July 13, 2017

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: 160-22867-1
TestAmerica Sample Delivery Group: SL2556
Client Project/Site: F11-002

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

Attn: Mr. Scot Fitzgerald

Authorized for release by:
7/13/2017 12:17:30 PM

Jayna Awalt, Project Manager II
(314)298-8566
jayna.awalt@testamericainc.com

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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Job ID: 160-22867-1

Laboratory: TestAmerica St. Louis

Narrative

CASE NARRATIVE

CH2MHill Plateau Remediation Company
P.O. Box 1600
Richland, Washington 99352
July 13, 2017
Attention: Scot Fitzgerald

SDG	: SL2556
Number of Samples	: 2 samples
Sample Matrix	: Water
Data Deliverable	: Summary
Date SDG Closed	: June 15, 2017

II. Introduction

On June 15, 2 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.

The following SAFs are associated with this SDG: F11-002

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

Job ID: 160-22867-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

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.

ICP Metals

Batch: 316808

Iron was detected in method blank MB 160-316569/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "B". If the associated sample reported a result above the MDL and/or RL and is not greater than 5% the method blank, the result has been flagged "C".

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

Volatiles
Mercury
Alkalinity

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.

Job ID: 160-22867-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

Reviewed and approved:

Jayna Awalt
St. Louis Project Manager

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 160-22867-1
SDG Number: SL2556

Login Number: 22867
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	0.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-002-170	PAGE 1 OF 1
COLLECTOR CHRIS FULTON CHPRC SL25556	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC	PRICE CODE 7H	DATA TURNAROUND
SAMPLING LOCATION 100-KR-4, EFFLUENT, VALVE T-K5 (FILTER VENT)	PROJECT DESIGNATION 100-KR-4 Pump and Treat Influent & Effluent Tanks - Water		SAF NO. F11-002	AIR QUALITY ☐	30 Days / 30 Days
ICE CHEST NO. GWS-1608	FIELD LOGBOOK NO. HNF-N- 491-16	ACTUAL SAMPLE DEPTH N/A	COA 302891	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO TestAmerica St. Louis	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. 779401309407		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

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 HANDLING AND/OR STORAGE
NA

PRESERVATION	HNO3 to pH <2	HCl or H2SO4 to pH <2/Cool	Cool <=6C
HOLDING TIME	28 Days	14 Days	14 Days
TYPE OF CONTAINER	G/P	aGs*	G/P
NO. OF CONTAINER(S)	1	5	1
VOLUME	500mL	40mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	8260_VOA_GCMS: COMMON {Trichloroethene};	SEE ITEM (2) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B3B337	WATER	JUN 13 2017	1045	✓	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
CHRIS FULTON CHPRC	JUN 13 2017 1345	SSU-1	JUN 13 2017 1345
SSU-1	JUN 14 2017 0700	Janelle Zunker CHPRC	JUN 14 2017 0700
Janelle Zunker CHPRC	JUN 14 2017 1400	FEDEX	
	FED EX		6/15/17 1000

SPECIAL INSTRUCTIONS
TRVL-17-135
(1) 7470_MERCURY_CV: COMMON (AQUEOUS); 6010_METALS_ICP: COMMON {Antimony, Arsenic, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc}; 6010_METALS_ICP: COMMON (Add-on) {Beryllium, Bismuth, Lead, Selenium};
(2) 310.1_ALKALINITY: COMMON (Add-0n) {Bi-carbonate alkalinity};

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

PRINTED ON 5/8/2017 FSR ID = FSR45067 TRVL NUM = TRVL-17-135 A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F11-002-175	PAGE 1 OF 1
COLLECTOR CHRIS FULTON CHPRC SL2556	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR SUMNER, LC	PRICE CODE 7H	DATA TURNAROUND
SAMPLING LOCATION 100-KR-4, INFLUENT, VALVE T-K3 (KP-16)	PROJECT DESIGNATION 100-KR-4 Pump and Treat Influent & Effluent Tanks - Water		SAF NO. F11-002	AIR QUALITY ☐	30 Days / 30 Days
ICE CHEST NO. GWS-608	FIELD LOGBOOK NO. HNF-N- 491-16	ACTUAL SAMPLE DEPTH N/A	COA 302891	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO TestAmerica St. Louis	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. 779401309407		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

