TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica St. Louis
13715 Rider Trail North
Earth City, MO 63045
Tel: (314)298-8566

TestAmerica Job ID: 160-21812-1
TestAmerica Sample Delivery Group: SL2499
Client Project/Site: X17-003 / S17-004 / W17-004
Revision: 1

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

Attn: Mr. Scot Fitzgerald

Authorized for release by:
2/23/2018 5:01:44 PM

Jayna Awalt, Project Manager II
(314)298-8566
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LINKS

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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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Case Narrative

Job ID: 160-21812-1

Laboratory: TestAmerica St. Louis

Narrative

CASE NARRATIVE

Rev. 1 - Per SIR18-0480, 1,4-Dichlorobenzene has been reported for 8260 samples B39081, B390B2 and B390F7.

CH2MHill Plateau Remediation Company
P.O. Box 1600
Richland, Washington 99352
May 12, 2017
Attention: Scot Fitzgerald

SDG	: SL2499
Number of Samples	: 18 samples
Sample Matrix	: Water
Data Deliverable	: Summary
Date SDG Closed	: April 12, 2017

II. Introduction

On April 11 and 12, 18 samples were received by TestAmerica - St. Louis for chemical analysis. The samples were received within temperature criteria. See the COC and receipt checklists for documentation of any variations on receipt conditions and temperature. Upon receipt, samples were given laboratory Ids to correspond with specific client Ids. Please refer to the Sample Summary sheets attached to this case narrative. This report is incomplete without the narrative.

Samples B39LK0, B39LK1, B39LK2 and B39LK3 were received with nickel-sized headspace in the TOX bottles. Per SIR17-618, analysis was performed and reported.

The following SAFs are associated with this SDG: X17-003, S17-004 and W17-004

III. Analytical Results/ Methodology

The analytical results for this report are presented by analytical test. Each set of data includes sample identification information, analytical results and the appropriate detection limits. All results are based upon samples as they were received, i.e. wet weight, unless otherwise noted on the data sheets. See the attached Methods Summary Form for the methods used in this SDG.

MS/MSD/Dup analysis was done per the client requirements. Analytical batches that did not contain matrix QC were analyzed with an LCS/LCS duplicate.

Note: For Metals analyses, per standard practice, all 6020 water and soil samples are initially prepared at 2x dilution. This standard dilution does not affect reporting limits as MDL studies are also prepared in the same manner. These dilutions do not necessitate a narrative note; however, they are flagged “D” due to a limitation in the LIMS.

For solid matrices, all Metals analyses (including Hg) use a Standard Reference Material for the Laboratory Control Sample (LCS). Certificate for this source material may be obtained from TASL.

For Anion analysis, samples have been started at a 2x dilution per CHPRC direction. The samples are flagged accordingly with a “D” flag if sample concentration is above the MDL/RL. Non-conformance will be included in the below section only if dilution is greater than 2x.

For WTPH methods, the lab utilizes method 8015B. Per CHPRC direction, the method name in the electronic data has been modified to read WTPH in the place of 8015B.

Per CHPRC direction, due to the short hold times for Nitrate, Nitrite and Phosphate by IC (48 hours) as well as pH analysis (24 hours), a SIR request is not needed when samples are run outside 1x hold but within 2x hold. A narrative comment will be included below if a sample is run outside the lab-specified hold time for waters.

For extractable and volatile organic analyses, several analytes are considered poor performers and will not meet CHPRC QC limits. Per

Job ID: 160-21812-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

CHPRC direction, the lab's statistical limits have been reported. Excursions outside these statistical limits will include a non-conformance in the sections below.

IV. Definitions

QCBLK- Quality Control Blank, Method Blank
QCLCS- Quality Control Laboratory Control Sample, Blank Spike
DUP- Laboratory Duplicate
MS- Matrix Spike
MSD- Matrix Spike Duplicate

The term "Detection Limit" used in the analytical data report refers to either the lab's standard reporting limits or contractually required reporting limits, whichever is applicable.

The following data qualifiers may be applicable to the results in this report, as appropriate.

- **B** - For inorganic analyses, the sample result is greater than the MDL but less than the RL.
- **B** - For organic analyses, Method Blank contamination. The Method Blank contains the target analyte at a concentration above the MDL.
- **B** - For radiochemistry, Method Blank reported above the MDC. Sample activity is > 5% the method blank.
- **J** - For organic analyses, the sample is estimated and less than the RL.
- **C** - For inorganic analyses, Method Blank contamination. The Method Blank contains the target analyte at a concentration above the MDL/RL but not greater than 5% the MB.
- **D** - For all analyses, the sample result was obtained from the analysis of a dilution. For ICPMS Metals analyses, per standard practice, all samples are initially prepared at a 2x dilution. This standard dilution does not affect reporting limits as MDL studies are also prepared in the same manner and will not be narrated below. Only dilutions above 2x will be narrated and considered a true dilution for these samples.
- **N** - For inorganics, rad and GC analyses, the spike/spike duplicate recoveries are outside QC limits.
- **T** - For GCMS analyses, the spike/spike duplicate recoveries are outside QC limits.
- **o** - For all analyses, the LCS (LCSD) recoveries are outside QC limits.
- **P -** For organic analyses (PCB/Pests only), the aroclor target analyte has greater than 25% difference for detected concentrations between the two GC columns.
- **X-** Organics and Anions IC - Sample concentration over calibration and/or surrogate recovery outside QC limits.
- **X-** Inorganics - The analyte present in the original sample is > 4x the spike concentration.
- **X-** Radiochemistry - Carrier or Tracer recovery is outside limits.
- **Z-** Sample was prepped or analyzed beyond the specified sample holding time.
- **y -** RPD is outside established limits.

Volatiles

Batch: 303648

The continuing calibration verification (CCV) associated with batch analytical batch 160-303648 recovered above the upper control limit for Isobutyl alcohol, Trichlorofluoromethane, and 2-Hexanone. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: (CCVIS 160-303648/2).

The following compounds did not meet the minimum relative response factor limits in the continuing calibration verification (CCV) associated with batch analytical batch 160-303648: 2-Butanone, 2-Hexanone, and Acetone. A low level CCV was analyzed at the base reporting limit of 1ug/L and the affected analytes were detected. Affected target analytes recovering above the reporting limit in the associated samples will be qualified and reported. (CCVIS 160-303648/2)

The matrix spike / matrix spike duplicate (MS/MSD) precision for analytical batch 160-303648 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits. (160-21812-A-1 MS) and (160-21812-A-1 MSD)

The following sample was analyzed at reduced volume due to high concentrations of target analytes: B39337 (160-21829-1). The

Job ID: 160-21812-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

reporting limits have been elevated by the appropriate factor. These analytes have been qualified accordingly with a "D" flag in the associated samples.

Semivolatiles

Batch: 306948

The LCS spike recoveries for several analytes are outside the lower QC limits. The samples are outside the 2X holding time window and thus will not be re-prepped and re-analyzed. Results are provided with this narrative.B390B2 (160-21813-3), B390F7 (160-21813-4), B39081 (160-21813-5), B397P7 (160-21829-3), (LCS 160-303360/2-A), (MB 160-303360/1-A), (160-21813-C-3-A MS) and (160-21813-D-3-A MSD) These analytes have been qualified accordingly with an "o" flag in the associated samples.

The MSD spike recoveries and precision for several analytes are outside the acceptable QC limits. The samples are outside the 2X holding time window and thus will not be re-prepped and re-analyzed. Results are provided with this narrative.B390B2 (160-21813-3), B390F7 (160-21813-4), B39081 (160-21813-5), B397P7 (160-21829-3), (LCS 160-303360/2-A), (MB 160-303360/1-A), (160-21813-C-3-A MS) and (160-21813-D-3-A MSD) MSD failures have been qualified with a "T" flag in the associated samples.

The CCV surrogate recovery for 2,4,6-Tribromophenol is outside the upper QC limits. The samples associated with this CCV had acceptable surrogate recoveries. Results are provided with this narrative.B390B2 (160-21813-3), B390F7 (160-21813-4), B39081 (160-21813-5), B397P7 (160-21829-3), (CCVIS 160-306948/3), (LCS 160-303360/2-A), (MB 160-303360/1-A), (160-21813-C-3-A MS) and (160-21813-D-3-A MSD)

The continuing calibration verification (CCV) associated with batch 160-306948 recovered above the upper control limit for alpha, alpha-Dimethyl phenethylamine. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: B390B2 (160-21813-3), B390F7 (160-21813-4), B39081 (160-21813-5), B397P7 (160-21829-3), (CCV 160-306948/4), (LCS 160-303360/2-A), (MB 160-303360/1-A), (160-21813-C-3-A MS) and (160-21813-D-3-A MSD).

The CCV recoveries for Famphur, Kepone, and Hexachlorophene are outside the QC limits. These compounds are poor responding compounds and thus will be reported as estimated. No further action is required. (CCV 160-306948/4), (CCV 160-306948/5) and (CCV 160-306948/6)

Pesticides

Batch: 303929

The laboratory control sample (LCS) for preparation batch 160-303381 and analytical batch 160-303929 recovered outside control limits for the following analytes: Aldrin and gamma-BHC (Lindane). These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. (LCS 160-303381/2-A) These analytes have been qualified accordingly with an "o" flag in the associated samples.

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 160-303381 and analytical batch 160-303929 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits for these analytes.(160-21829-B-2-A MS) and (160-21829-C-2-A MSD) These analytes have been qualified accordingly with an "N" flag in the associated samples.

Herbicides

Batch: 306680

The initial calibration curve analyzed in batch160-285841 was outside y-intercept acceptance criteria for MCPP from the primary column. MCPP will report from the confirmation column analysis. B397P7 (160-21829-3), B390C3 (160-21829-5), (LCS 160-303941/2-A), (MB 160-303941/1-A), (160-21829-C-5-A MS) and (160-21829-D-5-A MSD)

The continuing calibration verification (CCV) associated with batch 160-306680 recovered above the upper control limit for 2,4,5-T. The

Job ID: 160-21812-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. (CCV 160-306680/21)

The laboratory control sample (LCS) for preparation batch 160-303941 and analytical batch 160-306680 recovered outside control limits for the following analyte: MCPP. The analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported. (LCS 160-303941/2-A) This analyte has been qualified accordingly with an "o" flag in the associated samples.

The matrix spike duplicate (MSD) recovery and precision for preparation batch 160-303941 and analytical batch 160-306680 was outside control limits for MCPP. The analyte was biased high in the MSD and was not detected in the associated samples; therefore, the data have been reported. (160-21829-C-5-A MS) and (160-21829-D-5-A MSD) MSD failure has been qualified accordingly with an "N" flag in the associated samples.

The surrogate recovery for the MSD associated with preparation batch 160-303941 and analytical batch 160-306680 was outside the upper control limits. The associated sample was within QC limits for the surrogate recovery; therefore, re-analysis was not required.

ICP Metals

Batch: 304407

Due to the high concentration of Calcium, the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 160-304143 and analytical batch 160-304407 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria. (160-21829-A-6-E MS) and (160-21829-A-6-F MSD)

ICPMS Metals

Batch: 305645

The low level check (CCVL) was outside the upper QC limits for Beryllium. Associated samples which are below the reporting limit for the contaminant do not require re-analysis. Original results are reported. (CCVL 160-305645/25)

The low level check (CCVL) was outside the upper QC limits for Beryllium and Cadmium. Associated samples which are below the reporting limit for the contaminant do not require re-analysis. Original results are reported. (CCVL 160-305645/38)

Due to linear range check (LRC) failures, the linear range for beryllium has been lowered to the concentration of the highest calibration standard (200ppb). The LCS/MS/MSD were above the LRC, but was within acceptable limits. (LCS 160-304144/2-A), (160-21829-A-6-H MS) and (160-21829-A-6-I MSD)

TOX

Batch: 307081

The following samples in TOX analytical batch 160-307081 are reported from only one top and one bottom column result, rather than an average of two top and bottom replicates: B39LK2 (160-21813-7) Sample 21813-7 is reported from its first replicate result (0.00 ug/L), as the second replicate chromatogram shows that a noisy baseline during the analysis of both columns caused what appears to be false high results which did not confirm the first replicate results, nor the other sample results in this batch.

The following sample and its duplicate (DU) in TOX analytical batch 160-307081 have an RPD that is outside the acceptance limit of 20% (40%): (160-21770-A-7-A) and (160-21770-A-7-B DU) However, RPD is not as applicable for values near the reporting limit (RL). As the sample and its DU have values less than 5x the RL and nearly within the RL (5 ug/L) of each other, results are reported with this narration.

The following matrix spike (MS) recovered outside control limits (82%) in TOX analytical batch 160-307081: (160-21770-A-18-B MS) Sample matrix interference may have been the cause of this MS failure. However, this low-recovering MS was bracketed by continuing calibration verifications (CCVs) that recovered below the lower acceptance limit, which may indicate a slight low bias in the bracketed samples, including this MS. The associated laboratory control sample (LCS) recovery was within acceptance limits, as was the other MS analyzed in this batch. This analyte has been qualified accordingly with an "N" flag in the associated samples.

Job ID: 160-21812-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

The following samples in TOX analytical batch 160-307081 were bracketed by continuing calibration verifications (CCVs) that recovered below the lower acceptance limit of 90%: B39LK3 (160-21813-6), B39LK2 (160-21813-7), B39LK1 (160-21813-8), B39LK0 (160-21813-9), B390C3 (160-21829-5) and B390L5 (160-21829-8) The cause of these CCV excursions is unknown, but may be attributed to slight instrument drift throughout the course of the long run. As the sample bottles now contain significant headspace, re-prep/re-analysis cannot be performed, as headspace is known to bias results low for TOX.

The following samples in TOX analytical batch 160-307081 were not bracketed by an ending CCV/CCB, due to a power outage in the laboratory that prevented the analysis of this ending bracketing QC. Additionally, sample 21829-8, which injected right before the power outage, only injected 3 of the 4 total columns at the time of the outage. Thus, the final result for sample 21829-8 is reported as an average of 3 of the 4 total columns (note: this sample result is ND). B39LK2 (160-21813-7), B39LK1 (160-21813-8), B39LK0 (160-21813-9), B390C3 (160-21829-5) and B390L5 (160-21829-8) As the sample bottles now contain significant headspace, re-prep/re-analysis cannot be performed, as headspace is known to bias results low for TOX.

There were no observations or non-conformances associated with the following methods:

PCBs
Mercury
Alkalinity
Total Cyanide
Sulfide
TOC

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:

Jayna Awalt
St. Louis Project Manager

SAMPLE ISSUE RESOLUTION		
	SIR NUM	SIR17-618
	REV NUM	0
	DATE INITIATED	4/13/2017

SAMPLE EVENT INFORMATION

SAF NUM(S)	W17-004
OPERABLE UNIT(S)	
PROJECT(S)	RCRA17
SAMPLE EVENT TITLE(S)	RCRA17
LABORATORY	TestAmerica St. Louis

SAMPLING INFORMATION

NUMBER OF SAMPLES	4
SAMPLE NUMBERS	B39LK0, B39LK1, B39LK2, B39LK3
SAMPLE MATRIX	WATER
COLLECTION DATE	4/10/2017 - 4/10/2017
SDG NUM	SL2499

ISSUE BACKGROUND

CLASS	Field Sampling Issue
TYPE	Insufficient Sample Volume Collected
DESCRIPTION	Sample bottles for TOX received with nickel size headspace.

DISPOSITION

DESCRIPTION	TASL PROPOSES TO PROCEDE WITH ANALYSIS AND NARRATE.
JUSTIFICATION	Final Disposition: Accept proposed resolution. SUBMITTED BY: Jayna Awalt DATE: 04/12/2017 ACCEPTED BY: Scot Fitzgerald DATE: 04/13/2017

SAMPLE ISSUE RESOLUTION (SIR) REPORT

SIR Number: SIR18-0480
Rev. Number: 0
Date Initiated: 02/12/2018

SAMPLE EVENT INFORMATION

SAF NUM(S): W17-004

LABORATORY: TASL

SAMPLING INFORMATION

NUMBER OF SAMPLES: 3

SAMPLE NUMBERS: B39081, B390B2, B390F7

SAMPLE MATRIX: WATER

SDG NUM(S): SL2499

ISSUE BACKGROUND

CLASS: General Laboratory Direction

TYPE: Addition of Analysis

DESCRIPTION: Due to an oversight 1,4-Dichlorobenzene was not requested in the original VOA analyte list for the sample(s) listed above.

RESOLUTION

PROPOSED RESOLUTION: Re-report the SDG with 1,4-Dichlorobenzene results included for the above sample(s)

FINAL RESOLUTION: Accept proposed resolution

SUBMITTED BY:

FITZGERALD, SL 02/12/2018

ACCEPTED BY:

AWALT, JK 02/12/2018

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 160-21812-1
SDG Number: SL2499

Login Number: 21812
List Number: 1
Creator: Daniels, Brian J

List Source: TestAmerica St. Louis

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	0.8
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 824499	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X17-003-247 Page 1 of 1

Collector	C.C. HOFFMAN/CHPRC	Contact/Requester	WATERS-HUSTED, K	Telephone No.	376-4650
SAF No.	X17-003	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	Groundwater Background Study, October	Logbook No.	HNF-N-506 92 / 62	Ice Chest No.	GWS-533
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	7788683851 49
Protocol	SURV	Priority:	30 Days PRIORITY	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

*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 Hold Time Total Activity Exemption: Yes ☑ No ☐

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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B39730	N	W	4-10-17	1017	5x40-mL aGs*	8260_VOA_GCMS: COMMON	14 Days	HCl or H2SO4 to pH <2/Cool <=6C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
C.C. HOFFMAN/CHPRC			APR 10 2017 1135	Lesly Wall /CHPRC	Lesly Wall		APR 10 2017 1135
Relinquished By	Lesly Wall /CHPRC	Lesly Wall	APR 10 2017 1400	Received By	FEDEX		Date/Time
Relinquished By			FED EX	Received By	Brian Daniel		4/11/17 0800
Relinquished By			Date/Time	Received By			Date/Time

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 3/2/2017 FSR ID = FSR42375 A-6004-842 (REV 2)

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FedEx ® Tracking

778868385149

Ship date:
Mon 4/10/2017

RICHLAND, WA US

Delivered
Signed for by: B.DANIELS

Actual delivery:
Tue 4/11/2017 8:55 am

EARTH CITY, MO US

Travel History

Date/Time	Activity	Location
- 4/11/2017 - Tuesday		
8:55 am	Delivered	EARTH CITY, MO
6:59 am	On FedEx vehicle for delivery	EARTH CITY, MO
6:52 am	At local FedEx facility	EARTH CITY, MO
5:22 am	At destination sort facility	BERKELEY, MO
4:36 am	Departed FedEx location	MEMPHIS, TN
12:22 am	Arrived at FedEx location	MEMPHIS, TN
- 4/10/2017 - Monday		
4:49 pm	Left FedEx origin facility	PASCO, WA
3:56 pm	Shipment information sent to FedEx	
3:24 pm	Picked up	PASCO, WA

Shipment Facts

Tracking number	778868385149	**Service**	FedEx Standard Overnight
Weight	86 lbs / 39.01 kgs	**Dimensions**	28x17x16 in.
Delivered To	Shipping/Receiving	**Total pieces**	1
Total shipment weight	86 lbs / 39.01 kgs	**Terms**	Recipient
Shipper reference	GWS-533	**Packaging**	Your Packaging
Special handling section	Deliver Weekday, Additional Handling Surcharge	**Standard transit**	4/11/2017 by 3:00 pm

Search or tracking number Subm

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New Customer Center
Small Business Center
Service Guide
Customer Support

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FedEx HealthCare Solutions
Online Retail Solutions
Packaging Services
Ancillary Clearance Services

Other Resources
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Developer Resource Center
FedEx Ship Manager Software
FedEx Mobile

Companies
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FedEx Custom Critical
FedEx Trade Networks
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Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 160-21813-1
SDG Number: SL2499

Login Number: 21813
List Number: 1
Creator: Daniels, Brian J

List Source: TestAmerica St. Louis

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	
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").	False	All TOX samples received with headspace.
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

CH2MHill Plateau Remediation Company SL2499

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # S17-004-529

Collector	C.C. HOFFMAN/CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	S17-004	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	SURV, APRIL 2017	Logbook No.	HNF-N-506 92/62	Ice Chest No.	GWS-5333
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	778868385149
Protocol	CERCLA	Priority:	30 Days PRIORITY	Offsite Property No.	N/A

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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B39LK7	N	W	4-10-17	0911	1x250-mL aG	9012_CYANIDE (TOTAL): COMMON	14 Days	NaOH to pH >=12/Cool <=6C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
C.C. HOFFMAN/CHPRC			APR 10 2017 1135	Lesly Wall /CHPRC	Lesly Wall		APR 10 2017 1135
Lesly Wall /CHPRC	Lesly Wall		APR 10 2017 1400	FEDEX			
FED EX				Brian Daniels			4/11/17 0900

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 4/10/2017 FSR ID = FSR25827 A-6004-842 (REV 2)

78 lbs

CH2MHill Plateau Remediation Company SL2499

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # S17-004-430

Collector	Jeff Tucksen CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	S17-004	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	SURV, APRIL 2017	Logbook No.	HNF-N-506 93/26	Ice Chest No.	GWS-344
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	778868350730
Protocol	CERCLA	Priority:	30 Days PRIORITY	Offsite Property No.	N/A

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

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B392B5	N	W	4-10-17	1225	1x250-mL G/P	310.1_ALKALINITY: GW 01	14 Days	Cool <=6C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	Jeff Tucksen CHPRC		APR 10 2017 1300		Lesly Wall /CHPRC	Lesly Wall	APR 10 2017 1300
	Lesly Wall /CHPRC	Lesly Wall	APR 10 2017 1400				
			FED EX		FEDEX		
					Brian Harris		4/11/17 0907

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 3/9/2017 FSR ID = FSR41966 A-6004-842 (REV 2)

CH2MHill Plateau Remediation Company 82499

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W17-004-214

Collector	Barb Briggs /CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	W17-004	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	RCRA, APRIL 2017	Logbook No.	HNF-N-506 88 / 35	Ice Chest No.	GWS-533
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	7788683851 49
Protocol	RCRA	Priority:	30 Days PRIORITY	Offsite Property No.	N/A

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

* Due to air generated during pumping unable to achieve zero head space on VOAs

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

N/A

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B390B2	N	W	APR 10 2017	0915	1x250-mL G/P	310.1_ALKALINITY: GW 01	14 Days	Cool <=6C
B390B2	N	W	↓	↓	* 5x40-mL aGs*	8260_VOA_GCMS: COMMON	14 Days	HCl or H2SO4 to pH <2/Cool <=6C
B390B2	N	W	APR 10 2017	0915	4x1-L aG	8270_SVOA_GCMS: 1,4 Dioxane (1)	7/40 Days	Cool <=6C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Barb Briggs /CHPRC			4.10.17 1040	Troy Bacon CHPRC			4.10.17 1040
Troy Bacon CHPRC			APR 10 2017 1400	FEDEX			
FED EX							4/11/17 0905

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 3/9/2017 FSR ID = FSR10515 A-6004-842 (REV 2)

CH2MHill Plateau Remediation Company 82499

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W17-004-218

Collector	C.C. HOFFMAN/CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	W17-004	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	RCRA, APRIL 2017	Logbook No.	HNF-N-506 92/62	Ice Chest No.	GWS-344
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	7788683507 30
Protocol	RCRA	Priority:	30 Days PRIORITY	Offsite Property No.	N/A

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

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B390F7	N	W	4-10-17	1120	1x250-mL G/P	310.1_ALKALINITY: GW 01	14 Days	Cool <=6C
B390F7	N	W	4-10-17	1120	5x40-mL aGs*	8260_VOA_GCMS: COMMON	14 Days	HCl or H2SO4 to pH <2/Cool <=6C
B390F7	N	W	4-10-17	1120	4x1-L aG	8270_SVOA_GCMS: 1,4 Dioxane (1)	7/40 Days	Cool <=6C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
C.C. HOFFMAN/CH...	CC Hoffman		APR 10 2017 1135	Lesly Wall /CHPRC	Lesly Wall		APR 10 2017 1135
Relinquished By	Lesly Wall /CHPRC		APR 10 2017 1400	Received By	FEDEX		
Relinquished By	FED EX			Received By	Brian Daniels		4/11/17 0905
Relinquished By				Received By			

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 3/9/2017 FSR ID = FSR36425 A-6004-842 (REV 2)

CH2MHill Plateau Remediation Company 812499

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W17-004-213

Collector	C.C. HOFFMAN/CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	W17-004	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	RCRA, APRIL 2017	Logbook No.	HNF-N-506 92/62	Ice Chest No.	GWS-344
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	7788683 50730
Protocol	RCRA	Priority:	30 Days PRIORITY	Offsite Property No.	N/A

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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B39081	N	W	4-10-17	1017	1x250-mL G/P	310.1_ALKALINITY: GW 01	14 Days	Cool <=6C
B39081	N	W	4-10-17	1017	5x40-mL aGs*	8260_VOA_GCMS: COMMON	14 Days	HCl or H2SO4 to pH <2/Cool <=6C
B39081	N	W	4-10-17	1017	4x1-L aG	8270_SVOA_GCMS: 1,4 Dioxane (1)	7/40 Days	Cool <=6C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
C.C. HOFFMAN/CHPRC			4-10-17 1135	Lesly Wall /CHPRC			APR 10 2017 1135
Relinquished By: Lesly Wall /CHPRC			APR 10 2017 1400	Received By	FEDEX		Date/Time
Relinquished By	FED EX		Date/Time	Received By	Brian Daniels		4/10/17 0905
Relinquished By			Date/Time	Received By			Date/Time

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 3/9/2017 FSR ID = FSR25690 A-6004-842 (REV 2)

86 lbs

CH2MHill Plateau Remediation Company SL2499

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W17-004-299

Collector	C.C. HOFFMAN/CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	W17-004	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	RCRA, APRIL 2017	Logbook No.	HNF-N-506 92 / 62	Ice Chest No.	GWS-533
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	7798868385149
Protocol	RCRA	Priority: 30 Days	PRIORITY	Offsite Property No.	N/A

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

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B39LK3	N	W	4-10-17	0911	1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2/Cool <=6C
B39LK3	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2/Cool <=6C
B39LK2	N	W			1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2/Cool <=6C
B39LK2	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2/Cool <=6C
B39LK1	N	W			1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2/Cool <=6C
B39LK1	N	W			1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2/Cool <=6C
B39LK0	N	W			1x250-mL G/P	310.1_ALKALINITY: GW 01	14 Days	Cool <=6C
B39LK0	N	W			1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2/Cool <=6C
B39LK0	N	W	4-10-17	0911	1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2/Cool <=6C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
C.C. HOFFMAN/CHPRC			APR 10 2017 1135	Lesly Wall /CHPRC	Lesly Wall		APR 10 2017 1135
Relinquished By	Lesly Wall /CHPRC		APR 10 2017 1400	Received By	FEDEX		Date/Time
Relinquished By	FED EX		Date/Time	Received By	Brian Dansen		4/11/17 0905
Relinquished By			Date/Time	Received By			Date/Time

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 4/10/2017 FSR ID = FSR25827 A-6004-842 (REV 2)

