SEPTEMBER 30, 2013

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: 160-3796-1
TestAmerica Sample Delivery Group: SL1398
Client Project/Site: F11-031

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

Attn: General Mailbox

Authorized for release by:
9/30/2013 11:44:17 AM

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

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.

Table of Contents

Job ID: 160-3796-1

Laboratory: TestAmerica St. Louis

Narrative

CASE NARRATIVE

CH2MHill Plateau Remediation Company
P.O. Box 1600
MS B3-60
Richland, Washington 99352
September 30, 2013
Attention: Scot Fitzgerald

SDG : SL1398
Number of Samples : 1 sample
Sample Matrix : Other Solid
Data Deliverable : Summary
Date SDG Closed : September 18, 2013

II. Introduction

On September 28, 2103, 1 sample was received by TestAmerica - St. Louis for chemical analysis. The sample was received outside TestAmerica's temperature criteria for this analysis. Per client, analysis was acceptable. CHPRC does not have preservation requirement for TCLP VOA analysis. See the COC and Receipt Checklist for documentation of any variations on receipt conditions and temperature. Upon receipt, the 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: F11-031

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 a LCS/LCS duplicate.

Deviation from Request: None

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.

Job ID: 160-3796-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

- **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.
- **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.

TCLP Volatiles

Batch: 74629

1,2-Dichloroethane was detected in method blank LB 160-74165/1-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 "J". The associated sample did not contain this analyte; therefore, qualification was not necessary.

The matrix spike / matrix spike duplicate (MS/MSD) precision for batch 74383 was outside control limits. Non-homogeneity of the sample volume is the cause. The analyst mistakenly used 1.0mL initial volume preparing the MS instead of 0.5mL as used in the associated sample and MSD. The MS/MSD recoveries were within QC limits: (160-3796-1 MS), (160-3796-1 MSD). The associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision met acceptance criteria.

I certify that this Summary Package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. The Laboratory Manager or a designee, as verified by the signature on the cover page has authorized release of the data contained in this hard copy data package.

Reviewed and approved:

Jayna Awalt
St. Louis Project Manager

CWC 416

CH2MHill Plateau Remediation Company 92398 — **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** — F11-031-056 — PAGE 1 OF 1

COLLECTOR Kawa Crow Floyd	**COMPANY CONTACT** EVANS, RT	**TELEPHONE NO.** 373-7924	**PROJECT COORDINATOR** EVANS, RT
SAMPLING LOCATION 200-PW-10 GAC COMPOSITE	**PROJECT DESIGNATION** 200-PW-1 & 200-ZP-1 Spent GAC Canisters and Filters		**SAF NO.** F11-031
ICE CHEST NO. GWS-263	**FIELD LOGBOOK NO.** WMF-491-9/12	**ACTUAL SAMPLE DEPTH** N/A	**COA** 302853ES10
SHIPPED TO TestAmerica St. Louis	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** ~~SEE PTR~~ 7967 0338 5284

PRICE CODE 9C — **DATA TURNAROUND** — **AIR QUALITY** ☐ — 15 Days / 15 Days — **METHOD OF SHIPMENT** FEDERAL EXPRESS — **ORIGINAL**

bb 9/17/13

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 may or may 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

PRESERVATION	None
HOLDING TIME	14/14 Days
TYPE OF CONTAINER	aGs
NO. OF CONTAINER(S)	1
VOLUME	120mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2RKF8	OTHER SOLID	9-13-13	1045	✓

TRVL-13-092

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Ed Kawa	9-13-13/1112	SSU #7	9-13-13/1112
SSU-1	AUG 17 2013 0700	B.E. Briggs CHPRC	AUG 17 2013 0700
B.E. Briggs CHPRC	AUG 17 2013 1400	FEDEX	
Fed Ex		Brian Daniels	9/18/13 0930

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-13-092; COMPOSITE OF CANISTER AE-1104 AND AE-1082
(1) 1311/8260_TCLP_VOA: COMMON {1,1,1-Trichloroethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 2-Butanone, 4-Methyl-2-pentanone, Benzene, Bromodichloromethane, Carbon tetrachloride, Chlorobenzene, Chloroform, Chloromethane, Ethylbenzene, Methylene chloride, Tetrachloroethene, Toluene, Trichloroethene, Xylenes (total)}; 1311/8260_TCLP_VOA: COMMON (Add-on) {1,1,1,2-Tetrachloroethane, trans-1,2-Dichloroethylene};

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

PRINTED ON 9/5/2013

A-6003-618 (REV 2)

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9/30/2013

SEPTEMBER 30, 2013

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IMPORTANT!
Flooding in Colorado is causing delays and disruptions. Learn More

FedEx.