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 HANDLING AND/OR STORAGE
NA

PRESERVATION	HNO3 to pH <2	HCl or H2SO4 to pH <2/Cool	Cool <=6C
HOLDING TIME	28 Days	14 Days	14 Days
TYPE OF CONTAINER	G/P	aGs*	G/P
NO. OF CONTAINER(S)	1	5	1
VOLUME	500mL	40mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	8260_VOA_GCMS: COMMON {Trichloroethene};	SEE ITEM (2) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B3B342	WATER	JUN 13 2017	1030	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM CHRIS FULTON CHPRC	DATE/TIME JUN 13 2017 1315	RECEIVED BY/STORED IN SSU-1	DATE/TIME JUN 13 2017 1345
RELINQUISHED BY/REMOVED FROM SSU-1	DATE/TIME JUN 14 2017 0700	RECEIVED BY/STORED IN Janelle Zunker CHPRC	DATE/TIME JUN 14 2017 0700
RELINQUISHED BY/REMOVED FROM Janelle Zunker CHPRC	DATE/TIME JUN 14 2017 1400	RECEIVED BY/STORED IN FEDEX	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME FED EX	RECEIVED BY/STORED IN	DATE/TIME 6/15/17 1000
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
TRVL-17-135
(1) 7470_MERCURY_CV: COMMON (AQUEOUS); 6010_METALS_ICP: COMMON {Antimony, Arsenic, Barium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc}; 6010_METALS_ICP: COMMON (Add-on) {Beryllium, Bismuth, Lead, Selenium};
(2) 310.1_ALKALINITY: COMMON (Add-0n) {Bi-carbonate alkalinity};

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

PRINTED ON 5/8/2017 FSR ID = FSR45068 TRVL NUM = TRVL-17-135 A-6003-618 (REV 2)

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779401309407

Ship date:
Wed 6/14/2017

RICHLAND, WA US

Delivered
Signed for by: B.DANIELS

Actual delivery:
Thu 6/15/2017 9:52 am

EARTH CITY, MO US

Travel History

Date/Time	Activity	Location
- 6/15/2017 - Thursday		
9:52 am	Delivered	EARTH CITY, MO
7:55 am	On FedEx vehicle for delivery	EARTH CITY, MO
7:50 am	At local FedEx facility	EARTH CITY, MO
5:25 am	At destination sort facility	BERKELEY, MO
4:18 am	Departed FedEx location	MEMPHIS, TN
12:15 am	Arrived at FedEx location	MEMPHIS, TN
- 6/14/2017 - Wednesday		
4:51 pm	Left FedEx origin facility	PASCO, WA
3:15 pm	Picked up	PASCO, WA
1:17 pm	Shipment information sent to FedEx	

Shipment Facts

Tracking number	779401309407	**Service**	FedEx Standard Overnight
Weight	73 lbs / 33.11 kgs	**Dimensions**	28x16x16 in.
Delivered To	Shipping/Receiving	**Total pieces**	1
Total shipment weight	73 lbs / 33.11 kgs	**Terms**	Recipient
Shipper reference	GWS-608	**Packaging**	Your Packaging
Special handling section	Deliver Weekday, Additional Handling Surcharge	**Standard transit**	6/15/2017 by 3:00 pm

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Analyzed for but not detected.

