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: 160-17999-1
TestAmerica Sample Delivery Group: SL2233
Client Project/Site: F16-047

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

Attn: Mr. Scot Fitzgerald

Authorized for release by:
7/8/2016 2:16:09 PM

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

Table of Contents

Case Narrative

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-047

TestAmerica Job ID: 160-17999-1
SDG: SL2233

Job ID: 160-17999-1

Laboratory: TestAmerica St. Louis

Narrative

CASE NARRATIVE

CH2MHill Plateau Remediation Company
P.O. Box 1600
Richland, Washington 99352
July 8, 2016
Attention: Scot Fitzgerald

SDG	: SL2233
Number of Samples	: 2 samples
Sample Matrix	: Water
Data Deliverable	: Summary
Date SDG Closed	: June 29, 2016

II. Introduction

On June 29, 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: F16-047

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 flagging unless otherwise noted in the case narrative.

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 (June 2014), Boron will be reported for Metals using method 6010. Boron will no longer be reported by method 6020.

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.

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-047

TestAmerica Job ID: 160-17999-1
SDG: SL2233

Job ID: 160-17999-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

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.

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.
- **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.
- **D** - For all analyses, the sample result was obtained from the analysis of a dilution. For Metals analyses, per standard practice, all solid 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. These dilutions do not necessitate qualification unless otherwise noted in the case narrative.
- **N** - For inorganics 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.
- **M**- For inorganic analyses, the precision was outside control 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.

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

Volatiles

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

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 160-17999-1
SDG Number: SL2233

Login Number: 17999
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	1.2°
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 52165

F16-047-024 | PAGE 1 OF 1

COLLECTOR Kevin Patterson CHPRC SL2233	**COMPANY CONTACT** SUMNER, LC	**TELEPHONE NO.** 376-3922	**PROJECT COORDINATOR** SUMNER, LC
SAMPLING LOCATION 289-T, MBR Effluent, Valve V15-Y50	**PROJECT DESIGNATION** 200 West Pump & Treat - Fluidized Bed Reactor (FBR) Micronutrient Analys		**SAF NO.** F16-047
ICE CHEST NO. 6WS-509	**FIELD LOGBOOK NO.** HNF-N- 49115	**ACTUAL SAMPLE DEPTH** N/A	**COA** 303111
SHIPPED TO TestAmerica St. Louis	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** 7766 2486 1940

PRICE CODE 7C | **DATA TURNAROUND** | **AIR QUALITY** ☐ | 15 Days / 15 Days | **METHOD OF SHIPMENT** FEDERAL EXPRESS | **ORIGINAL**

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. NA

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	HCl or H2SO4 to pH <2/Cool
HOLDING TIME	14 Days
TYPE OF CONTAINER	aGs*
NO. OF CONTAINER(S)	4
VOLUME	40mL
SAMPLE ANALYSIS	8260_VOA_GCMS: COMMON {Carbon tetrachloride};

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B35WH2	WATER	JUN 27 2016	1310	J

Page 6 of 16

July 8, 2016

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Kevin Patterson CHPRC	JUN 27 2016 1415	SSU-1	JUN 27 2016 1415
SSU-1	JUN 28 2016 0800	Lesly Wall /CHPRC Lesly Wall	JUN 28 2016 0800
Lesly Wall /CHPRC Lesly Wall	JUN 28 2016 1400	FEDEX	
FEDEX		JILL CLARKE Jill Clarke	6.25.16 0920

SPECIAL INSTRUCTIONS
The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-16-129

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

7/8/2016 6 of 16

PRINTED ON 5/26/2016 | **FSR ID = FSR32753** | **TRVL NUM = TRVL-16-157** | A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F16-047-027 | PAGE 1 OF 1

COLLECTOR
Kevin Patterson
CHPRC
SL2233

COMPANY CONTACT
SUMNER, LC

TELEPHONE NO.
376-3922

PROJECT COORDINATOR
SUMNER, LC

PRICE CODE 7C

DATA TURNAROUND
15 Days / 15 Days

AIR QUALITY ☐

SAMPLING LOCATION
289-T, Air-Strip Effluent, Valve V05-Y63

PROJECT DESIGNATION
200 West Pump & Treat - Fluidized Bed Reactor (FBR) Micronutrient Analys

