September 8, 2014

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
Tel: (865)291-3000

TestAmerica Job ID: 140-1929-1
TestAmerica Sample Delivery Group: W06763
Client Project/Site: F12-025

For:
CH2M Hill Plateau Remediation Company
PO BOX 1600
Mail Stop R3-50
Richland, Washington 99352

Attn: Mr. Scot Fitzgerald

Authorized for release by:
9/8/2014 3:09:28 PM

Jamie McKinney, Senior Project Manager
(865)291-3000
jamie.mckinney@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

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

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

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

Table of Contents

Cover Page 1
Table of Contents 2
Definitions/Glossary 3
Case Narrative 4
Detection Summary 5
Client Sample Results 6
Surrogate Summary 8
QC Sample Results 9
QC Association Summary 10
Lab Chronicle 11
Certification Summary 12
Method Summary 13
Sample Summary 14
Chain of Custody 15
Receipt Checklists 18

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)

Job ID: 140-1929-1

Laboratory: TestAmerica Knoxville

Narrative

Job Narrative
140-1929-1

Comments
No additional comments.

Receipt
The samples were received on 9/5/2014 10:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice.

Except:

The Chain-of-Custody (COC) was not relinquished.

B2XPR3 (140-1929-1), B2XPR4 (140-1929-2), B2XPR5 (140-1929-3)

Air - GC/MS VOA
Method(s) TO 14A, TO 15 LL, TO-14A, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F12-025

TestAmerica Job ID: 140-1929-1
SDG: W06763

Client Sample ID: B2XPR3 — Lab Sample ID: 140-1929-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	940		15	2.9	ppb v/v	4.24		TO 15 LL	Total/NA
Chloroform	20		15	2.9	ppb v/v	4.24		TO 15 LL	Total/NA

Client Sample ID: B2XPR4 — Lab Sample ID: 140-1929-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	1100		16	2.9	ppb v/v	4.27		TO 15 LL	Total/NA
Chloroform	22		16	2.9	ppb v/v	4.27		TO 15 LL	Total/NA

Client Sample ID: B2XPR5 — Lab Sample ID: 140-1929-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon tetrachloride	630		13	2.4	ppb v/v	3.55		TO 15 LL	Total/NA
Chloroform	15		13	2.4	ppb v/v	3.55		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: B2XPR3

Lab Sample ID: 140-1929-1

Date Collected: 09/04/14 08:29
Matrix: Air
Date Received: 09/05/14 10:20
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		15	2.3	ppb v/v			09/05/14 17:06	4.24
1,1-Dichloroethene	ND		15	2.7	ppb v/v			09/05/14 17:06	4.24
1,2-Dichloroethane	ND		15	3.7	ppb v/v			09/05/14 17:06	4.24
Acetone	ND		390	100	ppb v/v			09/05/14 17:06	4.24
Benzene	ND		15	4.4	ppb v/v			09/05/14 17:06	4.24
Carbon tetrachloride	**940**		15	2.9	ppb v/v			09/05/14 17:06	4.24
Chloroform	**20**		15	2.9	ppb v/v			09/05/14 17:06	4.24
Dibromochloromethane	ND		15	3.3	ppb v/v			09/05/14 17:06	4.24
Methylene Chloride	ND		39	25	ppb v/v			09/05/14 17:06	4.24
Trichloroethene	ND		7.7	2.7	ppb v/v			09/05/14 17:06	4.24
Vinyl chloride	ND		15	5.6	ppb v/v			09/05/14 17:06	4.24

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*114*		*60 - 140*		*09/05/14 17:06*	*4.24*