Metals

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

General Chemistry

Qualifier	Qualifier Description
U	Analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	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: F11-002

TestAmerica Job ID: 160-22867-1
SDG: SL2556

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds (GC/MS)	SW846	TAL SL
6010C	Metals (ICP)	SW846	TAL SL
7470A	Mercury (CVAA)	SW846	TAL SL
310.1	Alkalinity	MCAWW	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: F11-002

TestAmerica Job ID: 160-22867-1
SDG: SL2556

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-22867-1	B3B337	Water	06/13/17 10:45	06/15/17 10:00
160-22867-2	B3B342	Water	06/13/17 10:30	06/15/17 10:00

Client: CH2M Hill Plateau Remediation Company
Project/Site: F11-002

TestAmerica Job ID: 160-22867-1
SDG: SL2556

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

Client Sample ID: B3B337 — **Lab Sample ID: 160-22867-1**
Date Collected: 06/13/17 10:45 — **Matrix: Water**
Date Received: 06/15/17 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	0.25	U	1.0	0.25	ug/L			06/20/17 09:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*75 - 129*		*06/20/17 09:27*	*1*
4-Bromofluorobenzene (Surr)	*118*		*81 - 130*		*06/20/17 09:27*	*1*
Dibromofluoromethane (Surr)	*97*		*81 - 124*		*06/20/17 09:27*	*1*
Toluene-d8 (Surr)	*118*		*87 - 128*		*06/20/17 09:27*	*1*

Client Sample ID: B3B342 — **Lab Sample ID: 160-22867-2**
Date Collected: 06/13/17 10:30 — **Matrix: Water**
Date Received: 06/15/17 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	0.25	U	1.0	0.25	ug/L			06/20/17 09:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*75 - 129*		*06/20/17 09:51*	*1*
4-Bromofluorobenzene (Surr)	*121*		*81 - 130*		*06/20/17 09:51*	*1*
Dibromofluoromethane (Surr)	*102*		*81 - 124*		*06/20/17 09:51*	*1*
Toluene-d8 (Surr)	*117*		*87 - 128*		*06/20/17 09:51*	*1*

Method: 6010C - Metals (ICP)

Client Sample ID: B3B337 — **Lab Sample ID: 160-22867-1**
Date Collected: 06/13/17 10:45 — **Matrix: Water**
Date Received: 06/15/17 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	3.0	U	10.0	3.0	ug/L		07/07/17 10:16	07/10/17 19:20	1
Arsenic	**4.6**	**B**	10.0	4.0	ug/L		07/07/17 10:16	07/10/17 19:20	1
Barium	**26.1**	**B**	50.0	15.0	ug/L		07/07/17 10:16	07/10/17 19:20	1
Beryllium	1.5	U	5.0	1.5	ug/L		07/07/17 10:16	07/10/17 19:20	1
Bismuth	50.0	U	200	50.0	ug/L		07/07/17 10:16	07/10/17 19:20	1
Cadmium	1.5	U	5.0	1.5	ug/L		07/07/17 10:16	07/10/17 19:20	1
Calcium	**42200**		1000	300	ug/L		07/07/17 10:16	07/10/17 19:20	1
Chromium	**4.6**	**B**	10.0	3.0	ug/L		07/07/17 10:16	07/10/17 19:20	1
Cobalt	15.0	U	50.0	15.0	ug/L		07/07/17 10:16	07/10/17 19:20	1
Copper	7.0	U	25.0	7.0	ug/L		07/07/17 10:16	07/10/17 19:20	1
Iron	30.0	U	100	30.0	ug/L		07/07/17 10:16	07/10/17 19:20	1
Lead	3.0	U	10.0	3.0	ug/L		07/07/17 10:16	07/10/17 19:20	1
Magnesium	**8380**		1000	300	ug/L		07/07/17 10:16	07/10/17 19:20	1
Manganese	4.0	U	15.0	4.0	ug/L		07/07/17 10:16	07/10/17 19:20	1
Nickel	**21.7**	**B**	40.0	10.0	ug/L		07/07/17 10:16	07/10/17 19:20	1
Potassium	**3230**	**B**	5000	1500	ug/L		07/07/17 10:16	07/10/17 19:20	1
Selenium	8.0	U	15.0	8.0	ug/L		07/07/17 10:16	07/10/17 19:20	1
Silver	3.0	U	10.0	3.0	ug/L		07/07/17 10:16	07/10/17 19:20	1
Sodium	**7170**		1000	300	ug/L		07/07/17 10:16	07/10/17 19:20	1
Vanadium	25.0	U	50.0	25.0	ug/L		07/07/17 10:16	07/10/17 19:20	1
Zinc	**6.8**	**B**	20.0	6.0	ug/L		07/07/17 10:16	07/10/17 19:20	1