FedEx ® Tracking

778868385149

Ship date:
Mon 4/10/2017

RICHLAND, WA US

Delivered
Signed for by: B.DANIELS

Actual delivery:
Tue 4/11/2017 8:55 am

EARTH CITY, MO US

Travel History

Date/Time	Activity	Location
4/11/2017 - Tuesday		
8:55 am	Delivered	EARTH CITY, MO
6:59 am	On FedEx vehicle for delivery	EARTH CITY, MO
6:52 am	At local FedEx facility	EARTH CITY, MO
5:22 am	At destination sort facility	BERKELEY, MO
4:36 am	Departed FedEx location	MEMPHIS, TN
12:22 am	Arrived at FedEx location	MEMPHIS, TN
4/10/2017 - Monday		
4:49 pm	Left FedEx origin facility	PASCO, WA
3:56 pm	Shipment information sent to FedEx	
3:24 pm	Picked up	PASCO, WA

Shipment Facts

Tracking number	778868385149	**Service**	FedEx Standard Overnight
Weight	86 lbs / 39.01 kgs	**Dimensions**	28x17x16 in.
Delivered To	Shipping/Receiving	**Total pieces**	1
Total shipment weight	86 lbs / 39.01 kgs	**Terms**	Recipient
Shipper reference	GWS-533	**Packaging**	Your Packaging
Special handling section	Deliver Weekday, Additional Handling Surcharge	**Standard transit**	4/11/2017 by 3:00 pm

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FedEx ® Tracking

778868350730

Ship date:
Mon 4/10/2017

RICHLAND, WA US

Delivered
Signed for by: B.DANIELS

Actual delivery:
Tue 4/11/2017 8:55 am

EARTH CITY, MO US

Travel History

Date/Time	Activity	Location
- 4/11/2017 - Tuesday		
8:55 am	Delivered	EARTH CITY, MO
7:02 am	On FedEx vehicle for delivery	EARTH CITY, MO
6:54 am	At local FedEx facility	EARTH CITY, MO
5:22 am	At destination sort facility	BERKELEY, MO
4:36 am	Departed FedEx location	MEMPHIS, TN
12:22 am	Arrived at FedEx location	MEMPHIS, TN
- 4/10/2017 - Monday		
4:49 pm	Left FedEx origin facility	PASCO, WA
3:56 pm	Shipment information sent to FedEx	
3:24 pm	Picked up	PASCO, WA

Shipment Facts

Tracking number	778868350730	**Service**	FedEx Standard Overnight
Weight	78 lbs / 35.38 kgs	**Delivered To**	Shipping/Receiving
Total pieces	1	**Total shipment weight**	78 lbs / 35.38 kgs
Terms	Recipient	**Shipper reference**	GWS-344
Packaging	Your Packaging	**Special handling section**	Deliver Weekday, Additional Handling Surcharge
Standard transit	4/11/2017 by 3:00 pm		

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Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 160-21829-1
SDG Number: SL2499

Login Number: 21829
List Number: 1
Creator: Clarke, Jill C

List Source: TestAmerica St. Louis

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	0.9, 0.6, 0.7
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 812499	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S17-004-448 Page 1 of 1

Collector	Barb Briggs /CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	S17-004	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	SURV, APRIL 2017	Logbook No.	HNF-N-506 88 / 35	Ice Chest No.	GWS-~~551~~ 590
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	7788 7928 5978
Protocol	CERCLA	Priority:	30 Days **PRIORITY**	Offsite Property No.	N/A

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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B39337	N	W	APR 10 2017	1403	5x40-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
Barb Briggs /CHPRC		BeBriggs	APR 10 2017 1430	SSU-1			APR 10 2017 1430
SSU-1			APR 11 2017 0645	Janelle Zunker CHPRC			APR 11 2017 0645
Janelle Zunker CHPRC			APR 11 2017 1400	FEDEX			
Relinquished By			Date/Time	Received By			Date/Time
FedEx				Jill Clarke		JillClarke	4.12.17 0900

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 3/9/2017 FSR ID = FSR42665 A-6004-842 (REV 2)

CH2MHill Plateau Remediation Company 82499

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # S17-004-446

Collector	Juan Aguilar /CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	S17-004	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	SURV, APRIL 2017	Logbook No.	HNF-N-506 53 / 27	Ice Chest No.	GWS-590
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	7788 7928 5978
Protocol	CERCLA	Priority:	30 Days PRIORITY	Offsite Property No.	N/A

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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B39302	N	W	4-11-17	1042	4x1-L aG	8081_PEST_GC: CH 01; 8081_PEST_GC: COMMON	7/40 Days	Cool <=6C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Juan Aguilar /CHPRC			APR 11 2017 1135	Troy Bacon CHPRC		Troy L. Bacon	APR 11 2017 1135
Troy Bacon CHPRC		Troy L. Bacon	APR 11 2017 1400	FEDEX			
Fed Ex				Jill Clarke		Jill Clarke	4.12.17 0900

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 3/9/2017 FSR ID = FSR42296 A-6004-842 (REV 2)

CH2MHill Plateau Remediation Company 824499

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W17-004-287

Collector	Jeff Tucksen CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	W17-004	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	RCRA, APRIL 2017	Logbook No.	HNF-N-506 92/64	Ice Chest No.	GWS-590
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	778879285978
Protocol	RCRA	Priority:	30 Days PRIORITY	Offsite Property No.	N/A

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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B397P7	N	W	4-11-17	1105	1x250-mL G/P	310.1_ALKALINITY: GW 01	14 Days	Cool <=6C
B397P7	N	W	|	|	4x1-L aG	8151_HERBICIDE_GC: COMMON	7/40 Days	Cool <=6C
B397P7	N	W	|	|	5x40-mL aGs*	8260_VOA_GCMS_IX: COMMON REV 1	14 Days	HCl or H2SO4 to pH <2/Cool <=6C
B397P7	N	W	|	|	4x1-L aG	8270_SVOA_GCMS_IX: COMMON REV 1	7/40 Days	Cool <=6C
B397P7	N	W	4-11-17	1105	1x250-mL aG	9012_CYANIDE (TOTAL): COMMON	14 Days	NaOH to pH >=12/Cool <=6C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	Jeff Tucksen CHPRC		APR 11 2017 1200		Troy Bacon CHPRC	Troy L. Bacon	APR 11 2017 1200
Relinquished By	Troy Bacon CHPRC	Troy L. Bacon	APR 11 2017 1400	Received By	FEDEX		Date/Time
Relinquished By		Fed Ex	Date/Time	Received By	Jill Clarke	Jill Clarke	4.12.17 0900
Relinquished By			Date/Time	Received By			Date/Time

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 3/9/2017 FSR ID = FSR25567 A-6004-842 (REV 2)

CH2MHill Plateau Remediation Company 82499

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

84/65

C.O.C. # X17-003-241

Collector	Jeff Tucksen CHPRC	Contact/Requester	WATERS-HUSTED, K	Telephone No.	376-4650
SAF No.	X17-003	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	Groundwater Background Study, October	Logbook No.	HNF-N-506 92164	Ice Chest No.	GWS-590
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	7788 7928 5978
Protocol	SURV	Priority:	30 Days PRIORITY	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

*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 Hold Time

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

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B39731	N	W	4-11-17	1105	5x40-mL aGs*	8260_VOA_GCMS: COMMON	14 Days	HCl or H2SO4 to pH <2/Cool <=6C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	Jeff Tucksen CHPRC		APR 11 2017 1200		Troy Bacon CHPRC	Troy L. Bacon	APR 11 2017 1200
Relinquished By	Troy Bacon CHPRC	Troy L. Bacon	APR 11 2017 1400	Received By	FEDEX		Date/Time
Relinquished By		Fed Ex	Date/Time	Received By	Jill Clarke	Jill Clarke	4-12-17 0900
Relinquished By			Date/Time	Received By			Date/Time

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 3/2/2017 FSR ID = FSR42376 A-6004-842 (REV 2)

81 lbs

CH2MHill Plateau Remediation Company 512499

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W17-004-215

Collector	Juan Aguilar /CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	W17-004	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	RCRA, APRIL 2017	Logbook No.	HNF-N-506 93 / 27	Ice Chest No.	GWS-566
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	7788 7926 0389
Protocol	RCRA	Priority:	30 Days PRIORITY	Offsite Property No.	N/A

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

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B390C3	N	W	4-11-17	1042	1x250-mL G/P	310.1_ALKALINITY: GW 01	14 Days	Cool <=6C
B390C3	N	W			4x1-L aG	8082_PCB_GC: COMMON	None	Cool <=6C
B390C3	N	W			4x1-L aG	8151_HERBICIDE_GC: COMMON	7/40 Days	Cool <=6C
B390C3	N	W			1x250-mL aG	9012_CYANIDE (TOTAL): COMMON	14 Days	NaOH to pH >=12/Cool <=6C
B390C3	N	W			1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2/Cool <=6C
B390C3	N	W			1x1-L G/P	9034_SULFIDE: COMMON	7 Days	ZnAc+NaOH to pH > 9/Cool <=6C
B390C3	N	W	4-11-17	1042	1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2/Cool <=6C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Juan Aguilar /CHPRC			APR 11 2017 1135	Troy Bacon CHPRC	Troy L. Bacon		APR 11 2017 1135
Troy Bacon CHPRC	Troy L. Bacon		APR 11 2017 1400	FEDEX			
Fed Ex				Jill Clarke	Jill Clarke		4.12.17 0900

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 3/9/2017 FSR ID = FSR42296 A-6004-842 (REV 2)

CH2MHill Plateau Remediation Company 524499

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W17-004-263

Collector	Jeff Tucksen CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	W17-004	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	RCRA, APRIL 2017	Logbook No.	HNF-N-506 92/64	Ice Chest No.	GWS-566
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	7788 7926 0389
Protocol	RCRA	Priority:	30 Days PRIORITY	Offsite Property No.	N/A

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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B396V1	N	W	4-11-17	0847	1x500-mL G/P	7470_MERCURY_CV: COMMON (AQUEOUS); 6020_METALS_ICPMS: GW 01; 6010_METALS_ICP: GW 04	28 Days	HNO3 to pH <2
B390M3	Y	W	4-11-17	0847	1x500-mL G/P	7470_MERCURY_CV: COMMON (AQUEOUS); 6020_METALS_ICPMS: GW 01; 6010_METALS_ICP: GW 04	28 Days	HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	Jeff Tucksen CHPRC		APR 11 2017 1020		Troy Bacon CHPRC	Troy L. Bacon	APR 11 2017 1020
Relinquished By	Troy Bacon CHPRC	Troy L. Bacon	APR 11 2017 1400	Received By	FEDEX		Date/Time
Relinquished By		Fed Ex	Date/Time	Received By		Jill Clarke	Date/Time 4-12-17 0800
Relinquished By			Date/Time	Received By			Date/Time

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 3/9/2017 FSR ID = FSR39844 A-6004-842 (REV 2)

30 lbs

CH2MHill Plateau Remediation Company 824499

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W17-004-219

Collector	Jeff Tucksen CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	W17-004	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071
Project Title	RCRA, APRIL 2017	Logbook No.	HNF-N-506 92164	Ice Chest No.	GWS -588
Shipped To (Lab)	TestAmerica St. Louis	Method of Shipment	Commercial Carrier	Bill of Lading/Air Bill No.	7788 7930 4863
Protocol	RCRA	Priority:	30 Days PRIORITY	Offsite Property No.	N/A

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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B390L5	N	W	4-11-17	1105	4x1-L aG	8081_PEST_GC: CH 01; 8081_PEST_GC: COMMON	7/40 Days	Cool <=6C
B390L5	N	W	|	|	4x1-L aG	8082_PCB_GC: COMMON	None	Cool <=6C
B390L5	N	W	|	|	1x1-L aGs*	9020_TOX: COMMON	28 Days	H2SO4 to pH <2/Cool <=6C
B390L5	N	W	|	|	1x1-L G/P	9034_SULFIDE: COMMON	7 Days	ZnAc+NaOH to pH > 9/Cool <=6C
B390L5	N	W	4-11-17	1105	1x250-mL aG	9060_TOC: COMMON	28 Days	HCl or H2SO4 to pH <2/Cool <=6C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Jeff Tucksen CHPRC			APR 11 2017 1200	Troy Bacon CHPRC		Troy L. Bacon	APR 11 2017 1200
Troy Bacon CHPRC		Troy L. Bacon	APR 11 2017 1400	FEDEX			
FedEx				Jill Clarke		Jill Clarke	4.12.17 0900

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 3/9/2017 FSR ID = FSR25567 A-6004-842 (REV 2)

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778879285978

Ship date:
Tue 4/11/2017

RICHLAND, WA US

Delivered
Signed for by: J.CLARKE

Actual delivery:
Wed 4/12/2017 8:52 am

EARTH CITY, MO US

Travel History

Date/Time	Activity	Location
- 4/12/2017 - Wednesday		
8:52 am	Delivered	EARTH CITY, MO
6:46 am	On FedEx vehicle for delivery	EARTH CITY, MO
6:42 am	At local FedEx facility	EARTH CITY, MO
5:00 am	At destination sort facility	BERKELEY, MO
4:09 am	Departed FedEx location	MEMPHIS, TN
12:23 am	Arrived at FedEx location	MEMPHIS, TN
- 4/11/2017 - Tuesday		
4:48 pm	Left FedEx origin facility	PASCO, WA
3:36 pm	Picked up	PASCO, WA
3:29 pm	Shipment information sent to FedEx	

Shipment Facts

Tracking number	778879285978	**Service**	FedEx Standard Overnight
Weight	84 lbs / 38.1 kgs	**Delivered To**	Shipping/Receiving
Total pieces	1	**Total shipment weight**	84 lbs / 38.1 kgs
Terms	Recipient	**Shipper reference**	GWS-590
Packaging	Your Packaging	**Special handling section**	Deliver Weekday
Standard transit	4/12/2017 by 3:00 pm		

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778879260389

Ship date:
Tue 4/11/2017

RICHLAND, WA US

Delivered
Signed for by: J.CLARKE

Actual delivery:
Wed 4/12/2017 8:52 am

EARTH CITY, MO US

Travel History

Date/Time	Activity	Location
- 4/12/2017 - Wednesday		
8:52 am	Delivered	EARTH CITY, MO
6:58 am	On FedEx vehicle for delivery	EARTH CITY, MO
6:53 am	At local FedEx facility	EARTH CITY, MO
5:00 am	At destination sort facility	BERKELEY, MO
4:09 am	Departed FedEx location	MEMPHIS, TN
12:23 am	Arrived at FedEx location	MEMPHIS, TN
- 4/11/2017 - Tuesday		
4:48 pm	Left FedEx origin facility	PASCO, WA
3:36 pm	Picked up	PASCO, WA
3:29 pm	Shipment information sent to FedEx	

Shipment Facts

Tracking number	778879260389	**Service**	FedEx Standard Overnight
Weight	81 lbs / 36.74 kgs	**Delivered To**	Shipping/Receiving
Total pieces	1	**Total shipment weight**	81 lbs / 36.74 kgs
Terms	Recipient	**Shipper reference**	GWS-566
Packaging	Your Packaging	**Special handling section**	Deliver Weekday
Standard transit	4/12/2017 by 3:00 pm		

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778879304863

Ship date:
Tue 4/11/2017

RICHLAND, WA US

Delivered
Signed for by: J.CLARKE

Actual delivery:
Wed 4/12/2017 8:52 am

EARTH CITY, MO US

Travel History

Date/Time	Activity	Location
- 4/12/2017 - Wednesday		
8:52 am	Delivered	EARTH CITY, MO
7:00 am	On FedEx vehicle for delivery	EARTH CITY, MO
6:53 am	At local FedEx facility	EARTH CITY, MO
5:00 am	At destination sort facility	BERKELEY, MO
4:09 am	Departed FedEx location	MEMPHIS, TN
12:23 am	Arrived at FedEx location	MEMPHIS, TN
- 4/11/2017 - Tuesday		
4:48 pm	Left FedEx origin facility	PASCO, WA
3:36 pm	Picked up	PASCO, WA
3:29 pm	Shipment information sent to FedEx	

Shipment Facts

Tracking number	778879304863	**Service**	FedEx Standard Overnight
Weight	80 lbs / 36.29 kgs	**Delivered To**	Shipping/Receiving
Total pieces	1	**Total shipment weight**	80 lbs / 36.29 kgs
Terms	Recipient	**Shipper reference**	GWS-588
Packaging	Your Packaging	**Special handling section**	Deliver Weekday, Additional Handling Surcharge
Standard transit	4/12/2017 by 3:00 pm		

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Definitions/Glossary

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Analyzed for but not detected.
y	Duplicate analysis not within control limits.
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.

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.
T	MS, MSD: Recovery exceeds upper or lower control limits.

GC/MS Semi VOA

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

GC/MS Semi VOA TICs

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

GC Semi VOA

Qualifier	Qualifier Description
N	MS, MSD: Spike recovery is outside acceptance limits.
U	Analyzed for but not detected.
o	LCS, LCSD: Recovery exceeds upper or lower control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
P	This flag is used for an aroclor target analyte where there is greater than 25% difference for detected concentrations between the two GC columns
y	Duplicate analysis not within control limits.
X	See case narrative notes for explanation of the 'X' flag

Metals

Qualifier	Qualifier Description
U	Analyzed for but not detected.
B	Estimated result. Result is less than the RL, but greater than MDL
D	The reported value is from a dilution.
X	See case narrative notes for explanation of the 'X' flag

General Chemistry

Qualifier	Qualifier Description
U	Analyzed for but not detected.
N	MS, MSD: Spike recovery is outside acceptance limits.
y	Duplicate analysis not within control limits.
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

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds (GC/MS)	SW846	TAL SL
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SL
8081B	Organochlorine Pesticides (GC)	SW846	TAL SL
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL SL
8151A	Herbicides (GC)	SW846	TAL SL
6010C	Metals (ICP)	SW846	TAL SL
6020A	Metals (ICP/MS)	SW846	TAL SL
7470A	Mercury (CVAA)	SW846	TAL SL
310.1	Alkalinity	MCAWW	TAL SL
9012B	Cyanide, Total andor Amenable	SW846	TAL SL
9020B	Organic Halides, Total (TOX)	SW846	TAL SL
9034	Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	TAL SL
9060	Organic Carbon, Total (TOC)	SW846	TAL SL

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SL = TestAmerica St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-21812-1	B39730	Water	04/10/17 10:17	04/11/17 09:05
160-21813-1	B39LK7	Water	04/10/17 09:11	04/11/17 09:05
160-21813-2	B392B5	Water	04/10/17 12:25	04/11/17 09:05
160-21813-3	B390B2	Water	04/10/17 09:15	04/11/17 09:05
160-21813-4	B390F7	Water	04/10/17 11:20	04/11/17 09:05
160-21813-5	B39081	Water	04/10/17 10:17	04/11/17 09:05
160-21813-6	B39LK3	Water	04/10/17 09:11	04/11/17 09:05
160-21813-7	B39LK2	Water	04/10/17 09:11	04/11/17 09:05
160-21813-8	B39LK1	Water	04/10/17 09:11	04/11/17 09:05
160-21813-9	B39LK0	Water	04/10/17 09:11	04/11/17 09:05
160-21829-1	B39337	Water	04/10/17 14:03	04/12/17 09:00
160-21829-2	B39302	Water	04/11/17 10:42	04/12/17 09:00
160-21829-3	B397P7	Water	04/11/17 11:05	04/12/17 09:00
160-21829-4	B39731	Water	04/11/17 11:05	04/12/17 09:00
160-21829-5	B390C3	Water	04/11/17 10:42	04/12/17 09:00
160-21829-6	B396V1	Water	04/11/17 08:47	04/12/17 09:00
160-21829-7	B390M3	Water	04/11/17 08:47	04/12/17 09:00
160-21829-8	B390L5	Water	04/11/17 11:05	04/12/17 09:00

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Client Sample ID: B39730 — **Lab Sample ID: 160-21812-1**
Date Collected: 04/10/17 10:17 — **Matrix: Water**
Date Received: 04/11/17 09:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.17	U	1.0	0.17	ug/L			04/16/17 13:10	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			04/16/17 13:10	1
1,1-Dichloroethane	0.070	U	1.0	0.070	ug/L			04/16/17 13:10	1
1,1-Dichloroethene	0.10	U	1.0	0.10	ug/L			04/16/17 13:10	1
1,2-Dichloroethane	0.22	U	1.0	0.22	ug/L			04/16/17 13:10	1
2-Butanone (MEK)	0.47	U	5.0	0.47	ug/L			04/16/17 13:10	1
4-Methyl-2-pentanone (MIBK)	0.22	U	5.0	0.22	ug/L			04/16/17 13:10	1
Acetone	0.55	U	2.0	0.55	ug/L			04/16/17 13:10	1
Benzene	0.10	U	1.0	0.10	ug/L			04/16/17 13:10	1
Carbon disulfide	0.10	U	1.0	0.10	ug/L			04/16/17 13:10	1
Carbon tetrachloride	0.18	U	1.0	0.18	ug/L			04/16/17 13:10	1
Chlorobenzene	0.11	U	1.0	0.11	ug/L			04/16/17 13:10	1
Chloroform	0.10	U	1.0	0.10	ug/L			04/16/17 13:10	1
Ethylbenzene	0.12	U	1.0	0.12	ug/L			04/16/17 13:10	1
Methylene Chloride	**2.6**		1.0	0.27	ug/L			04/16/17 13:10	1
Tetrachloroethene	0.18	U	1.0	0.18	ug/L			04/16/17 13:10	1
Toluene	0.14	U	1.0	0.14	ug/L			04/16/17 13:10	1
Trichloroethene	0.25	U	1.0	0.25	ug/L			04/16/17 13:10	1
Vinyl chloride	0.19	U	2.0	0.19	ug/L			04/16/17 13:10	1
Xylenes, Total	0.27	U	3.0	0.27	ug/L			04/16/17 13:10	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Isopropyl alcohol	*6.4*	*J T*	*ug/L*		*5.97*	*67-63-0*		*04/16/17 13:10*	*1*
Ethyl acetate	*1.5*	*J*	*ug/L*		*7.96*	*141-78-6*		*04/16/17 13:10*	*1*
Tentatively Identified Compound	*None*		*ug/L*					*04/16/17 13:10*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*75 - 129*		*04/16/17 13:10*	*1*
4-Bromofluorobenzene (Surr)	*114*		*81 - 130*		*04/16/17 13:10*	*1*
Dibromofluoromethane (Surr)	*96*		*81 - 124*		*04/16/17 13:10*	*1*
Toluene-d8 (Surr)	*116*		*87 - 128*		*04/16/17 13:10*	*1*

Client Sample ID: B390B2 — **Lab Sample ID: 160-21813-3**
Date Collected: 04/10/17 09:15 — **Matrix: Water**
Date Received: 04/11/17 09:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.24**	**J**	1.0	0.17	ug/L			04/16/17 17:50	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			04/16/17 17:50	1
1,1-Dichloroethane	0.070	U	1.0	0.070	ug/L			04/16/17 17:50	1
1,1-Dichloroethene	0.10	U	1.0	0.10	ug/L			04/16/17 17:50	1
1,2-Dichloroethane	0.22	U	1.0	0.22	ug/L			04/16/17 17:50	1
2-Butanone (MEK)	0.47	U	5.0	0.47	ug/L			04/16/17 17:50	1
4-Methyl-2-pentanone (MIBK)	0.22	U	5.0	0.22	ug/L			04/16/17 17:50	1
Acetone	0.55	U	2.0	0.55	ug/L			04/16/17 17:50	1
Benzene	0.10	U	1.0	0.10	ug/L			04/16/17 17:50	1
Carbon disulfide	0.10	U	1.0	0.10	ug/L			04/16/17 17:50	1
Carbon tetrachloride	0.18	U	1.0	0.18	ug/L			04/16/17 17:50	1
Chlorobenzene	0.11	U	1.0	0.11	ug/L			04/16/17 17:50	1
Chloroform	0.10	U	1.0	0.10	ug/L			04/16/17 17:50	1
Ethylbenzene	0.12	U	1.0	0.12	ug/L			04/16/17 17:50	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Client Sample ID: B390B2 — **Lab Sample ID: 160-21813-3**
Date Collected: 04/10/17 09:15 — **Matrix: Water**
Date Received: 04/11/17 09:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	0.27	U	1.0	0.27	ug/L			04/16/17 17:50	1
Tetrachloroethene	**0.39**	**J**	1.0	0.18	ug/L			04/16/17 17:50	1
Toluene	0.14	U	1.0	0.14	ug/L			04/16/17 17:50	1
Trichloroethene	0.25	U	1.0	0.25	ug/L			04/16/17 17:50	1
Vinyl chloride	0.19	U	2.0	0.19	ug/L			04/16/17 17:50	1
Xylenes, Total	0.27	U	3.0	0.27	ug/L			04/16/17 17:50	1
1,4-Dichlorobenzene	0.10	U	1.0	0.10	ug/L			04/16/17 17:50	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/16/17 17:50*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*75 - 129*		*04/16/17 17:50*	*1*
4-Bromofluorobenzene (Surr)	*114*		*81 - 130*		*04/16/17 17:50*	*1*
Dibromofluoromethane (Surr)	*94*		*81 - 124*		*04/16/17 17:50*	*1*
Toluene-d8 (Surr)	*111*		*87 - 128*		*04/16/17 17:50*	*1*

Client Sample ID: B390F7 — **Lab Sample ID: 160-21813-4**
Date Collected: 04/10/17 11:20 — **Matrix: Water**
Date Received: 04/11/17 09:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.20**	**J**	1.0	0.17	ug/L			04/16/17 18:18	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			04/16/17 18:18	1
1,1-Dichloroethane	0.070	U	1.0	0.070	ug/L			04/16/17 18:18	1
1,1-Dichloroethene	0.10	U	1.0	0.10	ug/L			04/16/17 18:18	1
1,2-Dichloroethane	0.22	U	1.0	0.22	ug/L			04/16/17 18:18	1
2-Butanone (MEK)	0.47	U	5.0	0.47	ug/L			04/16/17 18:18	1
4-Methyl-2-pentanone (MIBK)	0.22	U	5.0	0.22	ug/L			04/16/17 18:18	1
Acetone	0.55	U	2.0	0.55	ug/L			04/16/17 18:18	1
Benzene	0.10	U	1.0	0.10	ug/L			04/16/17 18:18	1
Carbon disulfide	0.10	U	1.0	0.10	ug/L			04/16/17 18:18	1
Carbon tetrachloride	0.18	U	1.0	0.18	ug/L			04/16/17 18:18	1
Chlorobenzene	0.11	U	1.0	0.11	ug/L			04/16/17 18:18	1
Chloroform	0.10	U	1.0	0.10	ug/L			04/16/17 18:18	1
Ethylbenzene	0.12	U	1.0	0.12	ug/L			04/16/17 18:18	1
Methylene Chloride	0.27	U	1.0	0.27	ug/L			04/16/17 18:18	1
Tetrachloroethene	**0.68**	**J**	1.0	0.18	ug/L			04/16/17 18:18	1
Toluene	0.14	U	1.0	0.14	ug/L			04/16/17 18:18	1
Trichloroethene	**0.38**	**J**	1.0	0.25	ug/L			04/16/17 18:18	1
Vinyl chloride	0.19	U	2.0	0.19	ug/L			04/16/17 18:18	1
Xylenes, Total	0.27	U	3.0	0.27	ug/L			04/16/17 18:18	1
1,4-Dichlorobenzene	0.10	U	1.0	0.10	ug/L			04/16/17 18:18	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/16/17 18:18*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*75 - 129*		*04/16/17 18:18*	*1*
4-Bromofluorobenzene (Surr)	*116*		*81 - 130*		*04/16/17 18:18*	*1*
Dibromofluoromethane (Surr)	*93*		*81 - 124*		*04/16/17 18:18*	*1*
Toluene-d8 (Surr)	*112*		*87 - 128*		*04/16/17 18:18*	*1*

