SAF-RC-110
100-H Burial Grounds Remaining Sites – Soil In-Process
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt H4-21 KW 4/21/15
INITIAL/DATE

COMMENTS:

SDG JP0941 SAF-RC-110

Rad only ☑ Chem only Rad & Chem

☑ Complete Partial

Waste Site: 100-H-59:2 (excavation)

ANALYTICAL REPORT

Job Number: 280-67867-1

SDG Number: JP0941

Job Description: SAF# RC-110

For:
Washington Closure Hanford
2620 Fermi Avenue
Richland, WA 99354

Attention: Joan H Kessner

Approved for release.
Kae E Yoder
Senior Project Manager
4/21/2015 9:50 AM

Kae E Yoder, Senior Project Manager
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04/21/2015

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is 4025.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

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CASE NARRATIVE

Client: Washington Closure Hanford

Project: WASHINGTON CLOSURE HANFORD

Job Number: 280-67867-1

SDG #: JP0941
SAF#: RC-110

Date SDG Closed: April 15, 2015
Data Deliverable: 7 Day / Summary

CLIENT ID	LAB ID	ANALYSES REQUESTED	ANALYSES PERFORMED
J1V655	280-67867-1	WTPH-D+/8082	NWTPH-Dx/8082
J1V656	280-67867-2	WTPH-D+/8082	NWTPH-Dx/8082
J1V657	280-67867-3	WTPH-D+/8082	NWTPH-Dx/8082
J1V658	280-67867-4	WTPH-D+/8082	NWTPH-Dx/8082
J1V659	280-67867-5	WTPH-D+/8082	NWTPH-Dx/8082

I certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed in this Case Narrative. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the signature on the Report Cover.

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted. Calculations are performed before rounding to avoid round-off errors in calculated results.

This report includes reporting limits (RLs) less than TestAmerica Denver's practical quantitation limits. These reporting limits are being used specifically at the client's request to meet the needs of this project. Please note that data are not normally reported to these levels without qualification, since they are inherently less reliable and potentially less defensible than required by the current NELAC standards.

The results, RLs and MDLs included in this report have been adjusted for dry weight, as appropriate.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 4/15/2015 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.3º C.

GC SEMIVOLATILES - SW846 8082 - PCBs
No anomalies were encountered.

GC SEMIVOLATILES - NWTPH-Dx - DRO
Low levels of C10-C36 and C10-C28 are present in the method blank associated with batch 280-272850. Because the concentrations in the method blank are not present at levels greater than half the reporting limit, corrective action is deemed unnecessary. Associated sample results present above the MDL and/or RL have been flagged with a "B".

No other anomalies were encountered.

DATA REPORTING QUALIFIERS

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

Lab Section	Qualifier	Description
GC Semi VOA		
	B	Analyte was found in the associated method blank as well as in the sample.
	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.

SAMPLE SUMMARY

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-67867-1	J1V655	Solid	04/13/2015 1048	04/15/2015 0930
280-67867-2	J1V656	Solid	04/13/2015 1051	04/15/2015 0930
280-67867-3	J1V657	Solid	04/13/2015 1108	04/15/2015 0930
280-67867-4	J1V658	Solid	04/13/2015 1104	04/15/2015 0930
280-67867-5	J1V659	Solid	04/13/2015 1101	04/15/2015 0930

METHOD SUMMARY

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	TAL DEN	SW846 8082	
Ultrasonic Extraction	TAL DEN		SW846 3550C
Northwest - Semi-Volatile Petroleum Products (GC)	TAL DEN	NWTPH NWTPH-Dx	
Ultrasonic Extraction	TAL DEN		SW846 3550C
ASTM D-2216	TAL DEN	ASTM D-2216	

Lab References:

TAL DEN = TestAmerica Denver

Method References:

ASTM = ASTM International

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

Method	Analyst	Analyst ID
SW846 8082	Jackson, Todd D	TDJ
NWTPH NWTPH-Dx	Moore, Tegan E	TEM
ASTM D-2216	Shaheen, Scott W	SWS

