 09:00	08/12/16 17:39	1
Barium	0.740	B	10.0	0.58	ug/L		08/11/16 09:00	08/12/16 17:39	1
Cadmium	0.45	U	5.0	0.45	ug/L		08/11/16 09:00	08/12/16 17:39	1
Calcium	34.5	U	200	34.5	ug/L		08/11/16 09:00	08/12/16 17:39	1
Chromium	0.66	U	10.0	0.66	ug/L		08/11/16 09:00	08/12/16 17:39	1
Cobalt	1.2	U	10.0	1.2	ug/L		08/11/16 09:00	08/12/16 17:39	1
Copper	4.2	U	15.0	4.2	ug/L		08/11/16 09:00	08/12/16 17:39	1
Iron	56.47	B	100	22.0	ug/L		08/11/16 09:00	08/12/16 17:39	1
Magnesium	10.7	U	200	10.7	ug/L		08/11/16 09:00	08/12/16 17:39	1
Manganese	0.25	U	10.0	0.25	ug/L		08/11/16 09:00	08/12/16 17:39	1
Nickel	1.3	U	40.0	1.3	ug/L		08/11/16 09:00	08/12/16 17:39	1
Potassium	237	U	3000	237	ug/L		08/11/16 09:00	08/12/16 17:39	1

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: A16-006 / S16-007 / W16-007

TestAmerica Job ID: 280-85511-1
SDG: DN0010

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

Lab Sample ID: MB 280-337341/1-A
Matrix: Water
Analysis Batch: 337780

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 337341

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.93	U	10.0	0.93	ug/L		08/11/16 09:00	08/12/16 17:39	1
Sodium	91.6	U	1000	91.6	ug/L		08/11/16 09:00	08/12/16 17:39	1
Vanadium	1.1	U	10.0	1.1	ug/L		08/11/16 09:00	08/12/16 17:39	1
Zinc	4.5	U	20.0	4.5	ug/L		08/11/16 09:00	08/12/16 17:39	1

Lab Sample ID: LCS 280-337341/2-A
Matrix: Water
Analysis Batch: 337780

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 337341

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	500	525.7		ug/L		105	80 - 120
Arsenic	1000	1061		ug/L		106	80 - 120
Barium	2000	2063		ug/L		103	80 - 120
Cadmium	100	101.5		ug/L		101	80 - 120
Calcium	50000	50990		ug/L		102	80 - 120
Chromium	200	205.4		ug/L		103	80 - 120
Cobalt	500	504.6		ug/L		101	80 - 120
Copper	250	249.3		ug/L		100	80 - 120
Iron	1000	1007		ug/L		101	80 - 120
Magnesium	50000	49180		ug/L		98	80 - 120
Manganese	500	483.0		ug/L		97	80 - 120
Nickel	500	503.6		ug/L		101	80 - 120
Potassium	50000	53780		ug/L		108	80 - 120
Silver	50.0	51.13		ug/L		102	80 - 120
Sodium	50000	52480		ug/L		105	80 - 120
Vanadium	500	487.4		ug/L		97	80 - 120
Zinc	500	469.7		ug/L		94	80 - 120

Lab Sample ID: 280-85682-4 MS
Matrix: Water
Analysis Batch: 337780

Client Sample ID: B35NV4
Prep Type: Dissolved
Prep Batch: 337341

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	3.1	U	500	523.2		ug/L		105	75 - 125
Arsenic	9.3	B	1000	1061		ug/L		105	75 - 125
Barium	53.5		2000	2114		ug/L		103	75 - 125
Cadmium	0.45	U	100	100.9		ug/L		101	75 - 125
Calcium	45700		50000	96520		ug/L		102	75 - 125
Chromium	6.0	B	200	209.4		ug/L		102	75 - 125
Cobalt	1.2	U	500	497.2		ug/L		99	75 - 125
Copper	4.2	U	250	248.4		ug/L		99	75 - 125
Iron	44.0	B C	1000	1020		ug/L		98	75 - 125
Magnesium	13700		50000	62280		ug/L		97	75 - 125
Manganese	0.83	B	500	478.4		ug/L		96	75 - 125
Nickel	2.4	B	500	497.5		ug/L		99	75 - 125
Potassium	7610		50000	61660		ug/L		108	75 - 125
Silver	0.93	U	50.0	51.01		ug/L		102	75 - 125
Sodium	25700		50000	77550		ug/L		104	75 - 125
Vanadium	16.7		500	498.5		ug/L		96	75 - 125