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

Client Sample ID: B39081
Date Collected: 04/10/17 10:17
Date Received: 04/11/17 09:05

Lab Sample ID: 160-21813-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.27**	**J**	1.0	0.17	ug/L			04/16/17 18:46	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			04/16/17 18:46	1
1,1-Dichloroethane	0.070	U	1.0	0.070	ug/L			04/16/17 18:46	1
1,1-Dichloroethene	0.10	U	1.0	0.10	ug/L			04/16/17 18:46	1
1,2-Dichloroethane	0.22	U	1.0	0.22	ug/L			04/16/17 18:46	1
2-Butanone (MEK)	0.47	U	5.0	0.47	ug/L			04/16/17 18:46	1
4-Methyl-2-pentanone (MIBK)	0.22	U	5.0	0.22	ug/L			04/16/17 18:46	1
Acetone	0.55	U	2.0	0.55	ug/L			04/16/17 18:46	1
Benzene	0.10	U	1.0	0.10	ug/L			04/16/17 18:46	1
Carbon disulfide	0.10	U	1.0	0.10	ug/L			04/16/17 18:46	1
Carbon tetrachloride	0.18	U	1.0	0.18	ug/L			04/16/17 18:46	1
Chlorobenzene	0.11	U	1.0	0.11	ug/L			04/16/17 18:46	1
Chloroform	0.10	U	1.0	0.10	ug/L			04/16/17 18:46	1
Ethylbenzene	0.12	U	1.0	0.12	ug/L			04/16/17 18:46	1
Methylene Chloride	0.27	U	1.0	0.27	ug/L			04/16/17 18:46	1
Tetrachloroethene	**0.35**	**J**	1.0	0.18	ug/L			04/16/17 18:46	1
Toluene	0.14	U	1.0	0.14	ug/L			04/16/17 18:46	1
Trichloroethene	**0.38**	**J**	1.0	0.25	ug/L			04/16/17 18:46	1
Vinyl chloride	0.19	U	2.0	0.19	ug/L			04/16/17 18:46	1
Xylenes, Total	0.27	U	3.0	0.27	ug/L			04/16/17 18:46	1
1,4-Dichlorobenzene	0.10	U	1.0	0.10	ug/L			04/16/17 18:46	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/16/17 18:46*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*75 - 129*		*04/16/17 18:46*	*1*
4-Bromofluorobenzene (Surr)	*114*		*81 - 130*		*04/16/17 18:46*	*1*
Dibromofluoromethane (Surr)	*96*		*81 - 124*		*04/16/17 18:46*	*1*
Toluene-d8 (Surr)	*112*		*87 - 128*		*04/16/17 18:46*	*1*

Client Sample ID: B39337
Date Collected: 04/10/17 14:03
Date Received: 04/12/17 09:00

Lab Sample ID: 160-21829-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.12	U	1.0	0.12	ug/L			04/16/17 20:37	1
1,1,1-Trichloroethane	0.17	U	1.0	0.17	ug/L			04/16/17 20:37	1
1,1,2,2-Tetrachloroethane	0.10	U	1.0	0.10	ug/L			04/16/17 20:37	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			04/16/17 20:37	1
1,1-Dichloroethane	0.070	U	1.0	0.070	ug/L			04/16/17 20:37	1
1,1-Dichloroethene	0.10	U	1.0	0.10	ug/L			04/16/17 20:37	1
1,2,3-Trichloropropane	0.18	U	1.0	0.18	ug/L			04/16/17 20:37	1
1,2-Dibromo-3-Chloropropane	0.41	U	1.0	0.41	ug/L			04/16/17 20:37	1
1,2-Dibromoethane (EDB)	0.13	U	1.0	0.13	ug/L			04/16/17 20:37	1
1,2-Dichloroethane	0.22	U	1.0	0.22	ug/L			04/16/17 20:37	1
1,2-Dichloropropane	0.10	U	1.0	0.10	ug/L			04/16/17 20:37	1
1,4-Dichlorobenzene	0.10	U	1.0	0.10	ug/L			04/16/17 20:37	1
2-Butanone (MEK)	**0.82**	**J**	5.0	0.47	ug/L			04/16/17 20:37	1
2-Hexanone	0.25	U	5.0	0.25	ug/L			04/16/17 20:37	1
4-Methyl-2-pentanone (MIBK)	0.22	U	5.0	0.22	ug/L			04/16/17 20:37	1
Acetone	0.55	U	2.0	0.55	ug/L			04/16/17 20:37	1
Acetonitrile	3.7	U	10	3.7	ug/L			04/16/17 20:37	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Client Sample ID: B39337
Date Collected: 04/10/17 14:03
Date Received: 04/12/17 09:00

Lab Sample ID: 160-21829-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	2.8	U	10	2.8	ug/L			04/16/17 20:37	1
Acrylonitrile	0.73	U	10	0.73	ug/L			04/16/17 20:37	1
Allyl chloride	0.10	U	2.0	0.10	ug/L			04/16/17 20:37	1
Benzene	0.10	U	1.0	0.10	ug/L			04/16/17 20:37	1
Bromodichloromethane	0.14	U	1.0	0.14	ug/L			04/16/17 20:37	1
Bromoform	0.17	U	1.0	0.17	ug/L			04/16/17 20:37	1
Bromomethane	0.25	U	2.0	0.25	ug/L			04/16/17 20:37	1
Carbon disulfide	0.10	U	1.0	0.10	ug/L			04/16/17 20:37	1
Carbon tetrachloride	**200**	**D**	10	1.8	ug/L			04/16/17 19:13	10
Chlorobenzene	0.11	U	1.0	0.11	ug/L			04/16/17 20:37	1
Chloroethane	0.16	U	2.0	0.16	ug/L			04/16/17 20:37	1
Chloroform	**5.0**		1.0	0.10	ug/L			04/16/17 20:37	1
Chloromethane	0.10	U	2.0	0.10	ug/L			04/16/17 20:37	1
Chloroprene	0.16	U	1.0	0.16	ug/L			04/16/17 20:37	1
cis-1,2-Dichloroethylene	0.10	U	1.0	0.10	ug/L			04/16/17 20:37	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/16/17 20:37	1
Dibromochloromethane	0.14	U	1.0	0.14	ug/L			04/16/17 20:37	1
Dibromomethane	0.21	U	1.0	0.21	ug/L			04/16/17 20:37	1
Dichlorodifluoromethane	0.14	U	2.0	0.14	ug/L			04/16/17 20:37	1
Ethyl Cyanide	1.4	U	10	1.4	ug/L			04/16/17 20:37	1
Ethyl methacrylate	0.17	U	1.0	0.17	ug/L			04/16/17 20:37	1
Ethylbenzene	0.12	U	1.0	0.12	ug/L			04/16/17 20:37	1
Iodomethane	0.10	U	2.0	0.10	ug/L			04/16/17 20:37	1
Isobutyl alcohol	8.3	U	80	8.3	ug/L			04/16/17 20:37	1
Methacrylonitrile	1.2	U	10	1.2	ug/L			04/16/17 20:37	1
Methyl methacrylate	0.27	U	2.0	0.27	ug/L			04/16/17 20:37	1
Methylene Chloride	0.27	U	1.0	0.27	ug/L			04/16/17 20:37	1
Styrene	0.13	U	1.0	0.13	ug/L			04/16/17 20:37	1
Tetrachloroethene	0.18	U	1.0	0.18	ug/L			04/16/17 20:37	1
Toluene	0.14	U	1.0	0.14	ug/L			04/16/17 20:37	1
trans-1,2-Dichloroethylene	0.10	U	1.0	0.10	ug/L			04/16/17 20:37	1
trans-1,3-Dichloropropene	0.10	U	1.0	0.10	ug/L			04/16/17 20:37	1
trans-1,4-Dichloro-2-butene	0.29	U	2.0	0.29	ug/L			04/16/17 20:37	1
Trichloroethene	**2.4**		1.0	0.25	ug/L			04/16/17 20:37	1
Trichloromonofluoromethane	0.11	U	1.0	0.11	ug/L			04/16/17 20:37	1
Vinyl acetate	0.18	U	2.0	0.18	ug/L			04/16/17 20:37	1
Vinyl chloride	0.19	U	2.0	0.19	ug/L			04/16/17 20:37	1
Xylenes, Total	0.27	U	3.0	0.27	ug/L			04/16/17 20:37	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/16/17 19:13*	*10*
Tentatively Identified Compound	*None*		*ug/L*					*04/16/17 20:37*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*75 - 129*		*04/16/17 19:13*	*10*
1,2-Dichloroethane-d4 (Surr)	*95*		*75 - 129*		*04/16/17 20:37*	*1*
4-Bromofluorobenzene (Surr)	*115*		*81 - 130*		*04/16/17 19:13*	*10*
4-Bromofluorobenzene (Surr)	*116*		*81 - 130*		*04/16/17 20:37*	*1*
Dibromofluoromethane (Surr)	*99*		*81 - 124*		*04/16/17 19:13*	*10*
Dibromofluoromethane (Surr)	*110*		*81 - 124*		*04/16/17 20:37*	*1*

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Client Sample ID: B39337
Date Collected: 04/10/17 14:03
Date Received: 04/12/17 09:00

Lab Sample ID: 160-21829-1
Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*113*		*87 - 128*		*04/16/17 19:13*	*10*
Toluene-d8 (Surr)	*111*		*87 - 128*		*04/16/17 20:37*	*1*

Client Sample ID: B397P7
Date Collected: 04/11/17 11:05
Date Received: 04/12/17 09:00

Lab Sample ID: 160-21829-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	0.12	U	1.0	0.12	ug/L			04/16/17 19:42	1
1,1,1-Trichloroethane	0.17	U	1.0	0.17	ug/L			04/16/17 19:42	1
1,1,2,2-Tetrachloroethane	0.10	U	1.0	0.10	ug/L			04/16/17 19:42	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			04/16/17 19:42	1
1,1-Dichloroethane	0.070	U	1.0	0.070	ug/L			04/16/17 19:42	1
1,1-Dichloroethene	0.10	U	1.0	0.10	ug/L			04/16/17 19:42	1
1,2,3-Trichloropropane	0.18	U	1.0	0.18	ug/L			04/16/17 19:42	1
1,2-Dibromo-3-Chloropropane	0.41	U	1.0	0.41	ug/L			04/16/17 19:42	1
1,2-Dibromoethane (EDB)	0.13	U	1.0	0.13	ug/L			04/16/17 19:42	1
1,2-Dichloroethane	0.22	U	1.0	0.22	ug/L			04/16/17 19:42	1
1,2-Dichloropropane	0.10	U	1.0	0.10	ug/L			04/16/17 19:42	1
1,4-Dichlorobenzene	0.10	U	1.0	0.10	ug/L			04/16/17 19:42	1
2-Butanone (MEK)	0.47	U	5.0	0.47	ug/L			04/16/17 19:42	1
2-Hexanone	0.25	U	5.0	0.25	ug/L			04/16/17 19:42	1
4-Methyl-2-pentanone (MIBK)	0.22	U	5.0	0.22	ug/L			04/16/17 19:42	1
Acetone	0.55	U	2.0	0.55	ug/L			04/16/17 19:42	1
Acetonitrile	3.7	U	10	3.7	ug/L			04/16/17 19:42	1
Acrolein	2.8	U	10	2.8	ug/L			04/16/17 19:42	1
Acrylonitrile	0.73	U	10	0.73	ug/L			04/16/17 19:42	1
Allyl chloride	0.10	U	2.0	0.10	ug/L			04/16/17 19:42	1
Benzene	0.10	U	1.0	0.10	ug/L			04/16/17 19:42	1
Bromodichloromethane	0.14	U	1.0	0.14	ug/L			04/16/17 19:42	1
Bromoform	0.17	U	1.0	0.17	ug/L			04/16/17 19:42	1
Bromomethane	0.25	U	2.0	0.25	ug/L			04/16/17 19:42	1
Carbon disulfide	0.10	U	1.0	0.10	ug/L			04/16/17 19:42	1
Carbon tetrachloride	0.18	U	1.0	0.18	ug/L			04/16/17 19:42	1
Chlorobenzene	0.11	U	1.0	0.11	ug/L			04/16/17 19:42	1
Chloroethane	0.16	U	2.0	0.16	ug/L			04/16/17 19:42	1
Chloroform	**0.11**	**J**	1.0	0.10	ug/L			04/16/17 19:42	1
Chloromethane	0.10	U	2.0	0.10	ug/L			04/16/17 19:42	1
Chloroprene	0.16	U	1.0	0.16	ug/L			04/16/17 19:42	1
cis-1,2-Dichloroethylene	0.10	U	1.0	0.10	ug/L			04/16/17 19:42	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/16/17 19:42	1
Dibromochloromethane	0.14	U	1.0	0.14	ug/L			04/16/17 19:42	1
Dibromomethane	0.21	U	1.0	0.21	ug/L			04/16/17 19:42	1
Dichlorodifluoromethane	0.14	U	2.0	0.14	ug/L			04/16/17 19:42	1
Ethyl Cyanide	1.4	U	10	1.4	ug/L			04/16/17 19:42	1
Ethyl methacrylate	0.17	U	1.0	0.17	ug/L			04/16/17 19:42	1
Ethylbenzene	0.12	U	1.0	0.12	ug/L			04/16/17 19:42	1
Iodomethane	0.10	U	2.0	0.10	ug/L			04/16/17 19:42	1
Isobutyl alcohol	8.3	U	80	8.3	ug/L			04/16/17 19:42	1
Methacrylonitrile	1.2	U	10	1.2	ug/L			04/16/17 19:42	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Client Sample ID: B397P7 — **Lab Sample ID: 160-21829-3**
Date Collected: 04/11/17 11:05 — **Matrix: Water**
Date Received: 04/12/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl methacrylate	0.27	U	2.0	0.27	ug/L			04/16/17 19:42	1
Methylene Chloride	0.27	U	1.0	0.27	ug/L			04/16/17 19:42	1
Styrene	0.13	U	1.0	0.13	ug/L			04/16/17 19:42	1
Tetrachloroethene	0.18	U	1.0	0.18	ug/L			04/16/17 19:42	1
Toluene	0.14	U	1.0	0.14	ug/L			04/16/17 19:42	1
trans-1,2-Dichloroethylene	0.10	U	1.0	0.10	ug/L			04/16/17 19:42	1
trans-1,3-Dichloropropene	0.10	U	1.0	0.10	ug/L			04/16/17 19:42	1
trans-1,4-Dichloro-2-butene	0.29	U	2.0	0.29	ug/L			04/16/17 19:42	1
Trichloroethene	0.25	U	1.0	0.25	ug/L			04/16/17 19:42	1
Trichloromonofluoromethane	0.11	U	1.0	0.11	ug/L			04/16/17 19:42	1
Vinyl acetate	0.18	U	2.0	0.18	ug/L			04/16/17 19:42	1
Vinyl chloride	0.19	U	2.0	0.19	ug/L			04/16/17 19:42	1
Xylenes, Total	0.27	U	3.0	0.27	ug/L			04/16/17 19:42	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/16/17 19:42*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*75 - 129*		*04/16/17 19:42*	*1*
4-Bromofluorobenzene (Surr)	*115*		*81 - 130*		*04/16/17 19:42*	*1*
Dibromofluoromethane (Surr)	*96*		*81 - 124*		*04/16/17 19:42*	*1*
Toluene-d8 (Surr)	*111*		*87 - 128*		*04/16/17 19:42*	*1*

Client Sample ID: B39731 — **Lab Sample ID: 160-21829-4**
Date Collected: 04/11/17 11:05 — **Matrix: Water**
Date Received: 04/12/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.17	U	1.0	0.17	ug/L			04/16/17 20:09	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			04/16/17 20:09	1
1,1-Dichloroethane	0.070	U	1.0	0.070	ug/L			04/16/17 20:09	1
1,1-Dichloroethene	0.10	U	1.0	0.10	ug/L			04/16/17 20:09	1
1,2-Dichloroethane	0.22	U	1.0	0.22	ug/L			04/16/17 20:09	1
2-Butanone (MEK)	0.47	U	5.0	0.47	ug/L			04/16/17 20:09	1
4-Methyl-2-pentanone (MIBK)	0.22	U	5.0	0.22	ug/L			04/16/17 20:09	1
Acetone	0.55	U	2.0	0.55	ug/L			04/16/17 20:09	1
Benzene	0.10	U	1.0	0.10	ug/L			04/16/17 20:09	1
Carbon disulfide	0.10	U	1.0	0.10	ug/L			04/16/17 20:09	1
Carbon tetrachloride	0.18	U	1.0	0.18	ug/L			04/16/17 20:09	1
Chlorobenzene	0.11	U	1.0	0.11	ug/L			04/16/17 20:09	1
Chloroform	0.10	U	1.0	0.10	ug/L			04/16/17 20:09	1
Ethylbenzene	0.12	U	1.0	0.12	ug/L			04/16/17 20:09	1
Methylene Chloride	**4.8**		1.0	0.27	ug/L			04/16/17 20:09	1
Tetrachloroethene	0.18	U	1.0	0.18	ug/L			04/16/17 20:09	1
Toluene	0.14	U	1.0	0.14	ug/L			04/16/17 20:09	1
Trichloroethene	0.25	U	1.0	0.25	ug/L			04/16/17 20:09	1
Vinyl chloride	0.19	U	2.0	0.19	ug/L			04/16/17 20:09	1
Xylenes, Total	0.27	U	3.0	0.27	ug/L			04/16/17 20:09	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/16/17 20:09*	*1*

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		75 - 129		04/16/17 20:09	1
4-Bromofluorobenzene (Surr)	114		81 - 130		04/16/17 20:09	1
Dibromofluoromethane (Surr)	95		81 - 124		04/16/17 20:09	1
Toluene-d8 (Surr)	112		87 - 128		04/16/17 20:09	1

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

Client Sample ID: B390B2 — **Lab Sample ID: 160-21813-3**
Date Collected: 04/10/17 09:15 — **Matrix: Water**
Date Received: 04/11/17 09:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.95	U	9.5	0.95	ug/L		04/13/17 08:45	05/03/17 16:23	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L				04/13/17 08:45	05/03/17 16:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	42		15 - 59	04/13/17 08:45	05/03/17 16:23	1
2,4,6-Tribromophenol (Surr)	97		37 - 120	04/13/17 08:45	05/03/17 16:23	1
Nitrobenzene-d5 (Surr)	73		50 - 101	04/13/17 08:45	05/03/17 16:23	1
Phenol-d5 (Surr)	27		10 - 50	04/13/17 08:45	05/03/17 16:23	1
Terphenyl-d14 (Surr)	80		21 - 97	04/13/17 08:45	05/03/17 16:23	1
2-Fluorobiphenyl (Surr)	76		43 - 108	04/13/17 08:45	05/03/17 16:23	1

Client Sample ID: B390F7 — **Lab Sample ID: 160-21813-4**
Date Collected: 04/10/17 11:20 — **Matrix: Water**
Date Received: 04/11/17 09:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.95	U	9.5	0.95	ug/L		04/13/17 08:45	05/03/17 18:07	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L				04/13/17 08:45	05/03/17 18:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	46		15 - 59	04/13/17 08:45	05/03/17 18:07	1
2,4,6-Tribromophenol (Surr)	100		37 - 120	04/13/17 08:45	05/03/17 18:07	1
Nitrobenzene-d5 (Surr)	78		50 - 101	04/13/17 08:45	05/03/17 18:07	1
Phenol-d5 (Surr)	28		10 - 50	04/13/17 08:45	05/03/17 18:07	1
Terphenyl-d14 (Surr)	86		21 - 97	04/13/17 08:45	05/03/17 18:07	1
2-Fluorobiphenyl (Surr)	79		43 - 108	04/13/17 08:45	05/03/17 18:07	1

Client Sample ID: B39081 — **Lab Sample ID: 160-21813-5**
Date Collected: 04/10/17 10:17 — **Matrix: Water**
Date Received: 04/11/17 09:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.95	U	9.5	0.95	ug/L		04/13/17 08:45	05/03/17 18:42	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L				04/13/17 08:45	05/03/17 18:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	43		15 - 59	04/13/17 08:45	05/03/17 18:42	1
2,4,6-Tribromophenol (Surr)	93		37 - 120	04/13/17 08:45	05/03/17 18:42	1
Nitrobenzene-d5 (Surr)	71		50 - 101	04/13/17 08:45	05/03/17 18:42	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Client Sample ID: B39081
Date Collected: 04/10/17 10:17
Date Received: 04/11/17 09:05

Lab Sample ID: 160-21813-5
Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Phenol-d5 (Surr)	*27*		*10 - 50*	*04/13/17 08:45*	*05/03/17 18:42*	*1*
Terphenyl-d14 (Surr)	*83*		*21 - 97*	*04/13/17 08:45*	*05/03/17 18:42*	*1*
2-Fluorobiphenyl (Surr)	*74*		*43 - 108*	*04/13/17 08:45*	*05/03/17 18:42*	*1*

Client Sample ID: B397P7
Date Collected: 04/11/17 11:05
Date Received: 04/12/17 09:00

Lab Sample ID: 160-21829-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
1,2,4-Trichlorobenzene	0.93	U o T	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
1,2-Dichlorobenzene	0.93	U o T	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
1,3-Dichlorobenzene	0.93	U o T	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
1,4-Dichlorobenzene	0.93	U o T	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
1,4-Dioxane	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
1,4-Naphthoquinone	0.93	U	47	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
1-Naphthylamine	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
2,3,4,6-Tetrachlorophenol	0.93	U	47	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
2,4,5-Trichlorophenol	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
2,4,6-Trichlorophenol	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
2,4-Dichlorophenol	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
2,4-Dimethylphenol	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
2,4-Dinitrophenol	1.9	U o	47	1.9	ug/L		04/13/17 08:45	05/03/17 19:16	1
2,4-Dinitrotoluene	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
2,6-Dichlorophenol	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
2,6-Dinitrotoluene	2.0	U	9.3	2.0	ug/L		04/13/17 08:45	05/03/17 19:16	1
2-Acetylaminofluorene	0.93	U	93	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
2-Chloronaphthalene	0.93	U o	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
2-Chlorophenol	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
2-Methylnaphthalene	0.93	U o	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
2-Methylphenol	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
2-Naphthylamine	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
2-Nitroaniline	1.0	U	9.3	1.0	ug/L		04/13/17 08:45	05/03/17 19:16	1
2-Nitrophenol	1.4	U	9.3	1.4	ug/L		04/13/17 08:45	05/03/17 19:16	1
2-Picoline	1.9	U	19	1.9	ug/L		04/13/17 08:45	05/03/17 19:16	1
3 & 4 Methylphenol	1.9	U	19	1.9	ug/L		04/13/17 08:45	05/03/17 19:16	1
3,3'-Dichlorobenzidine	1.2	U	47	1.2	ug/L		04/13/17 08:45	05/03/17 19:16	1
3,3'-Dimethylbenzidine	2.4	U	47	2.4	ug/L		04/13/17 08:45	05/03/17 19:16	1
3-Methylcholanthrene	0.93	U	19	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
3-Nitroaniline	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
4,6-Dinitro-2-methylphenol	1.2	U	9.3	1.2	ug/L		04/13/17 08:45	05/03/17 19:16	1
4-Aminobiphenyl	0.98	U	47	0.98	ug/L		04/13/17 08:45	05/03/17 19:16	1
4-Bromophenyl phenyl ether	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
4-Chloro-3-methylphenol	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
4-Chloroaniline	1.9	U	9.3	1.9	ug/L		04/13/17 08:45	05/03/17 19:16	1
4-Chlorophenyl phenyl ether	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
4-Nitroaniline	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
4-Nitrophenol	1.9	U	9.3	1.9	ug/L		04/13/17 08:45	05/03/17 19:16	1
4-Nitroquinoline-1-oxide	4.7	U	93	4.7	ug/L		04/13/17 08:45	05/03/17 19:16	1
5-Nitro-o-toluidine	0.93	U	19	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Client Sample ID: B397P7
Date Collected: 04/11/17 11:05
Date Received: 04/12/17 09:00

Lab Sample ID: 160-21829-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
7,12-Dimethylbenz(a)anthracene	0.93	U	19	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Acenaphthene	0.93	U o	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Acenaphthylene	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Acetophenone	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
alpha,alpha-Dimethyl phenethylamine	21	U	47	21	ug/L		04/13/17 08:45	05/03/17 19:16	1
Aniline	1.2	U	9.3	1.2	ug/L		04/13/17 08:45	05/03/17 19:16	1
Anthracene	0.93	U o	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Aramite, Total	4.7	U	19	4.7	ug/L		04/13/17 08:45	05/03/17 19:16	1
Benzo[a]anthracene	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Benzo[a]pyrene	0.93	U o	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Benzo[b]fluoranthene	0.93	U o T	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Benzo[g,h,i]perylene	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Benzo[k]fluoranthene	0.93	U o	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Benzyl alcohol	2.8	U	9.3	2.8	ug/L		04/13/17 08:45	05/03/17 19:16	1
bis(2 chloro-1-methylethyl) ether	0.93	U o	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Bis(2-chloroethoxy)methane	0.93	U o	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Bis(2-chloroethyl)ether	0.93	U o T	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Bis(2-ethylhexyl) phthalate	1.7	U	9.3	1.7	ug/L		04/13/17 08:45	05/03/17 19:16	1
Butyl benzyl phthalate	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Carbazole	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Chlorobenzilate	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Chrysene	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Diallate	1.9	U	19	1.9	ug/L		04/13/17 08:45	05/03/17 19:16	1
Dibenz(a,h)anthracene	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Dibenzofuran	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Diethyl phthalate	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Dimethoate	0.93	U	19	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Dimethyl phthalate	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Di-n-butyl phthalate	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Dinitrobenzene, m-	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Di-n-octyl phthalate	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Dinoseb	1.9	U	19	1.9	ug/L		04/13/17 08:45	05/03/17 19:16	1
Diphenylamine + N-Nitrosodiphenylamine	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Disulfoton	0.93	U	47	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Ethyl methanesulfonate	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Famphur	1.6	U	93	1.6	ug/L		04/13/17 08:45	05/03/17 19:16	1
Fluoranthene	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Fluorene	0.93	U o	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Hexachlorobenzene	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Hexachlorobutadiene	0.93	U o T	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Hexachlorocyclopentadiene	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Hexachloroethane	0.93	U o T	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Hexachlorophene	9.3	U	230	9.3	ug/L		04/13/17 08:45	05/03/17 19:16	1
Hexachloropropene	0.93	U	93	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Indeno[1,2,3-cd]pyrene	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Isodrin	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Isophorone	0.93	U o	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Isosafrole	4.7	U	19	4.7	ug/L		04/13/17 08:45	05/03/17 19:16	1
Kepone	19	U	93	19	ug/L		04/13/17 08:45	05/03/17 19:16	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Client Sample ID: B397P7
Date Collected: 04/11/17 11:05
Date Received: 04/12/17 09:00