SAF NO.
F16-047

ICE CHEST NO.
GWS-509

FIELD LOGBOOK NO.
HNF-N- 491 15

ACTUAL SAMPLE DEPTH
N/A

COA
303111

METHOD OF SHIPMENT
FEDERAL EXPRESS

ORIGINAL

SHIPPED TO
TestAmerica St. Louis

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
7766 2486 1940

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. NA

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	HCl or H2SO4 to pH <2/Cool
HOLDING TIME	14 Days
TYPE OF CONTAINER	aGs*
NO. OF CONTAINER(S)	4
VOLUME	40mL
SAMPLE ANALYSIS	8260_VOA_GCMS: COMMON {Carbon tetrachloride};

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B35WH5	WATER	JUN 27 2016	1305	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Kevin Patterson CHPRC	JUN 27 2016 1415	SSU-1	JUN 27 2016 1415
SSU-1	JUN 28 2016 0800	Lesly Wall /CHPRC	JUN 28 2016 0800
Lesly Wall /CHPRC	JUN 28 2016 1400	FEDEX	
FEDEX		JILL CLARKE	6-29-16 0920

SPECIAL INSTRUCTIONS
The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-16-129

LABORATORY SECTION | RECEIVED BY | TITLE | DATE/TIME

FINAL SAMPLE DISPOSITION | DISPOSAL METHOD | DISPOSED BY | DATE/TIME

PRINTED ON 5/26/2016

FSR ID = FSR32754

TRVL NUM = TRVL-16-157

A-6003-618 (REV 2)

FedEx ® Tracking

776624861940

Ship date		Actual delivery
Tue 6/28/2016		**Wed 6/29/2016 9:19 am**
RICHLAND, WA US	**Delivered** *Signed for by: J.CLARKE*	EARTH CITY, MO US

Travel History

Date/Time	Activity	Location
- 6/29/2016 - Wednesday		
9:19 am	Delivered	EARTH CITY, MO
7:18 am	On FedEx vehicle for delivery	EARTH CITY, MO
7:13 am	At local FedEx facility	EARTH CITY, MO
5:22 am	At destination sort facility	BERKELEY, MO
4:28 am	Departed FedEx location	MEMPHIS, TN
1:35 am	Arrived at FedEx location	MEMPHIS, TN
- 6/28/2016 - Tuesday		
5:13 pm	Left FedEx origin facility	PASCO, WA
3:23 pm	Picked up	PASCO, WA
12:39 pm	Shipment information sent to FedEx	

Shipment Facts

Tracking number	776624861940	**Service**	FedEx Standard Overnight
Weight	52 lbs / 23.59 kgs	**Dimensions**	35x17x16 in.
Delivered To	Shipping/Receiving	**Total pieces**	1
Total shipment weight	52 lbs / 23.59 kgs	**Terms**	Recipient
Shipper reference	GWS-509	**Packaging**	Your Packaging
Special handling section	Deliver Weekday, Additional Handling Surcharge		

Definitions/Glossary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-047

TestAmerica Job ID: 160-17999-1
SDG: SL2233

Qualifiers

GC/MS VOA

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-047

TestAmerica Job ID: 160-17999-1
SDG: SL2233

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds (GC/MS)	SW846	TAL SL

Protocol References:

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: F16-047

TestAmerica Job ID: 160-17999-1
SDG: SL2233

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-17999-1	B35WH2	Water	06/27/16 13:10	06/29/16 09:20
160-17999-2	B35WH5	Water	06/27/16 13:05	06/29/16 09:20

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-047

TestAmerica Job ID: 160-17999-1
SDG: SL2233

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

Client Sample ID: B35WH2
Date Collected: 06/27/16 13:10
Date Received: 06/29/16 09:20

Lab Sample ID: 160-17999-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	**6.8**		1.0	0.18	ug/L			07/05/16 10:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*75 - 129*		*07/05/16 10:01*	*1*
4-Bromofluorobenzene (Surr)	*114*		*81 - 130*		*07/05/16 10:01*	*1*
Dibromofluoromethane (Surr)	*107*		*81 - 124*		*07/05/16 10:01*	*1*
Toluene-d8 (Surr)	*106*		*87 - 128*		*07/05/16 10:01*	*1*

Client Sample ID: B35WH5
Date Collected: 06/27/16 13:05
Date Received: 06/29/16 09:20

