

September 12, 2014

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: 160-8140-1

TestAmerica Sample Delivery Group: SL1573
Client Project/Site: L14-010

For:

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

Attn: General Mailbox



Authorized for release by:
9/12/2014 4:56:35 PM

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

jayna.awalt@testamericainc.com

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www.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.

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Client: CH2M Hill Plateau Remediation Company
Project/Site: L14-010

TestAmerica Job ID: 160-8140-1
SDG: SL1573

Job ID: 160-8140-1

Laboratory: TestAmerica St. Louis

Narrative

CASE NARRATIVE

CH2MHill Plateau Remediation Company
P.O. Box 1600
MS B3-60
Richland, Washington 99352
September 12, 2014
Attention: Scot Fitzgerald

SDG : SL1573
Number of Samples : 7 samples
Sample Matrix : Water
Data Deliverable : Summary
Date SDG Closed : August 28, 2014

II. Introduction

On August 28, 7 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: L14-010

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.

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.
- B - For organic analyses, Method Blank contamination. The Method Blank contains the target analyte at a concentration above the



Job ID: 160-8140-1 (Continued)

Laboratory: TestAmerica St. Louis (Continued)

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. Due to limitations of the LIMS system, "D" flags may appear on QC samples.
- **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 organic 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.

Semivolatiles

Batch: 142511

Elevated reporting limits are provided for the following samples due to sample bottles containing less than 900 mLs: (160-8140-2 MS), B2XNL1 (160-8140-7), B2XNL2 (160-8140-1), B2XNL3 (160-8140-2), B2XNL4 (160-8140-3), B2XNL5 (160-8140-4), B2XNL6 (160-8140-5), B2XNL7 (160-8140-6).

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

Login Sample Receipt Checklist

Client: CH2M Hill Plateau Remediation Company

Job Number: 160-8140-1

SDG Number: SL1573

Login Number: 8140

List Number: 1

Creator: Daniels, Brian J

List Source: TestAmerica St. Louis

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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	2.1, 3.1, 3.6
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 $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



September 12, 2014

CH2MHill DANA WIBERG SL1573	au Remediation Company	CHAIN OF CUSTODY/S	E ANALYSIS REQUEST	L14-010-007	PAGE	OF 1
COLLECTOR	COMPANY CONTACT WATERS-HUSTED, K	TELEPHONE NO. 373-9379	PROJECT COORDINATOR BOWMAN, M	PRICE CODE 7C		DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION WSCF Drums at ETF	PROJECT DESIGNATION ETF Sampling of WSCF Waste Drums FY2014	FIELD LOGBOOK NO. 14-07 pg 31	ACTUAL SAMPLE DEPTH N/A	AIR QUALITY		
ICE CHEST NO. SMT-572-2025E-14	OFFSITE PROPERTY NO.	FIELD LOGBOOK NO. 14-07 pg 31	ACTUAL SAMPLE DEPTH N/A	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO TestAmerica St. Louis		OFFSITE PROPERTY NO.	ACTUAL SAMPLE DEPTH N/A	BILL OF LADING/AIR BILL NO. 7709 6294 6788		
MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	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. OPS: Samples may contain corrosive preservatives. MSDS numbers: HCl #039256; NaOH #042214; HINO3 #039255; H2SO4 #039254. Wear proper PPE.				
SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS
B2XNL2	/	W	8-26-14	1350	4X1L aG	
						HOLDING TIME 7/40 Days
						PRESERVATION Cool <=6C

Samples were stored in fridge at 6°C until packaged at 0100 on 6-27-14 JC

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS		
RELINQUISHED BY/REMOVED FROM P.C. D. Wiberg P. Carey M. Be...	DATE/TIME 1520 8/27/14 0015	RECEIVED BY/STORED IN WA Robertson SOM - Lab Eng. #2/3	DATE/TIME 8-26-14/1520	OPS: This sampling of specific drums is intended to determine the actual pyridine levels (instead of WSCF Lab estimates) for addition of drums to LERF. Sample drum 6266-13R302726		
RELINQUISHED BY/REMOVED FROM SOM	DATE/TIME 8/27/14 0015	RECEIVED BY/STORED IN J. Conway All County	DATE/TIME 8-27-14/0015	TASL: Rad levels (from previous sampling) are alpha < 100 pCi/L; beta = 1900 pCi/L; tritium < 1.4E+04 pCi/L.		
RELINQUISHED BY/REMOVED FROM Jeff Conway All County	DATE/TIME 8-27-14/0015	RECEIVED BY/STORED IN S. Anderson	DATE/TIME 8/27/14 0035			
RELINQUISHED BY/REMOVED FROM S. Anderson	DATE/TIME AUG 27 2014 0910	RECEIVED BY/STORED IN L.D. Wall CHPMC	DATE/TIME AUG 27 2014 0910			
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME		
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME		



GENERATOR KNOWLEDGE INFORMATION

1. Chain of Custody Number L14-010-007 CACN/COA 300025/DBA Customer Identification Number SAF#: L14-010

2. List generator knowledge or description of process that produced sample. Or list description of sample source:
 Samples are from WSCF laboratory waste drums stored at ETF. Per WAC 173-303-071 (3) (1), samples are exempt from dangerous waste requirements, including waste designation.

MSDS Available? No Yes Hanford MSDS No. _____

3. List all waste codes and constituents associated with the waste or media that was sampled, regardless of CERCLA status.

a) Does the sample contain any of the following listed waste codes?

By checking "unknown" the customer understands that no knowledge is available following a careful search.

List Federal Waste Code(s): _____

List Constituent(s): _____

P Codes: _____	<input type="radio"/> Yes	<input checked="" type="radio"/> No
U Codes: _____	<input type="radio"/> Yes	<input checked="" type="radio"/> No
K Codes: _____	<input type="radio"/> Yes	<input checked="" type="radio"/> No <input type="radio"/> Unknown
F Codes: <u>F001-F005, F039</u>	<input checked="" type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Unknown

b) List applicable characteristic waste codes, flash point, pH, constituents, and concentrations as appropriate.

D001: <input type="checkbox"/> FP <100°F	<input type="checkbox"/> FP ≥100 <140°F	<input type="checkbox"/> DOT Oxidizer	<input type="radio"/> Yes	<input checked="" type="radio"/> No	<input type="radio"/> Unknown
D002: <input type="checkbox"/> pH <2	<input type="checkbox"/> pH ≥12.5	<input type="checkbox"/> Solid Corrosive (WSC2)	<input type="radio"/> Yes	<input checked="" type="radio"/> No	<input type="radio"/> Unknown
D003: <input type="checkbox"/> Cyanide	<input type="checkbox"/> Sulfide	<input type="checkbox"/> Water Reactive	<input type="radio"/> Yes	<input checked="" type="radio"/> No	<input type="radio"/> Unknown
D004-D043 (Identify applicable waste codes and concentrations):		<input type="checkbox"/> Other _____ (i.e., peroxide former, explosive, air reactive)	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Unknown

D038 Pyridine = estimated 5300 ug/L

c) If characteristic, list any known underlying hazardous constituents (UHCs) reasonably expected to be present, and their concentrations that may be present above the LDR treatment standard (40 CFR 268.48):

Barium = 1970 ug/L, Lead = 1280 ug/L, pyridine = 5300 ug/L
 All others are below UHCs (for wastewater).

d) List any known Land Disposal Restrictions (LDR) subcategories, if applicable (40 CFR 268.40):

None

e) List any applicable Washington State dangerous waste codes: (not required if federally regulated)

(*State mixture rule for ignitability)

WT01: <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown	WP01: <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
WT02: <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown	WP02: <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
W001: <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown	WP03: <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
List constituents and concentrations:	F003:* <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown

4. Is this material TSCA regulated for PCBs? Yes No Unknown Analysis Requested

List concentration if applicable: _____

If yes, what is the source of the PCBs? (see TSCA PCB Hanford Site User Guide, DOE/RL-2001-50)

<input type="checkbox"/> PCB Liquid Waste	<input type="checkbox"/> PCB Bulk Product Waste	<input type="checkbox"/> PCB Transformer ≥500 ppm	<input type="checkbox"/> Unknown
<input type="checkbox"/> PCB Remediation Waste	<input type="checkbox"/> PCB R&D Waste	<input type="checkbox"/> PCB contaminated electrical equipment (capacitor/ballast) <500 ppm	
<input type="checkbox"/> PCB Spill Material	<input type="checkbox"/> PCB Item	<input type="checkbox"/> Other PCB Waste (list) _____	

5. Is this material TRU? Yes No Unknown

6. ACCURACY OF INFORMATION

Based on my inquiry of those individuals immediately responsible for obtaining this information, that to the best of my knowledge, the information entered in this document is true, accurate, and complete.