Lab Sample ID: 160-21829-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methapyrilene	1.2	U	47	1.2	ug/L		04/13/17 08:45	05/03/17 19:16	1
Methyl methanesulfonate	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Methyl parathion	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Naphthalene	0.93	U o	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Nitrobenzene	0.93	U o	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
N-Nitrosodiethylamine	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
N-Nitrosodimethylamine	1.9	U	9.3	1.9	ug/L		04/13/17 08:45	05/03/17 19:16	1
N-Nitrosodi-n-butylamine	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
N-Nitrosodi-n-propylamine	1.4	U o	9.3	1.4	ug/L		04/13/17 08:45	05/03/17 19:16	1
N-Nitrosomethylethylamine	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
N-Nitrosomorpholine	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
N-Nitrosopiperidine	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
N-Nitrosopyrrolidine	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
o,o',o''-Triethylphosphorothioate	1.1	U	47	1.1	ug/L		04/13/17 08:45	05/03/17 19:16	1
O,O-Diethyl O-2-pyrazinyl phosphorothioate	0.93	U	47	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
o-Toluidine	0.93	U	19	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Parathion	0.93	U	47	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
p-Dimethylamino azobenzene	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Pentachlorobenzene	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Pentachloroethane	0.93	U	47	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Pentachloronitrobenzene	0.93	U	47	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Pentachlorophenol	1.2	U o T	47	1.2	ug/L		04/13/17 08:45	05/03/17 19:16	1
Phenacetin	0.93	U	19	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Phenanthrene	0.93	U o	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Phenol	1.9	U	9.3	1.9	ug/L		04/13/17 08:45	05/03/17 19:16	1
Phorate	1.9	U	47	1.9	ug/L		04/13/17 08:45	05/03/17 19:16	1
p-Phenylene diamine	0.93	U	93	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Pronamide	0.93	U	19	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Pyrene	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Pyridine	1.9	U	19	1.9	ug/L		04/13/17 08:45	05/03/17 19:16	1
Safrole	0.93	U	19	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
sym-Trinitrobenzene	0.93	U	47	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Tetraethyl dithiopyrophosphate (sulfotep)	0.93	U	47	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1
Tributyl phosphate	0.93	U	9.3	0.93	ug/L		04/13/17 08:45	05/03/17 19:16	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Methylene Chloride	*5.3*	*N J*	*ug/L*		*2.34*	*75-09-2*	*04/13/17 08:45*	*05/03/17 19:16*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*104*		*37 - 120*	*04/13/17 08:45*	*05/03/17 19:16*	*1*
2-Fluorobiphenyl (Surr)	*80*		*43 - 108*	*04/13/17 08:45*	*05/03/17 19:16*	*1*
2-Fluorophenol (Surr)	*48*		*15 - 59*	*04/13/17 08:45*	*05/03/17 19:16*	*1*
Nitrobenzene-d5 (Surr)	*77*		*50 - 101*	*04/13/17 08:45*	*05/03/17 19:16*	*1*
Phenol-d5 (Surr)	*31*		*10 - 50*	*04/13/17 08:45*	*05/03/17 19:16*	*1*
Terphenyl-d14 (Surr)	*88*		*21 - 97*	*04/13/17 08:45*	*05/03/17 19:16*	*1*

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

Method: 8081B - Organochlorine Pesticides (GC)

Client Sample ID: B39302
Date Collected: 04/11/17 10:42
Date Received: 04/12/17 09:00

Lab Sample ID: 160-21829-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	0.0095	U N	0.048	0.0095	ug/L		04/13/17 10:45	04/18/17 14:15	1
4,4'-DDE	0.013	U N	0.048	0.013	ug/L		04/13/17 10:45	04/18/17 14:15	1
4,4'-DDT	0.022	U N	0.048	0.022	ug/L		04/13/17 10:45	04/18/17 14:15	1
Aldrin	0.0095	U o	0.048	0.0095	ug/L		04/13/17 10:45	04/18/17 14:15	1
alpha-BHC	0.0095	U	0.048	0.0095	ug/L		04/13/17 10:45	04/18/17 14:15	1
alpha-Chlordane	0.014	U	0.048	0.014	ug/L		04/13/17 10:45	04/18/17 14:15	1
beta-BHC	0.012	U N	0.048	0.012	ug/L		04/13/17 10:45	04/18/17 14:15	1
delta-BHC	0.0095	U	0.048	0.0095	ug/L		04/13/17 10:45	04/18/17 14:15	1
Dieldrin	0.0095	U	0.048	0.0095	ug/L		04/13/17 10:45	04/18/17 14:15	1
Endosulfan I	0.018	U N	0.048	0.018	ug/L		04/13/17 10:45	04/18/17 14:15	1
Endosulfan II	0.0095	U N	0.048	0.0095	ug/L		04/13/17 10:45	04/18/17 14:15	1
Endosulfan sulfate	0.0095	U N	0.048	0.0095	ug/L		04/13/17 10:45	04/18/17 14:15	1
Endrin	0.017	U	0.048	0.017	ug/L		04/13/17 10:45	04/18/17 14:15	1
Endrin aldehyde	0.0095	U N	0.048	0.0095	ug/L		04/13/17 10:45	04/18/17 14:15	1
Endrin ketone	0.0095	U	0.048	0.0095	ug/L		04/13/17 10:45	04/18/17 14:15	1
gamma-BHC (Lindane)	0.0095	U o	0.048	0.0095	ug/L		04/13/17 10:45	04/18/17 14:15	1
Heptachlor	0.0095	U	0.048	0.0095	ug/L		04/13/17 10:45	04/18/17 14:15	1
Heptachlor epoxide	0.016	U	0.048	0.016	ug/L		04/13/17 10:45	04/18/17 14:15	1
Methoxychlor	0.012	U	0.48	0.012	ug/L		04/13/17 10:45	04/18/17 14:15	1
Technical Chlordane	0.095	U	0.48	0.095	ug/L		04/13/17 10:45	04/18/17 14:15	1
Toxaphene	0.26	U	1.9	0.26	ug/L		04/13/17 10:45	04/18/17 14:15	1
trans-Chlordane	0.0095	U	0.048	0.0095	ug/L		04/13/17 10:45	04/18/17 14:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*89*		*26 - 127*	*04/13/17 10:45*	*04/18/17 14:15*	*1*
Tetrachloro-m-xylene	*95*		*53 - 116*	*04/13/17 10:45*	*04/18/17 14:15*	*1*

Client Sample ID: B390L5
Date Collected: 04/11/17 11:05
Date Received: 04/12/17 09:00

Lab Sample ID: 160-21829-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	0.0096	U N	0.048	0.0096	ug/L		04/13/17 10:45	04/18/17 15:15	1
4,4'-DDE	0.013	U N	0.048	0.013	ug/L		04/13/17 10:45	04/18/17 15:15	1
4,4'-DDT	0.022	U N	0.048	0.022	ug/L		04/13/17 10:45	04/18/17 15:15	1
Aldrin	0.0096	U o N	0.048	0.0096	ug/L		04/13/17 10:45	04/18/17 15:15	1
alpha-BHC	0.0096	U N	0.048	0.0096	ug/L		04/13/17 10:45	04/18/17 15:15	1
alpha-Chlordane	0.014	U	0.048	0.014	ug/L		04/13/17 10:45	04/18/17 15:15	1
beta-BHC	0.012	U N	0.048	0.012	ug/L		04/13/17 10:45	04/18/17 15:15	1
delta-BHC	0.0096	U	0.048	0.0096	ug/L		04/13/17 10:45	04/18/17 15:15	1
Dieldrin	0.0096	U	0.048	0.0096	ug/L		04/13/17 10:45	04/18/17 15:15	1
Endosulfan I	0.018	U N	0.048	0.018	ug/L		04/13/17 10:45	04/18/17 15:15	1
Endosulfan II	0.0096	U N	0.048	0.0096	ug/L		04/13/17 10:45	04/18/17 15:15	1
Endosulfan sulfate	0.0096	U N	0.048	0.0096	ug/L		04/13/17 10:45	04/18/17 15:15	1
Endrin	0.017	U	0.048	0.017	ug/L		04/13/17 10:45	04/18/17 15:15	1
Endrin aldehyde	0.0096	U N	0.048	0.0096	ug/L		04/13/17 10:45	04/18/17 15:15	1
Endrin ketone	0.0096	U	0.048	0.0096	ug/L		04/13/17 10:45	04/18/17 15:15	1
gamma-BHC (Lindane)	0.0096	U o	0.048	0.0096	ug/L		04/13/17 10:45	04/18/17 15:15	1
Heptachlor	0.0096	U	0.048	0.0096	ug/L		04/13/17 10:45	04/18/17 15:15	1
Heptachlor epoxide	0.016	U	0.048	0.016	ug/L		04/13/17 10:45	04/18/17 15:15	1
Methoxychlor	0.012	U	0.48	0.012	ug/L		04/13/17 10:45	04/18/17 15:15	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Client Sample ID: B390L5 — **Lab Sample ID: 160-21829-8**
Date Collected: 04/11/17 11:05 — **Matrix: Water**
Date Received: 04/12/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Technical Chlordane	0.096	U	0.48	0.096	ug/L		04/13/17 10:45	04/18/17 15:15	1
Toxaphene	0.26	U	1.9	0.26	ug/L		04/13/17 10:45	04/18/17 15:15	1
trans-Chlordane	0.0096	U	0.048	0.0096	ug/L		04/13/17 10:45	04/18/17 15:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*76*		*26 - 127*	*04/13/17 10:45*	*04/18/17 15:15*	*1*
Tetrachloro-m-xylene	*85*		*53 - 116*	*04/13/17 10:45*	*04/18/17 15:15*	*1*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Sample ID: B390C3 — **Lab Sample ID: 160-21829-5**
Date Collected: 04/11/17 10:42 — **Matrix: Water**
Date Received: 04/12/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	0.33	U	0.96	0.33	ug/L		04/13/17 16:05	04/18/17 11:18	1
Aroclor 1221	0.33	U	0.96	0.33	ug/L		04/13/17 16:05	04/18/17 11:18	1
Aroclor 1232	0.33	U	0.96	0.33	ug/L		04/13/17 16:05	04/18/17 11:18	1
Aroclor 1242	0.33	U	0.96	0.33	ug/L		04/13/17 16:05	04/18/17 11:18	1
Aroclor 1248	0.33	U	0.96	0.33	ug/L		04/13/17 16:05	04/18/17 11:18	1
Aroclor 1254	0.21	U	0.96	0.21	ug/L		04/13/17 16:05	04/18/17 11:18	1
Aroclor 1260	0.21	U	0.96	0.21	ug/L		04/13/17 16:05	04/18/17 11:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*90*		*32 - 141*	*04/13/17 16:05*	*04/18/17 11:18*	*1*

Client Sample ID: B390L5 — **Lab Sample ID: 160-21829-8**
Date Collected: 04/11/17 11:05 — **Matrix: Water**
Date Received: 04/12/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	0.33	U	0.95	0.33	ug/L		04/13/17 16:05	04/18/17 12:21	1
Aroclor 1221	0.33	U	0.95	0.33	ug/L		04/13/17 16:05	04/18/17 12:21	1
Aroclor 1232	0.33	U	0.95	0.33	ug/L		04/13/17 16:05	04/18/17 12:21	1
Aroclor 1242	0.33	U	0.95	0.33	ug/L		04/13/17 16:05	04/18/17 12:21	1
Aroclor 1248	0.33	U	0.95	0.33	ug/L		04/13/17 16:05	04/18/17 12:21	1
Aroclor 1254	0.20	U	0.95	0.20	ug/L		04/13/17 16:05	04/18/17 12:21	1
Aroclor 1260	0.20	U	0.95	0.20	ug/L		04/13/17 16:05	04/18/17 12:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*83*		*32 - 141*	*04/13/17 16:05*	*04/18/17 12:21*	*1*

Method: 8151A - Herbicides (GC)

Client Sample ID: B397P7 — **Lab Sample ID: 160-21829-3**
Date Collected: 04/11/17 11:05 — **Matrix: Water**
Date Received: 04/12/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	0.26	U	0.95	0.26	ug/L		04/18/17 08:00	05/03/17 00:57	1
2,4-D	4.0	U	7.6	4.0	ug/L		04/18/17 08:00	05/03/17 00:57	1
2,4-DB	3.6	U	7.6	3.6	ug/L		04/18/17 08:00	05/03/17 00:57	1
Dalapon	9.3	U	11	9.3	ug/L		04/18/17 08:00	05/03/17 00:57	1
Dicamba	0.32	U	1.9	0.32	ug/L		04/18/17 08:00	05/03/17 00:57	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Client Sample ID: B397P7 — **Lab Sample ID: 160-21829-3**
Date Collected: 04/11/17 11:05 — **Matrix: Water**
Date Received: 04/12/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorprop	1.3	U	4.8	1.3	ug/L		04/18/17 08:00	05/03/17 00:57	1
Dinoseb	0.70	U	1.9	0.70	ug/L		04/18/17 08:00	05/03/17 00:57	1
MCPA	180	U	380	180	ug/L		04/18/17 08:00	05/03/17 00:57	1
MCPP	160	U N o	380	160	ug/L		04/18/17 08:00	05/03/17 00:57	1
Silvex (2,4,5-TP)	0.18	U	0.95	0.18	ug/L		04/18/17 08:00	05/03/17 00:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*119*		*60 - 128*	*04/18/17 08:00*	*05/03/17 00:57*	*1*

Client Sample ID: B390C3 — **Lab Sample ID: 160-21829-5**
Date Collected: 04/11/17 10:42 — **Matrix: Water**
Date Received: 04/12/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	0.26	U	0.96	0.26	ug/L		04/18/17 08:00	05/03/17 01:26	1
2,4-D	4.0	U	7.7	4.0	ug/L		04/18/17 08:00	05/03/17 01:26	1
2,4-DB	3.6	U	7.7	3.6	ug/L		04/18/17 08:00	05/03/17 01:26	1
Dalapon	9.3	U	11	9.3	ug/L		04/18/17 08:00	05/03/17 01:26	1
Dicamba	0.32	U	1.9	0.32	ug/L		04/18/17 08:00	05/03/17 01:26	1
Dichlorprop	1.3	U	4.8	1.3	ug/L		04/18/17 08:00	05/03/17 01:26	1
Dinoseb	0.70	U	1.9	0.70	ug/L		04/18/17 08:00	05/03/17 01:26	1
MCPA	180	U	380	180	ug/L		04/18/17 08:00	05/03/17 01:26	1
MCPP	160	U N o	380	160	ug/L		04/18/17 08:00	05/03/17 01:26	1
Silvex (2,4,5-TP)	0.18	U	0.96	0.18	ug/L		04/18/17 08:00	05/03/17 01:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*125*		*60 - 128*	*04/18/17 08:00*	*05/03/17 01:26*	*1*

Method: 6010C - Metals (ICP)

Client Sample ID: B396V1 — **Lab Sample ID: 160-21829-6**
Date Collected: 04/11/17 08:47 — **Matrix: Water**
Date Received: 04/12/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**55700**		1000	300	ug/L		04/18/17 14:37	04/19/17 20:06	1
Iron	30.0	U	100	30.0	ug/L		04/18/17 14:37	04/19/17 20:06	1
Magnesium	**12700**		1000	300	ug/L		04/18/17 14:37	04/19/17 20:06	1
Potassium	**6020**		5000	1500	ug/L		04/18/17 14:37	04/19/17 20:06	1
Sodium	**20900**		1000	300	ug/L		04/18/17 14:37	04/19/17 20:06	1
Vanadium	25.0	U	50.0	25.0	ug/L		04/18/17 14:37	04/19/17 20:06	1
Boron	**28.5**	**B**	100	25.0	ug/L		04/18/17 14:37	04/19/17 20:06	1

Method: 6010C - Metals (ICP) - Dissolved

Client Sample ID: B390M3 — **Lab Sample ID: 160-21829-7**
Date Collected: 04/11/17 08:47 — **Matrix: Water**
Date Received: 04/12/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**25.3**	**B**	100	25.0	ug/L		04/18/17 14:37	04/19/17 20:23	1
Calcium	**54000**		1000	300	ug/L		04/18/17 14:37	04/19/17 20:23	1
Iron	30.0	U	100	30.0	ug/L		04/18/17 14:37	04/19/17 20:23	1
Magnesium	**12400**		1000	300	ug/L		04/18/17 14:37	04/19/17 20:23	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Client Sample ID: B390M3 — **Lab Sample ID: 160-21829-7**
Date Collected: 04/11/17 08:47 — **Matrix: Water**
Date Received: 04/12/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	**5810**		5000	1500	ug/L		04/18/17 14:37	04/19/17 20:23	1
Sodium	**20100**		1000	300	ug/L		04/18/17 14:37	04/19/17 20:23	1
Vanadium	25.0	U	50.0	25.0	ug/L		04/18/17 14:37	04/19/17 20:23	1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: B396V1 — **Lab Sample ID: 160-21829-6**
Date Collected: 04/11/17 08:47 — **Matrix: Water**
Date Received: 04/12/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	20.0	U D	50.0	20.0	ug/L		04/18/17 14:38	04/25/17 19:12	2
Antimony	2.0	U D	5.0	2.0	ug/L		04/18/17 14:38	04/25/17 19:12	2
Arsenic	4.0	U D	10.0	4.0	ug/L		04/18/17 14:38	04/25/17 19:12	2
Barium	**52.5**	**D**	2.0	0.90	ug/L		04/18/17 14:38	04/25/17 19:12	2
Beryllium	**0.32**	**B D**	0.50	0.20	ug/L		04/18/17 14:38	04/25/17 19:12	2
Cadmium	0.20	U D	0.50	0.20	ug/L		04/18/17 14:38	04/25/17 19:12	2
Chromium	**10.7**	**D**	10.0	4.0	ug/L		04/18/17 14:38	04/25/17 19:12	2
Cobalt	0.90	U D	2.0	0.90	ug/L		04/18/17 14:38	04/25/17 19:12	2
Copper	**0.59**	**B D**	1.0	0.40	ug/L		04/18/17 14:38	05/02/17 17:49	2
Lead	1.0	U D	3.0	1.0	ug/L		04/18/17 14:38	04/25/17 19:12	2
Manganese	**3.1**	**D**	2.0	0.90	ug/L		04/18/17 14:38	04/25/17 19:12	2
Molybdenum	**7.5**	**D**	5.0	2.0	ug/L		04/18/17 14:38	04/25/17 19:12	2
Nickel	2.0	U D	5.0	2.0	ug/L		04/18/17 14:38	04/25/17 19:12	2
Selenium	**3.3**	**B D**	5.0	2.0	ug/L		04/18/17 14:38	04/25/17 19:12	2
Silver	0.90	U D	2.0	0.90	ug/L		04/18/17 14:38	04/25/17 19:12	2
Strontium	**239**	**D**	5.0	0.50	ug/L		04/18/17 14:38	04/25/17 19:12	2
Thallium	0.90	U D	2.0	0.90	ug/L		04/18/17 14:38	04/25/17 19:12	2
Thorium	0.90	U D	2.0	0.90	ug/L		04/18/17 14:38	04/25/17 19:12	2
Tin	1.2	U D	2.0	1.2	ug/L		04/18/17 14:38	04/25/17 19:12	2
Uranium	**6.4**	**D**	1.0	0.40	ug/L		04/18/17 14:38	04/25/17 19:12	2
Zinc	7.5	U D	20.0	7.5	ug/L		04/18/17 14:38	04/25/17 19:12	2

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

Client Sample ID: B390M3 — **Lab Sample ID: 160-21829-7**
Date Collected: 04/11/17 08:47 — **Matrix: Water**
Date Received: 04/12/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	20.0	U D	50.0	20.0	ug/L		04/18/17 14:38	04/25/17 19:39	2
Antimony	2.0	U D	5.0	2.0	ug/L		04/18/17 14:38	04/25/17 19:39	2
Arsenic	4.0	U D	10.0	4.0	ug/L		04/18/17 14:38	04/25/17 19:39	2
Barium	**51.1**	**D**	2.0	0.90	ug/L		04/18/17 14:38	04/25/17 19:39	2
Beryllium	**0.45**	**B D**	0.50	0.20	ug/L		04/18/17 14:38	04/25/17 19:39	2
Cadmium	0.20	U D	0.50	0.20	ug/L		04/18/17 14:38	04/25/17 19:39	2
Chromium	**10.6**	**D**	10.0	4.0	ug/L		04/18/17 14:38	04/25/17 19:39	2
Cobalt	0.90	U D	2.0	0.90	ug/L		04/18/17 14:38	04/25/17 19:39	2
Copper	**0.55**	**B D**	1.0	0.40	ug/L		04/18/17 14:38	05/02/17 18:36	2
Lead	1.0	U D	3.0	1.0	ug/L		04/18/17 14:38	04/25/17 19:39	2
Manganese	**1.7**	**B D**	2.0	0.90	ug/L		04/18/17 14:38	04/25/17 19:39	2
Molybdenum	**7.6**	**D**	5.0	2.0	ug/L		04/18/17 14:38	04/25/17 19:39	2

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Client Sample ID: B390M3 — **Lab Sample ID: 160-21829-7**
Date Collected: 04/11/17 08:47 — **Matrix: Water**
Date Received: 04/12/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	2.0	U D	5.0	2.0	ug/L		04/18/17 14:38	04/25/17 19:39	2
Selenium	**3.6**	**B D**	5.0	2.0	ug/L		04/18/17 14:38	04/25/17 19:39	2
Silver	0.90	U D	2.0	0.90	ug/L		04/18/17 14:38	04/25/17 19:39	2
Strontium	**236**	**D**	5.0	0.50	ug/L		04/18/17 14:38	04/25/17 19:39	2
Thallium	0.90	U D	2.0	0.90	ug/L		04/18/17 14:38	04/25/17 19:39	2
Thorium	0.90	U D	2.0	0.90	ug/L		04/18/17 14:38	04/25/17 19:39	2
Tin	1.2	U D	2.0	1.2	ug/L		04/18/17 14:38	04/25/17 19:39	2
Uranium	**6.3**	**D**	1.0	0.40	ug/L		04/18/17 14:38	04/25/17 19:39	2
Zinc	7.5	U D	20.0	7.5	ug/L		04/18/17 14:38	04/25/17 19:39	2

Method: 7470A - Mercury (CVAA)

Client Sample ID: B396V1 — **Lab Sample ID: 160-21829-6**
Date Collected: 04/11/17 08:47 — **Matrix: Water**
Date Received: 04/12/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.060	U	0.20	0.060	ug/L		04/13/17 08:17	04/13/17 15:19	1

Method: 7470A - Mercury (CVAA) - Dissolved

Client Sample ID: B390M3 — **Lab Sample ID: 160-21829-7**
Date Collected: 04/11/17 08:47 — **Matrix: Water**
Date Received: 04/12/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.060	U	0.20	0.060	ug/L		04/13/17 08:17	04/13/17 15:32	1

General Chemistry

Client Sample ID: B39LK7 — **Lab Sample ID: 160-21813-1**
Date Collected: 04/10/17 09:11 — **Matrix: Water**
Date Received: 04/11/17 09:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	**79.0**		5.0	3.1	ug/L		04/18/17 15:50	04/18/17 19:34	1

Client Sample ID: B392B5 — **Lab Sample ID: 160-21813-2**
Date Collected: 04/10/17 12:25 — **Matrix: Water**
Date Received: 04/11/17 09:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**118**		5.0	0.54	mg/L			04/14/17 23:22	1
Bicarbonate Alkalinity	**118**		5.0	0.54	mg/L			04/14/17 23:22	1
Carbonate Alkalinity	0.54	U	5.0	0.54	mg/L			04/14/17 23:22	1
Hydroxide Alkalinity	0.54	U	5.0	0.54	mg/L			04/14/17 23:22	1

Client Sample ID: B390B2 — **Lab Sample ID: 160-21813-3**
Date Collected: 04/10/17 09:15 — **Matrix: Water**
Date Received: 04/11/17 09:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**216**		5.0	0.54	mg/L			04/14/17 23:33	1
Bicarbonate Alkalinity	**216**		5.0	0.54	mg/L			04/14/17 23:33	1
Carbonate Alkalinity	0.54	U	5.0	0.54	mg/L			04/14/17 23:33	1
Hydroxide Alkalinity	0.54	U	5.0	0.54	mg/L			04/14/17 23:33	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

Client Sample ID: B390F7 — **Lab Sample ID: 160-21813-4**
Date Collected: 04/10/17 11:20 — **Matrix: Water**
Date Received: 04/11/17 09:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**268**		5.0	0.54	mg/L			04/14/17 23:43	1
Bicarbonate Alkalinity	**268**		5.0	0.54	mg/L			04/14/17 23:43	1
Carbonate Alkalinity	0.54	U	5.0	0.54	mg/L			04/14/17 23:43	1
Hydroxide Alkalinity	0.54	U	5.0	0.54	mg/L			04/14/17 23:43	1

Client Sample ID: B39081 — **Lab Sample ID: 160-21813-5**
Date Collected: 04/10/17 10:17 — **Matrix: Water**
Date Received: 04/11/17 09:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**324**		5.0	0.54	mg/L			04/14/17 23:54	1
Bicarbonate Alkalinity	**324**		5.0	0.54	mg/L			04/14/17 23:54	1
Carbonate Alkalinity	0.54	U	5.0	0.54	mg/L			04/14/17 23:54	1
Hydroxide Alkalinity	0.54	U	5.0	0.54	mg/L			04/14/17 23:54	1

Client Sample ID: B39LK3 — **Lab Sample ID: 160-21813-6**
Date Collected: 04/10/17 09:11 — **Matrix: Water**
Date Received: 04/11/17 09:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	2.1	U N	5.0	2.1	ug/L		04/26/17 12:00	04/28/17 02:22	1
Total Organic Carbon	0.72	U	1.0	0.72	mg/L			04/20/17 23:02	1

Client Sample ID: B39LK2 — **Lab Sample ID: 160-21813-7**
Date Collected: 04/10/17 09:11 — **Matrix: Water**
Date Received: 04/11/17 09:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	2.1	U N	5.0	2.1	ug/L		04/26/17 12:00	04/28/17 03:27	1
Total Organic Carbon	0.72	U	1.0	0.72	mg/L			04/20/17 23:14	1

Client Sample ID: B39LK1 — **Lab Sample ID: 160-21813-8**
Date Collected: 04/10/17 09:11 — **Matrix: Water**
Date Received: 04/11/17 09:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	2.1	U N	5.0	2.1	ug/L		04/26/17 12:00	04/28/17 04:10	1
Total Organic Carbon	0.72	U	1.0	0.72	mg/L			04/20/17 23:25	1

Client Sample ID: B39LK0 — **Lab Sample ID: 160-21813-9**
Date Collected: 04/10/17 09:11 — **Matrix: Water**
Date Received: 04/11/17 09:05

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**100**		5.0	0.54	mg/L			04/24/17 22:37	1
Bicarbonate Alkalinity	**100**		5.0	0.54	mg/L			04/24/17 22:37	1
Carbonate Alkalinity	0.54	U	5.0	0.54	mg/L			04/24/17 22:37	1
Hydroxide Alkalinity	0.54	U	5.0	0.54	mg/L			04/24/17 22:37	1
Halogens, Total Organic	2.1	U N	5.0	2.1	ug/L		04/26/17 12:00	04/28/17 11:13	1
Total Organic Carbon	0.72	U	1.0	0.72	mg/L			04/20/17 23:37	1

