

SAF-RC-130
100-N Area D4 - Soil In-Process
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

No Distribution

COMMENTS:

SDG J02059

SAF-RC-130

Rad only

Chem only

Rad & Chem

Complete

Partial

Waste Site(s): 100N Waste Accumulation Area Puddle

ANALYTICAL REPORT

Job Number: 280-50282-1

SDG Number: J02059

Job Description: SAF# RC-130

For:

Washington Closure Hanford
2620 Fermi Avenue
Richland, WA 99354

Attention: Joan H Kessner



Approved for release.
Kae E Yoder
Senior Project Manager
12/20/2013 2:00 PM

Kae E Yoder, Senior Project Manager
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12/20/2013

The test results in this report relate only to the samples in this report and meet all requirements of NELAP, 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 E87667.

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

Report Number: 280-50282-1

SDG #: J02059

SAF#: RC-130

Date SDG Closed: December 13, 2013

Data Deliverable: 7 Day / Summary

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>ANALYSES REQUESTED</u>	<u>ANALYSES PERFORMED</u>
J1T6V1	280-50282-1	WTPH-D/9071	NWTPH-Dx/9071B

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.

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 sample was received on 12/13/2013 10:30 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.4° C.

The chain-of-custody requests WTPH-D analysis for sample J1T6V1; however, as instructed by the client on 12/12/2013, the sample was logged for WTPH-D+ analysis.

GC SEMIVOLATILES - NWTPH-Dx - DRO

No anomalies were encountered.

GENERAL CHEMISTRY - SW846 9071B - OIL & GREASE (HEM)

Oil & Grease (HEM) is present at a level greater than half the reporting limit in the method blank associated with batch 280-205524. As Oil & Grease (HEM) is not present at a level greater than the reporting limit in the associated sample, corrective action is deemed unnecessary.

No other anomalies were encountered.

DATA REPORTING QUALIFIERS

Client: Washington Closure Hanford

Job Number: 280-50282-1

Sdg Number: J02059

Lab Section	Qualifier	Description
GC Semi VOA	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.
General Chemistry	B	Estimated result. Result is less than the RL, but greater than MDL
	C	The analyte was detected in both the sample and the associated QC blank, and the sample concentration was $\leq 5X$ the blank concentration.

SAMPLE SUMMARY

Client: Washington Closure Hanford

Job Number: 280-50282-1

Sdg Number: J02059

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-50282-1	J1T6V1	Solid	12/11/2013 1150	12/13/2013 1030

METHOD SUMMARY

Client: Washington Closure Hanford

Job Number: 280-50282-1

Sdg Number: J02059

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Northwest - Semi-Volatile Petroleum Products (GC)	TAL DEN	NWTPH NWTPH-Dx	
Ultrasonic Extraction	TAL DEN		SW846 3550C
HEM and SGT-HEM	TAL DEN	SW846 9071B	
Soxhlet Extraction	TAL DEN		SW846 3540C
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: 280-50282-1

Sdg Number: J02059

Method	Analyst	Analyst ID
NWTPH NWTPH-Dx	Birdsell, Matthew R	MRB
SW846 9071B	Benson, Alex F	AFB
ASTM D-2216	Henton, Jeffrey L	JLH

SAMPLE RESULTS

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-50282-1

Sdg Number: J02059

Client Sample ID: J1T6V1

Lab Sample ID: 280-50282-1

Date Sampled: 12/11/2013 1150

Client Matrix: Solid

% Moisture: 1.6

Date Received: 12/13/2013 1030

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

Analysis Method:	NWTPH-Dx	Analysis Batch:	280-205631	Instrument ID:	SGC_U
Prep Method:	3550C	Prep Batch:	280-205270	Lab File ID:	12170008.D
Dilution:	1.0			Initial Weight/Volume:	30.4 g
Analysis Date:	12/17/2013 1824			Final Weight/Volume:	1000 uL
Prep Date:	12/13/2013 2021			Injection Volume:	1 uL

Analyte	DryWt Corrected: Y	Result (ug/Kg)	Qualifier	MDL	RL
C10-C36		4500		1000	4000
C10-C28		3300	J	680	4000
Surrogate		%Rec	Qualifier	Acceptance Limits	
o-Terphenyl		72		49 - 115	