Print & Sign Mark Bowman Mark Bowman Date 8-18-14

September 12, 2014

CH2MHill 3u Remediation Company	CHAIN OF CUSTODY/S/ E ANALYSIS REQUEST		L14-010-008	PAGE	OF 1
COLLECTOR Dana Wiberg 8-26-14 SHADY ARBERSON @wuw	COMPANY CONTACT WATERS-HUSTED, K	TELEPHONE NO. 373-9379	PROJECT COORDINATOR BOWMAN, M	PRICE CODE 7C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION WSCF Drums at ETF	PROJECT DESIGNATION ETF Sampling of WSCF Waste Drums FY2014	FIELD LOGBOOK NO. 14-07 pg. 31	SAF NO. L14-010	AIR QUALITY	
ICE CHEST NO. 605-060	ACTUAL SAMPLE DEPTH N/A	OFFSITE PROPERTY NO. N/A	COA 300025	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO TestAmerica St. Louis	BILL OF LADING/AIR BILL NO. 77096394 6788				
SPECIAL HANDLING AND/OR STORAGE MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER					
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. OPS: Samples may contain corrosive preservatives. MSDS numbers: HCl #039256; NaOH #042214; HNO3 #039255; H2SO4 #039254. Wear proper PPE.					
SAMPLE NO. B2XNL3	MATRIX* W	SAMPLE DATE 8/26/14	SAMPLE TIME 1404	NO./TYPE CONTAINER(S) 4X1L aG	SVOA for LERF/ETF (PYRIDINE);
ANALYSIS			HOLDING TIME 7/40 Days	PRESERVATION Cool <=6C	

Samples were stored in Fridge at 6°C until packaged at 0100 on 8-27-14. gk

CHAIN OF POSSESSION		SIGN / PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY / REMOVED FROM Dana Wiberg (Waters-Husted) 8-26-14	DATE/TIME 8-26-14	RECEIVED BY / STORED IN W.A. Arberson	DATE/TIME 8-26-14/1510	OPS: This sampling of specific drums is intended to determine the actual pyridine levels (instead of WSCF Lab estimates) for addition of drums to LERF.	
RELINQUISHED BY / REMOVED FROM P. Carey	DATE/TIME 8-26-14 1510	RECEIVED BY / STORED IN SOM - Lab Frigs #2/3	DATE/TIME 8-27-14/0015	Sample drum 6266-13R302755	
RELINQUISHED BY / REMOVED FROM Jeff Conway	DATE/TIME 8-27-14 0015	RECEIVED BY / STORED IN Jeff Conway Aff County	DATE/TIME 8-27-14/0015	TASL: Rad levels (from previous sampling) are alpha <1000 pCi/L; beta = 1300 pCi/L; tritium <1.4E+04 pCi/L.	
RELINQUISHED BY / REMOVED FROM Jeff Conway	DATE/TIME 8-27-14/0015	RECEIVED BY / STORED IN S. Anderson	DATE/TIME 8/27/14 0035		
RELINQUISHED BY / REMOVED FROM S. Anderson	DATE/TIME AUG 27 2014 0910	RECEIVED BY / STORED IN L.D. Wall	DATE/TIME AUG 27 2014 0910		
LABORATORY SECTION 912	RECEIVED BY	TITLE		DATE/TIME	
DISPOSAL METHOD	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	



GENERATOR KNOWLEDGE INFORMATION

1. Chain of Custody Number L14-010-008 CACN/COA 300025/DBA Customer Identification Number SAF#: L14-010

2. List generator knowledge or description of process that produced sample. Or list description of sample source:
 Samples are from WSCF laboratory waste drums stored at ETF. Per WAC 173-303-071 (3) (1), samples are exempt from dangerous waste requirements, including waste designation.
 MSDS Available? No Yes Hanford MSDS No. _____

3. List all waste codes and constituents associated with the waste or media that was sampled, regardless of CERCLA status.

a) Does the sample contain any of the following listed waste codes?

By checking "unknown" the customer understands that no knowledge is available following a careful search.

List Federal Waste Code(s): _____

List Constituent(s): _____

P Codes: _____ Yes No
 U Codes: _____ Yes No
 K Codes: _____ Yes No Unknown
 F Codes: F001-F005 Yes No Unknown

b) List applicable characteristic waste codes, flash point, pH, constituents, and concentrations as appropriate.

D001: FP <100°F FP ≥100 <140°F DOT Oxidizer Yes No Unknown
 D002: pH ≤2 pH ≥12.5 Solid Corrosive (WSC2) Yes No Unknown
 D003: Cyanide Sulfide Water Reactive Other _____ Yes No Unknown
 D004-D043 (Identify applicable waste codes and concentrations):
 D038 Pyridine = estimated 9020 ug/L (i.e., peroxide former, explosive, air reactive) Yes No Unknown

c) If characteristic, list any known underlying hazardous constituents (UHCs) reasonably expected to be present, and their concentrations that may be present above the LDR treatment standard (40 CFR 268.48):

Arsenic = 3430 ug/L, pyridine = 9020 ug/L
 All other are below UHCs (for wastewater).

d) List any known Land Disposal Restrictions (LDR) subcategories, if applicable (40 CFR 268.40):

None

e) List any applicable Washington State dangerous waste codes: (not required if federally regulated)

(*State mixture rule for ignitability)

WT01: Yes No Unknown WP01: Yes No Unknown
 WT02: Yes No Unknown WP02: Yes No Unknown
 W001: Yes No Unknown WP03: Yes No Unknown
 List constituents and concentrations: _____ F003:* Yes No Unknown

4. Is this material TSCA regulated for PCBs? Yes No Unknown Analysis Requested

List concentration if applicable: _____

If yes, what is the source of the PCBs? (see TSCA PCB Hanford Site User Guide, DOE/RL-2001-50)

PCB Liquid Waste PCB Bulk Product Waste PCB Transformer ≥500 ppm Unknown
 PCB Remediation Waste PCB R&D Waste PCB contaminated electrical equipment (capacitor/ballast) <500 ppm
 PCB Spill Material PCB Item Other PCB Waste (list) _____

5. Is this material TRU? Yes No Unknown

6. ACCURACY OF INFORMATION

Based on my inquiry of those individuals immediately responsible for obtaining this information, that to the best of my knowledge, the information entered in this document is true, accurate, and complete.

Print & Sign _____ Date _____

September 12, 2014

CH2MHill Dana Wiberberg 8-26-14 SANDY ANDERSON	au Remediation Company	CHAIN OF CUSTODY/S/	E ANALYSIS REQUEST	L14-010-009	PAGE	OF
COLLECTOR Dana Wiberberg 8-26-14 SANDY ANDERSON	COMPANY CONTACT WATERS-HUSTED, K	TELEPHONE NO. 373-9379	PROJECT COORDINATOR BOWMAN, M	PRICE CODE 7C		DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION WSCF Drums at ETF	PROJECT DESIGNATION ETF Sampling of WSCF Waste Drums F2014	FIELD LOGBOOK NO. 14-07	SAF NO. L14-010	AIR QUALITY		
ICE CHEST NO. 2025E-12	ACTUAL SAMPLE DEPTH N/A	PG. 31	COA 300025	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO TestAmerica St. Louis	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. 7709 6403 8932			
MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE		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. OPS: Samples may contain corrosive preservatives. MSDS numbers: HCl #039256; NaOH #042214; HNO3 #039255; H2SO4 #039254. Wear proper PPE.			
SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS
B2XNL4	✓	W	8-26-14	1345	4X1L aG	HOLDING TIME 7/40 Days
						PRESERVATION Cool <=6C

Samples were stored in fridge at 6°C until they were packaged at 0100 on 8-27-14 JG