Client: CH2M Hill Plateau Remediation Company
Project/Site: F11-002

TestAmerica Job ID: 160-22867-1
SDG: SL2556

Method: 6010C - Metals (ICP)

Client Sample ID: B3B342 — **Lab Sample ID: 160-22867-2**
Date Collected: 06/13/17 10:30 — **Matrix: Water**
Date Received: 06/15/17 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	3.0	U	10.0	3.0	ug/L		07/07/17 10:16	07/10/17 19:39	1
Arsenic	**4.2**	**B**	10.0	4.0	ug/L		07/07/17 10:16	07/10/17 19:39	1
Barium	**25.7**	**B**	50.0	15.0	ug/L		07/07/17 10:16	07/10/17 19:39	1
Beryllium	1.5	U	5.0	1.5	ug/L		07/07/17 10:16	07/10/17 19:39	1
Bismuth	50.0	U	200	50.0	ug/L		07/07/17 10:16	07/10/17 19:39	1
Cadmium	1.5	U	5.0	1.5	ug/L		07/07/17 10:16	07/10/17 19:39	1
Calcium	**40300**		1000	300	ug/L		07/07/17 10:16	07/10/17 19:39	1
Chromium	3.0	U	10.0	3.0	ug/L		07/07/17 10:16	07/10/17 19:39	1
Cobalt	15.0	U	50.0	15.0	ug/L		07/07/17 10:16	07/10/17 19:39	1
Copper	7.0	U	25.0	7.0	ug/L		07/07/17 10:16	07/10/17 19:39	1
Iron	30.0	U	100	30.0	ug/L		07/07/17 10:16	07/10/17 19:39	1
Lead	3.0	U	10.0	3.0	ug/L		07/07/17 10:16	07/10/17 19:39	1
Magnesium	**8150**		1000	300	ug/L		07/07/17 10:16	07/10/17 19:39	1
Manganese	4.0	U	15.0	4.0	ug/L		07/07/17 10:16	07/10/17 19:39	1
Nickel	10.0	U	40.0	10.0	ug/L		07/07/17 10:16	07/10/17 19:39	1
Potassium	**3170**	**B**	5000	1500	ug/L		07/07/17 10:16	07/10/17 19:39	1
Selenium	8.0	U	15.0	8.0	ug/L		07/07/17 10:16	07/10/17 19:39	1
Silver	3.0	U	10.0	3.0	ug/L		07/07/17 10:16	07/10/17 19:39	1
Sodium	**7080**		1000	300	ug/L		07/07/17 10:16	07/10/17 19:39	1
Vanadium	25.0	U	50.0	25.0	ug/L		07/07/17 10:16	07/10/17 19:39	1
Zinc	**7.0**	**B**	20.0	6.0	ug/L		07/07/17 10:16	07/10/17 19:39	1

Method: 7470A - Mercury (CVAA)

Client Sample ID: B3B337 — **Lab Sample ID: 160-22867-1**
Date Collected: 06/13/17 10:45 — **Matrix: Water**
Date Received: 06/15/17 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.060	U	0.20	0.060	ug/L		06/20/17 07:36	06/20/17 14:20	1

Client Sample ID: B3B342 — **Lab Sample ID: 160-22867-2**
Date Collected: 06/13/17 10:30 — **Matrix: Water**
Date Received: 06/15/17 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.060	U	0.20	0.060	ug/L		06/20/17 07:36	06/20/17 14:33	1