SAMPLE RESULTS

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

Client Sample ID: **J1V655**

Lab Sample ID: 280-67867-1
Client Matrix: Solid
% Moisture: 2.5

Date Sampled: 04/13/2015 1048
Date Received: 04/15/2015 0930

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-273190	Instrument ID:	SGC_W
Prep Method:	3550C	Prep Batch:	280-272859	Initial Weight/Volume:	30.9 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	04/17/2015 1458			Injection Volume:	1 uL
Prep Date:	04/15/2015 1845			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.8	U	2.8	10
Aroclor 1221		8.0	U	8.0	16
Aroclor 1232		2.0	U	2.0	10
Aroclor 1242		4.6	U	4.6	10
Aroclor 1248		4.6	U	4.6	10
Aroclor 1254		2.6	U	2.6	10
Aroclor 1260		2.6	U	2.6	10

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	79		59 - 130
Tetrachloro-m-xylene	67		53 - 128

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

Client Sample ID: **J1V656**

Lab Sample ID: 280-67867-2
Client Matrix: Solid
% Moisture: 6.0

Date Sampled: 04/13/2015 1051
Date Received: 04/15/2015 0930

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-273190	Instrument ID:	SGC_W
Prep Method:	3550C	Prep Batch:	280-272859	Initial Weight/Volume:	30.5 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	04/17/2015 1521			Injection Volume:	1 uL
Prep Date:	04/15/2015 1845			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.9	U	2.9	10
Aroclor 1221		8.4	U	8.4	17
Aroclor 1232		2.1	U	2.1	10
Aroclor 1242		4.9	U	4.9	10
Aroclor 1248		4.9	U	4.9	10
Aroclor 1254		76		2.7	10
Aroclor 1260		2.7	U	2.7	10

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	82		59 - 130
Tetrachloro-m-xylene	68		53 - 128

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

Client Sample ID: **J1V657**

Lab Sample ID: 280-67867-3
Client Matrix: Solid
% Moisture: 6.1

Date Sampled: 04/13/2015 1108
Date Received: 04/15/2015 0930

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-273190	Instrument ID:	SGC_W
Prep Method:	3550C	Prep Batch:	280-272859	Initial Weight/Volume:	32.6 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	04/17/2015 1544			Injection Volume:	1 uL
Prep Date:	04/15/2015 1845			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.7	U	2.7	9.8
Aroclor 1221		7.9	U	7.9	16
Aroclor 1232		2.0	U	2.0	9.8
Aroclor 1242		4.6	U	4.6	9.8
Aroclor 1248		4.6	U	4.6	9.8
Aroclor 1254		2.5	U	2.5	9.8
Aroclor 1260		2.5	U	2.5	9.8

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	88		59 - 130
Tetrachloro-m-xylene	77		53 - 128

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

Client Sample ID: **J1V658**

Lab Sample ID: 280-67867-4
Client Matrix: Solid
% Moisture: 6.1

Date Sampled: 04/13/2015 1104
Date Received: 04/15/2015 0930

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-273190	Instrument ID:	SGC_W
Prep Method:	3550C	Prep Batch:	280-272859	Initial Weight/Volume:	30.4 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	04/17/2015 1654			Injection Volume:	1 uL
Prep Date:	04/15/2015 1845			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.9	U	2.9	11
Aroclor 1221		8.4	U	8.4	17
Aroclor 1232		2.1	U	2.1	11
Aroclor 1242		4.9	U	4.9	11
Aroclor 1248		4.9	U	4.9	11
Aroclor 1254		2.7	U	2.7	11
Aroclor 1260		2.7	U	2.7	11

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	85		59 - 130
Tetrachloro-m-xylene	75		53 - 128

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

Client Sample ID: **J1V659**

Lab Sample ID: 280-67867-5
Client Matrix: Solid
% Moisture: 5.1

Date Sampled: 04/13/2015 1101
Date Received: 04/15/2015 0930

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	280-273190	Instrument ID:	SGC_W
Prep Method:	3550C	Prep Batch:	280-272859	Initial Weight/Volume:	30.1 g
Dilution:	1.0			Final Weight/Volume:	5 mL
Analysis Date:	04/17/2015 1717			Injection Volume:	1 uL
Prep Date:	04/15/2015 1845			Result Type:	PRIMARY

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
Aroclor 1016		2.9	U	2.9	11
Aroclor 1221		8.4	U	8.4	17
Aroclor 1232		2.1	U	2.1	11
Aroclor 1242		4.9	U	4.9	11
Aroclor 1248		4.9	U	4.9	11
Aroclor 1254		2.7	U	2.7	11
Aroclor 1260		2.7	U	2.7	11