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM P. Carey P. CAREY 8-26-14	DATE/TIME 1510	RECEIVED BY/STORED IN WATERS-HUSTED, K SOM-Lab F2014	DATE/TIME 8-26-14/1510	OPS: This sampling of specific drums is intended to determine the actual pyridine levels (instead of WSCF Lab estimates) for addition of drums to LERF.	
RELINQUISHED BY/REMOVED FROM Mik Wiberberg	DATE/TIME 8/27/14 0015	RECEIVED BY/STORED IN Jeff Conway Off Conroy	DATE/TIME 8-27-14/0015	Sample drum 6266-13R602780	
RELINQUISHED BY/REMOVED FROM Jeff Conway Off Conroy	DATE/TIME 8-27-14/0615	RECEIVED BY/STORED IN S. Anderson	DATE/TIME 8/27/14 0635	TASL: Rad levels (from previous sampling) are alpha=100 pCi/L; beta=6700 pCi/L; tritium=2.0E+04 pCi/L.	
LABORATORY SECTION S. Anderson	RECEIVED BY S. Anderson	RECEIVED BY/STORED IN LB. Wall CHPRC	DATE/TIME AUG 27 2014 0910	TITLE	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME	DATE/TIME	



GENERATOR KNOWLEDGE INFORMATION

1. Chain of Custody Number L14-010-009 CACN/COA 300025/DBA Customer Identification Number SAF#: L14-010

2. List generator knowledge or description of process that produced sample. Or list description of sample source:
 Samples are from WSCF laboratory waste drums stored at ETF. Per WAC 173-303-071 (3) (1), samples are exempt from dangerous waste requirements, including waste designation.
 MSDS Available? No Yes Hanford MSDS No. _____

3. List all waste codes and constituents associated with the waste or media that was sampled, regardless of CERCLA status.

a) Does the sample contain any of the following listed waste codes?

By checking "unknown" the customer understands that no knowledge is available following a careful search.

List Federal Waste Code(s):

List Constituent(s):

P Codes: _____ Yes No
 U Codes: _____ Yes No
 K Codes: _____ Yes No Unknown
 F Codes: F001-F005, F039 Yes No Unknown

b) List applicable characteristic waste codes, flash point, pH, constituents, and concentrations as appropriate.

D001: FP <100°F FP ≥100 <140°F DOT Oxidizer Yes No Unknown
 D002: pH ≤2 pH ≥12.5 Solid Corrosive (WSC2) Yes No Unknown
 D003: Cyanide Sulfide Water Reactive Other _____ Yes No Unknown
 D004-D043 (Identify applicable waste codes and concentrations):
 D038 Pyridine = estimated 1.3E+04 ug/L Yes No Unknown
 (i.e., peroxide former, explosive, air reactive)

c) If characteristic, list any known underlying hazardous constituents (UHCs) reasonably expected to be present, and their concentrations that may be present above the LDR treatment standard (40 CFR 268.48):

Arsenic = 4820 ug/L, pyridine = 1.3E+04 ug/L
 All other are below UHCs (for wastewater).

d) List any known Land Disposal Restrictions (LDR) subcategories, if applicable (40 CFR 268.40):

None

e) List any applicable Washington State dangerous waste codes: (not required if federally regulated)

(*State mixture rule for ignitability)

WT01: Yes No Unknown WP01: Yes No Unknown
 WT02: Yes No Unknown WP02: Yes No Unknown
 W001: Yes No Unknown WP03: Yes No Unknown
 List constituents and concentrations: _____ F003:* Yes No Unknown

4. Is this material TSCA regulated for PCBs? Yes No Unknown Analysis Requested

List concentration if applicable: _____

If yes, what is the source of the PCBs? (see TSCA PCB Hanford Site User Guide, DOE/RL-2001-50)

PCB Liquid Waste PCB Bulk Product Waste PCB Transformer ≥500 ppm Unknown
 PCB Remediation Waste PCB R&D Waste PCB contaminated electrical equipment (capacitor/ballast) <500 ppm
 PCB Spill Material PCB Item Other PCB Waste (list) _____

5. Is this material TRU? Yes No Unknown

6. ACCURACY OF INFORMATION

Based on my inquiry of those individuals immediately responsible for obtaining this information, that to the best of my knowledge, the information entered in this document is true, accurate, and complete.

Print & Sign Mark Bowman Mark Bowman Date 8-18-14

September 12, 2014

CH2MH11 f	Remediation Company	CHAIN OF CUSTODY/SA	ANALYSIS REQUEST	L14-010-010	PAGE 1 of 2
COLLECTOR	DANA WIBERG	COMPANY CONTACT	WATERS-HUSTED, K	PROJECT COORDINATOR	BOWMAN, M
SAMPLING LOCATION	SL1573	PROJECT DESIGNATION	ETF Sampling of WSCF Waste Drums FY2014	PRICE CODE	7C
WSCF Drums at ETF	8/27/14	FIELD LOGBOOK NO.	14-07	AIR QUALITY	<input type="checkbox"/>
ICE CHEST NO.	2025E-12	OFFSITE PROPERTY NO.	N/A	METHOD OF SHIPMENT	GOVERNMENT VEHICLE
SHIPPED TO	TestAmerica St. Louis	ACTUAL SAMPLE DEPTH	N/A	BILL OF LADING/AIR BILL NO.	7709 6403 8932
MATRIX*	OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	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. OPS: Samples may contain corrosive preservatives. MSDS numbers: HCl #039256; NaOH #042214; HNO3 #039255; H2SO4 #039254. Wear proper PPE.	
SAMPLE NO.	B2XNL5	LAB ID	W	ANALYSIS	HOLDING TIME
		MATRIX*			
		SAMPLE DATE	8/26/14		7/40 Days
		SAMPLE TIME	1331		Cool <=6C
		NO./TYPE CONTAINER(S)	4X1L aG		
		DATE/TIME	8/27/14 1510		
		DATE/TIME	8/27/14/0015		
		DATE/TIME	8/27-14/0615		
		DATE/TIME	AUG 27 2014 0910		

Samples were stored in fridge at 6°C until packaged at 0100 on 8-27-14 JC

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	OPS: This sampling of specific drums is intended to determine the actual pyridine levels (instead of WSCF Lab estimates) for addition of drums to LERF.
D. Carney	WA Reboverson / G. Ann	Sample drum 6266-13R202784
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	TASL: Rad levels (from previous sampling) are alpha=500 pCi/L; beta=7500 pCi/L; tritium<1.2E+04 pCi/L.
SOM mp b.c.l. / m.l.u.t	SOM - Lab P.C.S. #2/3	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
SOM	Jeff Conway / G. Ann	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
Jeff Conway / G. Ann	S. Anderson / S. Anderson	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
S. Anderson	L.D. Wall / CHPRC	
LABORATORY SECTION	RECEIVED BY	DATE/TIME
2/2014		
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DATE/TIME
4		



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GENERATOR KNOWLEDGE INFORMATION

1. Chain of Custody Number L14-010-010 CACN/COA 300025/DBA Customer Identification Number SAF#: L14-010

2. List generator knowledge or description of process that produced sample. Or list description of sample source:
 Samples are from WSCF laboratory waste drums stored at ETF. Per WAC 173-303-071 (3) (1), samples are exempt from dangerous waste requirements, including waste designation.

MSDS Available? No Yes Hanford MSDS No. _____

3. List all waste codes and constituents associated with the waste or media that was sampled, regardless of CERCLA status.

a) Does the sample contain any of the following listed waste codes?

By checking "unknown" the customer understands that no knowledge is available following a careful search.

List Federal Waste Code(s):

List Constituent(s):

P Codes: _____ Yes No
 U Codes: _____ Yes No
 K Codes: _____ Yes No Unknown
 F Codes: F001-F005, F039 Yes No Unknown

b) List applicable characteristic waste codes, flash point, pH, constituents, and concentrations as appropriate.