Client Sample ID: B2XPR4

Lab Sample ID: 140-1929-2

Date Collected: 09/04/14 09:34
Matrix: Air
Date Received: 09/05/14 10:20
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		16	2.3	ppb v/v			09/05/14 17:51	4.27
1,1-Dichloroethene	ND		16	2.7	ppb v/v			09/05/14 17:51	4.27
1,2-Dichloroethane	ND		16	3.7	ppb v/v			09/05/14 17:51	4.27
Acetone	ND		390	100	ppb v/v			09/05/14 17:51	4.27
Benzene	ND		16	4.5	ppb v/v			09/05/14 17:51	4.27
Carbon tetrachloride	**1100**		16	2.9	ppb v/v			09/05/14 17:51	4.27
Chloroform	**22**		16	2.9	ppb v/v			09/05/14 17:51	4.27
Dibromochloromethane	ND		16	3.3	ppb v/v			09/05/14 17:51	4.27
Methylene Chloride	ND		39	25	ppb v/v			09/05/14 17:51	4.27
Trichloroethene	ND		7.8	2.7	ppb v/v			09/05/14 17:51	4.27
Vinyl chloride	ND		16	5.6	ppb v/v			09/05/14 17:51	4.27

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*60 - 140*		*09/05/14 17:51*	*4.27*

Client Sample ID: B2XPR5

Lab Sample ID: 140-1929-3

Date Collected: 09/04/14 10:39
Matrix: Air
Date Received: 09/05/14 10:20
Sample Container: Summa Canister 6L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		13	1.9	ppb v/v			09/05/14 18:39	3.55
1,1-Dichloroethene	ND		13	2.3	ppb v/v			09/05/14 18:39	3.55
1,2-Dichloroethane	ND		13	3.1	ppb v/v			09/05/14 18:39	3.55
Acetone	ND		320	87	ppb v/v			09/05/14 18:39	3.55
Benzene	ND		13	3.7	ppb v/v			09/05/14 18:39	3.55

Client: CH2M Hill Plateau Remediation Company
Project/Site: F12-025

TestAmerica Job ID: 140-1929-1
SDG: W06763

Client Sample ID: B2XPR5
Date Collected: 09/04/14 10:39
Date Received: 09/05/14 10:20
Sample Container: Summa Canister 6L

Lab Sample ID: 140-1929-3
Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	**630**		13	2.4	ppb v/v			09/05/14 18:39	3.55
Chloroform	**15**		13	2.4	ppb v/v			09/05/14 18:39	3.55
Dibromochloromethane	ND		13	2.7	ppb v/v			09/05/14 18:39	3.55
Methylene Chloride	ND		32	21	ppb v/v			09/05/14 18:39	3.55
Trichloroethene	ND		6.5	2.3	ppb v/v			09/05/14 18:39	3.55
Vinyl chloride	ND		13	4.7	ppb v/v			09/05/14 18:39	3.55

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*115*		*60 - 140*		*09/05/14 18:39*	*3.55*

Surrogate Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F12-025

TestAmerica Job ID: 140-1929-1
SDG: W06763

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

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

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	**Client Sample ID**	**BFB (60-140)**							
140-1929-1	B2XPR3	114							
140-1929-2	B2XPR4	113							
140-1929-3	B2XPR5	115							
LCS 140-1644/1002	Lab Control Sample	122							
MB 140-1644/4	Method Blank	113							

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-1644/4
Matrix: Air
Analysis Batch: 1644

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-Trichloroethane	ND		0.080	0.012	ppb v/v			09/05/14 16:22	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			09/05/14 16:22	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			09/05/14 16:22	1
Acetone	ND		2.0	0.54	ppb v/v			09/05/14 16:22	1
Benzene	ND		0.080	0.023	ppb v/v			09/05/14 16:22	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			09/05/14 16:22	1
Chloroform	ND		0.080	0.015	ppb v/v			09/05/14 16:22	1
Dibromochloromethane	ND		0.080	0.017	ppb v/v			09/05/14 16:22	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			09/05/14 16:22	1
Trichloroethene	ND		0.040	0.014	ppb v/v			09/05/14 16:22	1
Vinyl chloride	ND		0.080	0.029	ppb v/v			09/05/14 16:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*113*		*60 - 140*		*09/05/14 16:22*	*1*