Lab Sample ID: 160-17999-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.18	U	1.0	0.18	ug/L			07/05/16 10:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*75 - 129*		*07/05/16 10:24*	*1*
4-Bromofluorobenzene (Surr)	*117*		*81 - 130*		*07/05/16 10:24*	*1*
Dibromofluoromethane (Surr)	*98*		*81 - 124*		*07/05/16 10:24*	*1*
Toluene-d8 (Surr)	*110*		*87 - 128*		*07/05/16 10:24*	*1*

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-047

TestAmerica Job ID: 160-17999-1
SDG: SL2233

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

Lab Sample ID: MB 160-258981/8
Matrix: Water
Analysis Batch: 258981

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.18	U	1.0	0.18	ug/L			07/05/16 08:50	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*75 - 129*		*07/05/16 08:50*	*1*
4-Bromofluorobenzene (Surr)	*112*		*81 - 130*		*07/05/16 08:50*	*1*
Dibromofluoromethane (Surr)	*96*		*81 - 124*		*07/05/16 08:50*	*1*
Toluene-d8 (Surr)	*107*		*87 - 128*		*07/05/16 08:50*	*1*

Lab Sample ID: LCS 160-258981/5
Matrix: Water
Analysis Batch: 258981

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Carbon tetrachloride			10.0	10.8		ug/L		108	83 - 125		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*91*		*75 - 129*
4-Bromofluorobenzene (Surr)	*102*		*81 - 130*
Dibromofluoromethane (Surr)	*96*		*81 - 124*
Toluene-d8 (Surr)	*103*		*87 - 128*

Lab Sample ID: LCSD 160-258981/6
Matrix: Water
Analysis Batch: 258981

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
Carbon tetrachloride			10.0	10.2		ug/L		102	83 - 125	7	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*89*		*75 - 129*
4-Bromofluorobenzene (Surr)	*104*		*81 - 130*
Dibromofluoromethane (Surr)	*101*		*81 - 124*
Toluene-d8 (Surr)	*105*		*87 - 128*

Lab Sample ID: 160-17997-B-1 MS
Matrix: Water
Analysis Batch: 258981

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Carbon tetrachloride	0.18	U	10.0	9.82		ug/L		98	77 - 131		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*91*		*75 - 129*
4-Bromofluorobenzene (Surr)	*98*		*81 - 130*
Dibromofluoromethane (Surr)	*101*		*81 - 124*
Toluene-d8 (Surr)	*102*		*87 - 128*

QC Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-047

TestAmerica Job ID: 160-17999-1
SDG: SL2233

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

Lab Sample ID: 160-17997-C-1 MSD
Matrix: Water
Analysis Batch: 258981

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Carbon tetrachloride	0.18	U	10.0	9.91		ug/L		99	77 - 131	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*90*		*75 - 129*
4-Bromofluorobenzene (Surr)	*103*		*81 - 130*
Dibromofluoromethane (Surr)	*99*		*81 - 124*
Toluene-d8 (Surr)	*103*		*87 - 128*

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-047

TestAmerica Job ID: 160-17999-1
SDG: SL2233

GC/MS VOA

Analysis Batch: 258981

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-17997-B-1 MS	Matrix Spike	Total/NA	Water	8260C	
160-17997-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260C	
160-17999-1	B35WH2	Total/NA	Water	8260C	
160-17999-2	B35WH5	Total/NA	Water	8260C	
LCS 160-258981/5	Lab Control Sample	Total/NA	Water	8260C	
LCSD 160-258981/6	Lab Control Sample Dup	Total/NA	Water	8260C	
MB 160-258981/8	Method Blank	Total/NA	Water	8260C	

Surrogate Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F16-047

TestAmerica Job ID: 160-17999-1
SDG: SL2233

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

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

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	12DCE (75-129)	BFB (81-130)	DBFM (81-124)	TOL (87-128)
160-17997-B-1 MS	Matrix Spike	91	98	101	102
160-17997-C-1 MSD	Matrix Spike Duplicate	90	103	99	103
160-17999-1	B35WH2	102	114	107	106
160-17999-2	B35WH5	93	117	98	110
LCS 160-258981/5	Lab Control Sample	91	102	96	103
LCSD 160-258981/6	Lab Control Sample Dup	89	104	101	105
MB 160-258981/8	Method Blank	91	112	96	107

Surrogate Legend

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