D001: FP <100°F FP ≥100 <140°F DOT Oxidizer Yes No Unknown
 D002: pH ≤2 pH ≥12.5 Solid Corrosive (WSC2) Yes No Unknown
 D003: Cyanide Sulfide Water Reactive Other _____ Yes No Unknown
 D004-D043 (Identify applicable waste codes and concentrations):
 D038 Pyridine = estimated 9300 ug/L Yes No Unknown
 (i.e., peroxide former, explosive, air reactive)

c) If characteristic, list any known underlying hazardous constituents (UHCs) reasonably expected to be present, and their concentrations that may be present above the LDR treatment standard (40 CFR 268.48):

Arsenic = 4260 ug/L, pyridine = 9300 ug/L
 All other are below UHCs (for wastewater).

d) List any known Land Disposal Restrictions (LDR) subcategories, if applicable (40 CFR 268.40):

None

e) List any applicable Washington State dangerous waste codes: (not required if federally regulated)

(*State mixture rule for ignitability)

WT01: Yes No Unknown WP01: Yes No Unknown
 WT02: Yes No Unknown WP02: Yes No Unknown
 W001: Yes No Unknown WP03: Yes No Unknown
 List constituents and concentrations: _____ F003:* Yes No Unknown

4. Is this material TSCA regulated for PCBs? Yes No Unknown Analysis Requested

List concentration if applicable: _____

If yes, what is the source of the PCBs? (see TSCA PCB Hanford Site User Guide, DOE/RL-2001-50)

PCB Liquid Waste PCB Bulk Product Waste PCB Transformer ≥500 ppm Unknown
 PCB Remediation Waste PCB R&D Waste PCB contaminated electrical equipment (capacitor/ballast) <500 ppm
 PCB Spill Material PCB Item Other PCB Waste (list) _____

5. Is this material TRU? Yes No Unknown

6. ACCURACY OF INFORMATION

Based on my inquiry of those individuals immediately responsible for obtaining this information, that to the best of my knowledge, the information entered in this document is true, accurate, and complete.

Print & Sign Mark Bowman Mark Bowman Date 8-18-14

76 lbs
 12
 8/21/14

September 12, 2014

Samples were stored in
 fridge at 6°C until packaging
 at 0100 on 8-27-14 JLC

CH2MHill . eau Remediation Company		CHAIN OF CUSTODY/S. LE ANALYSIS REQUEST		PAGE	OF
COLLECTOR Dana W. Wiberger SANDY ANDERSON	COMPANY CONTACT WATERS-HUSTED, K	TELEPHONE NO. 373-9379	PROJECT COORDINATOR BOWMAN, M	PRICE CODE 7C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION WSCF Drums at ETF	PROJECT DESIGNATION ETF Sampling of WSCF Waste Drums FY2014	FIELD LOGBOOK NO. 14-07	SAF NO. L14-010	AIR QUALITY	METHOD OF SHIPMENT GOVERNMENT VEHICLE
ICE CHEST NO. 6WS-427	ACTUAL SAMPLE DEPTH N/A	OFFSITE PROPERTY NO. N/A	COA 300025		
SHIPPED TO TestAmerica St. Louis	BILL OF LADING/AIR BILL NO. 7709 6403 8932				
SPECIAL HANDLING AND/OR STORAGE					
MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER					
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. OPS: Samples may contain corrosive preservatives. MSDS numbers: HCl #039256; NaOH #042214; HNO3 #039255; H2SO4 #039254. Wear proper PPE.					
SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)
BZXNL6 ✓		W	8-26-14	1354	4X1L aG
					ANALYSIS
					HOLDING TIME 7/40 Days
					PRESERVATION Cool <=6C

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
P. Carey	8-26-14 1510	WA Reberisen/Ag. Atm	8-26-14/1510
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
SOM	8/27/14 0015	SOM - Lab Fds. #2/3	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Jeff Conway	8-27-14/0615	Jeff Conway	8-27-14/0015
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
S. Anderson	AUG 27 2014 0910	S. Anderson	8/27/14 0035
		L.D. Wall	
		CHPRC	AUG 27 2014 0910
LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

SPECIAL INSTRUCTIONS
 OPS: Sample drum 6266-13-002849.

OPS: Deliver samples to SGRP 5-Bay for shipment to Test America St Louis.

TASL: Rad levels (from previous sampling) are alpha=200 pCi/L; beta=400 pCi/L; tritium < 1.3E+04 pCi/L.



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GENERATOR KNOWLEDGE INFORMATION

1. Chain of Custody Number L14-010-011 CACN/COA 300025/DBA Customer Identification Number SAF#: L14-010

2. List generator knowledge or description of process that produced sample. Or list description of sample source:
 Samples are from WSCF laboratory waste drums stored at ETF. Per WAC 173-303-071 (3) (1), samples are exempt from dangerous waste requirements, including waste designation.
 MSDS Available? No Yes Hanford MSDS No. _____

3. List all waste codes and constituents associated with the waste or media that was sampled, regardless of CERCLA status.

a) Does the sample contain any of the following listed waste codes?
By checking "unknown" the customer understands that no knowledge is available following a careful search.

List Federal Waste Code(s): _____ List Constituent(s): _____

P Codes: _____ Yes No
 U Codes: _____ Yes No
 K Codes: _____ Yes No Unknown
 F Codes: F001-F005 Yes No Unknown

b) List applicable characteristic waste codes, flash point, pH, constituents, and concentrations as appropriate.

D001: FP <100°F FP ≥100 <140°F DOT Oxidizer Yes No Unknown
 D002: pH ≤2 pH ≥12.5 Solid Corrosive (WSC2) Yes No Unknown
 D003: Cyanide Sulfide Water Reactive Other _____ Yes No Unknown
 D004-D043 (Identify applicable waste codes and concentrations):
 (i.e., peroxide former, explosive, air reactive) Yes No Unknown
 D038 Pyridine = estimated 6140 ug/L

c) If characteristic, list any known underlying hazardous constituents (UHCs) reasonably expected to be present, and their concentrations that may be present above the LDR treatment standard (40 CFR 268.48):

Arsenic = 2530 ug/L, pyridine = 6140 ug/L
 All other are below UHCs (for wastewater).

d) List any known Land Disposal Restrictions (LDR) subcategories, if applicable (40 CFR 268.40):

None

e) List any applicable Washington State dangerous waste codes: (not required if federally regulated) (*State mixture rule for ignitability)

WT01: Yes No Unknown WP01: Yes No Unknown
 WT02: Yes No Unknown WP02: Yes No Unknown
 W001: Yes No Unknown WP03: Yes No Unknown
 List constituents and concentrations: _____ F003:* Yes No Unknown

4. Is this material TSCA regulated for PCBs? Yes No Unknown Analysis Requested

List concentration if applicable: _____

If yes, what is the source of the PCBs? (see TSCA PCB Hanford Site User Guide, DOE/RL-2001-50)

PCB Liquid Waste PCB Bulk Product Waste PCB Transformer ≥500 ppm Unknown
 PCB Remediation Waste PCB R&D Waste PCB contaminated electrical equipment (capacitor/ballast) <500 ppm
 PCB Spill Material PCB Item Other PCB Waste (list) _____

5. Is this material TRU? Yes No Unknown

6. ACCURACY OF INFORMATION

Based on my inquiry of those individuals immediately responsible for obtaining this information, that to the best of my knowledge, the information entered in this document is true, accurate, and complete.

Print & Sign Mark Bowman Mark Bowman Date 8-18-14

44165

L14-010-012

PAGE 1 OF 1

44165

1200

8/27/14

CH2MHILL F in Remediation Company

COLLECTOR DANA WIBERG SL1673

COMPANY CONTACT WATERS-HUSTED, K

TELEPHONE NO. 373-9379

PROJECT COORDINATOR BOWMAN, M

PRICE CODE 7C

DATA TURNAROUND 15 Days / 15 Days

SAMPLING LOCATION WSCF Drums at ETF

PROJECT DESIGNATION ETF Sampling of WSCF Waste Drums FY2014

SAF NO. L14-010

AIR QUALITY

METHOD OF SHIPMENT GOVERNMENT VEHICLE

ICE CHEST NO. 2025E-12

FIELD LOGBOOK NO. 14-07

ACTUAL SAMPLE DEPTH N/A

COA 300025

SHIPPED TO TestAmerica St. Louis

OFFSITE PROPERTY NO. 09.31

BILL OF LADING/AIR BILL NO. 770964072103

CHAIN OF CUSTODY/SA ANALYSIS REQUEST

NO. / TYPE CONTAINER(S) 4X1L aG

SAMPLE DATE 8-26-14

SAMPLE TIME 1407

SPECIAL HANDLING AND/OR STORAGE

SPECIAL INSTRUCTIONS

MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER

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. OPS: Samples may contain corrosive preservatives. MSDS numbers: HCl #039256; NaOH #042214; HNO3 #039255; H2SO4 #039254. Wear proper PPE.