General Chemistry

Client Sample ID: B3B337 — **Lab Sample ID: 160-22867-1**
Date Collected: 06/13/17 10:45 — **Matrix: Water**
Date Received: 06/15/17 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	**88.0**		5.0	0.54	mg/L			06/16/17 10:28	1

Client Sample ID: B3B342 — **Lab Sample ID: 160-22867-2**
Date Collected: 06/13/17 10:30 — **Matrix: Water**
Date Received: 06/15/17 10:00

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	**86.0**		5.0	0.54	mg/L			06/16/17 10:28	1

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

Lab Sample ID: MB 160-314177/8 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 314177

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	0.25	U	1.0	0.25	ug/L			06/20/17 09:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*75 - 129*		*06/20/17 09:03*	*1*
4-Bromofluorobenzene (Surr)	*114*		*81 - 130*		*06/20/17 09:03*	*1*
Dibromofluoromethane (Surr)	*97*		*81 - 124*		*06/20/17 09:03*	*1*
Toluene-d8 (Surr)	*111*		*87 - 128*		*06/20/17 09:03*	*1*

Lab Sample ID: LCS 160-314177/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 314177

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichloroethene	10.0	9.32		ug/L		93	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*75 - 129*
4-Bromofluorobenzene (Surr)	*106*		*81 - 130*
Dibromofluoromethane (Surr)	*99*		*81 - 124*
Toluene-d8 (Surr)	*104*		*87 - 128*

Lab Sample ID: LCSD 160-314177/6 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 314177

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichloroethene	10.0	9.54		ug/L		95	80 - 120	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*92*		*75 - 129*
4-Bromofluorobenzene (Surr)	*103*		*81 - 130*
Dibromofluoromethane (Surr)	*96*		*81 - 124*
Toluene-d8 (Surr)	*102*		*87 - 128*

Lab Sample ID: 160-22867-1 MS — **Client Sample ID: B3B337**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 314177

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichloroethene	0.25	U	10.0	9.23		ug/L		92	81 - 125

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*75 - 129*
4-Bromofluorobenzene (Surr)	*107*		*81 - 130*
Dibromofluoromethane (Surr)	*98*		*81 - 124*
Toluene-d8 (Surr)	*106*		*87 - 128*

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

Lab Sample ID: 160-22867-1 MSD **Client Sample ID: B3B337**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 314177

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichloroethene	0.25	U	10.0	9.39		ug/L		94	81 - 125	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*75 - 129*
4-Bromofluorobenzene (Surr)	*107*		*81 - 130*
Dibromofluoromethane (Surr)	*98*		*81 - 124*
Toluene-d8 (Surr)	*105*		*87 - 128*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 160-316569/1-A **Client Sample ID: Method Blank**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 316808 **Prep Batch: 316569**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	3.0	U	10.0	3.0	ug/L		07/07/17 10:16	07/10/17 18:16	1
Arsenic	4.0	U	10.0	4.0	ug/L		07/07/17 10:16	07/10/17 18:16	1
Barium	15.0	U	50.0	15.0	ug/L		07/07/17 10:16	07/10/17 18:16	1
Beryllium	1.5	U	5.0	1.5	ug/L		07/07/17 10:16	07/10/17 18:16	1
Bismuth	50.0	U	200	50.0	ug/L		07/07/17 10:16	07/10/17 18:16	1
Cadmium	1.5	U	5.0	1.5	ug/L		07/07/17 10:16	07/10/17 18:16	1
Calcium	300	U	1000	300	ug/L		07/07/17 10:16	07/10/17 18:16	1
Chromium	3.0	U	10.0	3.0	ug/L		07/07/17 10:16	07/10/17 18:16	1
Cobalt	15.0	U	50.0	15.0	ug/L		07/07/17 10:16	07/10/17 18:16	1
Copper	7.0	U	25.0	7.0	ug/L		07/07/17 10:16	07/10/17 18:16	1
Iron	53.30	B	100	30.0	ug/L		07/07/17 10:16	07/10/17 18:16	1
Lead	3.0	U	10.0	3.0	ug/L		07/07/17 10:16	07/10/17 18:16	1
Magnesium	300	U	1000	300	ug/L		07/07/17 10:16	07/10/17 18:16	1
Manganese	4.0	U	15.0	4.0	ug/L		07/07/17 10:16	07/10/17 18:16	1
Nickel	10.0	U	40.0	10.0	ug/L		07/07/17 10:16	07/10/17 18:16	1
Potassium	1500	U	5000	1500	ug/L		07/07/17 10:16	07/10/17 18:16	1
Selenium	8.0	U	15.0	8.0	ug/L		07/07/17 10:16	07/10/17 18:16	1
Silver	3.0	U	10.0	3.0	ug/L		07/07/17 10:16	07/10/17 18:16	1
Sodium	300	U	1000	300	ug/L		07/07/17 10:16	07/10/17 18:16	1
Vanadium	25.0	U	50.0	25.0	ug/L		07/07/17 10:16	07/10/17 18:16	1
Zinc	6.0	U	20.0	6.0	ug/L		07/07/17 10:16	07/10/17 18:16	1