Lab Sample ID: LCS 140-1644/1002
Matrix: Air
Analysis Batch: 1644

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	5.00	6.52		ppb v/v		130	70 - 130
1,1-Dichloroethene	5.00	4.84		ppb v/v		97	70 - 130
1,2-Dichloroethane	5.00	5.37		ppb v/v		107	70 - 130
Acetone	15.0	10.6		ppb v/v		71	60 - 140
Benzene	5.00	4.50		ppb v/v		90	70 - 130
Carbon tetrachloride	5.00	5.44		ppb v/v		109	70 - 130
Chloroform	5.00	6.44		ppb v/v		129	70 - 130
Dibromochloromethane	5.00	5.17		ppb v/v		103	70 - 130
Methylene Chloride	5.00	4.50		ppb v/v		90	70 - 130
Trichloroethene	5.00	4.27		ppb v/v		85	70 - 130
Vinyl chloride	5.00	5.19		ppb v/v		104	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*122*		*60 - 140*

QC Association Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F12-025

TestAmerica Job ID: 140-1929-1
SDG: W06763

Air - GC/MS VOA

Analysis Batch: 1644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-1929-1	B2XPR3	Total/NA	Air	TO 15 LL	
140-1929-2	B2XPR4	Total/NA	Air	TO 15 LL	
140-1929-3	B2XPR5	Total/NA	Air	TO 15 LL	
LCS 140-1644/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	
MB 140-1644/4	Method Blank	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: CH2M Hill Plateau Remediation Company
Project/Site: F12-025

TestAmerica Job ID: 140-1929-1
SDG: W06763

Client Sample ID: B2XPR3 — Lab Sample ID: 140-1929-1

Date Collected: 09/04/14 08:29 — **Matrix: Air**
Date Received: 09/05/14 10:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		4.24	11 mL	500 mL	1644	09/05/14 17:06	AFB	TAL KNX
	Instrument ID: MG									

Client Sample ID: B2XPR4 — Lab Sample ID: 140-1929-2

Date Collected: 09/04/14 09:34 — **Matrix: Air**
Date Received: 09/05/14 10:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		4.27	11 mL	500 mL	1644	09/05/14 17:51	AFB	TAL KNX
	Instrument ID: MG									

Client Sample ID: B2XPR5 — Lab Sample ID: 140-1929-3

Date Collected: 09/04/14 10:39 — **Matrix: Air**
Date Received: 09/05/14 10:20

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		3.55	11 mL	500 mL	1644	09/05/14 18:39	AFB	TAL KNX
	Instrument ID: MG									

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Certification Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F12-025

TestAmerica Job ID: 140-1929-1
SDG: W06763

Laboratory: TestAmerica Knoxville

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
	AFCEE		N/A	
Arkansas DEQ	State Program	6	88-0688	06-17-15
California	State Program	9	2423	06-30-16
Colorado	State Program	8	N/A	02-28-15
Connecticut	State Program	1	PH-0223	09-30-15
Florida	NELAP	4	E87177	06-30-15
Georgia	State Program	4	906	04-13-17
Hawaii	State Program	9	N/A	04-13-15
Kansas	NELAP	7	E-10349	10-31-14
Kentucky (DW)	State Program	4	90101	12-31-14
L-A-B	DoD ELAP		L2311	02-13-16
Louisiana	NELAP	6	83979	06-30-15
Maryland	State Program	3	277	03-31-15
Michigan	State Program	5	9933	04-13-17
Nevada	State Program	9	TN00009	07-31-15
New Jersey	NELAP	2	TN001	06-30-15
New York	NELAP	2	10781	03-31-15
North Carolina (DW)	State Program	4	21705	07-31-15
Ohio VAP	State Program	5	CL0059	03-26-15
Oklahoma	State Program	6	9415	08-31-15
Pennsylvania	NELAP	3	68-00576	12-31-14
South Carolina	State Program	4	84001	06-30-15
Tennessee	State Program	4	2014	04-13-17
Texas	NELAP	6	T104704380-TX	08-31-15
USDA	Federal		P330-13-00260	08-29-16
Utah	NELAP	8	QUAN3	07-31-15
Virginia	NELAP	3	460176	09-14-14
Virginia	State Program	3	165	06-30-15
Washington	State Program	10	C593	01-19-15
West Virginia (DW)	State Program	3	9955C	12-31-14
West Virginia DEP	State Program	3	345	04-30-15
Wisconsin	State Program	5	998044300	08-31-15