796703385284

Ship (P/U) date :
Tues 9/17/2013 3:18 pm
RICHLAND, WA US

Delivered
Signed for by: B.DANIELS

Actual delivery :
Wed 9/18/2013 9:23 am
EARTH CITY, MO US

Travel History

Date/Time	Activity	Location
▪ 9/18/2013 - Wednesday		
9:23 am	Delivered	EARTH CITY, MO
7:15 am	On FedEx vehicle for delivery	EARTH CITY, MO
7:11 am	At local FedEx facility	EARTH CITY, MO
5:24 am	At destination sort facility	BERKELEY, MO
4:35 am	Departed FedEx location	MEMPHIS, TN
12:46 am	Arrived at FedEx location	MEMPHIS, TN
▪ 9/17/2013 - Tuesday		
5:16 pm	Left FedEx origin facility	PASCO, WA
3:18 pm	Picked up	PASCO, WA
11:18 am	Shipment information sent to FedEx	

Local Scan Time

Shipment Facts

Tracking number	796703385284	**Service**	FedEx Priority Overnight
Weight	4 lbs	**Delivered To**	Shipping/Receiving
Total pieces	1	**Total shipment weight**	4 lbs / 1.8 kgs
Shipper reference	GWS-263	**Packaging**	Your Packaging
Special handling section	Deliver Weekday		

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 160-3796-1
SDG Number: SL1398

Login Number: 3796
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.	False	
Cooler Temperature is acceptable.	False	cooler received at 20 Degrees.
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.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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
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: F11-031

TestAmerica Job ID: 160-3796-1
SDG: SL1398

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by 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: F11-031

TestAmerica Job ID: 160-3796-1
SDG: SL1398

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-3796-1	B2RKF8	Solid	09/13/13 10:45	09/18/13 09:30

Detection Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F11-031

TestAmerica Job ID: 160-3796-1
SDG: SL1398

Client Sample ID: B2RKF8

Lab Sample ID: 160-3796-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	270		50	3.6	ug/L	1		8260C	TCLP
Chloroform	13	J	50	0.92	ug/L	1		8260C	TCLP

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: CH2M Hill Plateau Remediation Company
Project/Site: F11-031

TestAmerica Job ID: 160-3796-1
SDG: SL1398

Client Sample ID: B2RKF8
Date Collected: 09/13/13 10:45
Date Received: 09/18/13 09:30

Lab Sample ID: 160-3796-1
Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	2.4	U	50	2.4	ug/L			09/24/13 14:09	1
1,1,1-Trichloroethane	2.9	U	50	2.9	ug/L			09/24/13 14:09	1
1,1-Dichloroethane	3.9	U	50	3.9	ug/L			09/24/13 14:09	1
1,1-Dichloroethene	3.7	U	50	3.7	ug/L			09/24/13 14:09	1
1,2-Dichloroethane	3.7	U	50	3.7	ug/L			09/24/13 14:09	1
2-Butanone (MEK)	3.9	U	50	3.9	ug/L			09/24/13 14:09	1
4-Methyl-2-pentanone (MIBK)	3.3	U	200	3.3	ug/L			09/24/13 14:09	1
Benzene	2.5	U	50	2.5	ug/L			09/24/13 14:09	1
Bromodichloromethane	2.5	U	50	2.5	ug/L			09/24/13 14:09	1
Carbon tetrachloride	**270**		50	3.6	ug/L			09/24/13 14:09	1
Chlorobenzene	3.8	U	50	3.8	ug/L			09/24/13 14:09	1
Chloroform	**13**	**J**	50	0.92	ug/L			09/24/13 14:09	1
Chloromethane	5.5	U	100	5.5	ug/L			09/24/13 14:09	1
Ethylbenzene	3.0	U	50	3.0	ug/L			09/24/13 14:09	1
Methylene Chloride	8.0	U	50	8.0	ug/L			09/24/13 14:09	1
Tetrachloroethene	2.8	U	50	2.8	ug/L			09/24/13 14:09	1
Toluene	3.0	U	50	3.0	ug/L			09/24/13 14:09	1
1,2-Dichloroethylene, trans-	1.8	U	50	1.8	ug/L			09/24/13 14:09	1
Trichloroethene	2.9	U	50	2.9	ug/L			09/24/13 14:09	1
Vinyl chloride	4.3	U	100	4.3	ug/L			09/24/13 14:09	1
Xylenes, Total	8.5	U	100	8.5	ug/L			09/24/13 14:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*83 - 117*		*09/24/13 14:09*	*1*
4-Bromofluorobenzene (Surr)	*107*		*84 - 120*		*09/24/13 14:09*	*1*
Dibromofluoromethane (Surr)	*105*		*85 - 115*		*09/24/13 14:09*	*1*
Toluene-d8 (Surr)	*97*		*85 - 115*		*09/24/13 14:09*	*1*