Surrogate	%Rec	Qualifier	Acceptance Limits
Decachlorobiphenyl	77		59 - 130
Tetrachloro-m-xylene	65		53 - 128

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

Client Sample ID: **J1V655**

Lab Sample ID: 280-67867-1
Client Matrix: Solid
% Moisture: 2.5

Date Sampled: 04/13/2015 1048
Date Received: 04/15/2015 0930

NWTPH-Dx Northwest - Semi-Volatile Petroleum Products (GC)

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-273200	Instrument ID:	SGC_U
Prep Method:	3550C	Prep Batch:	280-272850	Lab File ID:	04170032.D
Dilution:	1.0			Initial Weight/Volume:	30.7 g
Analysis Date:	04/18/2015 0009			Final Weight/Volume:	1 mL
Prep Date:	04/15/2015 1948			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		2000	J B	1000	4000
C10-C28		2000	J B	680	4000

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	77		49 - 115

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

Client Sample ID: **J1V656**

Lab Sample ID: 280-67867-2
Client Matrix: Solid
% Moisture: 6.0

Date Sampled: 04/13/2015 1051
Date Received: 04/15/2015 0930

NWTPH-Dx Northwest - Semi-Volatile Petroleum Products (GC)

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-273200	Instrument ID:	SGC_U
Prep Method:	3550C	Prep Batch:	280-272850	Lab File ID:	04170035.D
Dilution:	1.0			Initial Weight/Volume:	30.0 g
Analysis Date:	04/18/2015 0134			Final Weight/Volume:	1 mL
Prep Date:	04/15/2015 1948			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		8000	B	1100	4300
C10-C28		5700	B	720	4300

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	88		49 - 115

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

Client Sample ID: **J1V657**

Lab Sample ID: 280-67867-3
Client Matrix: Solid
% Moisture: 6.1

Date Sampled: 04/13/2015 1108
Date Received: 04/15/2015 0930

NWTPH-Dx Northwest - Semi-Volatile Petroleum Products (GC)

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-273200	Instrument ID:	SGC_U
Prep Method:	3550C	Prep Batch:	280-272850	Lab File ID:	04170036.D
Dilution:	1.0			Initial Weight/Volume:	31.8 g
Analysis Date:	04/18/2015 0202			Final Weight/Volume:	1 mL
Prep Date:	04/15/2015 1948			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		2300	J B	1000	4000
C10-C28		2300	J B	680	4000

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	82		49 - 115

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

Client Sample ID: **J1V658**

Lab Sample ID: 280-67867-4
Client Matrix: Solid
% Moisture: 6.1

Date Sampled: 04/13/2015 1104
Date Received: 04/15/2015 0930

NWTPH-Dx Northwest - Semi-Volatile Petroleum Products (GC)

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-273200	Instrument ID:	SGC_U
Prep Method:	3550C	Prep Batch:	280-272850	Lab File ID:	04170037.D
Dilution:	1.0			Initial Weight/Volume:	30.5 g
Analysis Date:	04/18/2015 0231			Final Weight/Volume:	1 mL
Prep Date:	04/15/2015 1948			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		3100	J B	1000	4200
C10-C28		2800	J B	710	4200

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	84		49 - 115

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

Client Sample ID: **J1V659**

Lab Sample ID: 280-67867-5
Client Matrix: Solid
% Moisture: 5.1

Date Sampled: 04/13/2015 1101
Date Received: 04/15/2015 0930

NWTPH-Dx Northwest - Semi-Volatile Petroleum Products (GC)

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-273200	Instrument ID:	SGC_U
Prep Method:	3550C	Prep Batch:	280-272850	Lab File ID:	04170038.D
Dilution:	1.0			Initial Weight/Volume:	30.8 g
Analysis Date:	04/18/2015 0259			Final Weight/Volume:	1 mL
Prep Date:	04/15/2015 1948			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		4600	B	1000	4100
C10-C28		3300	J B	700	4100