Lab Sample ID: LCS 160-316569/2-A **Client Sample ID: Lab Control Sample**
Matrix: Water **Prep Type: Total/NA**
Analysis Batch: 316808 **Prep Batch: 316569**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	500	480.5		ug/L		96	80 - 120
Arsenic	1000	991.2		ug/L		99	80 - 120
Barium	1000	1007		ug/L		101	80 - 120
Beryllium	100	97.50		ug/L		98	80 - 120
Bismuth	1000	1026		ug/L		103	80 - 120
Cadmium	1000	984.1		ug/L		98	80 - 120

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

Lab Sample ID: LCS 160-316569/2-A
Matrix: Water
Analysis Batch: 316808

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 316569

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	10000	10510		ug/L		105	80 - 120
Chromium	1000	1026		ug/L		103	80 - 120
Cobalt	1000	1037		ug/L		104	80 - 120
Copper	1000	1004		ug/L		100	80 - 120
Iron	10000	9469		ug/L		95	80 - 120
Lead	1000	1042		ug/L		104	80 - 120
Magnesium	10000	8845		ug/L		88	80 - 120
Manganese	1000	939.6		ug/L		94	80 - 120
Nickel	1000	1043		ug/L		104	80 - 120
Potassium	10000	9969		ug/L		100	80 - 120
Selenium	500	499.2		ug/L		100	80 - 120
Silver	200	200.8		ug/L		100	80 - 120
Sodium	10000	10300		ug/L		103	80 - 120
Vanadium	1000	941.0		ug/L		94	80 - 120
Zinc	1000	1003		ug/L		100	80 - 120

Lab Sample ID: 160-22866-A-1-B MS
Matrix: Water
Analysis Batch: 316808

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 316569

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	3.0	U	500	494.7		ug/L		99	75 - 125
Arsenic	6.4	B	1000	1031		ug/L		102	75 - 125
Barium	31.7	B	1000	1051		ug/L		102	75 - 125
Beryllium	1.5	U	100	100.4		ug/L		100	75 - 125
Bismuth	50.0	U	1000	1036		ug/L		104	75 - 125
Cadmium	1.5	U	1000	1022		ug/L		102	75 - 125
Calcium	30500		10000	41560		ug/L		111	75 - 125
Chromium	123		1000	1162		ug/L		104	75 - 125
Cobalt	15.0	U	1000	1043		ug/L		104	75 - 125
Copper	7.0	U	1000	1027		ug/L		103	75 - 125
Iron	30.0	U	10000	9690		ug/L		97	75 - 125
Lead	3.9	B	1000	1062		ug/L		106	75 - 125
Magnesium	8590		10000	17840		ug/L		92	75 - 125
Manganese	4.0	U	1000	952.6		ug/L		95	75 - 125
Nickel	10.0	U	1000	1062		ug/L		106	75 - 125
Potassium	3810	B	10000	14010		ug/L		102	75 - 125
Selenium	8.0	U	500	521.7		ug/L		104	75 - 125
Silver	3.0	U	200	204.9		ug/L		102	75 - 125
Sodium	26800		10000	37530		ug/L		107	75 - 125
Vanadium	27.4	B	1000	991.8		ug/L		96	75 - 125
Zinc	6.0	U	1000	1039		ug/L		104	75 - 125