Method Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F12-025

TestAmerica Job ID: 140-1929-1
SDG: W06763

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: CH2M Hill Plateau Remediation Company
Project/Site: F12-025

TestAmerica Job ID: 140-1929-1
SDG: W06763

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-1929-1	B2XPR3	Air	09/04/14 08:29	09/05/14 10:20
140-1929-2	B2XPR4	Air	09/04/14 09:34	09/05/14 10:20
140-1929-3	B2XPR5	Air	09/04/14 10:39	09/05/14 10:20

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F12-025-071	PAGE 1 OF 1
COLLECTOR C. Fulton / CHPRC	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT	PRICE CODE 9C	DATA TURNAROUND
SAMPLING LOCATION 289-T VOG Stack Smp Port Samp shed VAL V55-Y62 01	PROJECT DESIGNATION 200W Pump & Treat - ETBs and BioTreatment VOC Sampling - Gaseous		SAF NO. F12-025	AIR QUALITY ☐	15 Days / 15 Days
ICE CHEST NO. FB 1	FIELD LOGBOOK NO. HNF-N-507 p30	ACTUAL SAMPLE DEPTH N/A	COA 303110ES10	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO TestAmerica Knoxville	OFFSITE PROPERTY NO. SEE PTR		BILL OF LADING/AIR BILL NO. ~~N/A~~ 7710 4724 0981 KW 9/4/14		

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

PRESERVATION	None
HOLDING TIME	30 Days
TYPE OF CONTAINER	Summa Canister
NO. OF CONTAINER(S)	1
VOLUME	6L
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2XPR3	GASEOUS	9/4/14	0829	✓

Received @ ambient
Custody seal intact
1 box
KW 9/5/14
Fedex PO
trk# 7710 4724 0981
3 cans, 3 flows

SDG: W06763

140-1929 Chain of Custody

RUSH

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM C. Fulton CHPRC	DATE/TIME 9/4/14 1157	RECEIVED BY/STORED IN F.M. Hall CHPRC	DATE/TIME 9/4/14 1157
RELINQUISHED BY/REMOVED FROM F.M. Hall CHPRC	DATE/TIME SEP 04 2014 1400	RECEIVED BY/STORED IN FEDEX	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN Ken Wilson	DATE/TIME 9/5/14 1020
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
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-14-155
(1) TO-15_VOA: COMMON {1,1,1-Trichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, Acetone, Benzene, Carbon tetrachloride, Chloroform, Dibromochloromethane, Methylene chloride, Trichloroethene, Vinyl chloride};

TRVL- 14 - 155

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

PRINTED ON 8/29/2014

A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F12-025-072	PAGE 1 OF 1
COLLECTOR: C. Fulton / CHPRC	COMPANY CONTACT: EVANS, RT	TELEPHONE NO.: 373-7924	PROJECT COORDINATOR: EVANS, RT	PRICE CODE: 9C	DATA TURNAROUND
SAMPLING LOCATION: 289-T VOG Stack Smp Port Samp shed VAL V55-Y62 02	PROJECT DESIGNATION: 200W Pump & Treat - ETBs and BioTreatment VOC Sampling - Gaseous		SAF NO.: F12-025	AIR QUALITY ☐	15 Days / 15 Days
ICE CHEST NO.: FB 1	FIELD LOGBOOK NO.: HNF-N-507 30p10	ACTUAL SAMPLE DEPTH: N/A	COA: 303110ES10	METHOD OF SHIPMENT: FEDERAL EXPRESS	ORIGINAL
SHIPPED TO: TestAmerica Knoxville	OFFSITE PROPERTY NO.: SEE PTR		BILL OF LADING/AIR BILL NO.: ~~N/A~~ 7710 4724 0981		