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	89		49 - 115

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

General Chemistry

Client Sample ID: **J1V655**

Lab Sample ID: 280-67867-1
Client Matrix: Solid

Date Sampled: 04/13/2015 1048
Date Received: 04/15/2015 0930

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	2.5		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-273374 Analysis Date: 04/18/2015 1340 DryWt Corrected: N

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

General Chemistry

Client Sample ID: **J1V656**

Lab Sample ID: 280-67867-2
Client Matrix: Solid

Date Sampled: 04/13/2015 1051
Date Received: 04/15/2015 0930

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	6.0		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-273374 Analysis Date: 04/18/2015 1340 DryWt Corrected: N

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

General Chemistry

Client Sample ID: **J1V657**

Lab Sample ID: 280-67867-3
Client Matrix: Solid

Date Sampled: 04/13/2015 1108
Date Received: 04/15/2015 0930

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	6.1		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-273374 Analysis Date: 04/18/2015 1340 DryWt Corrected: N

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

General Chemistry

Client Sample ID: **J1V658**

Lab Sample ID: 280-67867-4
Client Matrix: Solid

Date Sampled: 04/13/2015 1104
Date Received: 04/15/2015 0930

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	6.1		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-273374 Analysis Date: 04/18/2015 1340 DryWt Corrected: N

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

General Chemistry

Client Sample ID: **J1V659**

Lab Sample ID: 280-67867-5
Client Matrix: Solid

Date Sampled: 04/13/2015 1101
Date Received: 04/15/2015 0930

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	5.1		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-273374 Analysis Date: 04/18/2015 1340 DryWt Corrected: N

QUALITY CONTROL RESULTS

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

Surrogate Recovery Report

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Matrix: Solid

Lab Sample ID	Client Sample ID	DCB1 %Rec	TCX1 %Rec
280-67867-1	J1V655	79	67
280-67867-2	J1V656	82	68
280-67867-3	J1V657	88	77
280-67867-4	J1V658	85	75
280-67867-5	J1V659	77	65
MB 280-272859/1-A		112	93
LCS 280-272859/2-A		92	80
280-67867-3 MS	J1V657 MS	87	77
280-67867-3 MSD	J1V657 MSD	84	74

Surrogate	Acceptance Limits
DCB = Decachlorobiphenyl	59-130
TCX = Tetrachloro-m-xylene	53-128

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

Surrogate Recovery Report

NWTPH-Dx Northwest - Semi-Volatile Petroleum Products (GC)

Client Matrix: Solid

Lab Sample ID	Client Sample ID	OTPH %Rec
280-67867-1	J1V655	77
280-67867-2	J1V656	88
280-67867-3	J1V657	82
280-67867-4	J1V658	84
280-67867-5	J1V659	89
MB 280-272850/1-A		80
LCS 280-272850/2-A		79
280-67867-1 MS	J1V655 MS	82
280-67867-1 MSD	J1V655 MSD	87

Surrogate	Acceptance Limits
OTPH = o-Terphenyl	49-115

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

Method Blank - Batch: 280-272859

Method: 8082
Preparation: 3550C

Lab Sample ID:	MB 280-272859/1-A	Analysis Batch:	280-273190	Instrument ID:	SGC_W
Client Matrix:	Solid	Prep Batch:	280-272859	Lab File ID:	04171509.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.0 g
Analysis Date:	04/17/2015 1412	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	04/15/2015 1845			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	MDL	RL
Aroclor 1016	2.7	U	2.7	9.7
Aroclor 1221	7.8	U	7.8	16
Aroclor 1232	1.9	U	1.9	9.7
Aroclor 1242	4.5	U	4.5	9.7
Aroclor 1248	4.5	U	4.5	9.7
Aroclor 1254	2.5	U	2.5	9.7
Aroclor 1260	2.5	U	2.5	9.7

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl	112	59 - 130
Tetrachloro-m-xylene	93	53 - 128

Lab Control Sample - Batch: 280-272859

Method: 8082
Preparation: 3550C

Lab Sample ID:	LCS 280-272859/2-A	Analysis Batch:	280-273190	Instrument ID:	SGC_W
Client Matrix:	Solid	Prep Batch:	280-272859	Lab File ID:	04171510.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.9 g
Analysis Date:	04/17/2015 1435	Units:	ug/Kg	Final Weight/Volume:	5 mL
Prep Date:	04/15/2015 1845			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aroclor 1016	31.3	29.6	94	54 - 132	
Aroclor 1260	31.3	30.7	98	62 - 129	