SAMPLE NO. B2XNL7

LAB ID

MATRIX* W

SAMPLE DATE 8-26-14

SAMPLE TIME 1407

NO. / TYPE CONTAINER(S) 4X1L aG

HOLDING TIME 7/40 Days

PRESERVATION Cool <=6C

September 12, 2014

Samples were stored in fridge at 6°C until packaged at 0100 on 8-27-14 JC

CH2MHILL F in Remediation Company

COLLECTOR DANA WIBERG SL1673

COMPANY CONTACT WATERS-HUSTED, K

TELEPHONE NO. 373-9379

PROJECT COORDINATOR BOWMAN, M

PRICE CODE 7C

DATA TURNAROUND 15 Days / 15 Days

SAMPLING LOCATION WSCF Drums at ETF

PROJECT DESIGNATION ETF Sampling of WSCF Waste Drums FY2014

SAF NO. L14-010

AIR QUALITY

METHOD OF SHIPMENT GOVERNMENT VEHICLE

ICE CHEST NO. 2025E-12

FIELD LOGBOOK NO. 14-07

ACTUAL SAMPLE DEPTH N/A

COA 300025

SHIPPED TO TestAmerica St. Louis

OFFSITE PROPERTY NO. 09.31

BILL OF LADING/AIR BILL NO. 770964072103

CHAIN OF CUSTODY/SA ANALYSIS REQUEST

NO. / TYPE CONTAINER(S) 4X1L aG

SAMPLE DATE 8-26-14

SAMPLE TIME 1407

SPECIAL HANDLING AND/OR STORAGE

SPECIAL INSTRUCTIONS

MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER

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. OPS: Samples may contain corrosive preservatives. MSDS numbers: HCl #039256; NaOH #042214; HNO3 #039255; H2SO4 #039254. Wear proper PPE.

SAMPLE NO. B2XNL7

LAB ID

MATRIX* W

SAMPLE DATE 8-26-14

SAMPLE TIME 1407

NO. / TYPE CONTAINER(S) 4X1L aG

HOLDING TIME 7/40 Days

PRESERVATION Cool <=6C

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM

RECEIVED BY/STORED IN

DATE/TIME

DATE/TIME

LABORATORY SECTION

RECEIVED BY

DISPOSAL METHOD

FINAL SAMPLE DISPOSITION

DISPOSED BY

DATE/TIME

DATE/TIME

SPECIAL INSTRUCTIONS

OPS: This sampling of specific drums is intended to determine the actual pyridine levels (instead of WSCF Lab estimates) for addition of drums to LERF.

Sample drum 6266-14-002911

TASL: Rad levels (from previous sampling) are alpha=700 pCi/L; beta=4100 pCi/L; tritium<1.5E+04 pCi/L.



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GENERATOR KNOWLEDGE INFORMATION

1. Chain of Custody Number L14-010-012 CACN/COA 300025/DBA Customer Identification Number SAF#: L14-010

2. List generator knowledge or description of process that produced sample. Or list description of sample source:
 Samples are from WSCF laboratory waste drums stored at ETF. Per WAC 173-303-071 (3) (1), samples are exempt from dangerous waste requirements, including waste designation.

MSDS Available? No Yes Hanford MSDS No. _____

3. List all waste codes and constituents associated with the waste or media that was sampled, regardless of CERCLA status.

a) Does the sample contain any of the following listed waste codes?

By checking "unknown" the customer understands that no knowledge is available following a careful search.

List Federal Waste Code(s):

List Constituent(s):

P Codes: _____	_____	<input type="radio"/> Yes	<input checked="" type="radio"/> No
U Codes: _____	_____	<input type="radio"/> Yes	<input checked="" type="radio"/> No
K Codes: _____	_____	<input type="radio"/> Yes	<input checked="" type="radio"/> No <input type="radio"/> Unknown
F Codes: <u>F001-F005</u>	_____	<input checked="" type="radio"/> Yes	<input type="radio"/> No <input type="radio"/> Unknown

b) List applicable characteristic waste codes, flash point, pH, constituents, and concentrations as appropriate.

D001: <input type="checkbox"/> FP <100°F	<input type="checkbox"/> FP ≥100 <140°F	<input type="checkbox"/> DOT Oxidizer	<input type="radio"/> Yes	<input checked="" type="radio"/> No	<input type="radio"/> Unknown
D002: <input type="checkbox"/> pH ≤2	<input type="checkbox"/> pH ≥12.5	<input type="checkbox"/> Solid Corrosive (WSC2)	<input type="radio"/> Yes	<input checked="" type="radio"/> No	<input type="radio"/> Unknown
D003: <input type="checkbox"/> Cyanide	<input type="checkbox"/> Sulfide	<input type="checkbox"/> Water Reactive	<input type="radio"/> Yes	<input checked="" type="radio"/> No	<input type="radio"/> Unknown
D004-D043 (Identify applicable waste codes and concentrations):		<input type="checkbox"/> Other _____ (i.e., peroxide former, explosive, air reactive)	<input checked="" type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Unknown

D038 Pyridine = estimated 8600 ug/L

c) If characteristic, list any known underlying hazardous constituents (UHCs) reasonably expected to be present, and their concentrations that may be present above the LDR treatment standard (40 CFR 268.48):

Arsenic = 2040 ug/L, pyridine = 8600 ug/L
 All other are below UHCs (for wastewater).

d) List any known Land Disposal Restrictions (LDR) subcategories, if applicable (40 CFR 268.40):

None

e) List any applicable Washington State dangerous waste codes: (not required if federally regulated)

(*State mixture rule for ignitability)

WT01: <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown	WP01: <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
WT02: <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown	WP02: <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
W001: <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown	WP03: <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
List constituents and concentrations:	F003:* <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown

4. Is this material TSCA regulated for PCBs? Yes No Unknown Analysis Requested

List concentration if applicable: _____

If yes, what is the source of the PCBs? (see TSCA PCB Hanford Site User Guide, DOE/RL-2001-50)

<input type="checkbox"/> PCB Liquid Waste	<input type="checkbox"/> PCB Bulk Product Waste	<input type="checkbox"/> PCB Transformer ≥500 ppm	<input type="checkbox"/> Unknown
<input type="checkbox"/> PCB Remediation Waste	<input type="checkbox"/> PCB R&D Waste	<input type="checkbox"/> PCB contaminated electrical equipment (capacitor/ballast) <500 ppm	
<input type="checkbox"/> PCB Spill Material	<input type="checkbox"/> PCB Item	<input type="checkbox"/> Other PCB Waste (list) _____	

5. Is this material TRU? Yes No Unknown

6. ACCURACY OF INFORMATION

Based on my inquiry of those individuals immediately responsible for obtaining this information, that to the best of my knowledge, the information entered in this document is true, accurate, and complete.

Print & Sign Mark Bowman Mark Bowman Date 8-18-14

September 12, 2014

74165
8/27/14

CH2MHill 3u Remediation Company		CHAIN OF CUSTODY/SF		E ANALYSIS REQUEST		L14-010-006	PAGE 1 OF 1	
COLLECTOR DANA WIBERG	COMPANY CONTACT WATERS-HUSTED, K	TELEPHONE NO. 373-9379	PROJECT COORDINATOR BOWMAN, M	PRICE CODE 7C	DATA TURNAROUND	7C	15 Days / 15 Days	
SAMPLING LOCATION WSCF Drums at ETF	PROJECT DESIGNATION ETF Sampling of WSCF Waste Drums FY2014	FIELD LOGBOOK NO. 14-07 p9 31	SAF NO. L14-010	AIR QUALITY	METHOD OF SHIPMENT GOVERNMENT VEHICLE			
ICE CHEST NO. SMK-572/2025E-14	ACTUAL SAMPLE DEPTH N/A	OFFSITE PROPERTY NO. N/A	COA 300025		BILL OF LADING/AIR BILL NO. 17709 6394 6788			
SHIPPED TO TestAmerica St. Louis	SPECIAL HANDLING AND/OR STORAGE		SPECIAL SAMPLE HAZARDS/ REMARKS		ANALYSIS			
MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE		*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. OPS: Samples may contain corrosive preservatives. MSDS numbers: HCl #039256; NaOH #042214; HNO3 #039255; H2SO4 #039254. Wear proper PPE.		HOLDING TIME 7/40 Days			PRESERVATION Cool <=6C
SAMPLE NO. B2XNLI ✓	MATRIX* W	SAMPLE DATE 8-26-14 1400	NO./TYPE CONTAINER(S) 4X1L aG	SPECIAL INSTRUCTIONS		SAMPLES WERE STORED AT 6°C UNTIL PACKAGED AT 0100 ON 8-27-14 BY		