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-50282-1

Sdg Number: J02059

General Chemistry

Client Sample ID: J1T6V1

Lab Sample ID: 280-50282-1

Date Sampled: 12/11/2013 1150

Client Matrix: Solid

% Moisture: 1.6

Date Received: 12/13/2013 1030

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Oil & Grease (HEM)	305	B C	mg/Kg	83.4	492	1.0	9071B
	Analysis Batch: 280-205759	Analysis Date: 12/18/2013 1312					DryWt Corrected: Y
	Prep Batch: 280-205524	Prep Date: 12/17/2013 0852					

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	1.6		%	0.10	0.10	1.0	D-2216
	Analysis Batch: 280-205375	Analysis Date: 12/16/2013 0853					DryWt Corrected: N

QUALITY CONTROL RESULTS

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-50282-1

Sdg Number: J02059

Surrogate Recovery Report

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

Client Matrix: Solid

Lab Sample ID	Client Sample ID	OTPH %Rec
280-50282-1	J1T6V1	72
MB 280-205270/1-A		71
LCS 280-205270/2-A		74
280-50282-1 MS	J1T6V1 MS	72
280-50282-1 MSD	J1T6V1 MSD	68

Surrogate

Acceptance Limits

OTPH = o-Terphenyl

49-115

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-50282-1
Sdg Number: J02059

Method Blank - Batch: 280-205270

**Method: NWTPH-Dx
Preparation: 3550C**

Lab Sample ID: MB 280-205270/1-A
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 12/17/2013 1726
Prep Date: 12/13/2013 2021
Leach Date: N/A

Analysis Batch: 280-205631
Prep Batch: 280-205270
Leach Batch: N/A
Units: ug/Kg

Instrument ID: SGC_U
Lab File ID: 12170006.D
Initial Weight/Volume: 30.2 g
Final Weight/Volume: 1000 uL
Injection Volume: 1 uL

Analyte	Result	Qual	MDL	RL
C10-C36	990	U	990	4000
C10-C28	670	U	670	4000

Surrogate	% Rec	Acceptance Limits
o-Terphenyl	71	49 - 115

Lab Control Sample - Batch: 280-205270

**Method: NWTPH-Dx
Preparation: 3550C**

Lab Sample ID: LCS 280-205270/2-A
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 12/17/2013 1755
Prep Date: 12/13/2013 2021
Leach Date: N/A

Analysis Batch: 280-205631
Prep Batch: 280-205270
Leach Batch: N/A
Units: ug/Kg

Instrument ID: SGC_U
Lab File ID: 12170007.D
Initial Weight/Volume: 30.2 g
Final Weight/Volume: 1000 uL
Injection Volume: 1 uL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
C10-C36	66300	56300	85	57 - 115	
C10-C28	66300	56000	85	53 - 115	

Surrogate	% Rec	Acceptance Limits
o-Terphenyl	74	49 - 115

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-50282-1
Sdg Number: J02059

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-205270**

**Method: NWTPH-Dx
Preparation: 3550C**

MS Lab Sample ID:	280-50282-1	Analysis Batch:	280-205631	Instrument ID:	SGC_U
Client Matrix:	Solid	Prep Batch:	280-205270	Lab File ID:	12170009.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.2 g
Analysis Date:	12/17/2013 1853			Final Weight/Volume:	1000 uL
Prep Date:	12/13/2013 2021			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	280-50282-1	Analysis Batch:	280-205631	Instrument ID:	SGC_U
Client Matrix:	Solid	Prep Batch:	280-205270	Lab File ID:	12170010.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.8 g
Analysis Date:	12/17/2013 1922			Final Weight/Volume:	1000 uL
Prep Date:	12/13/2013 2021			Injection Volume:	1 uL
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
C10-C36	82	79	57 - 115	6	23		
C10-C28	79	78	56 - 115	3	23		
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
o-Terphenyl	72		68	49 - 115			

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-205270**

**Method: NWTPH-Dx
Preparation: 3550C**

MS Lab Sample ID:	280-50282-1	Units:	ug/Kg	MSD Lab Sample ID:	280-50282-1
Client Matrix:	Solid			Client Matrix:	Solid
Dilution:	1.0			Dilution:	1.0
Analysis Date:	12/17/2013 1853			Analysis Date:	12/17/2013 1922
Prep Date:	12/13/2013 2021			Prep Date:	12/13/2013 2021
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	4500	67400	66100	60100	56400
C10-C28	3300 J	67400	66100	56800	55100