Client: CH2M Hill Plateau Remediation Company
Project/Site: F11-031

TestAmerica Job ID: 160-3796-1
SDG: SL1398

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: LCS 160-74629/4
Matrix: Solid
Analysis Batch: 74629

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-Trichloroethane	500	486		ug/L		97	70 - 130
1,1-Dichloroethene	500	498		ug/L		100	79 - 117
1,2-Dichloroethane	500	456		ug/L		91	80 - 115
2-Butanone (MEK)	500	462		ug/L		92	64 - 117
Benzene	500	487		ug/L		97	85 - 115
Carbon tetrachloride	500	489		ug/L		98	79 - 119
Chlorobenzene	500	490		ug/L		98	85 - 115
Chloroform	500	488		ug/L		98	85 - 115
Ethylbenzene	500	450		ug/L		90	80 - 120
Tetrachloroethene	500	508		ug/L		102	79 - 116
Toluene	500	534		ug/L		107	70 - 130
Trichloroethene	500	497		ug/L		99	85 - 115
Vinyl chloride	500	408		ug/L		82	72 - 136

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*91*		*83 - 117*
4-Bromofluorobenzene (Surr)	*109*		*84 - 120*
Dibromofluoromethane (Surr)	*101*		*85 - 115*
Toluene-d8 (Surr)	*100*		*85 - 115*

Lab Sample ID: LB 160-74165/1-A LB
Matrix: Solid
Analysis Batch: 74629

Client Sample ID: Method Blank
Prep Type: TCLP

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	2.4	U	50	2.4	ug/L			09/24/13 13:44	1
1,1,1-Trichloroethane	2.9	U	50	2.9	ug/L			09/24/13 13:44	1
1,1-Dichloroethane	3.9	U	50	3.9	ug/L			09/24/13 13:44	1
1,1-Dichloroethene	3.7	U	50	3.7	ug/L			09/24/13 13:44	1
1,2-Dichloroethane	24.3	J	50	3.7	ug/L			09/24/13 13:44	1
2-Butanone (MEK)	3.9	U	50	3.9	ug/L			09/24/13 13:44	1
4-Methyl-2-pentanone (MIBK)	3.3	U	200	3.3	ug/L			09/24/13 13:44	1
Benzene	2.5	U	50	2.5	ug/L			09/24/13 13:44	1
Bromodichloromethane	2.5	U	50	2.5	ug/L			09/24/13 13:44	1
Carbon tetrachloride	3.6	U	50	3.6	ug/L			09/24/13 13:44	1
Chlorobenzene	3.8	U	50	3.8	ug/L			09/24/13 13:44	1
Chloroform	0.92	U	50	0.92	ug/L			09/24/13 13:44	1
Chloromethane	5.5	U	100	5.5	ug/L			09/24/13 13:44	1
Ethylbenzene	3.0	U	50	3.0	ug/L			09/24/13 13:44	1
Methylene Chloride	8.0	U	50	8.0	ug/L			09/24/13 13:44	1
Tetrachloroethene	2.8	U	50	2.8	ug/L			09/24/13 13:44	1
Toluene	3.0	U	50	3.0	ug/L			09/24/13 13:44	1
1,2-Dichloroethylene, trans-	1.8	U	50	1.8	ug/L			09/24/13 13:44	1
Trichloroethene	2.9	U	50	2.9	ug/L			09/24/13 13:44	1
Vinyl chloride	4.3	U	100	4.3	ug/L			09/24/13 13:44	1
Xylenes, Total	8.5	U	100	8.5	ug/L			09/24/13 13:44	1

Client: CH2M Hill Plateau Remediation Company
Project/Site: F11-031

TestAmerica Job ID: 160-3796-1
SDG: SL1398

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

Lab Sample ID: LB 160-74165/1-A LB
Matrix: Solid
Analysis Batch: 74629

Client Sample ID: Method Blank
Prep Type: TCLP

Surrogate	LB %Recovery	LB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*92*		*83 - 117*		*09/24/13 13:44*	*1*
4-Bromofluorobenzene (Surr)	*107*		*84 - 120*		*09/24/13 13:44*	*1*
Dibromofluoromethane (Surr)	*103*		*85 - 115*		*09/24/13 13:44*	*1*
Toluene-d8 (Surr)	*96*		*85 - 115*		*09/24/13 13:44*	*1*