Client Sample ID: B397P7 — **Lab Sample ID: 160-21829-3**
Date Collected: 04/11/17 11:05 — **Matrix: Water**
Date Received: 04/12/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**136**		5.0	0.54	mg/L			04/24/17 23:26	1
Bicarbonate Alkalinity	**136**		5.0	0.54	mg/L			04/24/17 23:26	1
Carbonate Alkalinity	0.54	U	5.0	0.54	mg/L			04/24/17 23:26	1

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

General Chemistry (Continued)

Client Sample ID: B397P7 — **Lab Sample ID: 160-21829-3**
Date Collected: 04/11/17 11:05 — **Matrix: Water**
Date Received: 04/12/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hydroxide Alkalinity	0.54	U	5.0	0.54	mg/L			04/24/17 23:26	1
Cyanide, Total	3.1	U	5.0	3.1	ug/L		04/18/17 16:20	04/18/17 19:51	1

Client Sample ID: B390C3 — **Lab Sample ID: 160-21829-5**
Date Collected: 04/11/17 10:42 — **Matrix: Water**
Date Received: 04/12/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	**126**		5.0	0.54	mg/L			04/24/17 23:42	1
Bicarbonate Alkalinity	**126**		5.0	0.54	mg/L			04/24/17 23:42	1
Carbonate Alkalinity	0.54	U	5.0	0.54	mg/L			04/24/17 23:42	1
Hydroxide Alkalinity	0.54	U	5.0	0.54	mg/L			04/24/17 23:42	1
Cyanide, Total	3.1	U	5.0	3.1	ug/L		04/18/17 16:20	04/18/17 19:55	1
Halogens, Total Organic	2.1	U N	5.0	2.1	ug/L		04/27/17 12:00	04/28/17 11:35	1
Sulfide	2.2	U	10.9	2.2	mg/L		04/17/17 09:29	04/17/17 11:04	1
Total Organic Carbon	0.72	U	1.0	0.72	mg/L			04/20/17 23:48	1

Client Sample ID: B390L5 — **Lab Sample ID: 160-21829-8**
Date Collected: 04/11/17 11:05 — **Matrix: Water**
Date Received: 04/12/17 09:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	2.1	U N	5.0	2.1	ug/L		04/27/17 12:00	04/28/17 11:58	1
Sulfide	**2.9**	**B**	10.9	2.2	mg/L		04/17/17 09:29	04/17/17 11:04	1
Total Organic Carbon	0.72	U	1.0	0.72	mg/L			04/21/17 00:00	1

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Lab Sample ID: MB 160-303648/6
Matrix: Water
Analysis Batch: 303648

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	0.12	U	1.0	0.12	ug/L			04/16/17 12:14	1
1,1,1-Trichloroethane	0.17	U	1.0	0.17	ug/L			04/16/17 12:14	1
1,1,2,2-Tetrachloroethane	0.10	U	1.0	0.10	ug/L			04/16/17 12:14	1
1,1,2-Trichloroethane	0.13	U	1.0	0.13	ug/L			04/16/17 12:14	1
1,1-Dichloroethane	0.070	U	1.0	0.070	ug/L			04/16/17 12:14	1
1,1-Dichloroethene	0.10	U	1.0	0.10	ug/L			04/16/17 12:14	1
1,2,3-Trichloropropane	0.18	U	1.0	0.18	ug/L			04/16/17 12:14	1
1,2-Dibromo-3-Chloropropane	0.41	U	1.0	0.41	ug/L			04/16/17 12:14	1
1,2-Dibromoethane (EDB)	0.13	U	1.0	0.13	ug/L			04/16/17 12:14	1
1,2-Dichloroethane	0.22	U	1.0	0.22	ug/L			04/16/17 12:14	1
1,2-Dichloropropane	0.10	U	1.0	0.10	ug/L			04/16/17 12:14	1
2-Butanone (MEK)	0.47	U	5.0	0.47	ug/L			04/16/17 12:14	1
2-Hexanone	0.25	U	5.0	0.25	ug/L			04/16/17 12:14	1
4-Methyl-2-pentanone (MIBK)	0.22	U	5.0	0.22	ug/L			04/16/17 12:14	1
Acetone	0.55	U	2.0	0.55	ug/L			04/16/17 12:14	1
Acetonitrile	3.7	U	10	3.7	ug/L			04/16/17 12:14	1
Acrolein	2.8	U	10	2.8	ug/L			04/16/17 12:14	1
Acrylonitrile	0.73	U	10	0.73	ug/L			04/16/17 12:14	1
Allyl chloride	0.10	U	2.0	0.10	ug/L			04/16/17 12:14	1
Benzene	0.10	U	1.0	0.10	ug/L			04/16/17 12:14	1
Bromodichloromethane	0.14	U	1.0	0.14	ug/L			04/16/17 12:14	1
Bromoform	0.17	U	1.0	0.17	ug/L			04/16/17 12:14	1
Bromomethane	0.25	U	2.0	0.25	ug/L			04/16/17 12:14	1
Carbon disulfide	0.10	U	1.0	0.10	ug/L			04/16/17 12:14	1
Carbon tetrachloride	0.18	U	1.0	0.18	ug/L			04/16/17 12:14	1
Chlorobenzene	0.11	U	1.0	0.11	ug/L			04/16/17 12:14	1
Chloroethane	0.16	U	2.0	0.16	ug/L			04/16/17 12:14	1
Chloroform	0.10	U	1.0	0.10	ug/L			04/16/17 12:14	1
Chloromethane	0.10	U	2.0	0.10	ug/L			04/16/17 12:14	1
Chloroprene	0.16	U	1.0	0.16	ug/L			04/16/17 12:14	1
cis-1,2-Dichloroethylene	0.10	U	1.0	0.10	ug/L			04/16/17 12:14	1
cis-1,3-Dichloropropene	0.16	U	1.0	0.16	ug/L			04/16/17 12:14	1
Dibromochloromethane	0.14	U	1.0	0.14	ug/L			04/16/17 12:14	1
Dibromomethane	0.21	U	1.0	0.21	ug/L			04/16/17 12:14	1
Dichlorodifluoromethane	0.14	U	2.0	0.14	ug/L			04/16/17 12:14	1
Ethyl Cyanide	1.4	U	10	1.4	ug/L			04/16/17 12:14	1
Ethyl methacrylate	0.17	U	1.0	0.17	ug/L			04/16/17 12:14	1
Ethylbenzene	0.12	U	1.0	0.12	ug/L			04/16/17 12:14	1
Iodomethane	0.10	U	2.0	0.10	ug/L			04/16/17 12:14	1
Isobutyl alcohol	8.3	U	80	8.3	ug/L			04/16/17 12:14	1
Methacrylonitrile	1.2	U	10	1.2	ug/L			04/16/17 12:14	1
Methyl methacrylate	0.27	U	2.0	0.27	ug/L			04/16/17 12:14	1
Methylene Chloride	0.27	U	1.0	0.27	ug/L			04/16/17 12:14	1
Styrene	0.13	U	1.0	0.13	ug/L			04/16/17 12:14	1
Tetrachloroethene	0.18	U	1.0	0.18	ug/L			04/16/17 12:14	1
Toluene	0.14	U	1.0	0.14	ug/L			04/16/17 12:14	1
trans-1,2-Dichloroethylene	0.10	U	1.0	0.10	ug/L			04/16/17 12:14	1
1,4-Dichlorobenzene	0.10	U	1.0	0.10	ug/L			04/16/17 12:14	1

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Lab Sample ID: MB 160-303648/6
Matrix: Water
Analysis Batch: 303648

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	0.10	U	1.0	0.10	ug/L			04/16/17 12:14	1
trans-1,4-Dichloro-2-butene	0.29	U	2.0	0.29	ug/L			04/16/17 12:14	1
Trichloroethene	0.25	U	1.0	0.25	ug/L			04/16/17 12:14	1
Trichloromonofluoromethane	0.11	U	1.0	0.11	ug/L			04/16/17 12:14	1
Vinyl acetate	0.18	U	2.0	0.18	ug/L			04/16/17 12:14	1
Vinyl chloride	0.19	U	2.0	0.19	ug/L			04/16/17 12:14	1
Xylenes, Total	0.27	U	3.0	0.27	ug/L			04/16/17 12:14	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/16/17 12:14*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*75 - 129*		*04/16/17 12:14*	*1*
4-Bromofluorobenzene (Surr)	*116*		*81 - 130*		*04/16/17 12:14*	*1*
Dibromofluoromethane (Surr)	*94*		*81 - 124*		*04/16/17 12:14*	*1*
Toluene-d8 (Surr)	*112*		*87 - 128*		*04/16/17 12:14*	*1*

Lab Sample ID: LCS 160-303648/3
Matrix: Water
Analysis Batch: 303648

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	10.0	10.1		ug/L		101	80 - 120
1,1,1-Trichloroethane	10.0	10.5		ug/L		105	85 - 116
1,1,2,2-Tetrachloroethane	10.0	9.79		ug/L		98	80 - 120
1,1,2-Trichloroethane	10.0	9.56		ug/L		96	80 - 120
1,1-Dichloroethane	10.0	10.0		ug/L		100	80 - 120
1,1-Dichloroethene	10.0	10.3		ug/L		103	80 - 120
1,2,3-Trichloropropane	10.0	9.90		ug/L		99	77 - 117
1,2-Dibromo-3-Chloropropane	10.0	9.57		ug/L		96	73 - 123
1,2-Dibromoethane (EDB)	10.0	9.57		ug/L		96	80 - 120
1,2-Dichloroethane	10.0	9.54		ug/L		95	80 - 115
1,2-Dichloropropane	10.0	10.1		ug/L		101	80 - 120
2-Butanone (MEK)	10.0	8.06		ug/L		81	67 - 127
2-Hexanone	10.0	9.48		ug/L		95	70 - 123
4-Methyl-2-pentanone (MIBK)	10.0	9.07		ug/L		91	75 - 126
Acetone	10.0	7.28		ug/L		73	69 - 129
Acetonitrile	100	93.8		ug/L		94	67 - 122
Acrolein	50.0	38.9		ug/L		78	58 - 140
Acrylonitrile	100	96.4		ug/L		96	80 - 122
Allyl chloride	10.0	10.2		ug/L		102	25 - 140
Benzene	10.0	10.4		ug/L		104	80 - 120
Bromodichloromethane	10.0	10.0		ug/L		100	80 - 120
Bromoform	10.0	10.6		ug/L		106	80 - 120
Bromomethane	10.0	9.83		ug/L		98	70 - 124
Carbon disulfide	10.0	10.1		ug/L		101	80 - 121
Carbon tetrachloride	10.0	10.5		ug/L		105	83 - 125

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Lab Sample ID: LCS 160-303648/3
Matrix: Water
Analysis Batch: 303648

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorobenzene	10.0	10.5		ug/L		105	80 - 120
Chloroethane	10.0	9.96		ug/L		100	73 - 119
Chloroform	10.0	10.2		ug/L		102	80 - 120
Chloromethane	10.0	9.87		ug/L		99	72 - 124
Chloroprene	10.0	9.64		ug/L		96	79 - 132
cis-1,2-Dichloroethylene	10.0	9.97		ug/L		100	80 - 120
cis-1,3-Dichloropropene	10.0	10.2		ug/L		102	80 - 120
Dibromochloromethane	10.0	10.2		ug/L		102	80 - 120
Dibromomethane	10.0	9.51		ug/L		95	80 - 120
Dichlorodifluoromethane	10.0	9.35		ug/L		94	24 - 140
Ethyl Cyanide	100	89.3		ug/L		89	77 - 121
Ethyl methacrylate	10.0	9.57		ug/L		96	69 - 123
Ethylbenzene	10.0	11.0		ug/L		110	80 - 120
Iodomethane	10.0	9.98		ug/L		100	69 - 129
Isobutyl alcohol	250	213		ug/L		85	64 - 124
Methacrylonitrile	100	97.2		ug/L		97	79 - 126
Methyl methacrylate	20.0	17.2		ug/L		86	70 - 123
Methylene Chloride	10.0	9.63		ug/L		96	80 - 120
Styrene	10.0	11.5		ug/L		115	81 - 133
Tetrachloroethene	10.0	10.6		ug/L		106	83 - 123
Toluene	10.0	10.7		ug/L		107	80 - 120
trans-1,2-Dichloroethylene	10.0	9.82		ug/L		98	80 - 120
1,4-Dichlorobenzene	10.0	10.5		ug/L		105	80 - 120
trans-1,3-Dichloropropene	10.0	10.6		ug/L		106	82 - 124
trans-1,4-Dichloro-2-butene	10.0	10.3		ug/L		103	64 - 137
Trichloroethene	10.0	10.3		ug/L		103	80 - 120
Trichloromonofluoromethane	10.0	10.9		ug/L		109	71 - 132
Vinyl acetate	10.0	9.28		ug/L		93	63 - 140
Vinyl chloride	10.0	9.49		ug/L		95	77 - 122
Xylenes, Total	20.0	22.1		ug/L		111	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*91*		*75 - 129*
4-Bromofluorobenzene (Surr)	*100*		*81 - 130*
Dibromofluoromethane (Surr)	*97*		*81 - 124*
Toluene-d8 (Surr)	*104*		*87 - 128*

Lab Sample ID: LCSD 160-303648/4
Matrix: Water
Analysis Batch: 303648

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	10.0	10.4		ug/L		104	80 - 120	3	20
1,1,1-Trichloroethane	10.0	10.1		ug/L		101	85 - 116	4	20
1,1,2,2-Tetrachloroethane	10.0	9.73		ug/L		97	80 - 120	1	20
1,1,2-Trichloroethane	10.0	9.70		ug/L		97	80 - 120	1	20
1,1-Dichloroethane	10.0	9.89		ug/L		99	80 - 120	1	20
1,1-Dichloroethene	10.0	10.3		ug/L		103	80 - 120	0	20

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Lab Sample ID: LCSD 160-303648/4
Matrix: Water
Analysis Batch: 303648

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
1,2,3-Trichloropropane	10.0	9.74		ug/L		97	77 - 117	2	20
1,2-Dibromo-3-Chloropropane	10.0	9.70		ug/L		97	73 - 123	1	20
1,2-Dibromoethane (EDB)	10.0	9.79		ug/L		98	80 - 120	2	20
1,2-Dichloroethane	10.0	9.68		ug/L		97	80 - 115	1	20
1,2-Dichloropropane	10.0	10.2		ug/L		102	80 - 120	0	20
2-Butanone (MEK)	10.0	8.63		ug/L		86	67 - 127	7	20
2-Hexanone	10.0	9.61		ug/L		96	70 - 123	1	20
4-Methyl-2-pentanone (MIBK)	10.0	9.69		ug/L		97	75 - 126	7	20
Acetone	10.0	7.98		ug/L		80	69 - 129	9	20
Acetonitrile	100	94.4		ug/L		94	67 - 122	1	20
Acrolein	50.0	40.4		ug/L		81	58 - 140	4	20
Acrylonitrile	100	97.2		ug/L		97	80 - 122	1	20
Allyl chloride	10.0	10.0		ug/L		100	25 - 140	1	20
Benzene	10.0	10.2		ug/L		102	80 - 120	2	20
Bromodichloromethane	10.0	9.88		ug/L		99	80 - 120	2	20
Bromoform	10.0	10.9		ug/L		109	80 - 120	2	20
Bromomethane	10.0	9.58		ug/L		96	70 - 124	3	20
Carbon disulfide	10.0	9.95		ug/L		100	80 - 121	1	20
Carbon tetrachloride	10.0	10.4		ug/L		104	83 - 125	1	20
Chlorobenzene	10.0	10.5		ug/L		105	80 - 120	0	20
Chloroethane	10.0	9.83		ug/L		98	73 - 119	1	20
Chloroform	10.0	10.1		ug/L		101	80 - 120	1	20
Chloromethane	10.0	9.75		ug/L		97	72 - 124	1	20
Chloroprene	10.0	9.44		ug/L		94	79 - 132	2	20
cis-1,2-Dichloroethylene	10.0	10.1		ug/L		101	80 - 120	1	20
cis-1,3-Dichloropropene	10.0	10.4		ug/L		104	80 - 120	3	20
Dibromochloromethane	10.0	10.5		ug/L		105	80 - 120	3	20
Dibromomethane	10.0	9.70		ug/L		97	80 - 120	2	20
Dichlorodifluoromethane	10.0	9.05		ug/L		91	24 - 140	3	20
Ethyl Cyanide	100	92.9		ug/L		93	77 - 121	4	20
Ethyl methacrylate	10.0	9.96		ug/L		100	69 - 123	4	20
Ethylbenzene	10.0	10.9		ug/L		109	80 - 120	1	20
Iodomethane	10.0	10.1		ug/L		101	69 - 129	1	20
Isobutyl alcohol	250	230		ug/L		92	64 - 124	8	20
Methacrylonitrile	100	96.7		ug/L		97	79 - 126	1	20
Methyl methacrylate	20.0	17.6		ug/L		88	70 - 123	2	20
Methylene Chloride	10.0	9.71		ug/L		97	80 - 120	1	20
Styrene	10.0	11.7		ug/L		117	81 - 133	2	20
Tetrachloroethene	10.0	10.6		ug/L		106	83 - 123	1	20
Toluene	10.0	10.7		ug/L		107	80 - 120	0	20
trans-1,2-Dichloroethylene	10.0	10.1		ug/L		101	80 - 120	3	20
1,4-Dichlorobenzene	10.0	10.5		ug/L		105	80 - 120	1	20
trans-1,3-Dichloropropene	10.0	10.8		ug/L		108	82 - 124	2	20
trans-1,4-Dichloro-2-butene	10.0	10.2		ug/L		102	64 - 137	0	20
Trichloroethene	10.0	10.1		ug/L		101	80 - 120	1	20
Trichloromonofluoromethane	10.0	11.0		ug/L		110	71 - 132	1	20
Vinyl acetate	10.0	9.15		ug/L		92	63 - 140	1	20
Vinyl chloride	10.0	9.66		ug/L		97	77 - 122	2	20

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Lab Sample ID: LCSD 160-303648/4
Matrix: Water
Analysis Batch: 303648

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
Xylenes, Total			20.0	22.2		ug/L		111	80 - 120	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*75 - 129*
4-Bromofluorobenzene (Surr)	*98*		*81 - 130*
Dibromofluoromethane (Surr)	*96*		*81 - 124*
Toluene-d8 (Surr)	*103*		*87 - 128*

Lab Sample ID: 160-21812-1 MS
Matrix: Water
Analysis Batch: 303648

Client Sample ID: B39730
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	0.12	U	10.0	10.2		ug/L		102	80 - 120
1,1,1-Trichloroethane	0.17	U	10.0	10.2		ug/L		102	82 - 124
1,1,2,2-Tetrachloroethane	0.10	U	10.0	9.43		ug/L		94	75 - 121
1,1,2-Trichloroethane	0.13	U	10.0	9.10		ug/L		91	80 - 120
1,1-Dichloroethane	0.070	U	10.0	10.1		ug/L		101	80 - 122
1,1-Dichloroethene	0.10	U	10.0	9.90		ug/L		99	80 - 120
1,2,3-Trichloropropane	0.18	U	10.0	9.45		ug/L		94	71 - 119
1,2-Dibromo-3-Chloropropane	0.41	U	10.0	8.98		ug/L		90	64 - 130
1,2-Dibromoethane (EDB)	0.13	U	10.0	9.56		ug/L		96	82 - 122
1,2-Dichloroethane	0.22	U	10.0	9.21		ug/L		92	80 - 120
1,2-Dichloropropane	0.10	U	10.0	9.95		ug/L		100	80 - 120
2-Butanone (MEK)	0.47	U	10.0	8.41		ug/L		84	53 - 145
2-Hexanone	0.25	U	10.0	8.95		ug/L		89	59 - 132
4-Methyl-2-pentanone (MIBK)	0.22	U	10.0	9.31		ug/L		93	70 - 131
Acetone	0.55	U	10.0	6.22		ug/L		62	50 - 137
Acetonitrile	3.7	U	100	92.3		ug/L		92	67 - 138
Acrolein	2.8	U	50.0	41.0		ug/L		82	52 - 150
Acrylonitrile	0.73	U	100	91.1		ug/L		91	73 - 137
Allyl chloride	0.10	U	10.0	10.1		ug/L		101	49 - 150
Benzene	0.10	U	10.0	10.3		ug/L		103	80 - 120
Bromodichloromethane	0.14	U	10.0	9.92		ug/L		99	80 - 120
Bromoform	0.17	U	10.0	10.2		ug/L		102	81 - 121
Bromomethane	0.25	U	10.0	9.53		ug/L		95	55 - 137
Carbon disulfide	0.10	U	10.0	9.96		ug/L		100	80 - 121
Carbon tetrachloride	0.18	U	10.0	10.2		ug/L		102	77 - 131
Chlorobenzene	0.11	U	10.0	10.6		ug/L		106	80 - 120
Chloroethane	0.16	U	10.0	9.70		ug/L		97	71 - 126
Chloroform	0.10	U	10.0	9.99		ug/L		100	80 - 120
Chloromethane	0.10	U	10.0	9.77		ug/L		98	62 - 132
Chloroprene	0.16	U	10.0	9.38		ug/L		94	74 - 137
cis-1,2-Dichloroethylene	0.10	U	10.0	10.0		ug/L		100	80 - 120
cis-1,3-Dichloropropene	0.16	U	10.0	9.97		ug/L		100	83 - 127
Dibromochloromethane	0.14	U	10.0	10.5		ug/L		105	84 - 123
Dibromomethane	0.21	U	10.0	9.56		ug/L		96	78 - 122
Dichlorodifluoromethane	0.14	U	10.0	8.75		ug/L		87	67 - 135

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Lab Sample ID: 160-21812-1 MS **Client Sample ID: B39730**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 303648

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethyl Cyanide	1.4	U	100	88.8		ug/L		89	67 - 141
Ethyl methacrylate	0.17	U	10.0	9.45		ug/L		95	69 - 123
Ethylbenzene	0.12	U	10.0	11.2		ug/L		112	84 - 125
Iodomethane	0.10	U	10.0	9.83		ug/L		98	53 - 141
Isobutyl alcohol	8.3	U	250	205		ug/L		82	59 - 138
Methacrylonitrile	1.2	U	100	92.3		ug/L		92	70 - 142
Methyl methacrylate	0.27	U	20.0	16.5		ug/L		82	66 - 131
Methylene Chloride	2.6		10.0	11.8		ug/L		93	80 - 120
Styrene	0.13	U	10.0	11.8		ug/L		118	77 - 139
Tetrachloroethene	0.18	U	10.0	10.7		ug/L		107	80 - 126
Toluene	0.14	U	10.0	10.9		ug/L		109	85 - 123
trans-1,2-Dichloroethylene	0.10	U	10.0	10.0		ug/L		100	80 - 120
1,4-Dichlorobenzene	0.10	U	10.0	10.6		ug/L		106	80 - 120
trans-1,3-Dichloropropene	0.10	U	10.0	10.5		ug/L		105	83 - 125
trans-1,4-Dichloro-2-butene	0.29	U	10.0	10.0		ug/L		100	56 - 139
Trichloroethene	0.25	U	10.0	9.98		ug/L		100	81 - 125
Trichloromonofluoromethane	0.11	U	10.0	10.4		ug/L		104	69 - 133
Vinyl acetate	0.18	U	10.0	9.63		ug/L		96	58 - 150
Vinyl chloride	0.19	U	10.0	9.43		ug/L		94	70 - 129
Xylenes, Total	0.27	U	20.0	22.5		ug/L		113	80 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*89*		*75 - 129*
4-Bromofluorobenzene (Surr)	*97*		*81 - 130*
Dibromofluoromethane (Surr)	*94*		*81 - 124*
Toluene-d8 (Surr)	*103*		*87 - 128*

Lab Sample ID: 160-21812-1 MSD **Client Sample ID: B39730**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 303648

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	0.12	U	10.0	10.7		ug/L		107	80 - 120	4	20
1,1,1-Trichloroethane	0.17	U	10.0	10.0		ug/L		100	82 - 124	1	20
1,1,2,2-Tetrachloroethane	0.10	U	10.0	9.63		ug/L		96	75 - 121	2	20
1,1,2-Trichloroethane	0.13	U	10.0	9.54		ug/L		95	80 - 120	5	20
1,1-Dichloroethane	0.070	U	10.0	10.1		ug/L		101	80 - 122	0	20
1,1-Dichloroethene	0.10	U	10.0	9.69		ug/L		97	80 - 120	2	20
1,2,3-Trichloropropane	0.18	U	10.0	9.48		ug/L		95	71 - 119	0	20
1,2-Dibromo-3-Chloropropane	0.41	U	10.0	9.44		ug/L		94	64 - 130	5	20
1,2-Dibromoethane (EDB)	0.13	U	10.0	9.91		ug/L		99	82 - 122	4	20
1,2-Dichloroethane	0.22	U	10.0	9.16		ug/L		92	80 - 120	1	20
1,2-Dichloropropane	0.10	U	10.0	10.0		ug/L		100	80 - 120	1	20
2-Butanone (MEK)	0.47	U	10.0	7.92		ug/L		79	53 - 145	6	20
2-Hexanone	0.25	U	10.0	9.28		ug/L		93	59 - 132	4	20
4-Methyl-2-pentanone (MIBK)	0.22	U	10.0	9.32		ug/L		93	70 - 131	0	20
Acetone	0.55	U	10.0	8.88	y	ug/L		89	50 - 137	35	20
Acetonitrile	3.7	U	100	91.4		ug/L		91	67 - 138	1	20

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Lab Sample ID: 160-21812-1 MSD
Matrix: Water
Analysis Batch: 303648