Surrogate	% Rec	Acceptance Limits
Decachlorobiphenyl	92	59 - 130
Tetrachloro-m-xylene	80	53 - 128

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-272859

Method: 8082
Preparation: 3550C

MS Lab Sample ID:	280-67867-3	Analysis Batch:	280-273190	Instrument ID:	SGC_W
Client Matrix:	Solid	Prep Batch:	280-272859	Lab File ID:	04171514.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.5 g
Analysis Date:	04/17/2015 1607			Final Weight/Volume:	5 mL
Prep Date:	04/15/2015 1845			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

MSD Lab Sample ID:	280-67867-3	Analysis Batch:	280-273190	Instrument ID:	SGC_W
Client Matrix:	Solid	Prep Batch:	280-272859	Lab File ID:	04171515.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.0 g
Analysis Date:	04/17/2015 1631			Final Weight/Volume:	5 mL
Prep Date:	04/15/2015 1845			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aroclor 1016	92	92	54 - 132	1	26		
Aroclor 1260	94	94	62 - 129	1	26		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Decachlorobiphenyl	87	84	59 - 130
Tetrachloro-m-xylene	77	74	53 - 128

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-272859

Method: 8082
Preparation: 3550C

MS Lab Sample ID:	280-67867-3	Units:	ug/Kg	MSD Lab Sample ID:	280-67867-3
Client Matrix:	Solid			Client Matrix:	Solid
Dilution:	1.0			Dilution:	1.0
Analysis Date:	04/17/2015 1607			Analysis Date:	04/17/2015 1631
Prep Date:	04/15/2015 1845			Prep Date:	04/15/2015 1845
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Aroclor 1016	2.7	U	34.9	35.5	32.2	32.5
Aroclor 1260	2.5	U	34.9	35.5	32.9	33.3

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

Method Blank - Batch: 280-272850

Method: NWTPH-Dx
Preparation: 3550C

Lab Sample ID:	MB 280-272850/1-A	Analysis Batch:	280-273200	Instrument ID:	SGC_U
Client Matrix:	Solid	Prep Batch:	280-272850	Lab File ID:	04170030.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	32.2 g
Analysis Date:	04/17/2015 2312	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	04/15/2015 1948			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
C10-C36	1040	J	930	3700
C10-C28	1450	J	630	3700

Surrogate	% Rec	Acceptance Limits
o-Terphenyl	80	49 - 115

Lab Control Sample - Batch: 280-272850

Method: NWTPH-Dx
Preparation: 3550C

Lab Sample ID:	LCS 280-272850/2-A	Analysis Batch:	280-273200	Instrument ID:	SGC_U
Client Matrix:	Solid	Prep Batch:	280-272850	Lab File ID:	04170031.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.9 g
Analysis Date:	04/17/2015 2341	Units:	ug/Kg	Final Weight/Volume:	1 mL
Prep Date:	04/15/2015 1948			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
C10-C36	64700	54500	84	57 - 115	
C10-C28	64700	53100	82	53 - 115	

Surrogate	% Rec	Acceptance Limits
o-Terphenyl	79	49 - 115

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-272850

Method: NWTPH-Dx
Preparation: 3550C

MS Lab Sample ID:	280-67867-1	Analysis Batch:	280-273200	Instrument ID:	SGC_U
Client Matrix:	Solid	Prep Batch:	280-272850	Lab File ID:	04170033.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.2 g
Analysis Date:	04/18/2015 0037			Final Weight/Volume:	1 mL
Prep Date:	04/15/2015 1948			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	280-67867-1	Analysis Batch:	280-273200	Instrument ID:	SGC_U
Client Matrix:	Solid	Prep Batch:	280-272850	Lab File ID:	04170034.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.3 g
Analysis Date:	04/18/2015 0106			Final Weight/Volume:	1 mL
Prep Date:	04/15/2015 1948			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
C10-C36	90	94	57 - 115	5	23		
C10-C28	86	90	56 - 115	4	23		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
o-Terphenyl	82	87	49 - 115