Lab Sample ID: 160-3796-1 MS
Matrix: Solid
Analysis Batch: 74629

Client Sample ID: B2RKF8
Prep Type: TCLP

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	2.9	U	250	243		ug/L		97	70 - 130
1,1-Dichloroethene	3.7	U	250	246		ug/L		98	80 - 115
1,2-Dichloroethane	3.7	U	250	237		ug/L		95	85 - 115
2-Butanone (MEK)	3.9	U	250	237		ug/L		95	67 - 117
Benzene	2.5	U	250	246		ug/L		98	85 - 115
Carbon tetrachloride	270		250	480		ug/L		82	79 - 117
Chlorobenzene	3.8	U	250	244		ug/L		97	85 - 115
Chloroform	13	J	250	258		ug/L		98	85 - 115
Ethylbenzene	3.0	U	250	227		ug/L		91	80 - 120
Tetrachloroethene	2.8	U	250	250		ug/L		100	82 - 115
Toluene	3.0	U	250	272		ug/L		109	50 - 150
Trichloroethene	2.9	U	250	245		ug/L		98	84 - 115
Vinyl chloride	4.3	U	250	203		ug/L		81	75 - 132

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*91*		*83 - 117*
4-Bromofluorobenzene (Surr)	*110*		*84 - 120*
Dibromofluoromethane (Surr)	*103*		*85 - 115*
Toluene-d8 (Surr)	*99*		*85 - 115*

Lab Sample ID: 160-3796-1 MSD
Matrix: Solid
Analysis Batch: 74629

Client Sample ID: B2RKF8
Prep Type: TCLP

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	2.9	U	500	499		ug/L		100	70 - 130	69	20
1,1-Dichloroethene	3.7	U	500	509		ug/L		102	80 - 115	70	20
1,2-Dichloroethane	3.7	U	500	472		ug/L		94	85 - 115	66	20
2-Butanone (MEK)	3.9	U	500	486		ug/L		97	67 - 117	69	20
Benzene	2.5	U	500	508		ug/L		102	85 - 115	69	20
Carbon tetrachloride	270		500	781		ug/L		102	79 - 117	48	20
Chlorobenzene	3.8	U	500	501		ug/L		100	85 - 115	69	20
Chloroform	13	J	500	519		ug/L		101	85 - 115	67	20
Ethylbenzene	3.0	U	500	455		ug/L		91	80 - 120	67	20
Tetrachloroethene	2.8	U	500	511		ug/L		102	82 - 115	69	20
Toluene	3.0	U	500	545		ug/L		109	50 - 150	67	20
Trichloroethene	2.9	U	500	519		ug/L		104	84 - 115	72	20
Vinyl chloride	4.3	U	500	426		ug/L		85	75 - 132	71	20

Client: CH2M Hill Plateau Remediation Company
Project/Site: F11-031

TestAmerica Job ID: 160-3796-1
SDG: SL1398

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

Lab Sample ID: 160-3796-1 MSD
Matrix: Solid
Analysis Batch: 74629

Client Sample ID: B2RKF8
Prep Type: TCLP

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	94		83 - 117
4-Bromofluorobenzene (Surr)	112		84 - 120
Dibromofluoromethane (Surr)	105		85 - 115
Toluene-d8 (Surr)	101		85 - 115

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F11-031

TestAmerica Job ID: 160-3796-1
SDG: SL1398

GC/MS VOA

Leach Batch: 74165

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3796-1	B2RKF8	TCLP	Solid	1311	
160-3796-1 MS	B2RKF8	TCLP	Solid	1311	
160-3796-1 MSD	B2RKF8	TCLP	Solid	1311	
LB 160-74165/1-A LB	Method Blank	TCLP	Solid	1311	

Analysis Batch: 74629

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-3796-1	B2RKF8	TCLP	Solid	8260C	74165
160-3796-1 MS	B2RKF8	TCLP	Solid	8260C	74165
160-3796-1 MSD	B2RKF8	TCLP	Solid	8260C	74165
LB 160-74165/1-A LB	Method Blank	TCLP	Solid	8260C	74165
LCS 160-74629/4	Lab Control Sample	Total/NA	Solid	8260C	

Surrogate Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F11-031

TestAmerica Job ID: 160-3796-1
SDG: SL1398

Method: 8260C - Volatile Organic Compounds by GC/MS

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

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(83-117)	(84-120)	(85-115)	(85-115)
LCS 160-74629/4	Lab Control Sample	91	109	101	100

Surrogate Legend

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

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid **Prep Type: TCLP**

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(83-117)	(84-120)	(85-115)	(85-115)
160-3796-1	B2RKF8	92	107	105	97
160-3796-1 MS	B2RKF8	91	110	103	99
160-3796-1 MSD	B2RKF8	94	112	105	101
LB 160-74165/1-A LB	Method Blank	92	107	103	96

Surrogate Legend

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