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS		
RELINQUISHED BY/REMOVED FROM P. Carney	DATE/TIME 8-26-14 1500	RECEIVED BY/STORED IN SOM - Lab Frig #2/3	DATE/TIME 8-26-14/500	OPS: This sampling of specific drums is intended to determine the actual pyridine levels (instead of WSCF Lab estimates) for addition of drums to LERF.		
RELINQUISHED BY/REMOVED FROM Mike the 1st	DATE/TIME 8/27/14 9:15	RECEIVED BY/STORED IN Jeff Conway	DATE/TIME 8-27-14/0015	Sample drum 6266-13R202719		
RELINQUISHED BY/REMOVED FROM Jeff Conway	DATE/TIME 8-27-14/0015	RECEIVED BY/STORED IN Sandra Anderson	DATE/TIME 8/27/14 0635	TASL: Rad levels (from previous sampling) are alpha=300 pCi/L; beta=2100 pCi/L; tritium=1.4E+04 pCi/L.		
RELINQUISHED BY/REMOVED FROM S. Anderson	DATE/TIME AUG 27 2014 0910	RECEIVED BY/STORED IN L.D. Wall	DATE/TIME AUG 27 2014 0910			
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME		
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME		



GENERATOR KNOWLEDGE INFORMATION

1. Chain of Custody Number L14-010-006 CACN/COA 300025/DBA Customer Identification Number SAF#: L14-010

2. List generator knowledge or description of process that produced sample. Or list description of sample source: Samples are from WSCF laboratory waste drums stored at ETF. Per WAC 173-303-071 (3) (1), samples are exempt from dangerous waste requirements, including waste designation. MSDS Available? [X] No [] Yes Hanford MSDS No.

3. List all waste codes and constituents associated with the waste or media that was sampled, regardless of CERCLA status.

a) Does the sample contain any of the following listed waste codes?

By checking "unknown" the customer understands that no knowledge is available following a careful search.

List Federal Waste Code(s):

List Constituent(s):

P Codes: [] Yes [X] No
U Codes: [] Yes [X] No
K Codes: [] Yes [X] No [] Unknown
F Codes: F001-F005 [X] Yes [] No [] Unknown

b) List applicable characteristic waste codes, flash point, pH, constituents, and concentrations as appropriate.

D001: [] FP <100°F [] FP ≥100 <140°F [] DOT Oxidizer [] Yes [X] No [] Unknown
D002: [] pH ≤2 [] pH ≥12.5 [] Solid Corrosive (WSC2) [] Yes [X] No [] Unknown
D003: [] Cyanide [] Sulfide [] Water Reactive [] Other [] Yes [X] No [] Unknown
D004-D043 (Identify applicable waste codes and concentrations): [X] Yes [] No [] Unknown
D004 Arsenic = 6070 ug/L
D038 Pyridine = estimated 1.73E+04 ug/L

c) If characteristic, list any known underlying hazardous constituents (UHCs) reasonably expected to be present, and their concentrations that may be present above the LDR treatment standard (40 CFR 268.48):

All constituents except arsenic and pyridine are below UHCs (for wastewaters).

d) List any known Land Disposal Restrictions (LDR) subcategories, if applicable (40 CFR 268.40):

None

e) List any applicable Washington State dangerous waste codes: (not required if federally regulated)

(*State mixture rule for ignitability)

WT01: [] Yes [X] No [] Unknown WP01: [] Yes [X] No [] Unknown
WT02: [] Yes [X] No [] Unknown WP02: [] Yes [X] No [] Unknown
W001: [] Yes [X] No [] Unknown WP03: [] Yes [X] No [] Unknown
List constituents and concentrations: F003:* [] Yes [X] No [] Unknown

4. Is this material TSCA regulated for PCBs? [] Yes [X] No [] Unknown [] Analysis Requested

List concentration if applicable:

If yes, what is the source of the PCBs? (see TSCA PCB Hanford Site User Guide, DOE/RL-2001-50)

[] PCB Liquid Waste [] PCB Bulk Product Waste [] PCB Transformer ≥500 ppm [] Unknown
[] PCB Remediation Waste [] PCB R&D Waste [] PCB contaminated electrical equipment (capacitor/ballast) <500 ppm
[] PCB Spill Material [] PCB Item [] Other PCB Waste (list)

5. Is this material TRU? [] Yes [X] No [] Unknown

6. ACCURACY OF INFORMATION

Based on my inquiry of those individuals immediately responsible for obtaining this information, that to the best of my knowledge, the information entered in this document is true, accurate, and complete.

Print & Sign Mark Bowman Mark Bowman

Date 8-18-14

FedEx is closely monitoring the volcanic eruption in Iceland. [Learn More](#)

Delivered

Tracking No. or Nickname	Shipper city, state	Origin Terminal	Ship (P/U) date	Status
770963946788	RICHLAND, WA	PASCO, WA	8/27/2014 3:50 pm	
770964038932	RICHLAND, WA	PASCO, WA	8/27/2014 3:50 pm	
770964072103	RICHLAND, WA	PASCO, WA	8/27/2014 3:50 pm	

Delivered

770963946788

Let us tell you when your shipment arrives. [Sign up for delivery notifications](#)

Travel History

Date/Time	Activity
<ul style="list-style-type: none"> 8/28/2014 - Thursday 	
9:20 am	Delivered
7:13 am	On FedEx vehicle for delivery
7:09 am	At local FedEx facility
5:10 am	At destination sort facility
4:24 am	Departed FedEx location
12:41 am	Arrived at FedEx location
<ul style="list-style-type: none"> 8/27/2014 - Wednesday 	
5:11 pm	Left FedEx origin facility
3:50 pm	Picked up
1:18 pm	Shipment information sent to FedEx

Shipment Facts

Tracking number	770963946788	Service	FedEx F
Weight	74 lbs / 33.57 kgs	Delivered To	Shipping
Total pieces	1	Total shipment weight	74 lbs / :
Shipper reference	gws-060	Packaging	Your Pa

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- 8
- 9
- 10
- 11

FedEx is closely monitoring the volcanic eruption in Iceland. [Learn More](#)

Delivered

Tracking No. or Nickname	Shipper city, state	Origin Terminal	Ship (P/U) date	Status	Recipient city, state	Delivery date
770963946788	RICHLAND, WA	PASCO, WA	8/27/2014 3:50 pm		EARTH CITY, MO	8/28/2014 9:20 am
770964038932	RICHLAND, WA	PASCO, WA	8/27/2014 3:50 pm		EARTH CITY, MO	8/28/2014 9:20 am
770964072103	RICHLAND, WA	PASCO, WA	8/27/2014 3:50 pm		EARTH CITY, MO	8/28/2014 9:20 am

Delivered Showing 2 of 3

770964038932

Travel History

Date/Time	Activity	Location
8/28/2014 - Thursday		
9:20 am	Delivered	EARTH CITY, MO
7:19 am	On FedEx vehicle for delivery	EARTH CITY, MO
7:09 am	At local FedEx facility	EARTH CITY, MO
5:10 am	At destination sort facility	BERKELEY, MO
4:24 am	Departed FedEx location	MEMPHIS, TN
12:41 am	Arrived at FedEx location	MEMPHIS, TN
8/27/2014 - Wednesday		
5:11 pm	Left FedEx origin facility	PASCO, WA
3:50 pm	Picked up	PASCO, WA
1:22 pm	Shipment information sent to FedEx	

Shipment Facts

Tracking number	770964038932	Service	FedEx Priority Overnight
Weight	76 lbs / 34.47 kgs	Delivered To	Shipping/Receiving
Total pieces	1	Total shipment weight	76 lbs / 34.47 kgs
Shipper reference	gws427	Packaging	Your Packaging
Special handling section	Deliver Weekday		