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-272850

Method: NWTPH-Dx
Preparation: 3550C

MS Lab Sample ID:	280-67867-1	Units:	ug/Kg	MSD Lab Sample ID:	280-67867-1
Client Matrix:	Solid			Client Matrix:	Solid
Dilution:	1.0			Dilution:	1.0
Analysis Date:	04/18/2015 0037			Analysis Date:	04/18/2015 0106
Prep Date:	04/15/2015 1948			Prep Date:	04/15/2015 1948
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
C10-C36	2000	J	67900	67700	63000	65900
C10-C28	2000	J	67900	67700	60500	63100

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

Duplicate - Batch: 280-273374

Method: D-2216
Preparation: N/A

Lab Sample ID:	280-67867-1	Analysis Batch:	280-273374	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	04/18/2015 1340	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	2.5	2.0	19	20	

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 280-272850					
LCS 280-272850/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-272850/1-A	Method Blank	T	Solid	3550C	
280-67867-1	J1V655	T	Solid	3550C	
280-67867-1MS	Matrix Spike	T	Solid	3550C	
280-67867-1MSD	Matrix Spike Duplicate	T	Solid	3550C	
280-67867-2	J1V656	T	Solid	3550C	
280-67867-3	J1V657	T	Solid	3550C	
280-67867-4	J1V658	T	Solid	3550C	
280-67867-5	J1V659	T	Solid	3550C	
Prep Batch: 280-272859					
LCS 280-272859/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-272859/1-A	Method Blank	T	Solid	3550C	
280-67867-1	J1V655	T	Solid	3550C	
280-67867-2	J1V656	T	Solid	3550C	
280-67867-3	J1V657	T	Solid	3550C	
280-67867-3MS	Matrix Spike	T	Solid	3550C	
280-67867-3MSD	Matrix Spike Duplicate	T	Solid	3550C	
280-67867-4	J1V658	T	Solid	3550C	
280-67867-5	J1V659	T	Solid	3550C	
Analysis Batch:280-273190					
LCS 280-272859/2-A	Lab Control Sample	T	Solid	8082	280-272859
MB 280-272859/1-A	Method Blank	T	Solid	8082	280-272859
280-67867-1	J1V655	T	Solid	8082	280-272859
280-67867-2	J1V656	T	Solid	8082	280-272859
280-67867-3	J1V657	T	Solid	8082	280-272859
280-67867-3MS	Matrix Spike	T	Solid	8082	280-272859
280-67867-3MSD	Matrix Spike Duplicate	T	Solid	8082	280-272859
280-67867-4	J1V658	T	Solid	8082	280-272859
280-67867-5	J1V659	T	Solid	8082	280-272859
Analysis Batch:280-273200					
LCS 280-272850/2-A	Lab Control Sample	T	Solid	NWTPH-Dx	280-272850
MB 280-272850/1-A	Method Blank	T	Solid	NWTPH-Dx	280-272850
280-67867-1	J1V655	T	Solid	NWTPH-Dx	280-272850
280-67867-1MS	Matrix Spike	T	Solid	NWTPH-Dx	280-272850
280-67867-1MSD	Matrix Spike Duplicate	T	Solid	NWTPH-Dx	280-272850
280-67867-2	J1V656	T	Solid	NWTPH-Dx	280-272850
280-67867-3	J1V657	T	Solid	NWTPH-Dx	280-272850
280-67867-4	J1V658	T	Solid	NWTPH-Dx	280-272850
280-67867-5	J1V659	T	Solid	NWTPH-Dx	280-272850

Client: Washington Closure Hanford

Job Number: 280-67867-1
Sdg Number: JP0941

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Report Basis					
T = Total					
General Chemistry					
Analysis Batch:280-273374					
280-67867-1	J1V655	T	Solid	D-2216	
280-67867-1DU	Duplicate	T	Solid	D-2216	
280-67867-2	J1V656	T	Solid	D-2216	
280-67867-3	J1V657	T	Solid	D-2216	
280-67867-4	J1V658	T	Solid	D-2216	
280-67867-5	J1V659	T	Solid	D-2216	

Report Basis
T = Total

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-110-127

Collector: STOWE, QG	Company Contact: Joan Kessner	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Project Designation: 100-H Field Remediation	Sampling Location: 100-H-59:2 (Excavation)		SAF No.: RC-110
Ice Chest No.: RCC-08-017	Field Logbook No.: EL-1627-09	COA: 01H5922600	Method of Shipment: Commercial Carrier \Fed Ex
Shipped To: TestAmerica Denver	Offsite Property No.: A131401		Bill of Lading/Air Bill No.: See OSPC