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: A16-006 / S16-007 / W16-007

TestAmerica Job ID: 280-85511-1
SDG: DN0010

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

Lab Sample ID: 280-85682-4 MS — **Client Sample ID: B35NV4**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 337780 — **Prep Batch: 337341**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Zinc	4.5	U	500	463.7		ug/L		93	75 - 125

Lab Sample ID: 280-85682-4 MSD — **Client Sample ID: B35NV4**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 337780 — **Prep Batch: 337341**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	3.1	U	500	527.1		ug/L		105	75 - 125	1	20
Arsenic	9.3	B	1000	1071		ug/L		106	75 - 125	1	20
Barium	53.5		2000	2132		ug/L		104	75 - 125	1	20
Cadmium	0.45	U	100	101.5		ug/L		101	75 - 125	1	20
Calcium	45700		50000	96750		ug/L		102	75 - 125	0	20
Chromium	6.0	B	200	210.9		ug/L		102	75 - 125	1	20
Cobalt	1.2	U	500	499.7		ug/L		100	75 - 125	1	20
Copper	4.2	U	250	251.0		ug/L		100	75 - 125	1	20
Iron	44.0	B C	1000	1031		ug/L		99	75 - 125	1	20
Magnesium	13700		50000	62790		ug/L		98	75 - 125	1	20
Manganese	0.83	B	500	483.2		ug/L		96	75 - 125	1	20
Nickel	2.4	B	500	499.3		ug/L		99	75 - 125	0	20
Potassium	7610		50000	61910		ug/L		109	75 - 125	0	20
Silver	0.93	U	50.0	51.49		ug/L		103	75 - 125	1	20
Sodium	25700		50000	77530		ug/L		104	75 - 125	0	20
Vanadium	16.7		500	503.4		ug/L		97	75 - 125	1	20
Zinc	4.5	U	500	482.1		ug/L		96	75 - 125	4	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 280-334797/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 336983 — **Prep Batch: 334797**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Uranium	0.050	U	1.0	0.050	ug/L		08/03/16 08:05	08/08/16 12:40	1

Lab Sample ID: LCS 280-334797/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 336983 — **Prep Batch: 334797**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Uranium	40.0	37.79		ug/L		94	80 - 120

Lab Sample ID: 280-85682-1 MS — **Client Sample ID: B35NT7**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 336983 — **Prep Batch: 334797**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Uranium	11.0		40.0	50.02		ug/L		98	75 - 125

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: A16-006 / S16-007 / W16-007

TestAmerica Job ID: 280-85511-1
SDG: DN0010

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

Lab Sample ID: 280-85682-1 MSD — **Client Sample ID: B35NT7**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 336983 — **Prep Batch: 334797**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Uranium	11.0		40.0	49.03		ug/L		95	75 - 125	2	20

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

Lab Sample ID: MB 280-337162/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 337162

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			08/05/16 11:00	1

Lab Sample ID: LCS 280-337162/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 337162

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Halogens - Dup	100	90.98		ug/L		91	80 - 120

Lab Sample ID: LCSD 280-337162/5 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 337162

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Halogens - Dup	100	96.09		ug/L		96	80 - 120	5	23

Lab Sample ID: MB 280-337319/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 337319

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			08/09/16 13:23	1

Lab Sample ID: LCS 280-337319/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 337319