Lab Sample ID: 160-22866-A-1-C MSD
Matrix: Water
Analysis Batch: 316808

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 316569

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	3.0	U	500	495.4		ug/L		99	75 - 125	0	20

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

Lab Sample ID: 160-22866-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 316808 — **Prep Batch: 316569**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	6.4	B	1000	1036		ug/L		103	75 - 125	0	20
Barium	31.7	B	1000	1040		ug/L		101	75 - 125	1	20
Beryllium	1.5	U	100	101.0		ug/L		101	75 - 125	1	20
Bismuth	50.0	U	1000	1035		ug/L		104	75 - 125	0	20
Cadmium	1.5	U	1000	1024		ug/L		102	75 - 125	0	20
Calcium	30500		10000	41840		ug/L		113	75 - 125	1	20
Chromium	123		1000	1165		ug/L		104	75 - 125	0	20
Cobalt	15.0	U	1000	1048		ug/L		105	75 - 125	0	20
Copper	7.0	U	1000	1028		ug/L		103	75 - 125	0	20
Iron	30.0	U	10000	9825		ug/L		98	75 - 125	1	20
Lead	3.9	B	1000	1066		ug/L		106	75 - 125	0	20
Magnesium	8590		10000	18400		ug/L		98	75 - 125	3	20
Manganese	4.0	U	1000	966.7		ug/L		97	75 - 125	1	20
Nickel	10.0	U	1000	1067		ug/L		107	75 - 125	0	20
Potassium	3810	B	10000	13800		ug/L		100	75 - 125	2	20
Selenium	8.0	U	500	516.3		ug/L		103	75 - 125	1	20
Silver	3.0	U	200	205.1		ug/L		103	75 - 125	0	20
Sodium	26800		10000	36730		ug/L		99	75 - 125	2	20
Vanadium	27.4	B	1000	1006		ug/L		98	75 - 125	1	20
Zinc	6.0	U	1000	1046		ug/L		105	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 160-314184/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 314369 — **Prep Batch: 314184**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.060	U	0.20	0.060	ug/L		06/20/17 07:36	06/20/17 14:16	1

Lab Sample ID: LCS 160-314184/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 314369 — **Prep Batch: 314184**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	5.15		ug/L		103	80 - 120

Lab Sample ID: 160-22867-1 MS — **Client Sample ID: B3B337**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 314369 — **Prep Batch: 314184**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.060	U	5.00	5.14		ug/L		103	80 - 120

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

Lab Sample ID: 160-22867-1 MSD — **Client Sample ID: B3B337**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 314369 — **Prep Batch: 314184**

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	5.17		ug/L		103	80 - 120	0	20

Method: 310.1 - Alkalinity

Lab Sample ID: MB 160-313787/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 313787

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	0.54	U	5.0	0.54	mg/L			06/16/17 10:28	1

Lab Sample ID: HLCS 160-313787/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 313787

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bicarbonate Alkalinity as CaCO3	400	386.0		mg/L		96	90 - 110

Lab Sample ID: LCS 160-313787/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 313787

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bicarbonate Alkalinity as CaCO3	200	191.0		mg/L		95	90 - 110

Lab Sample ID: 160-22866-A-9 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 313787

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bicarbonate Alkalinity as CaCO3	97.0		100	194.0		mg/L		97	80 - 120

Lab Sample ID: 160-22866-A-9 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 313787

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Bicarbonate Alkalinity as CaCO3	97.0		97.00		mg/L		0	20