Client Sample ID: B39730
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acrolein	2.8	U	50.0	41.8		ug/L		84	52 - 150	2	20
Acrylonitrile	0.73	U	100	92.5		ug/L		93	73 - 137	2	20
Allyl chloride	0.10	U	10.0	10.3		ug/L		103	49 - 150	2	20
Benzene	0.10	U	10.0	10.3		ug/L		103	80 - 120	1	20
Bromodichloromethane	0.14	U	10.0	9.86		ug/L		99	80 - 120	1	20
Bromoform	0.17	U	10.0	10.5		ug/L		105	81 - 121	2	20
Bromomethane	0.25	U	10.0	9.26		ug/L		93	55 - 137	3	20
Carbon disulfide	0.10	U	10.0	9.91		ug/L		99	80 - 121	0	20
Carbon tetrachloride	0.18	U	10.0	10.2		ug/L		102	77 - 131	1	20
Chlorobenzene	0.11	U	10.0	10.8		ug/L		108	80 - 120	1	20
Chloroethane	0.16	U	10.0	9.63		ug/L		96	71 - 126	1	20
Chloroform	0.10	U	10.0	9.94		ug/L		99	80 - 120	1	20
Chloromethane	0.10	U	10.0	9.84		ug/L		98	62 - 132	1	20
Chloroprene	0.16	U	10.0	9.21		ug/L		92	74 - 137	2	20
cis-1,2-Dichloroethylene	0.10	U	10.0	10.1		ug/L		101	80 - 120	1	20
cis-1,3-Dichloropropene	0.16	U	10.0	10.1		ug/L		101	83 - 127	1	20
Dibromochloromethane	0.14	U	10.0	10.4		ug/L		104	84 - 123	1	20
Dibromomethane	0.21	U	10.0	9.45		ug/L		95	78 - 122	1	20
Dichlorodifluoromethane	0.14	U	10.0	8.73		ug/L		87	67 - 135	0	20
Ethyl Cyanide	1.4	U	100	92.6		ug/L		93	67 - 141	4	20
Ethyl methacrylate	0.17	U	10.0	9.52		ug/L		95	69 - 123	1	20
Ethylbenzene	0.12	U	10.0	10.9		ug/L		109	84 - 125	3	20
Iodomethane	0.10	U	10.0	10.1		ug/L		101	53 - 141	3	20
Isobutyl alcohol	8.3	U	250	227		ug/L		91	59 - 138	10	20
Methacrylonitrile	1.2	U	100	91.8		ug/L		92	70 - 142	0	20
Methyl methacrylate	0.27	U	20.0	16.8		ug/L		84	66 - 131	2	20
Methylene Chloride	2.6		10.0	12.4		ug/L		98	80 - 120	5	20
Styrene	0.13	U	10.0	11.9		ug/L		119	77 - 139	1	20
Tetrachloroethene	0.18	U	10.0	10.5		ug/L		105	80 - 126	3	20
Toluene	0.14	U	10.0	10.9		ug/L		109	85 - 123	0	20
trans-1,2-Dichloroethylene	0.10	U	10.0	10.0		ug/L		100	80 - 120	0	20
1,4-Dichlorobenzene	0.10	U	10.0	10.8		ug/L		108	80 - 120	2	20
trans-1,3-Dichloropropene	0.10	U	10.0	10.6		ug/L		106	83 - 125	1	20
trans-1,4-Dichloro-2-butene	0.29	U	10.0	10.3		ug/L		103	56 - 139	2	20
Trichloroethene	0.25	U	10.0	9.98		ug/L		100	81 - 125	0	20
Trichloromonofluoromethane	0.11	U	10.0	10.2		ug/L		102	69 - 133	2	20
Vinyl acetate	0.18	U	10.0	9.52		ug/L		95	58 - 150	1	20
Vinyl chloride	0.19	U	10.0	9.33		ug/L		93	70 - 129	1	20
Xylenes, Total	0.27	U	20.0	22.4		ug/L		112	80 - 120	0	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*75 - 129*
4-Bromofluorobenzene (Surr)	*102*		*81 - 130*
Dibromofluoromethane (Surr)	*95*		*81 - 124*
Toluene-d8 (Surr)	*104*		*87 - 128*

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Lab Sample ID: MB 160-303360/1-A
Matrix: Water
Analysis Batch: 306948

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 303360

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
1,4-Naphthoquinone	1.0	U	50	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
1-Naphthylamine	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
2,3,4,6-Tetrachlorophenol	1.0	U	50	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
2,6-Dichlorophenol	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
2-Acetylaminofluorene	1.0	U	100	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
2-Chloronaphthalene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
2-Chlorophenol	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
1,2-Dichlorobenzene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
1,3-Dichlorobenzene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
1,4-Dichlorobenzene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
2-Naphthylamine	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
2,4-Dichlorophenol	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
2-Picoline	2.0	U	20	2.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
2,4-Dimethylphenol	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
3,3'-Dichlorobenzidine	1.3	U	50	1.3	ug/L		04/13/17 08:45	05/03/17 15:13	1
3,3'-Dimethylbenzidine	2.6	U	50	2.6	ug/L		04/13/17 08:45	05/03/17 15:13	1
2,4-Dinitrophenol	2.0	U	50	2.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
3-Methylcholanthrene	1.0	U	20	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
2,4-Dinitrotoluene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
2,6-Dinitrotoluene	2.2	U	10	2.2	ug/L		04/13/17 08:45	05/03/17 15:13	1
4,6-Dinitro-2-methylphenol	1.3	U	10	1.3	ug/L		04/13/17 08:45	05/03/17 15:13	1
4-Aminobiphenyl	1.1	U	50	1.1	ug/L		04/13/17 08:45	05/03/17 15:13	1
1,4-Dioxane	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
4-Bromophenyl phenyl ether	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
4-Chloro-3-methylphenol	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
4-Chloroaniline	2.0	U	10	2.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
4-Chlorophenyl phenyl ether	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
4-Nitroquinoline-1-oxide	5.0	U	100	5.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
5-Nitro-o-toluidine	1.0	U	20	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
7,12-Dimethylbenz(a)anthracene	1.0	U	20	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
2-Methylnaphthalene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Acenaphthene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
2-Methylphenol	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Acenaphthylene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
3 & 4 Methylphenol	2.0	U	20	2.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Acetophenone	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
alpha,alpha-Dimethyl phenethylamine	22	U	50	22	ug/L		04/13/17 08:45	05/03/17 15:13	1
2-Nitroaniline	1.1	U	10	1.1	ug/L		04/13/17 08:45	05/03/17 15:13	1
Aniline	1.3	U	10	1.3	ug/L		04/13/17 08:45	05/03/17 15:13	1
3-Nitroaniline	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Anthracene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
4-Nitroaniline	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Aramite, Total	5.0	U	20	5.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Benzo[a]anthracene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
2-Nitrophenol	1.5	U	10	1.5	ug/L		04/13/17 08:45	05/03/17 15:13	1
Benzo[a]pyrene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
4-Nitrophenol	2.0	U	10	2.0	ug/L		04/13/17 08:45	05/03/17 15:13	1

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Lab Sample ID: MB 160-303360/1-A
Matrix: Water
Analysis Batch: 306948

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 303360

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Benzo[g,h,i]perylene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Benzo[k]fluoranthene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Benzyl alcohol	3.0	U	10	3.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
2,2'-oxybis[1-chloropropane]	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
bis(2 chloro-1-methylethyl) ether	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Bis(2-chloroethoxy)methane	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Bis(2-chloroethyl)ether	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Bis(2-ethylhexyl) phthalate	1.9	U	10	1.9	ug/L		04/13/17 08:45	05/03/17 15:13	1
1,2,4-Trichlorobenzene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Butyl benzyl phthalate	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
2,4,5-Trichlorophenol	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Carbazole	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
2,4,6-Trichlorophenol	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Chlorobenzilate	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Chrysene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Diallate	2.0	U	20	2.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Dibenz(a,h)anthracene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Dibenzofuran	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Diethyl phthalate	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Dimethoate	1.0	U	20	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Dimethyl phthalate	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Di-n-butyl phthalate	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Dinitrobenzene, m-	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Di-n-octyl phthalate	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Dinoseb	2.0	U	20	2.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Diphenylamine + N-Nitrosodiphenylamine	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
N-Nitrosodiphenylamine	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Disulfoton	1.0	U	50	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Ethyl methanesulfonate	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Famphur	1.7	U	100	1.7	ug/L		04/13/17 08:45	05/03/17 15:13	1
Fluoranthene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Fluorene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Hexachlorobenzene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Hexachlorobutadiene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Hexachlorocyclopentadiene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Hexachloroethane	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Hexachlorophene	10	U	250	10	ug/L		04/13/17 08:45	05/03/17 15:13	1
Hexachloropropene	1.0	U	100	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Indeno[1,2,3-cd]pyrene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Isodrin	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Isophorone	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Isosafrole	5.0	U	20	5.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Kepone	20	U	100	20	ug/L		04/13/17 08:45	05/03/17 15:13	1
Methapyrilene	1.3	U	50	1.3	ug/L		04/13/17 08:45	05/03/17 15:13	1
Methyl methanesulfonate	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Methyl parathion	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Lab Sample ID: MB 160-303360/1-A
Matrix: Water
Analysis Batch: 306948

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 303360

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Nitrobenzene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
N-Nitrosodiethylamine	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
N-Nitrosodimethylamine	2.0	U	10	2.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
N-Nitrosodi-n-butylamine	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
N-Nitrosodi-n-propylamine	1.5	U	10	1.5	ug/L		04/13/17 08:45	05/03/17 15:13	1
N-Nitrosomethylethylamine	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
N-Nitrosomorpholine	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
N-Nitrosopiperidine	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
N-Nitrosopyrrolidine	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
o,o',o''-Triethylphosphorothioate	1.1	U	50	1.1	ug/L		04/13/17 08:45	05/03/17 15:13	1
O,O-Diethyl O-2-pyrazinyl phosphorothioate	1.0	U	50	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
o-Toluidine	1.0	U	20	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Parathion	1.0	U	50	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
p-Dimethylamino azobenzene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Pentachlorobenzene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Pentachloroethane	1.0	U	50	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Pentachloronitrobenzene	1.0	U	50	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Pentachlorophenol	1.3	U	50	1.3	ug/L		04/13/17 08:45	05/03/17 15:13	1
Phenacetin	1.0	U	20	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Phenanthrene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Phenol	2.0	U	10	2.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Phorate	2.0	U	50	2.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
p-Phenylene diamine	1.0	U	100	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Pronamide	1.0	U	20	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Pyrene	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Pyridine	2.0	U	20	2.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Safrole	1.0	U	20	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
sym-Trinitrobenzene	1.0	U	50	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Tetraethyl dithiopyrophosphate (sulfotep)	1.0	U	50	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1
Tributyl phosphate	1.0	U	10	1.0	ug/L		04/13/17 08:45	05/03/17 15:13	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*04/13/17 08:45*	*05/03/17 15:13*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol (Surr)	*49*		*15 - 59*	*04/13/17 08:45*	*05/03/17 15:13*	*1*
2,4,6-Tribromophenol (Surr)	*106*		*37 - 120*	*04/13/17 08:45*	*05/03/17 15:13*	*1*
2-Fluorobiphenyl (Surr)	*82*		*43 - 108*	*04/13/17 08:45*	*05/03/17 15:13*	*1*
Nitrobenzene-d5 (Surr)	*81*		*50 - 101*	*04/13/17 08:45*	*05/03/17 15:13*	*1*
Phenol-d5 (Surr)	*31*		*10 - 50*	*04/13/17 08:45*	*05/03/17 15:13*	*1*
Terphenyl-d14 (Surr)	*90*		*21 - 97*	*04/13/17 08:45*	*05/03/17 15:13*	*1*

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Lab Sample ID: LCS 160-303360/2-A
Matrix: Water
Analysis Batch: 306948

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 303360

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chloronaphthalene	100	54.6	o	ug/L		55	58 - 109
2-Chlorophenol	100	61.4		ug/L		61	47 - 97
1,2-Dichlorobenzene	100	40.4	o	ug/L		40	50 - 99
1,3-Dichlorobenzene	100	37.7	o	ug/L		38	55 - 99
1,4-Dichlorobenzene	100	38.3	o	ug/L		38	47 - 99
2,4-Dichlorophenol	100	64.3		ug/L		64	55 - 104
2,4-Dimethylphenol	100	60.8		ug/L		61	53 - 99
3,3'-Dichlorobenzidine	100	59.3		ug/L		59	50 - 105
2,4-Dinitrophenol	100	45.8	J o	ug/L		46	53 - 119
2,4-Dinitrotoluene	100	64.6		ug/L		65	57 - 117
2,6-Dinitrotoluene	100	63.0		ug/L		63	59 - 117
4,6-Dinitro-2-methylphenol	100	58.3		ug/L		58	56 - 118
4-Bromophenyl phenyl ether	100	62.4		ug/L		62	62 - 98
4-Chloro-3-methylphenol	100	66.9		ug/L		67	51 - 102
4-Chloroaniline	100	75.9		ug/L		76	43 - 97
4-Chlorophenyl phenyl ether	100	60.0		ug/L		60	59 - 110
2-Methylnaphthalene	100	53.5	o	ug/L		53	54 - 101
Acenaphthene	100	54.4	o	ug/L		54	58 - 108
2-Methylphenol	100	56.4		ug/L		56	40 - 96
Acenaphthylene	100	59.6		ug/L		60	59 - 110
3 & 4 Methylphenol	100	58.7		ug/L		59	40 - 87
2-Nitroaniline	100	56.6		ug/L		57	57 - 120
3-Nitroaniline	100	79.5		ug/L		80	47 - 113
Anthracene	100	57.8	o	ug/L		58	59 - 106
4-Nitroaniline	100	74.0		ug/L		74	51 - 119
Benzo[a]anthracene	100	62.2		ug/L		62	56 - 105
2-Nitrophenol	100	63.3		ug/L		63	58 - 111
Benzo[a]pyrene	100	51.0	o	ug/L		51	54 - 109
4-Nitrophenol	100	24.6		ug/L		25	20 - 47
Benzo[b]fluoranthene	100	50.8	o	ug/L		51	58 - 109
Benzo[g,h,i]perylene	100	50.5		ug/L		51	50 - 119
Benzo[k]fluoranthene	100	51.7	o	ug/L		52	54 - 109
2,2'-oxybis[1-chloropropane]	100	46.4	o	ug/L		46	49 - 97
bis(2 chloro-1-methylethyl) ether	100	46.4	o	ug/L		46	49 - 97
Bis(2-chloroethoxy)methane	100	55.3	o	ug/L		55	59 - 110
Bis(2-chloroethyl)ether	100	52.6	o	ug/L		53	58 - 109
Bis(2-ethylhexyl) phthalate	100	60.1		ug/L		60	58 - 111
1,2,4-Trichlorobenzene	100	44.9	o	ug/L		45	56 - 100
Butyl benzyl phthalate	100	59.5		ug/L		59	56 - 111
2,4,5-Trichlorophenol	100	60.9		ug/L		61	56 - 113
Carbazole	100	59.0		ug/L		59	56 - 101
2,4,6-Trichlorophenol	100	63.4		ug/L		63	47 - 116
Chrysene	100	60.6		ug/L		61	55 - 107
Dibenz(a,h)anthracene	100	52.4		ug/L		52	52 - 118
Dibenzofuran	100	57.4		ug/L		57	57 - 106
Diethyl phthalate	100	59.5		ug/L		59	58 - 113
Dimethyl phthalate	100	60.6		ug/L		61	60 - 114
Di-n-butyl phthalate	100	60.3		ug/L		60	60 - 105

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Lab Sample ID: LCS 160-303360/2-A
Matrix: Water
Analysis Batch: 306948

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 303360

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Di-n-octyl phthalate	100	61.8		ug/L		62	59 - 113
Diphenylamine + N-Nitrosodiphenylamine	100	69.6		ug/L		70	65 - 119
N-Nitrosodiphenylamine	100	69.6		ug/L		70	65 - 119
Fluoranthene	100	61.9		ug/L		62	56 - 113
Fluorene	100	58.5	o	ug/L		58	61 - 113
Hexachlorobenzene	100	66.2		ug/L		66	57 - 113
Hexachlorobutadiene	100	39.2	o	ug/L		39	52 - 102
Hexachlorocyclopentadiene	100	45.7		ug/L		46	40 - 120
Hexachloroethane	100	31.5	o	ug/L		31	52 - 102
Indeno[1,2,3-cd]pyrene	100	56.6		ug/L		57	49 - 120
Isophorone	100	52.0	o	ug/L		52	56 - 101
Naphthalene	100	50.2	o	ug/L		50	54 - 98
Nitrobenzene	100	53.5	o	ug/L		54	59 - 110
N-Nitrosodi-n-propylamine	100	54.2	o	ug/L		54	59 - 115
Pentachlorophenol	100	43.2	J o	ug/L		43	49 - 115
Phenanthrene	100	58.1	o	ug/L		58	59 - 110
Phenol	100	28.5		ug/L		29	20 - 69
Pyrene	100	59.4		ug/L		59	55 - 105

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorophenol (Surr)	*42*		*15 - 59*
2,4,6-Tribromophenol (Surr)	*73*		*37 - 120*
2-Fluorobiphenyl (Surr)	*59*		*43 - 108*
Nitrobenzene-d5 (Surr)	*56*		*50 - 101*
Phenol-d5 (Surr)	*27*		*10 - 50*
Terphenyl-d14 (Surr)	*69*		*21 - 97*

Lab Sample ID: 160-21813-3 MS
Matrix: Water
Analysis Batch: 306948

Client Sample ID: B390B2
Prep Type: Total/NA
Prep Batch: 303360

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chloronaphthalene	0.95	U o	96.2	77.0		ug/L		80	63 - 104
2-Chlorophenol	0.95	U	96.2	72.8		ug/L		76	52 - 92
1,2-Dichlorobenzene	0.95	U o T	96.2	64.5		ug/L		67	62 - 97
1,3-Dichlorobenzene	0.95	U o T	96.2	60.8		ug/L		63	60 - 94
1,4-Dichlorobenzene	0.95	U o T	96.2	61.8		ug/L		64	60 - 94
2,4-Dichlorophenol	0.95	U	96.2	81.0		ug/L		84	60 - 99
2,4-Dimethylphenol	0.95	U	96.2	76.2		ug/L		79	54 - 97
3,3'-Dichlorobenzidine	1.2	U	96.2	77.7		ug/L		81	43 - 117
2,4-Dinitrophenol	1.9	U o	96.2	69.1		ug/L		72	20 - 131
2,4-Dinitrotoluene	0.95	U	96.2	87.3		ug/L		91	62 - 112
2,6-Dinitrotoluene	2.1	U	96.2	85.1		ug/L		89	64 - 112
4,6-Dinitro-2-methylphenol	1.2	U	96.2	78.6		ug/L		82	61 - 113
4-Bromophenyl phenyl ether	0.95	U	96.2	86.3		ug/L		90	64 - 108
4-Chloro-3-methylphenol	0.95	U	96.2	82.3		ug/L		86	51 - 105
4-Chloroaniline	1.9	U	96.2	70.0		ug/L		73	48 - 92

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Lab Sample ID: 160-21813-3 MS
Matrix: Water
Analysis Batch: 306948

Client Sample ID: B390B2
Prep Type: Total/NA
Prep Batch: 303360

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Chlorophenyl phenyl ether	0.95	U	96.2	80.6		ug/L		84	64 - 105
2-Methylnaphthalene	0.95	U o	96.2	76.9		ug/L		80	64 - 99
Acenaphthene	0.95	U o	96.2	75.1		ug/L		78	63 - 103
2-Methylphenol	0.95	U	96.2	69.7		ug/L		72	39 - 83
Acenaphthylene	0.95	U	96.2	82.1		ug/L		85	64 - 105
3 & 4 Methylphenol	1.9	U	96.2	73.4		ug/L		76	39 - 82
2-Nitroaniline	1.1	U	96.2	74.2		ug/L		77	62 - 115
3-Nitroaniline	0.95	U	96.2	81.1		ug/L		84	52 - 108
Anthracene	0.95	U o	96.2	79.7		ug/L		83	64 - 101
4-Nitroaniline	0.95	U	96.2	86.5		ug/L		90	56 - 114
Benzo[a]anthracene	0.95	U	96.2	81.5		ug/L		85	55 - 116
2-Nitrophenol	1.5	U	96.2	84.3		ug/L		88	64 - 106
Benzo[a]pyrene	0.95	U o	96.2	65.9		ug/L		69	55 - 109
4-Nitrophenol	1.9	U	96.2	27.1		ug/L		28	15 - 42
Benzo[b]fluoranthene	0.95	U o T	96.2	67.6		ug/L		70	56 - 119
Benzo[g,h,i]perylene	0.95	U	96.2	71.0		ug/L		74	40 - 127
Benzo[k]fluoranthene	0.95	U o	96.2	65.5		ug/L		68	54 - 110
2,2'-oxybis[1-chloropropane]	0.95	U o	96.2	64.0		ug/L		67	54 - 102
bis(2 chloro-1-methylethyl) ether	0.95	U o	96.2	64.0		ug/L		67	54 - 102
Bis(2-chloroethoxy)methane	0.95	U o	96.2	73.5		ug/L		76	64 - 105
Bis(2-chloroethyl)ether	0.95	U o T	96.2	69.1		ug/L		72	63 - 104
Bis(2-ethylhexyl) phthalate	1.8	U	96.2	76.5		ug/L		80	53 - 125
1,2,4-Trichlorobenzene	0.95	U o T	96.2	69.9		ug/L		73	61 - 95
Butyl benzyl phthalate	0.95	U	96.2	79.4		ug/L		83	56 - 128
2,4,5-Trichlorophenol	0.95	U	96.2	81.0		ug/L		84	61 - 108
Carbazole	0.95	U	96.2	80.8		ug/L		84	62 - 106
2,4,6-Trichlorophenol	0.95	U	96.2	86.3		ug/L		90	61 - 108
Chrysene	0.95	U	96.2	78.9		ug/L		82	56 - 115
Dibenz(a,h)anthracene	0.95	U	96.2	70.9		ug/L		74	44 - 128
Dibenzofuran	0.95	U	96.2	78.9		ug/L		82	62 - 101
Diethyl phthalate	0.95	U	96.2	80.1		ug/L		83	63 - 108
Dimethyl phthalate	0.95	U	96.2	81.7		ug/L		85	65 - 109
Di-n-butyl phthalate	0.95	U	96.2	80.7		ug/L		84	62 - 109
Di-n-octyl phthalate	0.95	U	96.2	77.6		ug/L		81	54 - 128
Diphenylamine + N-Nitrosodiphenylamine	0.95	U	96.2	95.8		ug/L		100	70 - 119
N-Nitrosodiphenylamine	0.95	U	96.2	95.8		ug/L		100	70 - 119
Fluoranthene	0.95	U	96.2	82.3		ug/L		86	61 - 108
Fluorene	0.95	U o	96.2	79.8		ug/L		83	66 - 108
Hexachlorobenzene	0.95	U	96.2	89.7		ug/L		93	62 - 108
Hexachlorobutadiene	0.95	U o T	96.2	67.4		ug/L		70	57 - 97
Hexachlorocyclopentadiene	0.95	U	96.2	76.8		ug/L		80	16 - 115
Hexachloroethane	0.95	U o T	96.2	56.0		ug/L		58	57 - 97
Indeno[1,2,3-cd]pyrene	0.95	U	96.2	71.5		ug/L		74	42 - 131
Isophorone	0.95	U o	96.2	69.5		ug/L		72	48 - 106
Naphthalene	0.95	U o	96.2	72.9		ug/L		76	63 - 98
Nitrobenzene	0.95	U o	96.2	72.4		ug/L		75	64 - 105
N-Nitrosodi-n-propylamine	1.4	U o	96.2	73.2		ug/L		76	64 - 110

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Lab Sample ID: 160-21813-3 MS — **Client Sample ID: B390B2**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 306948 — **Prep Batch: 303360**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Pentachlorophenol	1.2	U o T	96.2	61.3		ug/L		64	54 - 110
Phenanthrene	0.95	U o	96.2	80.5		ug/L		84	64 - 105
Phenol	1.9	U	96.2	34.4		ug/L		36	15 - 70
Pyrene	0.95	U	96.2	82.9		ug/L		86	57 - 118

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Fluorophenol (Surr)	*48*		*15 - 59*
2,4,6-Tribromophenol (Surr)	*102*		*37 - 120*
2-Fluorobiphenyl (Surr)	*83*		*43 - 108*
Nitrobenzene-d5 (Surr)	*79*		*50 - 101*
Phenol-d5 (Surr)	*34*		*10 - 50*
Terphenyl-d14 (Surr)	*90*		*21 - 97*

Lab Sample ID: 160-21813-3 MSD — **Client Sample ID: B390B2**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 306948 — **Prep Batch: 303360**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Chloronaphthalene	0.95	U o	96.3	65.1		ug/L		68	63 - 104	17	20
2-Chlorophenol	0.95	U	96.3	62.4		ug/L		65	52 - 92	15	20
1,2-Dichlorobenzene	0.95	U o T	96.3	48.0	T y	ug/L		50	62 - 97	29	20
1,3-Dichlorobenzene	0.95	U o T	96.3	43.9	T y	ug/L		46	60 - 94	32	20
1,4-Dichlorobenzene	0.95	U o T	96.3	44.7	T y	ug/L		46	60 - 94	32	20
2,4-Dichlorophenol	0.95	U	96.3	69.2		ug/L		72	60 - 99	16	20
2,4-Dimethylphenol	0.95	U	96.3	65.0		ug/L		67	54 - 97	16	20
3,3'-Dichlorobenzidine	1.2	U	96.3	63.1	y	ug/L		65	43 - 117	21	20
2,4-Dinitrophenol	1.9	U o	96.3	56.4		ug/L		59	20 - 131	20	20
2,4-Dinitrotoluene	0.95	U	96.3	71.6		ug/L		74	62 - 112	20	20
2,6-Dinitrotoluene	2.1	U	96.3	70.9		ug/L		74	64 - 112	18	20
4,6-Dinitro-2-methylphenol	1.2	U	96.3	65.6		ug/L		68	61 - 113	18	20
4-Bromophenyl phenyl ether	0.95	U	96.3	69.7	y	ug/L		72	64 - 108	21	20
4-Chloro-3-methylphenol	0.95	U	96.3	69.3		ug/L		72	51 - 105	17	20
4-Chloroaniline	1.9	U	96.3	59.7		ug/L		62	48 - 92	16	20
4-Chlorophenyl phenyl ether	0.95	U	96.3	66.3		ug/L		69	64 - 105	19	20
2-Methylnaphthalene	0.95	U o	96.3	64.3		ug/L		67	64 - 99	18	20
Acenaphthene	0.95	U o	96.3	63.5		ug/L		66	63 - 103	17	20
2-Methylphenol	0.95	U	96.3	54.5	y	ug/L		57	39 - 83	24	20
Acenaphthylene	0.95	U	96.3	69.8		ug/L		72	64 - 105	16	20
3 & 4 Methylphenol	1.9	U	96.3	56.7	y	ug/L		59	39 - 82	26	20
2-Nitroaniline	1.1	U	96.3	63.9		ug/L		66	62 - 115	15	20
3-Nitroaniline	0.95	U	96.3	68.8		ug/L		71	52 - 108	16	20
Anthracene	0.95	U o	96.3	65.0		ug/L		67	64 - 101	20	20
4-Nitroaniline	0.95	U	96.3	71.8		ug/L		75	56 - 114	19	20
Benzo[a]anthracene	0.95	U	96.3	65.6	y	ug/L		68	55 - 116	22	20
2-Nitrophenol	1.5	U	96.3	72.1		ug/L		75	64 - 106	16	20
Benzo[a]pyrene	0.95	U o	96.3	52.8	y	ug/L		55	55 - 109	22	20
4-Nitrophenol	1.9	U	96.3	22.4		ug/L		23	15 - 42	19	20
Benzo[b]fluoranthene	0.95	U o T	96.3	52.8	T y	ug/L		55	56 - 119	25	20

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Lab Sample ID: 160-21813-3 MSD
Matrix: Water
Analysis Batch: 306948