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Halogens - Dup	100	96.59		ug/L		97	80 - 120

Lab Sample ID: LCSD 280-337319/5 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 337319

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Halogens - Dup	100	98.09		ug/L		98	80 - 120	2	23

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: A16-006 / S16-007 / W16-007

TestAmerica Job ID: 280-85511-1
SDG: DN0010

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

Lab Sample ID: 280-85511-3 MS — **Client Sample ID: B35PV2**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 337319

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Halogens - Dup	15.4	U	100	83.22		ug/L		83	75 - 125		

Lab Sample ID: 280-85511-3 MSD — **Client Sample ID: B35PV2**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 337319

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Halogens - Dup	15.4	U	100	83.02		ug/L		83	75 - 125	0	23

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

Lab Sample ID: MB 280-334928/62 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 334928

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average	155	U	1000	155	ug/L			07/23/16 06:27	1

Lab Sample ID: LCS 280-334928/61 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 334928

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon - Average			25000	23710		ug/L		95	80 - 120		

Lab Sample ID: 280-85511-1 MS — **Client Sample ID: B35PV4**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 334928

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon - Average	291	B	25000	23740		ug/L		94	75 - 125		

Lab Sample ID: 280-85511-1 MSD — **Client Sample ID: B35PV4**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 334928

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Average	291	B	25000	23590		ug/L		93	75 - 125	1	20

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: A16-006 / S16-007 / W16-007

TestAmerica Job ID: 280-85511-1
SDG: DN0010

GC/MS VOA

Analysis Batch: 334917

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85512-6	B35TX8	Total/NA	Water	8260B	
MB 280-334917/6	Method Blank	Total/NA	Water	8260B	
LCS 280-334917/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 280-334917/5	Lab Control Sample Dup	Total/NA	Water	8260B	

Metals

Prep Batch: 334797

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85512-5	B35RM7	Total/NA	Water	3020A	
280-85682-1	B35NT7	Total/NA	Water	3020A	
MB 280-334797/1-A	Method Blank	Total/NA	Water	3020A	
LCS 280-334797/2-A	Lab Control Sample	Total/NA	Water	3020A	
280-85682-1 MS	B35NT7	Total/NA	Water	3020A	
280-85682-1 MSD	B35NT7	Total/NA	Water	3020A	

Analysis Batch: 336983

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85512-5	B35RM7	Total/NA	Water	6020A	334797
280-85682-1	B35NT7	Total/NA	Water	6020A	334797
MB 280-334797/1-A	Method Blank	Total/NA	Water	6020A	334797
LCS 280-334797/2-A	Lab Control Sample	Total/NA	Water	6020A	334797
280-85682-1 MS	B35NT7	Total/NA	Water	6020A	334797
280-85682-1 MSD	B35NT7	Total/NA	Water	6020A	334797

Prep Batch: 337341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85682-4	B35NV4	Dissolved	Water	3005A	
MB 280-337341/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 280-337341/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
280-85682-4 MS	B35NV4	Dissolved	Water	3005A	
280-85682-4 MSD	B35NV4	Dissolved	Water	3005A	

Prep Batch: 337343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85682-1	B35NT7	Total/NA	Water	3010A	
MB 280-337343/1-A	Method Blank	Total/NA	Water	3010A	
LCS 280-337343/2-A	Lab Control Sample	Total/NA	Water	3010A	
280-85682-1 MS	B35NT7	Total/NA	Water	3010A	
280-85682-1 MSD	B35NT7	Total/NA	Water	3010A	

Analysis Batch: 337780

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85682-1	B35NT7	Total/NA	Water	6010C	337343
280-85682-4	B35NV4	Dissolved	Water	6010C	337341
MB 280-337341/1-A	Method Blank	Total Recoverable	Water	6010C	337341
MB 280-337343/1-A	Method Blank	Total/NA	Water	6010C	337343
LCS 280-337341/2-A	Lab Control Sample	Total Recoverable	Water	6010C	337341
LCS 280-337343/2-A	Lab Control Sample	Total/NA	Water	6010C	337343
280-85682-1 MS	B35NT7	Total/NA	Water	6010C	337343