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

PRESERVATION	None
HOLDING TIME	30 Days
TYPE OF CONTAINER	Summa Canister
NO. OF CONTAINER(S)	1
VOLUME	6L
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2XPR4	GASEOUS	9/4/14	0934	✓

9/4/14

SDG: W06763

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: C. Fulton	DATE/TIME: 9/4/14 1157	RECEIVED BY/STORED IN: F.M. Hall CHPRC	DATE/TIME: 9/4/14 1157
RELINQUISHED BY/REMOVED FROM: F.M. Hall CHPRC	DATE/TIME: SEP 04 2014 1400	RECEIVED BY/STORED IN: FEDEX	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN: Ken Wilson	DATE/TIME: 9/5/14 1020
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
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-14-155
(1) TO-15_VOA: COMMON {1,1,1-Trichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, Acetone, Benzene, Carbon tetrachloride, Chloroform, Dibromochloromethane, Methylene chloride, Trichloroethene, Vinyl chloride};

TRVL- 14- 155

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

PRINTED ON 8/29/2014

A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F12-025-073	PAGE 1 OF 1
COLLECTOR C. Fulton	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT	PRICE CODE 9C AIR QUALITY ☐	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 289-T VOG Stack Smp Port Samp shed VAL V55-Y62 03	PROJECT DESIGNATION 200W Pump & Treat - ETBs and BioTreatment VOC Sampling - Gaseous		SAF NO. F12-025		
ICE CHEST NO. FB 1	FIELD LOGBOOK NO. HNF-N-507 30 p10	ACTUAL SAMPLE DEPTH N/A	COA 303110ES10	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO TestAmerica Knoxville	OFFSITE PROPERTY NO. SEE PTR		BILL OF LADING/AIR BILL NO. ~~N/A~~ 7710 4724 0981		

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

PRESERVATION	None
HOLDING TIME	30 Days
TYPE OF CONTAINER	Summa Canister
NO. OF CONTAINER(S)	1
VOLUME	6L
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2XPR5	GASEOUS	9/4/14	1039	✓

LW. 9/4/14

SDG: W06763

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM C. Fulton / CHPRC	DATE/TIME 9/4/14 1157	RECEIVED BY/STORED IN F.M. Hall CHPRC	DATE/TIME 9/4/14 1157
RELINQUISHED BY/REMOVED FROM F.M. Hall CHPRC	DATE/TIME SEP 0 4 2014 1400	RECEIVED BY/STORED IN FEDEX	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN Ken Wilson	DATE/TIME 9/5/14 1020
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
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL-14-155
(1) TO-15_VOA: COMMON {1,1,1-Trichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethane, Acetone, Benzene, Carbon tetrachloride, Chloroform, Dibromochloromethane, Methylene chloride, Trichloroethene, Vinyl chloride};

TRVL- 14- 155

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

PRINTED ON 8/29/2014

A-6003-618 (REV 2)

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 140-1929-1
SDG Number: W06763

Login Number: 1929
List Number: 1
Creator: Wilson, Ken

List Source: TestAmerica Knoxville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
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.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	COC not relinquished.
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.	N/A	This is checked in the lab.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	N/A	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G1

Analyst	Date	Sample ID	6 L	1 L	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
DDF	9/5/2014	140-1929-a-1	X		-6.5	1100	
DDF	9/5/2014	140-1929-a-2	X		-6.6	1101	
DDF	9/5/2014	140-1929-a-3	X		-1.7	1102	