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-50282-1
Sdg Number: J02059

Method Blank - Batch: 280-205524

Method: 9071B
Preparation: 3540C

Lab Sample ID: MB 280-205524/1-A	Analysis Batch: 280-205759	Instrument ID: No Equipment Assigned
Client Matrix: Solid	Prep Batch: 280-205524	Lab File ID: N/A
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 10.54 g
Analysis Date: 12/18/2013 1312	Units: mg/Kg	Final Weight/Volume: 10 g
Prep Date: 12/17/2013 0852		
Leach Date: N/A		

Analyte	Result	Qual	MDL	RL
Oil & Grease (HEM)	256.2	B	80.5	474

Lab Control Sample - Batch: 280-205524

Method: 9071B
Preparation: 3540C

Lab Sample ID: LCS 280-205524/2-A	Analysis Batch: 280-205759	Instrument ID: No Equipment Assigned
Client Matrix: Solid	Prep Batch: 280-205524	Lab File ID: N/A
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 10.51 g
Analysis Date: 12/18/2013 1312	Units: mg/Kg	Final Weight/Volume: 10 g
Prep Date: 12/17/2013 0852		
Leach Date: N/A		

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Oil & Grease (HEM)	1900	2293	120	56 - 142	

Matrix Spike - Batch: 280-205524

Method: 9071B
Preparation: 3540C

Lab Sample ID: 280-50282-1	Analysis Batch: 280-205759	Instrument ID: No Equipment Assigned
Client Matrix: Solid	Prep Batch: 280-205524	Lab File ID: N/A
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 10.24 g
Analysis Date: 12/18/2013 1312	Units: mg/Kg	Final Weight/Volume: 10 g
Prep Date: 12/17/2013 0852		
Leach Date: N/A		

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Oil & Grease (HEM)	305 B	1900	2224	97	56 - 142	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-50282-1
Sdg Number: J02059

Duplicate - Batch: 280-205524

Method: 9071B
Preparation: 3540C

Lab Sample ID:	280-50282-1	Analysis Batch:	280-205759	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	280-205524	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	10.32 g
Analysis Date:	12/18/2013 1312	Units:	mg/Kg	Final Weight/Volume:	10 g
Prep Date:	12/17/2013 0852				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Oil & Grease (HEM)	305 B	305.3	0.2	32	B

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-50282-1
Sdg Number: J02059

Duplicate - Batch: 280-205375

Method: D-2216
Preparation: N/A

Lab Sample ID:	280-50282-1	Analysis Batch:	280-205375	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:	12/16/2013 0853	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	1.6	1.8	9	20	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-50282-1

Sdg Number: J02059

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 280-205270					
LCS 280-205270/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-205270/1-A	Method Blank	T	Solid	3550C	
280-50282-1	J1T6V1	T	Solid	3550C	
280-50282-1MS	Matrix Spike	T	Solid	3550C	
280-50282-1MSD	Matrix Spike Duplicate	T	Solid	3550C	
Analysis Batch:280-205631					
LCS 280-205270/2-A	Lab Control Sample	T	Solid	NWTPH-Dx	280-205270
MB 280-205270/1-A	Method Blank	T	Solid	NWTPH-Dx	280-205270
280-50282-1	J1T6V1	T	Solid	NWTPH-Dx	280-205270
280-50282-1MS	Matrix Spike	T	Solid	NWTPH-Dx	280-205270
280-50282-1MSD	Matrix Spike Duplicate	T	Solid	NWTPH-Dx	280-205270

Report Basis

T = Total

General Chemistry

Analysis Batch:280-205375					
280-50282-1	J1T6V1	T	Solid	D-2216	
280-50282-1DU	Duplicate	T	Solid	D-2216	
Prep Batch: 280-205524					
LCS 280-205524/2-A	Lab Control Sample	T	Solid	3540C	
MB 280-205524/1-A	Method Blank	T	Solid	3540C	
280-50282-1	J1T6V1	T	Solid	3540C	
280-50282-1DU	Duplicate	T	Solid	3540C	
280-50282-1MS	Matrix Spike	T	Solid	3540C	
Analysis Batch:280-205759					
LCS 280-205524/2-A	Lab Control Sample	T	Solid	9071B	280-205524
MB 280-205524/1-A	Method Blank	T	Solid	9071B	280-205524
280-50282-1	J1T6V1	T	Solid	9071B	280-205524
280-50282-1DU	Duplicate	T	Solid	9071B	280-205524
280-50282-1MS	Matrix Spike	T	Solid	9071B	280-205524

Report Basis

T = Total