Client Sample ID: B390B2
Prep Type: Total/NA
Prep Batch: 303360

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[g,h,i]perylene	0.95	U	96.3	56.7	y	ug/L		59	40 - 127	22	20
Benzo[k]fluoranthene	0.95	U o	96.3	53.2	y	ug/L		55	54 - 110	21	20
2,2'-oxybis[1-chloropropane]	0.95	U o	96.3	54.4		ug/L		56	54 - 102	16	20
bis(2 chloro-1-methylethyl) ether	0.95	U o	96.3	54.4		ug/L		56	54 - 102	16	20
Bis(2-chloroethoxy)methane	0.95	U o	96.3	63.1		ug/L		66	64 - 105	15	20
Bis(2-chloroethyl)ether	0.95	U o T	96.3	59.3	T	ug/L		62	63 - 104	15	20
Bis(2-ethylhexyl) phthalate	1.8	U	96.3	60.9	y	ug/L		63	53 - 125	23	20
1,2,4-Trichlorobenzene	0.95	U o T	96.3	56.6	T y	ug/L		59	61 - 95	21	20
Butyl benzyl phthalate	0.95	U	96.3	65.4		ug/L		68	56 - 128	19	20
2,4,5-Trichlorophenol	0.95	U	96.3	69.1		ug/L		72	61 - 108	16	20
Carbazole	0.95	U	96.3	66.2		ug/L		69	62 - 106	20	20
2,4,6-Trichlorophenol	0.95	U	96.3	72.7		ug/L		75	61 - 108	17	20
Chrysene	0.95	U	96.3	64.2	y	ug/L		67	56 - 115	21	20
Dibenz(a,h)anthracene	0.95	U	96.3	56.0	y	ug/L		58	44 - 128	24	20
Dibenzofuran	0.95	U	96.3	66.0		ug/L		68	62 - 101	18	20
Diethyl phthalate	0.95	U	96.3	66.3		ug/L		69	63 - 108	19	20
Dimethyl phthalate	0.95	U	96.3	68.5		ug/L		71	65 - 109	18	20
Di-n-butyl phthalate	0.95	U	96.3	64.5	y	ug/L		67	62 - 109	22	20
Di-n-octyl phthalate	0.95	U	96.3	62.4	y	ug/L		65	54 - 128	22	20
Diphenylamine + N-Nitrosodiphenylamine	0.95	U	96.3	78.5		ug/L		81	70 - 119	20	20
N-Nitrosodiphenylamine	0.95	U	96.3	78.5		ug/L		81	70 - 119	20	20
Fluoranthene	0.95	U	96.3	66.1	y	ug/L		69	61 - 108	22	20
Fluorene	0.95	U o	96.3	66.1		ug/L		69	66 - 108	19	20
Hexachlorobenzene	0.95	U	96.3	72.3	y	ug/L		75	62 - 108	22	20
Hexachlorobutadiene	0.95	U o T	96.3	53.2	T y	ug/L		55	57 - 97	24	20
Hexachlorocyclopentadiene	0.95	U	96.3	63.0		ug/L		65	16 - 115	20	20
Hexachloroethane	0.95	U o T	96.3	38.4	T y	ug/L		40	57 - 97	37	20
Indeno[1,2,3-cd]pyrene	0.95	U	96.3	57.9	y	ug/L		60	42 - 131	21	20
Isophorone	0.95	U o	96.3	59.9		ug/L		62	48 - 106	15	20
Naphthalene	0.95	U o	96.3	60.9		ug/L		63	63 - 98	18	20
Nitrobenzene	0.95	U o	96.3	62.1		ug/L		64	64 - 105	15	20
N-Nitrosodi-n-propylamine	1.4	U o	96.3	67.4		ug/L		70	64 - 110	8	20
Pentachlorophenol	1.2	U o T	96.3	48.7	T y	ug/L		51	54 - 110	23	20
Phenanthrene	0.95	U o	96.3	65.1	y	ug/L		68	64 - 105	21	20
Phenol	1.9	U	96.3	25.7	y	ug/L		27	15 - 70	29	20
Pyrene	0.95	U	96.3	67.9		ug/L		70	57 - 118	20	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2-Fluorophenol (Surr)	*39*		*15 - 59*
2,4,6-Tribromophenol (Surr)	*85*		*37 - 120*
2-Fluorobiphenyl (Surr)	*72*		*43 - 108*
Nitrobenzene-d5 (Surr)	*68*		*50 - 101*
Phenol-d5 (Surr)	*25*		*10 - 50*
Terphenyl-d14 (Surr)	*73*		*21 - 97*

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 160-303381/1-A
Matrix: Water
Analysis Batch: 303929

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 303381

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	0.010	U	0.050	0.010	ug/L		04/13/17 10:45	04/18/17 13:35	1
4,4'-DDE	0.014	U	0.050	0.014	ug/L		04/13/17 10:45	04/18/17 13:35	1
4,4'-DDT	0.023	U	0.050	0.023	ug/L		04/13/17 10:45	04/18/17 13:35	1
Aldrin	0.010	U	0.050	0.010	ug/L		04/13/17 10:45	04/18/17 13:35	1
alpha-BHC	0.010	U	0.050	0.010	ug/L		04/13/17 10:45	04/18/17 13:35	1
alpha-Chlordane	0.015	U	0.050	0.015	ug/L		04/13/17 10:45	04/18/17 13:35	1
beta-BHC	0.013	U	0.050	0.013	ug/L		04/13/17 10:45	04/18/17 13:35	1
delta-BHC	0.010	U	0.050	0.010	ug/L		04/13/17 10:45	04/18/17 13:35	1
Dieldrin	0.010	U	0.050	0.010	ug/L		04/13/17 10:45	04/18/17 13:35	1
Endosulfan I	0.019	U	0.050	0.019	ug/L		04/13/17 10:45	04/18/17 13:35	1
Endosulfan II	0.010	U	0.050	0.010	ug/L		04/13/17 10:45	04/18/17 13:35	1
Endosulfan sulfate	0.010	U	0.050	0.010	ug/L		04/13/17 10:45	04/18/17 13:35	1
Endrin	0.018	U	0.050	0.018	ug/L		04/13/17 10:45	04/18/17 13:35	1
Endrin aldehyde	0.010	U	0.050	0.010	ug/L		04/13/17 10:45	04/18/17 13:35	1
Endrin ketone	0.010	U	0.050	0.010	ug/L		04/13/17 10:45	04/18/17 13:35	1
gamma-BHC (Lindane)	0.010	U	0.050	0.010	ug/L		04/13/17 10:45	04/18/17 13:35	1
Heptachlor	0.010	U	0.050	0.010	ug/L		04/13/17 10:45	04/18/17 13:35	1
Heptachlor epoxide	0.017	U	0.050	0.017	ug/L		04/13/17 10:45	04/18/17 13:35	1
Methoxychlor	0.013	U	0.50	0.013	ug/L		04/13/17 10:45	04/18/17 13:35	1
Technical Chlordane	0.10	U	0.50	0.10	ug/L		04/13/17 10:45	04/18/17 13:35	1
Toxaphene	0.27	U	2.0	0.27	ug/L		04/13/17 10:45	04/18/17 13:35	1
trans-Chlordane	0.010	U	0.050	0.010	ug/L		04/13/17 10:45	04/18/17 13:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*91*		*26 - 127*	*04/13/17 10:45*	*04/18/17 13:35*	*1*
Tetrachloro-m-xylene	*93*		*53 - 116*	*04/13/17 10:45*	*04/18/17 13:35*	*1*

Lab Sample ID: LCS 160-303381/2-A
Matrix: Water
Analysis Batch: 303929

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 303381

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.500	0.522		ug/L		104	79 - 115
4,4'-DDE	0.501	0.525		ug/L		105	73 - 107
4,4'-DDT	0.500	0.498		ug/L		100	79 - 111
Aldrin	0.500	0.512	o	ug/L		102	63 - 94
alpha-BHC	0.500	0.545		ug/L		109	79 - 111
alpha-Chlordane	0.500	0.497		ug/L		99	75 - 105
beta-BHC	0.500	0.516		ug/L		103	73 - 104
delta-BHC	0.500	0.563		ug/L		113	80 - 117
Dieldrin	0.501	0.518		ug/L		104	75 - 107
Endosulfan I	0.500	0.518		ug/L		104	38 - 105
Endosulfan II	0.500	0.502		ug/L		100	50 - 105
Endosulfan sulfate	0.500	0.509		ug/L		102	76 - 111
Endrin	0.501	0.539		ug/L		108	73 - 118
Endrin aldehyde	0.500	0.535		ug/L		107	77 - 112
Endrin ketone	0.501	0.497		ug/L		99	78 - 112
gamma-BHC (Lindane)	0.501	0.534	o	ug/L		107	79 - 106

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 160-303381/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 303929 — **Prep Batch: 303381**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Heptachlor	0.500	0.494		ug/L		99	53 - 115
Heptachlor epoxide	0.500	0.511		ug/L		102	76 - 108
Methoxychlor	0.500	0.437	J	ug/L		87	77 - 114
trans-Chlordane	0.500	0.501		ug/L		100	72 - 104

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*91*		*26 - 127*
Tetrachloro-m-xylene	*96*		*53 - 116*

Lab Sample ID: 160-21829-2 MS — **Client Sample ID: B39302**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 303929 — **Prep Batch: 303381**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.0095	U N	0.485	0.567	N	ug/L		117	80 - 111
4,4'-DDE	0.013	U N	0.485	0.538	N	ug/L		111	70 - 106
4,4'-DDT	0.022	U N	0.485	0.538	N	ug/L		111	76 - 108
Aldrin	0.0095	U o	0.485	0.513	N	ug/L		106	57 - 101
alpha-BHC	0.0095	U	0.485	0.548	N	ug/L		113	76 - 109
alpha-Chlordane	0.014	U	0.485	0.514		ug/L		106	70 - 110
beta-BHC	0.012	U N	0.485	0.543	N	ug/L		112	74 - 102
delta-BHC	0.0095	U	0.485	0.581		ug/L		120	64 - 134
Dieldrin	0.0095	U	0.485	0.528		ug/L		109	69 - 117
Endosulfan I	0.018	U N	0.485	0.523	N	ug/L		108	36 - 102
Endosulfan II	0.0095	U N	0.485	0.517	N	ug/L		107	48 - 102
Endosulfan sulfate	0.0095	U N	0.485	0.537	N	ug/L		111	81 - 107
Endrin	0.017	U	0.485	0.567		ug/L		117	77 - 118
Endrin aldehyde	0.0095	U N	0.485	0.565	N	ug/L		116	81 - 109
Endrin ketone	0.0095	U	0.485	0.524		ug/L		108	81 - 109
gamma-BHC (Lindane)	0.0095	U o	0.485	0.541		ug/L		112	69 - 112
Heptachlor	0.0095	U	0.485	0.519		ug/L		107	23 - 150
Heptachlor epoxide	0.016	U	0.485	0.518		ug/L		107	76 - 115
Methoxychlor	0.012	U	0.485	0.474	J	ug/L		98	76 - 115
trans-Chlordane	0.0095	U	0.485	0.512		ug/L		106	70 - 108

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*100*		*26 - 127*
Tetrachloro-m-xylene	*97*		*53 - 116*

Lab Sample ID: 160-21829-2 MSD — **Client Sample ID: B39302**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 303929 — **Prep Batch: 303381**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4,4'-DDD	0.0095	U N	0.482	0.569	N	ug/L		118	80 - 111	0	20
4,4'-DDE	0.013	U N	0.482	0.515	N	ug/L		107	70 - 106	4	20
4,4'-DDT	0.022	U N	0.482	0.537	N	ug/L		111	76 - 108	0	20
Aldrin	0.0095	U o	0.482	0.473		ug/L		98	57 - 101	8	20

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 160-21829-2 MSD — **Client Sample ID: B39302**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 303929 — **Prep Batch: 303381**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
alpha-BHC	0.0095	U	0.482	0.524		ug/L		109	76 - 109	4	20
alpha-Chlordane	0.014	U	0.482	0.491		ug/L		102	70 - 110	5	20
beta-BHC	0.012	U N	0.482	0.504	N	ug/L		105	74 - 102	7	20
delta-BHC	0.0095	U	0.482	0.577		ug/L		120	64 - 134	1	20
Dieldrin	0.0095	U	0.482	0.515		ug/L		107	69 - 117	2	20
Endosulfan I	0.018	U N	0.482	0.501	N	ug/L		104	36 - 102	4	20
Endosulfan II	0.0095	U N	0.482	0.497	N	ug/L		103	48 - 102	4	20
Endosulfan sulfate	0.0095	U N	0.482	0.521	N	ug/L		108	81 - 107	3	20
Endrin	0.017	U	0.482	0.555		ug/L		115	77 - 118	2	20
Endrin aldehyde	0.0095	U N	0.482	0.555	N	ug/L		115	81 - 109	2	20
Endrin ketone	0.0095	U	0.482	0.513		ug/L		106	81 - 109	2	20
gamma-BHC (Lindane)	0.0095	U o	0.482	0.523		ug/L		108	69 - 112	4	20
Heptachlor	0.0095	U	0.482	0.462		ug/L		96	23 - 150	12	20
Heptachlor epoxide	0.016	U	0.482	0.497		ug/L		103	76 - 115	4	20
Methoxychlor	0.012	U	0.482	0.531		ug/L		110	76 - 115	11	20
trans-Chlordane	0.0095	U	0.482	0.486		ug/L		101	70 - 108	5	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*99*		*26 - 127*
Tetrachloro-m-xylene	*92*		*53 - 116*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 160-303455/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 304060 — **Prep Batch: 303455**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	0.35	U	1.0	0.35	ug/L		04/13/17 16:05	04/18/17 10:36	1
Aroclor 1221	0.35	U	1.0	0.35	ug/L		04/13/17 16:05	04/18/17 10:36	1
Aroclor 1232	0.35	U	1.0	0.35	ug/L		04/13/17 16:05	04/18/17 10:36	1
Aroclor 1242	0.35	U	1.0	0.35	ug/L		04/13/17 16:05	04/18/17 10:36	1
Aroclor 1248	0.35	U	1.0	0.35	ug/L		04/13/17 16:05	04/18/17 10:36	1
Aroclor 1254	0.22	U	1.0	0.22	ug/L		04/13/17 16:05	04/18/17 10:36	1
Aroclor 1260	0.22	U	1.0	0.22	ug/L		04/13/17 16:05	04/18/17 10:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*95*		*32 - 141*	*04/13/17 16:05*	*04/18/17 10:36*	*1*

Lab Sample ID: LCS 160-303455/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 304060 — **Prep Batch: 303455**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor 1016	5.00	3.48		ug/L		70	43 - 138
Aroclor 1260	5.00	4.75		ug/L		95	43 - 137

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 160-303455/2-A
Matrix: Water
Analysis Batch: 304060

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 303455

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*93*		*32 - 141*

Lab Sample ID: 160-21829-5 MS
Matrix: Water
Analysis Batch: 304060

Client Sample ID: B390C3
Prep Type: Total/NA
Prep Batch: 303455

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor 1016	0.33	U	4.78	3.50		ug/L		73	47 - 133
Aroclor 1260	0.21	U	4.78	3.51		ug/L		73	39 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*78*		*32 - 141*

Lab Sample ID: 160-21829-5 MSD
Matrix: Water
Analysis Batch: 304060

Client Sample ID: B390C3
Prep Type: Total/NA
Prep Batch: 303455

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aroclor 1016	0.33	U	4.78	3.64		ug/L		76	47 - 133	7	20
Aroclor 1260	0.21	U	4.78	4.22		ug/L		88	39 - 130	17	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*87*		*32 - 141*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 160-303941/1-A
Matrix: Water
Analysis Batch: 306680

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 303941

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	0.27	U	1.0	0.27	ug/L		04/18/17 08:00	05/02/17 23:59	1
2,4-D	4.2	U	8.0	4.2	ug/L		04/18/17 08:00	05/02/17 23:59	1
2,4-DB	3.8	U	8.0	3.8	ug/L		04/18/17 08:00	05/02/17 23:59	1
Dalapon	9.8	U	12	9.8	ug/L		04/18/17 08:00	05/02/17 23:59	1
Dicamba	0.33	U	2.0	0.33	ug/L		04/18/17 08:00	05/02/17 23:59	1
Dichlorprop	1.4	U	5.0	1.4	ug/L		04/18/17 08:00	05/02/17 23:59	1
Dinoseb	0.73	U	2.0	0.73	ug/L		04/18/17 08:00	05/02/17 23:59	1
MCPA	190	U	400	190	ug/L		04/18/17 08:00	05/02/17 23:59	1
MCPP	170	U	400	170	ug/L		04/18/17 08:00	05/02/17 23:59	1
Silvex (2,4,5-TP)	0.19	U	1.0	0.19	ug/L		04/18/17 08:00	05/02/17 23:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4-Dichlorophenylacetic acid	*94*		*60 - 128*	*04/18/17 08:00*	*05/02/17 23:59*	*1*

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Lab Sample ID: LCS 160-303941/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 306680 — **Prep Batch: 303941**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	5.00	6.44		ug/L		129	40 - 140
2,4-D	20.0	26.1		ug/L		130	40 - 140
2,4-DB	20.0	26.3		ug/L		131	40 - 140
Dalapon	20.0	18.5		ug/L		92	23 - 105
Dicamba	10.0	12.3		ug/L		123	25 - 140
Dichlorprop	20.0	25.3		ug/L		126	40 - 140
Dinoseb	20.0	17.1		ug/L		86	11 - 140
MCPA	2000	2210		ug/L		110	40 - 140
MCPP	2000	2870	o	ug/L		144	40 - 140
Silvex (2,4,5-TP)	5.00	6.93		ug/L		139	37 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*124*		*60 - 128*

Lab Sample ID: 160-21829-5 MS — **Client Sample ID: B390C3**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 306680 — **Prep Batch: 303941**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-T	0.26	U	4.77	3.70		ug/L		78	50 - 150
2,4-D	4.0	U	19.1	15.1		ug/L		79	50 - 150
2,4-DB	3.6	U	19.1	11.8		ug/L		62	50 - 150
Dalapon	9.3	U	19.1	11.7		ug/L		61	50 - 129
Dicamba	0.32	U	9.54	7.35		ug/L		77	50 - 150
Dichlorprop	1.3	U N o	19.1	16.6		ug/L		87	50 - 150
Dinoseb	0.70	U	19.1	11.1		ug/L		58	50 - 150
MCPA	180	U	1910	1400		ug/L		73	50 - 150
MCPP	160	U N o	1910	1490	P	ug/L		78	50 - 150
Silvex (2,4,5-TP)	0.18	U	4.77	4.44		ug/L		93	50 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*76*		*60 - 128*

Lab Sample ID: 160-21829-5 MSD — **Client Sample ID: B390C3**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 306680 — **Prep Batch: 303941**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,5-T	0.26	U	4.83	6.50	y	ug/L		135	50 - 150	55	20
2,4-D	4.0	U	19.3	26.6	y	ug/L		138	50 - 150	62	20
2,4-DB	3.6	U	19.3	25.8	y	ug/L		134	50 - 150	77	20
Dalapon	9.3	U	19.3	19.2	y	ug/L		100	50 - 129	49	20
Dicamba	0.32	U	9.65	12.6	y	ug/L		130	50 - 150	52	20
Dichlorprop	1.3	U	19.3	26.1	y	ug/L		135	50 - 150	49	20
Dinoseb	0.70	U	19.3	18.1	y	ug/L		94	50 - 150	48	20
MCPA	180	U	1930	2250	y	ug/L		117	50 - 150	55	20
MCPP	160	U N o	1930	3000	N y	ug/L		155	50 - 150	67	20

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Lab Sample ID: 160-21829-5 MSD — **Client Sample ID: B390C3**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 306680 — **Prep Batch: 303941**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Silvex (2,4,5-TP)	0.18	U	4.83	7.14	y	ug/L		148	50 - 150	47	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4-Dichlorophenylacetic acid	*135*	*X*	*60 - 128*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 160-304143/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 304407 — **Prep Batch: 304143**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	300	U	1000	300	ug/L		04/18/17 14:37	04/19/17 19:57	1
Iron	30.0	U	100	30.0	ug/L		04/18/17 14:37	04/19/17 19:57	1
Magnesium	300	U	1000	300	ug/L		04/18/17 14:37	04/19/17 19:57	1
Potassium	1500	U	5000	1500	ug/L		04/18/17 14:37	04/19/17 19:57	1
Sodium	300	U	1000	300	ug/L		04/18/17 14:37	04/19/17 19:57	1
Boron	25.0	U	100	25.0	ug/L		04/18/17 14:37	04/19/17 19:57	1
Vanadium	25.0	U	50.0	25.0	ug/L		04/18/17 14:37	04/19/17 19:57	1

Lab Sample ID: LCS 160-304143/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 304407 — **Prep Batch: 304143**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	10000	10720		ug/L		107	80 - 120
Iron	10000	9513		ug/L		95	80 - 120
Magnesium	10000	9355		ug/L		94	80 - 120
Potassium	10000	8438		ug/L		84	80 - 120
Sodium	10000	8796		ug/L		88	80 - 120
Boron	2000	1888		ug/L		94	80 - 120
Vanadium	1000	969.6		ug/L		97	80 - 120

Lab Sample ID: 160-21829-6 MS — **Client Sample ID: B396V1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 304407 — **Prep Batch: 304143**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	55700		10000	62270	X	ug/L		66	75 - 125
Iron	30.0	U	10000	8668		ug/L		87	75 - 125
Magnesium	12700		10000	20850		ug/L		81	75 - 125
Potassium	6020		10000	14430		ug/L		84	75 - 125
Sodium	20900		10000	29160		ug/L		83	75 - 125
Boron	28.5	B	2000	1796		ug/L		88	75 - 125
Vanadium	25.0	U	1000	901.2		ug/L		90	75 - 125

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Lab Sample ID: 160-21829-6 MSD — **Client Sample ID: B396V1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 304407 — **Prep Batch: 304143**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	55700		10000	66030	X	ug/L		103	75 - 125	6	20
Iron	30.0	U	10000	9356		ug/L		94	75 - 125	8	20
Magnesium	12700		10000	21730		ug/L		90	75 - 125	4	20
Potassium	6020		10000	15050		ug/L		90	75 - 125	4	20
Sodium	20900		10000	29820		ug/L		90	75 - 125	2	20
Boron	28.5	B	2000	1930		ug/L		95	75 - 125	7	20
Vanadium	25.0	U	1000	978.8		ug/L		98	75 - 125	8	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 160-304144/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 305645 — **Prep Batch: 304144**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	20.0	U D	50.0	20.0	ug/L		04/18/17 14:38	04/25/17 18:59	2
Antimony	2.0	U D	5.0	2.0	ug/L		04/18/17 14:38	04/25/17 18:59	2
Arsenic	4.0	U D	10.0	4.0	ug/L		04/18/17 14:38	04/25/17 18:59	2
Barium	0.90	U D	2.0	0.90	ug/L		04/18/17 14:38	04/25/17 18:59	2
Beryllium	0.20	U D	0.50	0.20	ug/L		04/18/17 14:38	04/25/17 18:59	2
Cadmium	0.20	U D	0.50	0.20	ug/L		04/18/17 14:38	04/25/17 18:59	2
Chromium	4.0	U D	10.0	4.0	ug/L		04/18/17 14:38	04/25/17 18:59	2
Cobalt	0.90	U D	2.0	0.90	ug/L		04/18/17 14:38	04/25/17 18:59	2
Lead	1.0	U D	3.0	1.0	ug/L		04/18/17 14:38	04/25/17 18:59	2
Manganese	0.90	U D	2.0	0.90	ug/L		04/18/17 14:38	04/25/17 18:59	2
Molybdenum	2.0	U D	5.0	2.0	ug/L		04/18/17 14:38	04/25/17 18:59	2
Nickel	2.0	U D	5.0	2.0	ug/L		04/18/17 14:38	04/25/17 18:59	2
Selenium	2.0	U D	5.0	2.0	ug/L		04/18/17 14:38	04/25/17 18:59	2
Silver	0.90	U D	2.0	0.90	ug/L		04/18/17 14:38	04/25/17 18:59	2
Strontium	0.50	U D	5.0	0.50	ug/L		04/18/17 14:38	04/25/17 18:59	2
Thallium	0.90	U D	2.0	0.90	ug/L		04/18/17 14:38	04/25/17 18:59	2
Thorium	0.90	U D	2.0	0.90	ug/L		04/18/17 14:38	04/25/17 18:59	2
Tin	1.2	U D	2.0	1.2	ug/L		04/18/17 14:38	04/25/17 18:59	2
Uranium	0.40	U D	1.0	0.40	ug/L		04/18/17 14:38	04/25/17 18:59	2
Zinc	7.5	U D	20.0	7.5	ug/L		04/18/17 14:38	04/25/17 18:59	2

Lab Sample ID: MB 160-304144/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 306808 — **Prep Batch: 304144**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	0.40	U D	1.0	0.40	ug/L		04/18/17 14:38	05/02/17 17:35	2

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Lab Sample ID: LCS 160-304144/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 305645 — **Prep Batch: 304144**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	10000	9738	D	ug/L		97	80 - 120
Antimony	500	496.6	D	ug/L		99	80 - 120
Arsenic	1000	965.5	D	ug/L		97	80 - 120
Barium	1000	1042	D	ug/L		104	80 - 120
Beryllium	1000	1079	D X	ug/L		108	80 - 120
Cadmium	1000	1025	D	ug/L		103	80 - 120
Chromium	1000	1007	D	ug/L		101	80 - 120
Cobalt	1000	975.9	D	ug/L		98	80 - 120
Lead	1000	991.6	D	ug/L		99	80 - 120
Manganese	1000	1024	D	ug/L		102	80 - 120
Molybdenum	500	521.2	D	ug/L		104	80 - 120
Nickel	1000	969.3	D	ug/L		97	80 - 120
Selenium	500	477.8	D	ug/L		96	80 - 120
Silver	200	207.8	D	ug/L		104	80 - 120
Strontium	1000	975.6	D	ug/L		98	80 - 120
Thallium	200	209.4	D	ug/L		105	80 - 120
Thorium	1000	993.0	D	ug/L		99	80 - 120
Tin	1000	990.0	D	ug/L		99	80 - 120
Uranium	1000	995.9	D	ug/L		100	80 - 120
Zinc	1000	949.9	D	ug/L		95	80 - 120

Lab Sample ID: LCS 160-304144/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 306808 — **Prep Batch: 304144**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Copper	1000	1024	D	ug/L		102	80 - 120

Lab Sample ID: 160-21829-6 MS — **Client Sample ID: B396V1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 305645 — **Prep Batch: 304144**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	20.0	U D	10000	8987	D	ug/L		90	75 - 125
Antimony	2.0	U D	500	509.0	D	ug/L		102	75 - 125
Arsenic	4.0	U D	1000	907.3	D	ug/L		91	75 - 125
Barium	52.5	D	1000	1016	D	ug/L		96	75 - 125
Beryllium	0.32	B D	1000	989.6	D X	ug/L		99	75 - 125
Cadmium	0.20	U D	1000	941.3	D	ug/L		94	75 - 125
Chromium	10.7	D	1000	948.6	D	ug/L		94	75 - 125
Cobalt	0.90	U D	1000	884.3	D	ug/L		88	75 - 125
Lead	1.0	U D	1000	918.4	D	ug/L		92	75 - 125
Manganese	3.1	D	1000	934.5	D	ug/L		93	75 - 125
Molybdenum	7.5	D	500	533.9	D	ug/L		105	75 - 125
Nickel	2.0	U D	1000	874.3	D	ug/L		87	75 - 125
Selenium	3.3	B D	500	446.2	D	ug/L		89	75 - 125
Silver	0.90	U D	200	189.1	D	ug/L		95	75 - 125
Strontium	239	D	1000	1129	D	ug/L		89	75 - 125