Price Code: 8B

Data Turnaround: 7 days

Other Labs Shipped To: N/A

280-67867 Chain of Custody

Preservation	Cool 4C	Cool 4C											
Type of Container	aG	aG											
No. of Container(s)	1	1											
Volume	125mL	125mL											
Sample Analysis	TPH-Diesel Range - WTPH-D +	4/13/15 ~~PAHs - 8310~~ PCBS - 8082											

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

Cooling as required

Sample No.	Matrix	Sample Date	Sample Time										
J1V655	SOIL	4/13/15	1048	X	X								
J1V656	SOIL	4/13/15	1051	X	X								
J1V657	SOIL	4/13/15	1108	X	X								
J1V658	SOIL	4/13/15	1104	X	X								
J1V659	SOIL	4/13/15	1101	X	X								

CHAIN OF POSSESSION / **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Quincy Stowe	4-13-15 1116	C. Martinez/C. Martinez	4/13/15 1116
C. Martinez/C. Martinez	4/13/15 1500	C. Bingham	4-13-15 1500
C. Bingham WCH	4-13-15 1505	1060 Battelle, fridge #3A	4-13-15 1505
1060 Battelle, fridge #3A	4-14-15 0735	C. Bingham	4-14-15 0735
C. Bingham WCH	4-14-15 0740	fed Ex	4-14-15
			4/15/15 9:30

SPECIAL INSTRUCTIONS

4.1 IRS to 0.2
Transfered By MT 4/15/15

REVIEWED BY K. Wood Via email DATE 4-14-15

JP0941

FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

90 day w/Permission
Project 28002142
Report Due: 4/22/15
TALs TAT: Rush 5 day TAT

Temp 4.1 IR# 5
CF +0.2 Initals MS
Date: 04/15/15

Sample Check-in List

Date/Time Received: 4/15/15 9:30 GM Screen Result 12 microR/hr

Client: Washington Closure Hanford SDG #: JP0941 NA[ ] SAF #: RC-110 NA [ ]

Job Number: 67867 Chain of Custody # RC-110-127

Shipping Container ID: RCC-08-017 Air Bill # 7733 6388 9335

1. Custody Seals on shipping container intact? NA [ ] Yes [✓] No [ ]
2. Custody Seals dated and signed? NA [ ] Yes [✓] No [ ]
3. Chain of Custody record present? NA [ ] Yes [✓] No [ ]
4. Cooler Temperature °C: 4.1 IR5 +0.2 NA [ ] 5. Vermiculite/packing materials is NA [ ] Wet [✓] Dry [ ]
6. Number of samples in shipping container: 5
7. Sample holding times exceeded? NA [ ] Yes [ ] No [✓]
8. Samples have:
   ✓ Tape
   ✓ Custody Seals
   ✓ Hazard Labels
   ✓ Appropriate Sample Labels
9. Samples are:
   ✓ In Good Condition
   Broken
   Leaking
   Have Air Bubbles
   (Only for samples requiring no head space.)
10. Sample pH taken? NA [✓] pH<2 [ ] pH>2 [ ] pH>9 [ ] Amount HNO_3 Added
11. Sample Location, Sample Collector Listed? * yes
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [✓]
13. Description of anomalies (include sample numbers):

Sample Custodian: [signature] Date: 4/15/15

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager [signature] Date 4/16/15

LS-023, Rev. 7, 1/08

From: (509) 376-7492
1162 Shipping
US DOE c/o WCH
2355 Stevens Dr

Richland, WA 99354

Origin ID: PSCA

FedEx. Express

J151215022303uv

Ship Date: 14APR15
ActWgt: 70.0 LB
CAD: 105266502/NET3610

Delivery Address Bar Code

Ref # 01H5922600
Invoice #
PO #
Dept #

SHIP TO: (303) 736-0190

BILL THIRD PARTY

Kae Yoder
TestAmerica
4955 Yarrow St.
A131401
ARVADA, CO 80002

WED - 15 APR 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7733 6388 9335

XH WHHA

80002
CO-US
DEN

537J2/6FC5/EE4B

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