FedEx is closely monitoring the volcanic eruption in Iceland. [Learn More](#)

Delivered

Tracking No. or Nickname	Shipper city, state	Origin Terminal	Ship (PIU) date	Status	Recipient city, state	Delivery date
770963946788	RICHLAND, WA	PASCO, WA	8/27/2014 3:50 pm		EARTH CITY, MO	8/28/2014 9:20 am
770964038932	RICHLAND, WA	PASCO, WA	8/27/2014 3:50 pm		EARTH CITY, MO	8/28/2014 9:20 am
770964072103	RICHLAND, WA	PASCO, WA	8/27/2014 3:50 pm		EARTH CITY, MO	8/28/2014 9:20 am

Delivered Showing 3 of 3

770964072103

Travel History

Date/Time	Activity	Location
- 8/28/2014 - Thursday		
9:20 am	Delivered	EARTH CITY, MO
6:53 am	On FedEx vehicle for delivery	EARTH CITY, MO
6:45 am	At local FedEx facility	EARTH CITY, MO
5:10 am	At destination sort facility	BERKELEY, MO
4:24 am	Departed FedEx location	MEMPHIS, TN
12:41 am	Arrived at FedEx location	MEMPHIS, TN
- 8/27/2014 - Wednesday		
5:11 pm	Left FedEx origin facility	PASCO, WA
3:50 pm	Picked up	PASCO, WA
1:17 pm	Shipment information sent to FedEx	

Shipment Facts

Tracking number	770964072103	Service	FedEx Priority Overnight
Weight	44 lbs / 19.96 kgs	Dimensions	16x16x17 in.
Delivered To	Shipping/Receiving	Total pieces	1
Total shipment weight	44 lbs / 19.96 kgs	Shipper reference	gws-485
Packaging	Your Packaging	Special handling section	Deliver Weekday

Qualifiers

GC/MS Semi 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.
α	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)



Client: CH2M Hill Plateau Remediation Company
Project/Site: L14-010

TestAmerica Job ID: 160-8140-1
SDG: SL1573

Method	Method Description	Protocol	Laboratory
8270D	Semivolatile 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



Client: CH2M Hill Plateau Remediation Company
Project/Site: L14-010

TestAmerica Job ID: 160-8140-1
SDG: SL1573

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
160-8140-1	B2XNL2	Water	08/26/14 13:50	08/28/14 09:30
160-8140-2	B2XNL3	Water	08/26/14 14:04	08/28/14 09:30
160-8140-3	B2XNL4	Water	08/26/14 13:45	08/28/14 09:30
160-8140-4	B2XNL5	Water	08/26/14 13:31	08/28/14 09:30
160-8140-5	B2XNL6	Water	08/26/14 13:54	08/28/14 09:30
160-8140-6	B2XNL7	Water	08/26/14 14:07	08/28/14 09:30
160-8140-7	B2XNL1	Water	08/26/14 14:00	08/28/14 09:30



Client: CH2M Hill Plateau Remediation Company
Project/Site: L14-010

TestAmerica Job ID: 160-8140-1
SDG: SL1573

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

Client Sample ID: B2XNL2
Date Collected: 08/26/14 13:50
Date Received: 08/28/14 09:30

Lab Sample ID: 160-8140-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pyridine	32		5.9	2.4	ug/L		09/02/14 14:46	09/08/14 01:06	1
Surrogate	%Recovery	Qualifier	Limits						
2-Fluorophenol (Surr)	48		10 - 74	09/02/14 14:46	09/08/14 01:06				1
2,4,6-Tribromophenol (Surr)	83		47 - 103	09/02/14 14:46	09/08/14 01:06				1
Nitrobenzene-d5 (Surr)	81		31 - 105	09/02/14 14:46	09/08/14 01:06				1
Phenol-d5 (Surr)	29		10 - 50	09/02/14 14:46	09/08/14 01:06				1
Terphenyl-d14 (Surr)	87		68 - 116	09/02/14 14:46	09/08/14 01:06				1
2-Fluorobiphenyl (Surr)	84		30 - 99	09/02/14 14:46	09/08/14 01:06				1

Client Sample ID: B2XNL3
Date Collected: 08/26/14 14:04
Date Received: 08/28/14 09:30

Lab Sample ID: 160-8140-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pyridine	18		5.8	2.3	ug/L		09/02/14 14:46	09/08/14 01:40	1
Surrogate	%Recovery	Qualifier	Limits						
2-Fluorophenol (Surr)	44		10 - 74	09/02/14 14:46	09/08/14 01:40				1
2,4,6-Tribromophenol (Surr)	78		47 - 103	09/02/14 14:46	09/08/14 01:40				1
Nitrobenzene-d5 (Surr)	79		31 - 105	09/02/14 14:46	09/08/14 01:40				1
Phenol-d5 (Surr)	28		10 - 50	09/02/14 14:46	09/08/14 01:40				1
Terphenyl-d14 (Surr)	89		68 - 116	09/02/14 14:46	09/08/14 01:40				1
2-Fluorobiphenyl (Surr)	80		30 - 99	09/02/14 14:46	09/08/14 01:40				1

Client Sample ID: B2XNL4
Date Collected: 08/26/14 13:45
Date Received: 08/28/14 09:30

Lab Sample ID: 160-8140-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pyridine	38		6.4	2.5	ug/L		09/02/14 14:46	09/08/14 03:21	1
Surrogate	%Recovery	Qualifier	Limits						
2-Fluorophenol (Surr)	45		10 - 74	09/02/14 14:46	09/08/14 03:21				1
2,4,6-Tribromophenol (Surr)	74		47 - 103	09/02/14 14:46	09/08/14 03:21				1
Nitrobenzene-d5 (Surr)	79		31 - 105	09/02/14 14:46	09/08/14 03:21				1
Phenol-d5 (Surr)	29		10 - 50	09/02/14 14:46	09/08/14 03:21				1
Terphenyl-d14 (Surr)	75		68 - 116	09/02/14 14:46	09/08/14 03:21				1
2-Fluorobiphenyl (Surr)	76		30 - 99	09/02/14 14:46	09/08/14 03:21				1

Client Sample ID: B2XNL5
Date Collected: 08/26/14 13:31
Date Received: 08/28/14 09:30

Lab Sample ID: 160-8140-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pyridine	17		6.3	2.5	ug/L		09/02/14 14:46	09/08/14 03:55	1
Surrogate	%Recovery	Qualifier	Limits						
2-Fluorophenol (Surr)	43		10 - 74	09/02/14 14:46	09/08/14 03:55				1
2,4,6-Tribromophenol (Surr)	81		47 - 103	09/02/14 14:46	09/08/14 03:55				1
Nitrobenzene-d5 (Surr)	73		31 - 105	09/02/14 14:46	09/08/14 03:55				1
Phenol-d5 (Surr)	28		10 - 50	09/02/14 14:46	09/08/14 03:55				1
Terphenyl-d14 (Surr)	88		68 - 116	09/02/14 14:46	09/08/14 03:55				1
2-Fluorobiphenyl (Surr)	77		30 - 99	09/02/14 14:46	09/08/14 03:55				1

TestAmerica St. Louis

Client: CH2M Hill Plateau Remediation Company
Project/Site: L14-010

TestAmerica Job ID: 160-8140-1
SDG: SL1573

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

Client Sample ID: B2XNL6
Date Collected: 08/26/14 13:54
Date Received: 08/28/14 09:30

Lab Sample ID: 160-8140-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pyridine	58		5.9	2.4	ug/L		09/02/14 14:46	09/08/14 04:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	44		10 - 74				09/02/14 14:46	09/08/14 04:29	1
2,4,6-Tribromophenol (Surr)	78		47 - 103				09/02/14 14:46	09/08/14 04:29	1
Nitrobenzene-d5 (Surr)	81		31 - 105				09/02/14 14:46	09/08/14 04:29	1
Phenol-d5 (Surr)	28		10 - 50				09/02/14 14:46	09/08/14 04:29	1
Terphenyl-d14 (Surr)	84		68 - 116				09/02/14 14:46	09/08/14 04:29	1
2-Fluorobiphenyl (Surr)	80		30 - 99				09/02/14 14:46	09/08/14 04:29	1