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Lab Sample ID: 160-21829-6 MS — **Client Sample ID: B396V1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 305645 — **Prep Batch: 304144**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Thallium	0.90	U D	200	193.7	D	ug/L		97	75 - 125
Thorium	0.90	U D	1000	934.4	D	ug/L		93	75 - 125
Tin	1.2	U D	1000	1012	D	ug/L		101	75 - 125
Uranium	6.4	D	1000	945.6	D	ug/L		94	75 - 125
Zinc	7.5	U D	1000	871.7	D	ug/L		87	75 - 125

Lab Sample ID: 160-21829-6 MS — **Client Sample ID: B396V1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 306808 — **Prep Batch: 304144**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Copper	0.59	B D	1000	927.5	D	ug/L		93	75 - 125

Lab Sample ID: 160-21829-6 MSD — **Client Sample ID: B396V1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 305645 — **Prep Batch: 304144**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	20.0	U D	10000	9544	D	ug/L		95	75 - 125	6	20
Antimony	2.0	U D	500	499.9	D	ug/L		100	75 - 125	2	20
Arsenic	4.0	U D	1000	965.4	D	ug/L		97	75 - 125	6	20
Barium	52.5	D	1000	1068	D	ug/L		102	75 - 125	5	20
Beryllium	0.32	B D	1000	1043	D X	ug/L		104	75 - 125	5	20
Cadmium	0.20	U D	1000	1007	D	ug/L		101	75 - 125	7	20
Chromium	10.7	D	1000	1010	D	ug/L		100	75 - 125	6	20
Cobalt	0.90	U D	1000	948.2	D	ug/L		95	75 - 125	7	20
Lead	1.0	U D	1000	971.4	D	ug/L		97	75 - 125	6	20
Manganese	3.1	D	1000	1014	D	ug/L		101	75 - 125	8	20
Molybdenum	7.5	D	500	525.0	D	ug/L		104	75 - 125	2	20
Nickel	2.0	U D	1000	945.5	D	ug/L		95	75 - 125	8	20
Selenium	3.3	B D	500	476.1	D	ug/L		95	75 - 125	6	20
Silver	0.90	U D	200	202.2	D	ug/L		101	75 - 125	7	20
Strontium	239	D	1000	1195	D	ug/L		96	75 - 125	6	20
Thallium	0.90	U D	200	204.0	D	ug/L		102	75 - 125	5	20
Thorium	0.90	U D	1000	994.0	D	ug/L		99	75 - 125	6	20
Tin	1.2	U D	1000	995.2	D	ug/L		100	75 - 125	2	20
Uranium	6.4	D	1000	1000	D	ug/L		99	75 - 125	6	20
Zinc	7.5	U D	1000	933.2	D	ug/L		93	75 - 125	7	20

Lab Sample ID: 160-21829-6 MSD — **Client Sample ID: B396V1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 306808 — **Prep Batch: 304144**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Copper	0.59	B D	1000	982.2	D	ug/L		98	75 - 125	6	20

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 160-303355/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 303477 — **Prep Batch: 303355**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.060	U	0.20	0.060	ug/L		04/13/17 08:17	04/13/17 15:15	1

Lab Sample ID: LCS 160-303355/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 303477 — **Prep Batch: 303355**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	5.04		ug/L		101	80 - 120

Lab Sample ID: 160-21829-6 MS — **Client Sample ID: B396V1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 303477 — **Prep Batch: 303355**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.060	U	5.00	5.08		ug/L		102	80 - 120

Lab Sample ID: 160-21829-6 MSD — **Client Sample ID: B396V1**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 303477 — **Prep Batch: 303355**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.060	U	5.00	5.03		ug/L		101	80 - 120	1	20

Method: 310.1 - Alkalinity

Lab Sample ID: MB 160-303641/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 303641

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	0.54	U	5.0	0.54	mg/L			04/14/17 21:15	1
Bicarbonate Alkalinity	0.54	U	5.0	0.54	mg/L			04/14/17 21:15	1
Carbonate Alkalinity	0.54	U	5.0	0.54	mg/L			04/14/17 21:15	1
Hydroxide Alkalinity	0.54	U	5.0	0.54	mg/L			04/14/17 21:15	1

Lab Sample ID: HLCS 160-303641/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 303641

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	400	370.0		mg/L		92	90 - 110
Bicarbonate Alkalinity	400	370.0		mg/L		92	90 - 110

Lab Sample ID: LCS 160-303641/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 303641

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	200	186.0		mg/L		93	90 - 110

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

Method: 310.1 - Alkalinity (Continued)

Lab Sample ID: LCS 160-303641/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 303641

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Bicarbonate Alkalinity			200	186.0		mg/L		93	90 - 110		

Lab Sample ID: 160-21739-D-15 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 303641

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Alkalinity	100		100	194.0		mg/L		94	80 - 120		
Bicarbonate Alkalinity	100		100	194.0		mg/L		94	80 - 120		

Lab Sample ID: 160-21739-D-15 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 303641

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Alkalinity	100			100.0		mg/L				0	20
Bicarbonate Alkalinity	100			100.0		mg/L				0	20
Carbonate Alkalinity	0.54	U		0.54	U	mg/L				NC	20
Hydroxide Alkalinity	0.54	U		0.54	U	mg/L				NC	20

Lab Sample ID: MB 160-305214/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 305214

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	0.54	U	5.0	0.54	mg/L			04/24/17 21:15	1
Bicarbonate Alkalinity	0.54	U	5.0	0.54	mg/L			04/24/17 21:15	1
Carbonate Alkalinity	0.54	U	5.0	0.54	mg/L			04/24/17 21:15	1
Hydroxide Alkalinity	0.54	U	5.0	0.54	mg/L			04/24/17 21:15	1

Lab Sample ID: HLCS 160-305214/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 305214

Analyte			Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Alkalinity			400	382.0		mg/L		95	90 - 110		
Bicarbonate Alkalinity			400	382.0		mg/L		95	90 - 110		

Lab Sample ID: LCS 160-305214/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 305214

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Alkalinity			200	182.0		mg/L		91	90 - 110		
Bicarbonate Alkalinity			200	182.0		mg/L		91	90 - 110		

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

Method: 310.1 - Alkalinity (Continued)

Lab Sample ID: 160-21813-9 MS — **Client Sample ID: B39LK0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 305214

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity	100		100	192.0		mg/L		92	80 - 120
Bicarbonate Alkalinity	100		100	192.0		mg/L		92	80 - 120

Lab Sample ID: 160-21813-9 DU — **Client Sample ID: B39LK0**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 305214

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity	100		100.0		mg/L		0	20
Bicarbonate Alkalinity	100		100.0		mg/L		0	20
Carbonate Alkalinity	0.54	U	0.54	U	mg/L		NC	20
Hydroxide Alkalinity	0.54	U	0.54	U	mg/L		NC	20

Method: 9012B - Cyanide, Total andor Amenable

Lab Sample ID: MB 160-304160/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 304234 — **Prep Batch: 304160**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	3.1	U	5.0	3.1	ug/L		04/18/17 15:50	04/18/17 19:07	1

Lab Sample ID: HLCS 160-304160/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 304234 — **Prep Batch: 304160**

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	400	385.6		ug/L		96	85 - 115

Lab Sample ID: LCS 160-304160/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 304234 — **Prep Batch: 304160**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	200	195.5		ug/L		98	85 - 115

Lab Sample ID: 160-21813-1 MS — **Client Sample ID: B39LK7**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 304234 — **Prep Batch: 304160**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	79.0		200	274.1		ug/L		98	66 - 120

Lab Sample ID: 160-21813-1 DU — **Client Sample ID: B39LK7**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 304234 — **Prep Batch: 304160**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cyanide, Total	79.0		78.27		ug/L		0.9	20

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

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

Lab Sample ID: MB 160-305208/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 307081 — **Prep Batch: 305208**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Halogens, Total Organic	2.1	U	5.0	2.1	ug/L		04/27/17 12:00	04/27/17 13:09	1

Lab Sample ID: LCS 160-305208/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 307081 — **Prep Batch: 305208**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Halogens, Total Organic	100	93.25		ug/L		93	90 - 116

Lab Sample ID: 160-21770-A-18-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 307081 — **Prep Batch: 305208**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Halogens, Total Organic	4.1	B N	100	86.02	N	ug/L		82	85 - 117

Lab Sample ID: 160-21770-A-7-B DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 307081 — **Prep Batch: 305208**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Halogens, Total Organic	12.7	y	19.08	y	ug/L		40	20

Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 160-303764/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 303778 — **Prep Batch: 303764**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	2.2	U	10.9	2.2	mg/L		04/17/17 09:29	04/17/17 11:04	1

Lab Sample ID: LCS 160-303764/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 303778 — **Prep Batch: 303764**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	54.6	39.27		mg/L		72	70 - 130

Lab Sample ID: 160-21829-5 MS — **Client Sample ID: B390C3**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 303778 — **Prep Batch: 303764**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	2.2	U	54.6	40.73		mg/L		75	70 - 130

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric) (Continued)

Lab Sample ID: 160-21829-5 DU — **Client Sample ID: B390C3**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 303778 — **Prep Batch: 303764**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Sulfide	2.2	U		2.2	U	mg/L				NC	20

Method: 9060 - Organic Carbon, Total (TOC)

Lab Sample ID: MB 160-304708/21 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 304708

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	0.72	U	1.0	0.72	mg/L			04/20/17 18:54	1

Lab Sample ID: LCS 160-304708/22 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 304708

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon			10.0	9.67		mg/L		97	90 - 110		

Lab Sample ID: 160-21829-8 MS — **Client Sample ID: B390L5**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 304708

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon	0.72	U	5.00	5.17		mg/L		103	76 - 120		

Lab Sample ID: 160-21874-C-4 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 304708

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon	1.9		5.00	7.00		mg/L		101	76 - 120		

Lab Sample ID: 160-21874-C-4 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 304708

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Organic Carbon	1.9			1.83		mg/L				6	20

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

GC/MS VOA

Analysis Batch: 303648

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-21812-1	B39730	Total/NA	Water	8260C	
160-21813-3	B390B2	Total/NA	Water	8260C	
160-21813-4	B390F7	Total/NA	Water	8260C	
160-21813-5	B39081	Total/NA	Water	8260C	
160-21829-1	B39337	Total/NA	Water	8260C	
160-21829-1	B39337	Total/NA	Water	8260C	
160-21829-3	B397P7	Total/NA	Water	8260C	
160-21829-4	B39731	Total/NA	Water	8260C	
MB 160-303648/6	Method Blank	Total/NA	Water	8260C	
LCS 160-303648/3	Lab Control Sample	Total/NA	Water	8260C	
LCSD 160-303648/4	Lab Control Sample Dup	Total/NA	Water	8260C	
160-21812-1 MS	B39730	Total/NA	Water	8260C	
160-21812-1 MSD	B39730	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 303360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-21813-3	B390B2	Total/NA	Water	3510C	
160-21813-4	B390F7	Total/NA	Water	3510C	
160-21813-5	B39081	Total/NA	Water	3510C	
160-21829-3	B397P7	Total/NA	Water	3510C	
MB 160-303360/1-A	Method Blank	Total/NA	Water	3510C	
LCS 160-303360/2-A	Lab Control Sample	Total/NA	Water	3510C	
160-21813-3 MS	B390B2	Total/NA	Water	3510C	
160-21813-3 MSD	B390B2	Total/NA	Water	3510C	

Analysis Batch: 306948

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-21813-3	B390B2	Total/NA	Water	8270D	303360
160-21813-4	B390F7	Total/NA	Water	8270D	303360
160-21813-5	B39081	Total/NA	Water	8270D	303360
160-21829-3	B397P7	Total/NA	Water	8270D	303360
MB 160-303360/1-A	Method Blank	Total/NA	Water	8270D	303360
LCS 160-303360/2-A	Lab Control Sample	Total/NA	Water	8270D	303360
160-21813-3 MS	B390B2	Total/NA	Water	8270D	303360
160-21813-3 MSD	B390B2	Total/NA	Water	8270D	303360

GC Semi VOA

Prep Batch: 303381

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-21829-2	B39302	Total/NA	Water	3510C	
160-21829-8	B390L5	Total/NA	Water	3510C	
MB 160-303381/1-A	Method Blank	Total/NA	Water	3510C	
LCS 160-303381/2-A	Lab Control Sample	Total/NA	Water	3510C	
160-21829-2 MS	B39302	Total/NA	Water	3510C	
160-21829-2 MSD	B39302	Total/NA	Water	3510C	

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

GC Semi VOA (Continued)

Prep Batch: 303455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-21829-5	B390C3	Total/NA	Water	3510C	
160-21829-8	B390L5	Total/NA	Water	3510C	
MB 160-303455/1-A	Method Blank	Total/NA	Water	3510C	
LCS 160-303455/2-A	Lab Control Sample	Total/NA	Water	3510C	
160-21829-5 MS	B390C3	Total/NA	Water	3510C	
160-21829-5 MSD	B390C3	Total/NA	Water	3510C	

Analysis Batch: 303929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-21829-2	B39302	Total/NA	Water	8081B	303381
160-21829-8	B390L5	Total/NA	Water	8081B	303381
MB 160-303381/1-A	Method Blank	Total/NA	Water	8081B	303381
LCS 160-303381/2-A	Lab Control Sample	Total/NA	Water	8081B	303381
160-21829-2 MS	B39302	Total/NA	Water	8081B	303381
160-21829-2 MSD	B39302	Total/NA	Water	8081B	303381

Prep Batch: 303941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-21829-3	B397P7	Total/NA	Water	8151A	
160-21829-5	B390C3	Total/NA	Water	8151A	
MB 160-303941/1-A	Method Blank	Total/NA	Water	8151A	
LCS 160-303941/2-A	Lab Control Sample	Total/NA	Water	8151A	
160-21829-5 MS	B390C3	Total/NA	Water	8151A	
160-21829-5 MSD	B390C3	Total/NA	Water	8151A	

Analysis Batch: 304060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-21829-5	B390C3	Total/NA	Water	8082A	303455
160-21829-8	B390L5	Total/NA	Water	8082A	303455
MB 160-303455/1-A	Method Blank	Total/NA	Water	8082A	303455
LCS 160-303455/2-A	Lab Control Sample	Total/NA	Water	8082A	303455
160-21829-5 MS	B390C3	Total/NA	Water	8082A	303455
160-21829-5 MSD	B390C3	Total/NA	Water	8082A	303455

Analysis Batch: 306680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-21829-3	B397P7	Total/NA	Water	8151A	303941
160-21829-5	B390C3	Total/NA	Water	8151A	303941
MB 160-303941/1-A	Method Blank	Total/NA	Water	8151A	303941
LCS 160-303941/2-A	Lab Control Sample	Total/NA	Water	8151A	303941
160-21829-5 MS	B390C3	Total/NA	Water	8151A	303941
160-21829-5 MSD	B390C3	Total/NA	Water	8151A	303941

Metals

Prep Batch: 303355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-21829-6	B396V1	Total/NA	Water	7470A	
160-21829-7	B390M3	Dissolved	Water	7470A	
MB 160-303355/1-A	Method Blank	Total/NA	Water	7470A	

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

Metals (Continued)

Prep Batch: 303355 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 160-303355/2-A	Lab Control Sample	Total/NA	Water	7470A	
160-21829-6 MS	B396V1	Total/NA	Water	7470A	
160-21829-6 MSD	B396V1	Total/NA	Water	7470A	

Analysis Batch: 303477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-21829-6	B396V1	Total/NA	Water	7470A	303355
160-21829-7	B390M3	Dissolved	Water	7470A	303355
MB 160-303355/1-A	Method Blank	Total/NA	Water	7470A	303355
LCS 160-303355/2-A	Lab Control Sample	Total/NA	Water	7470A	303355
160-21829-6 MS	B396V1	Total/NA	Water	7470A	303355
160-21829-6 MSD	B396V1	Total/NA	Water	7470A	303355

Prep Batch: 304143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-21829-6	B396V1	Total/NA	Water	3010A	
160-21829-7	B390M3	Dissolved	Water	3010A	
MB 160-304143/1-A	Method Blank	Total/NA	Water	3010A	
LCS 160-304143/2-A	Lab Control Sample	Total/NA	Water	3010A	
160-21829-6 MS	B396V1	Total/NA	Water	3010A	
160-21829-6 MSD	B396V1	Total/NA	Water	3010A	

Prep Batch: 304144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-21829-6	B396V1	Total/NA	Water	3010A	
160-21829-7	B390M3	Dissolved	Water	3010A	
MB 160-304144/1-A	Method Blank	Total/NA	Water	3010A	
LCS 160-304144/2-A	Lab Control Sample	Total/NA	Water	3010A	
160-21829-6 MS	B396V1	Total/NA	Water	3010A	
160-21829-6 MSD	B396V1	Total/NA	Water	3010A	

Analysis Batch: 304407

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-21829-6	B396V1	Total/NA	Water	6010C	304143
160-21829-7	B390M3	Dissolved	Water	6010C	304143
MB 160-304143/1-A	Method Blank	Total/NA	Water	6010C	304143
LCS 160-304143/2-A	Lab Control Sample	Total/NA	Water	6010C	304143
160-21829-6 MS	B396V1	Total/NA	Water	6010C	304143
160-21829-6 MSD	B396V1	Total/NA	Water	6010C	304143

Analysis Batch: 305645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-21829-6	B396V1	Total/NA	Water	6020A	304144
160-21829-7	B390M3	Dissolved	Water	6020A	304144
MB 160-304144/1-A	Method Blank	Total/NA	Water	6020A	304144
LCS 160-304144/2-A	Lab Control Sample	Total/NA	Water	6020A	304144
160-21829-6 MS	B396V1	Total/NA	Water	6020A	304144
160-21829-6 MSD	B396V1	Total/NA	Water	6020A	304144

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

Metals (Continued)

Analysis Batch: 306808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-21829-6	B396V1	Total/NA	Water	6020A	304144
160-21829-7	B390M3	Dissolved	Water	6020A	304144
MB 160-304144/1-A	Method Blank	Total/NA	Water	6020A	304144
LCS 160-304144/2-A	Lab Control Sample	Total/NA	Water	6020A	304144
160-21829-6 MS	B396V1	Total/NA	Water	6020A	304144
160-21829-6 MSD	B396V1	Total/NA	Water	6020A	304144

General Chemistry

Analysis Batch: 303641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-21813-2	B392B5	Total/NA	Water	310.1	
160-21813-3	B390B2	Total/NA	Water	310.1	
160-21813-4	B390F7	Total/NA	Water	310.1	
160-21813-5	B39081	Total/NA	Water	310.1	
MB 160-303641/1	Method Blank	Total/NA	Water	310.1	
HLCS 160-303641/3	Lab Control Sample	Total/NA	Water	310.1	
LCS 160-303641/2	Lab Control Sample	Total/NA	Water	310.1	
160-21739-D-15 MS	Matrix Spike	Total/NA	Water	310.1	
160-21739-D-15 DU	Duplicate	Total/NA	Water	310.1	

Prep Batch: 303764

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-21829-5	B390C3	Total/NA	Water	9030B	
160-21829-8	B390L5	Total/NA	Water	9030B	
MB 160-303764/1-A	Method Blank	Total/NA	Water	9030B	
LCS 160-303764/2-A	Lab Control Sample	Total/NA	Water	9030B	
160-21829-5 MS	B390C3	Total/NA	Water	9030B	
160-21829-5 DU	B390C3	Total/NA	Water	9030B	

Analysis Batch: 303778

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-21829-5	B390C3	Total/NA	Water	9034	303764
160-21829-8	B390L5	Total/NA	Water	9034	303764
MB 160-303764/1-A	Method Blank	Total/NA	Water	9034	303764
LCS 160-303764/2-A	Lab Control Sample	Total/NA	Water	9034	303764
160-21829-5 MS	B390C3	Total/NA	Water	9034	303764
160-21829-5 DU	B390C3	Total/NA	Water	9034	303764

Prep Batch: 304160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-21813-1	B39LK7	Total/NA	Water	9010C	
160-21829-3	B397P7	Total/NA	Water	9010C	
160-21829-5	B390C3	Total/NA	Water	9010C	
MB 160-304160/1-A	Method Blank	Total/NA	Water	9010C	
HLCS 160-304160/3-A	Lab Control Sample	Total/NA	Water	9010C	
LCS 160-304160/2-A	Lab Control Sample	Total/NA	Water	9010C	
160-21813-1 MS	B39LK7	Total/NA	Water	9010C	
160-21813-1 DU	B39LK7	Total/NA	Water	9010C	

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

General Chemistry (Continued)

Analysis Batch: 304234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-21813-1	B39LK7	Total/NA	Water	9012B	304160
160-21829-3	B397P7	Total/NA	Water	9012B	304160
160-21829-5	B390C3	Total/NA	Water	9012B	304160
MB 160-304160/1-A	Method Blank	Total/NA	Water	9012B	304160
HLCS 160-304160/3-A	Lab Control Sample	Total/NA	Water	9012B	304160
LCS 160-304160/2-A	Lab Control Sample	Total/NA	Water	9012B	304160
160-21813-1 MS	B39LK7	Total/NA	Water	9012B	304160
160-21813-1 DU	B39LK7	Total/NA	Water	9012B	304160

Analysis Batch: 304708

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-21813-6	B39LK3	Total/NA	Water	9060	
160-21813-7	B39LK2	Total/NA	Water	9060	
160-21813-8	B39LK1	Total/NA	Water	9060	
160-21813-9	B39LK0	Total/NA	Water	9060	
160-21829-5	B390C3	Total/NA	Water	9060	
160-21829-8	B390L5	Total/NA	Water	9060	
MB 160-304708/21	Method Blank	Total/NA	Water	9060	
LCS 160-304708/22	Lab Control Sample	Total/NA	Water	9060	
160-21829-8 MS	B390L5	Total/NA	Water	9060	
160-21874-C-4 MS	Matrix Spike	Total/NA	Water	9060	
160-21874-C-4 DU	Duplicate	Total/NA	Water	9060	

Prep Batch: 305208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-21813-6	B39LK3	Total/NA	Water	Carbon Trap	
160-21813-7	B39LK2	Total/NA	Water	Carbon Trap	
160-21813-8	B39LK1	Total/NA	Water	Carbon Trap	
160-21813-9	B39LK0	Total/NA	Water	Carbon Trap	
160-21829-5	B390C3	Total/NA	Water	Carbon Trap	
160-21829-8	B390L5	Total/NA	Water	Carbon Trap	
MB 160-305208/1-A	Method Blank	Total/NA	Water	Carbon Trap	
LCS 160-305208/2-A	Lab Control Sample	Total/NA	Water	Carbon Trap	
160-21770-A-18-B MS	Matrix Spike	Total/NA	Water	Carbon Trap	
160-21770-A-7-B DU	Duplicate	Total/NA	Water	Carbon Trap	

Analysis Batch: 305214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-21813-9	B39LK0	Total/NA	Water	310.1	
160-21829-3	B397P7	Total/NA	Water	310.1	
160-21829-5	B390C3	Total/NA	Water	310.1	
MB 160-305214/1	Method Blank	Total/NA	Water	310.1	
HLCS 160-305214/3	Lab Control Sample	Total/NA	Water	310.1	
LCS 160-305214/2	Lab Control Sample	Total/NA	Water	310.1	
160-21813-9 MS	B39LK0	Total/NA	Water	310.1	
160-21813-9 DU	B39LK0	Total/NA	Water	310.1	

Analysis Batch: 307081

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-21813-6	B39LK3	Total/NA	Water	9020B	305208
160-21813-7	B39LK2	Total/NA	Water	9020B	305208

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

General Chemistry (Continued)

Analysis Batch: 307081 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-21813-8	B39LK1	Total/NA	Water	9020B	305208
160-21813-9	B39LK0	Total/NA	Water	9020B	305208
160-21829-5	B390C3	Total/NA	Water	9020B	305208
160-21829-8	B390L5	Total/NA	Water	9020B	305208
MB 160-305208/1-A	Method Blank	Total/NA	Water	9020B	305208
LCS 160-305208/2-A	Lab Control Sample	Total/NA	Water	9020B	305208
160-21770-A-18-B MS	Matrix Spike	Total/NA	Water	9020B	305208
160-21770-A-7-B DU	Duplicate	Total/NA	Water	9020B	305208

Surrogate Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

Method: 8260C - 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	(75-129)	(81-130)	(81-124)	(87-128)
160-21812-1	B39730	90	114	96	116
160-21812-1 MS	B39730	89	97	94	103
160-21812-1 MSD	B39730	87	102	95	104
160-21813-3	B390B2	93	114	94	111
160-21813-4	B390F7	90	116	93	112
160-21813-5	B39081	92	114	96	112
160-21829-1	B39337	95	115	99	113
160-21829-1	B39337	95	116	110	111
160-21829-3	B397P7	94	115	96	111
160-21829-4	B39731	93	114	95	112
LCS 160-303648/3	Lab Control Sample	91	100	97	104
LCSD 160-303648/4	Lab Control Sample Dup	93	98	96	103
MB 160-303648/6	Method Blank	91	116	94	112

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)					
		2FP	TBP	NBZ	PHL	TPHL	FBP
Lab Sample ID	Client Sample ID	(15-59)	(37-120)	(50-101)	(10-50)	(21-97)	(43-108)
160-21813-3	B390B2	42	97	73	27	80	76
160-21813-3 MS	B390B2	48	102	79	34	90	83
160-21813-3 MSD	B390B2	39	85	68	25	73	72
160-21813-4	B390F7	46	100	78	28	86	79
160-21813-5	B39081	43	93	71	27	83	74
160-21829-3	B397P7	48	104	77	31	88	80
LCS 160-303360/2-A	Lab Control Sample	42	73	56	27	69	59
MB 160-303360/1-A	Method Blank	49	106	81	31	90	82

Surrogate Legend

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

Method: 8081B - Organochlorine Pesticides (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
		DCB1	TCX2
Lab Sample ID	Client Sample ID	(26-127)	(53-116)
160-21829-2	B39302	89	95

TestAmerica St. Louis

Surrogate Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCB1 (26-127)	TCX2 (53-116)
160-21829-2 MSD	B39302	99	92
160-21829-8	B390L5	76	85
LCS 160-303381/2-A	Lab Control Sample	91	96
MB 160-303381/1-A	Method Blank	91	93

Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)
TCX = Tetrachloro-m-xylene

Method: 8081B - Organochlorine Pesticides (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	DCB2 (26-127)	TCX2 (53-116)
160-21829-2 MS	B39302	100	97

Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)
TCX = Tetrachloro-m-xylene

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

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

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	DCB2 (32-141)
160-21829-5	B390C3	90
160-21829-5 MS	B390C3	78
160-21829-5 MSD	B390C3	87
160-21829-8	B390L5	83
LCS 160-303455/2-A	Lab Control Sample	93
MB 160-303455/1-A	Method Blank	95

Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)

Method: 8151A - Herbicides (GC)

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

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	DCPAA2 (60-128)
160-21829-3	B397P7	119
160-21829-5	B390C3	125
160-21829-5 MS	B390C3	76
160-21829-5 MSD	B390C3	135 X
LCS 160-303941/2-A	Lab Control Sample	124
MB 160-303941/1-A	Method Blank	94

Surrogate Legend

Surrogate Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: X17-003 / S17-004 / W17-004

TestAmerica Job ID: 160-21812-1
SDG: SL2499

DCPAA = 2,4-Dichlorophenylacetic acid