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: A16-006 / S16-007 / W16-007

TestAmerica Job ID: 280-85511-1
SDG: DN0010

Metals (Continued)

Analysis Batch: 337780 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85682-1 MSD	B35NT7	Total/NA	Water	6010C	337343
280-85682-4 MS	B35NV4	Dissolved	Water	6010C	337341
280-85682-4 MSD	B35NV4	Dissolved	Water	6010C	337341

General Chemistry

Analysis Batch: 334928

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85511-1	B35PV4	Total/NA	Water	9060A	
280-85511-2	B35P70	Total/NA	Water	9060A	
280-85511-3	B35PV2	Total/NA	Water	9060A	
280-85511-4	B35PV6	Total/NA	Water	9060A	
280-85512-1	B35PP0	Total/NA	Water	9060A	
280-85512-2	B35PP2	Total/NA	Water	9060A	
280-85512-3	B35NX3	Total/NA	Water	9060A	
280-85512-4	B35PN8	Total/NA	Water	9060A	
280-85682-1	B35NT7	Total/NA	Water	9060A	
280-85682-2	B35PL9	Total/NA	Water	9060A	
280-85682-3	B35PL7	Total/NA	Water	9060A	
280-85682-5	B35PM1	Total/NA	Water	9060A	
MB 280-334928/62	Method Blank	Total/NA	Water	9060A	
LCS 280-334928/61	Lab Control Sample	Total/NA	Water	9060A	
280-85511-1 MS	B35PV4	Total/NA	Water	9060A	
280-85511-1 MSD	B35PV4	Total/NA	Water	9060A	

Analysis Batch: 337162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85511-1	B35PV4	Total/NA	Water	9020B	
280-85511-2	B35P70	Total/NA	Water	9020B	
280-85511-4	B35PV6	Total/NA	Water	9020B	
280-85512-1	B35PP0	Total/NA	Water	9020B	
280-85512-2	B35PP2	Total/NA	Water	9020B	
280-85512-3	B35NX3	Total/NA	Water	9020B	
280-85512-4	B35PN8	Total/NA	Water	9020B	
MB 280-337162/2	Method Blank	Total/NA	Water	9020B	
LCS 280-337162/4	Lab Control Sample	Total/NA	Water	9020B	
LCSD 280-337162/5	Lab Control Sample Dup	Total/NA	Water	9020B	

Analysis Batch: 337319

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-85511-3	B35PV2	Total/NA	Water	9020B	
280-85682-1	B35NT7	Total/NA	Water	9020B	
280-85682-2	B35PL9	Total/NA	Water	9020B	
280-85682-3	B35PL7	Total/NA	Water	9020B	
280-85682-5	B35PM1	Total/NA	Water	9020B	
MB 280-337319/2	Method Blank	Total/NA	Water	9020B	
LCS 280-337319/4	Lab Control Sample	Total/NA	Water	9020B	
LCSD 280-337319/5	Lab Control Sample Dup	Total/NA	Water	9020B	
280-85511-3 MS	B35PV2	Total/NA	Water	9020B	
280-85511-3 MSD	B35PV2	Total/NA	Water	9020B	

Surrogate Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: A16-006 / S16-007 / W16-007

TestAmerica Job ID: 280-85511-1
SDG: DN0010

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

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

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	DBFM	TOL
Lab Sample ID	**Client Sample ID**	**(70-130)**	**(70-130)**	**(70-130)**	**(70-130)**
280-85512-6	B35TX8	106	111	107	110
LCS 280-334917/4	Lab Control Sample	102	106	103	106
LCSD 280-334917/5	Lab Control Sample Dup	105	104	102	106
MB 280-334917/6	Method Blank	103	111	109	108

Surrogate Legend

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