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F11-002

TestAmerica Job ID: 160-22867-1
SDG: SL2556

GC/MS VOA

Analysis Batch: 314177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-22867-1	B3B337	Total/NA	Water	8260C	
160-22867-2	B3B342	Total/NA	Water	8260C	
MB 160-314177/8	Method Blank	Total/NA	Water	8260C	
LCS 160-314177/5	Lab Control Sample	Total/NA	Water	8260C	
LCSD 160-314177/6	Lab Control Sample Dup	Total/NA	Water	8260C	
160-22867-1 MS	B3B337	Total/NA	Water	8260C	
160-22867-1 MSD	B3B337	Total/NA	Water	8260C	

Metals

Prep Batch: 314184

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-22867-1	B3B337	Total/NA	Water	7470A	
160-22867-2	B3B342	Total/NA	Water	7470A	
MB 160-314184/1-A	Method Blank	Total/NA	Water	7470A	
LCS 160-314184/2-A	Lab Control Sample	Total/NA	Water	7470A	
160-22867-1 MS	B3B337	Total/NA	Water	7470A	
160-22867-1 MSD	B3B337	Total/NA	Water	7470A	

Analysis Batch: 314369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-22867-1	B3B337	Total/NA	Water	7470A	314184
160-22867-2	B3B342	Total/NA	Water	7470A	314184
MB 160-314184/1-A	Method Blank	Total/NA	Water	7470A	314184
LCS 160-314184/2-A	Lab Control Sample	Total/NA	Water	7470A	314184
160-22867-1 MS	B3B337	Total/NA	Water	7470A	314184
160-22867-1 MSD	B3B337	Total/NA	Water	7470A	314184

Prep Batch: 316569

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-22867-1	B3B337	Total/NA	Water	3010A	
160-22867-2	B3B342	Total/NA	Water	3010A	
MB 160-316569/1-A	Method Blank	Total/NA	Water	3010A	
LCS 160-316569/2-A	Lab Control Sample	Total/NA	Water	3010A	
160-22866-A-1-B MS	Matrix Spike	Total/NA	Water	3010A	
160-22866-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	3010A	

Analysis Batch: 316808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-22867-1	B3B337	Total/NA	Water	6010C	316569
160-22867-2	B3B342	Total/NA	Water	6010C	316569
MB 160-316569/1-A	Method Blank	Total/NA	Water	6010C	316569
LCS 160-316569/2-A	Lab Control Sample	Total/NA	Water	6010C	316569
160-22866-A-1-B MS	Matrix Spike	Total/NA	Water	6010C	316569
160-22866-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	6010C	316569

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F11-002

TestAmerica Job ID: 160-22867-1
SDG: SL2556

General Chemistry

Analysis Batch: 313787

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-22867-1	B3B337	Total/NA	Water	310.1	
160-22867-2	B3B342	Total/NA	Water	310.1	
MB 160-313787/1	Method Blank	Total/NA	Water	310.1	
HLCS 160-313787/3	Lab Control Sample	Total/NA	Water	310.1	
LCS 160-313787/2	Lab Control Sample	Total/NA	Water	310.1	
160-22866-A-9 MS	Matrix Spike	Total/NA	Water	310.1	
160-22866-A-9 DU	Duplicate	Total/NA	Water	310.1	

Surrogate Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F11-002

TestAmerica Job ID: 160-22867-1
SDG: SL2556

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

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

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(75-129)	(81-130)	(81-124)	(87-128)
160-22867-1	B3B337	96	118	97	118
160-22867-1 MS	B3B337	97	107	98	106
160-22867-1 MSD	B3B337	97	107	98	105
160-22867-2	B3B342	97	121	102	117
LCS 160-314177/5	Lab Control Sample	94	106	99	104
LCSD 160-314177/6	Lab Control Sample Dup	92	103	96	102
MB 160-314177/8	Method Blank	93	114	97	111

Surrogate Legend

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