Client Sample ID: B2XNL7
Date Collected: 08/26/14 14:07
Date Received: 08/28/14 09:30

Lab Sample ID: 160-8140-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pyridine	2.3	U	5.8	2.3	ug/L		09/02/14 14:46	09/08/14 05:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	43		10 - 74				09/02/14 14:46	09/08/14 05:02	1
2,4,6-Tribromophenol (Surr)	80		47 - 103				09/02/14 14:46	09/08/14 05:02	1
Nitrobenzene-d5 (Surr)	75		31 - 105				09/02/14 14:46	09/08/14 05:02	1
Phenol-d5 (Surr)	27		10 - 50				09/02/14 14:46	09/08/14 05:02	1
Terphenyl-d14 (Surr)	84		68 - 116				09/02/14 14:46	09/08/14 05:02	1
2-Fluorobiphenyl (Surr)	78		30 - 99				09/02/14 14:46	09/08/14 05:02	1

Client Sample ID: B2XNL1
Date Collected: 08/26/14 14:00
Date Received: 08/28/14 09:30

Lab Sample ID: 160-8140-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pyridine	15		6.0	2.4	ug/L		09/02/14 14:46	09/08/14 05:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	51		10 - 74				09/02/14 14:46	09/08/14 05:36	1
2,4,6-Tribromophenol (Surr)	83		47 - 103				09/02/14 14:46	09/08/14 05:36	1
Nitrobenzene-d5 (Surr)	93		31 - 105				09/02/14 14:46	09/08/14 05:36	1
Phenol-d5 (Surr)	34		10 - 50				09/02/14 14:46	09/08/14 05:36	1
Terphenyl-d14 (Surr)	86		68 - 116				09/02/14 14:46	09/08/14 05:36	1
2-Fluorobiphenyl (Surr)	90		30 - 99				09/02/14 14:46	09/08/14 05:36	1

Client: CH2M Hill Plateau Remediation Company
Project/Site: L14-010

TestAmerica Job ID: 160-8140-1
SDG: SL1573

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

Lab Sample ID: MB 160-141244/1-A
Matrix: Water
Analysis Batch: 142511

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 141244

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pyridine	2.0	U	5.0	2.0	ug/L		09/02/14 14:46	09/07/14 21:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	44		10 - 74				09/02/14 14:46	09/07/14 21:41	1
2,4,6-Tribromophenol (Surr)	79		47 - 103				09/02/14 14:46	09/07/14 21:41	1
Nitrobenzene-d5 (Surr)	81		31 - 105				09/02/14 14:46	09/07/14 21:41	1
Phenol-d5 (Surr)	27		10 - 50				09/02/14 14:46	09/07/14 21:41	1
Terphenyl-d14 (Surr)	95		68 - 116				09/02/14 14:46	09/07/14 21:41	1
2-Fluorobiphenyl (Surr)	82		30 - 99				09/02/14 14:46	09/07/14 21:41	1

Lab Sample ID: LCS 160-141244/2-A
Matrix: Water
Analysis Batch: 142511

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 141244

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Pyridine	200	72.0		ug/L		36	10 - 68
Surrogate	%Recovery	Qualifier	Limits				
2-Fluorophenol (Surr)	44		10 - 74				
2,4,6-Tribromophenol (Surr)	73		47 - 103				
Nitrobenzene-d5 (Surr)	78		31 - 105				
Phenol-d5 (Surr)	29		10 - 50				
Terphenyl-d14 (Surr)	89		68 - 116				
2-Fluorobiphenyl (Surr)	78		30 - 99				

Lab Sample ID: 160-8140-2 MS
Matrix: Water
Analysis Batch: 142511

Client Sample ID: B2XNL3
Prep Type: Total/NA
Prep Batch: 141244

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Pyridine	18		230	95.9		ug/L		34	10 - 68
Surrogate	%Recovery	Qualifier	Limits						
2-Fluorophenol (Surr)	44		10 - 74						
2,4,6-Tribromophenol (Surr)	79		47 - 103						
Nitrobenzene-d5 (Surr)	74		31 - 105						
Phenol-d5 (Surr)	29		10 - 50						
Terphenyl-d14 (Surr)	81		68 - 116						
2-Fluorobiphenyl (Surr)	78		30 - 99						

Lab Sample ID: 160-8140-2 MSD
Matrix: Water
Analysis Batch: 142511

Client Sample ID: B2XNL3
Prep Type: Total/NA
Prep Batch: 141244

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Pyridine	18		221	98.8		ug/L		37	10 - 68	3	20

Client: CH2M Hill Plateau Remediation Company
 Project/Site: L14-010

TestAmerica Job ID: 160-8140-1
 SDG: SL1573

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

Lab Sample ID: 160-8140-2 MSD
Matrix: Water
Analysis Batch: 142511

Client Sample ID: B2XNL3
Prep Type: Total/NA
Prep Batch: 141244

<i>Surrogate</i>	<i>MSD MSD</i>		<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
<i>2-Fluorophenol (Surr)</i>	46		10 - 74
<i>2,4,6-Tribromophenol (Surr)</i>	79		47 - 103
<i>Nitrobenzene-d5 (Surr)</i>	79		31 - 105
<i>Phenol-d5 (Surr)</i>	30		10 - 50
<i>Terphenyl-d14 (Surr)</i>	87		68 - 116
<i>2-Fluorobiphenyl (Surr)</i>	82		30 - 99



Client: CH2M Hill Plateau Remediation Company
Project/Site: L14-010

TestAmerica Job ID: 160-8140-1
SDG: SL1573

GC/MS Semi VOA

Prep Batch: 141244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-8140-1	B2XNL2	Total/NA	Water	3510C	
160-8140-2	B2XNL3	Total/NA	Water	3510C	
160-8140-2 MS	B2XNL3	Total/NA	Water	3510C	
160-8140-2 MSD	B2XNL3	Total/NA	Water	3510C	
160-8140-3	B2XNL4	Total/NA	Water	3510C	
160-8140-4	B2XNL5	Total/NA	Water	3510C	
160-8140-5	B2XNL6	Total/NA	Water	3510C	
160-8140-6	B2XNL7	Total/NA	Water	3510C	
160-8140-7	B2XNL1	Total/NA	Water	3510C	
LCS 160-141244/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 160-141244/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 142511

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
160-8140-1	B2XNL2	Total/NA	Water	8270D	141244
160-8140-2	B2XNL3	Total/NA	Water	8270D	141244
160-8140-2 MS	B2XNL3	Total/NA	Water	8270D	141244
160-8140-2 MSD	B2XNL3	Total/NA	Water	8270D	141244
160-8140-3	B2XNL4	Total/NA	Water	8270D	141244
160-8140-4	B2XNL5	Total/NA	Water	8270D	141244
160-8140-5	B2XNL6	Total/NA	Water	8270D	141244
160-8140-6	B2XNL7	Total/NA	Water	8270D	141244
160-8140-7	B2XNL1	Total/NA	Water	8270D	141244
LCS 160-141244/2-A	Lab Control Sample	Total/NA	Water	8270D	141244
MB 160-141244/1-A	Method Blank	Total/NA	Water	8270D	141244

Client: CH2M Hill Plateau Remediation Company
Project/Site: L14-010

TestAmerica Job ID: 160-8140-1
SDG: SL1573

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		2FP (10-74)	TBP (47-103)	NBZ (31-105)	PHL (10-50)	TPH (68-116)	FBP (30-99)
160-8140-1	B2XNL2	48	83	81	29	87	84
160-8140-2	B2XNL3	44	78	79	28	89	80
160-8140-2 MS	B2XNL3	44	79	74	29	81	78
160-8140-2 MSD	B2XNL3	46	79	79	30	87	82
160-8140-3	B2XNL4	45	74	79	29	75	76
160-8140-4	B2XNL5	43	81	73	28	88	77
160-8140-5	B2XNL6	44	78	81	28	84	80
160-8140-6	B2XNL7	43	80	75	27	84	78
160-8140-7	B2XNL1	51	83	93	34	86	90
LCS 160-141244/2-A	Lab Control Sample	44	73	78	29	89	78
MB 160-141244/1-A	Method Blank	44	79	81	27	95	82

Surrogate Legend

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

