SAF-RC-211
100-IU-2 & 100-IU-6 Miscellaneous Restoration Sites Near 100-F – Soil In-Process
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt H4-21 KW 5/9/12
INITIAL/DATE

COMMENTS:

SDG JP0387 SAF-RC-211

Rad only ☑ Chem only Rad & Chem

☑ Complete Partial

Sample Location: 600-318:1 and 600-320:9

ANALYTICAL REPORT

Job Number: 280-28431-1

SDG Number: JP0387

Job Description: SAF# RC-211

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

Attention: Joan H Kessner

Approved for release.
Kae E Yoder
Project Manager II
5/9/2012 11:21 AM

Kae E Yoder
Project Manager II
kae.yoder@testamericainc.com
05/09/2012

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 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: 280-28431-1

SDG #: JP0387
SAF#: RC-211

Date SDG Closed: May 3, 2012
Data Deliverable: 7 Day / Summary

CLIENT ID	LAB ID	ANALYSES REQUESTED	ANALYSES PERFORMED
J1NPJ4	280-28431-1	6010/7471/311-6010-7470	6010B/7471A/311-6010B-7470A
J1NPJ5	280-28431-2	6010/7471/311-6010-7470	6010B/7471A/311-6010B-7470A

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 5/3/2012 9:00 AM; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 5.0 C.

TOTAL METALS - SW846 6010B/7471A

Serial dilution of a digestate in batch 280-118150 indicates that physical and chemical interferences are present for Cobalt. Results have been flagged with an "X".

It can be noted that the sample amount was greater than four times the spike amount for Aluminum, Iron and Manganese in the Matrix Spike performed on sample J1NPJ4; therefore, control limits are not applicable.

The duplicate analysis of sample J1NPJ4 exhibited RPD data outside the control limits for Antimony, Arsenic and Lead, and the associated sample results have been flagged "M". There is no indication that the analytical system was operating out of control, and method accuracy has been verified by the acceptable LCS analysis data; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

TCLP METALS - SW846 1311/6010B/7470A

Low levels of Barium are present in the method blank associated with batch 280-118355. Because the concentration in the method blank is not present at a level greater than half the reporting limit, corrective action is deemed unnecessary.

The duplicate analysis of sample J1NPJ4 exhibited RPD data outside the control limits for Chromium, and the associated sample result has been flagged "M". There is no indication that the analytical system was operating out of control, and method accuracy has been verified by the acceptable LCS analysis data; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

DATA REPORTING QUALIFIERS

Client: Washington Closure Hanford

Job Number: 280-28431-1
Sdg Number: JP0387

Lab Section	Qualifier	Description
Metals		
	U	Analyzed for but not detected.
	B	Estimated result. Result is less than the RL, but greater than MDL
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
	M	Sample duplicate precision not met.
	X	Serial dilution in the analytical batch indicates that physical and chemical interferences are present.

METHOD SUMMARY

Client: Washington Closure Hanford

Job Number: 280-28431-1
Sdg Number: JP0387

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Metals	TAL DEN		SW846 3050B
TCLP Metals (ICP)	TAL DEN	SW846 6010B	
TCLP Extraction	TAL DEN		SW846 1311
Preparation, Total Metals	TAL DEN		SW846 3010A
TCLP Mercury	TAL DEN	SW846 7470A	
TCLP Extraction	TAL DEN		SW846 1311
Preparation, Mercury	TAL DEN		SW846 7470A
Mercury (CVAA)	TAL DEN	SW846 7471A	
Preparation, Mercury	TAL DEN		SW846 7471A
ASTM D-2216	TAL DEN	ASTM D-2216	

Lab References:

TAL DEN = TestAmerica Denver

Method References:

ASTM = ASTM International

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: 280-28431-1
Sdg Number: JP0387

Method	Analyst	Analyst ID
SW846 6010B	Bowen, Heidi E	HEB
SW846 7470A	Rawlings, Brendon L	BLR
SW846 7471A	Rawlings, Brendon L	BLR
ASTM D-2216	Blythe, Scott	SB

SAMPLE SUMMARY

Client: Washington Closure Hanford

Job Number: 280-28431-1
Sdg Number: JP0387

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-28431-1	J1NPJ4	Solid	05/02/2012 0952	05/03/2012 0900
280-28431-2	J1NPJ5	Solid	05/02/2012 1015	05/03/2012 0900

SAMPLE RESULTS

Client: Washington Closure Hanford

Job Number: 280-28431-1
Sdg Number: JP0387

Client Sample ID: **J1NPJ4**

Lab Sample ID: 280-28431-1
Client Matrix: Solid
% Moisture: 2.2

Date Sampled: 05/02/2012 0952
Date Received: 05/03/2012 0900

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-118572	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-118150	Lab File ID:	26c050412.asc
Dilution:	1.0			Initial Weight/Volume:	1.05 g
Analysis Date:	05/04/2012 2053			Final Weight/Volume:	100 mL
Prep Date:	05/04/2012 0830				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Antimony		0.48	B M	0.37	0.58
Arsenic		1.4	M	0.64	0.97
Barium		47.9		0.074	0.49
Beryllium		0.18	B	0.032	0.19
Boron		0.95	U	0.95	1.9
Cadmium		0.092	B	0.040	0.19
Calcium		3670		13.7	48.7
Chromium		10		0.056	0.19
Cobalt		5.7	X	0.097	0.97
Copper		15.5		0.21	0.97
Iron		15300		3.7	4.9
Lead		7.4	M	0.26	0.49
Magnesium		4170		3.6	19.5
Manganese		249		0.097	0.97
Molybdenum		0.25	B	0.25	1.9
Nickel		10.1		0.12	3.9
Potassium		810		39.9	292
Selenium		0.84	U	0.84	0.97
Silicon		248		5.5	9.7
Silver		0.16	U	0.16	0.19
Sodium		212		57.4	117
Vanadium		43.6		0.092	1.9
Zinc		31.1		0.39	0.97

Analysis Method:	6010B	Analysis Batch:	280-118802	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-118150	Lab File ID:	26a050712.asc
Dilution:	1.0			Initial Weight/Volume:	1.05 g
Analysis Date:	05/07/2012 1620			Final Weight/Volume:	100 mL
Prep Date:	05/04/2012 0830				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6390		1.5	4.9

6010B TCLP Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	280-118805	Instrument ID:	MT_026
Prep Method:	3010A	Prep Batch:	280-118355	Lab File ID:	26c050712.asc
Dilution:	1.0	Leach Batch:	280-118210	Initial Weight/Volume:	10 mL
Analysis Date:	05/08/2012 0130			Final Weight/Volume:	50 mL
Prep Date:	05/07/2012 0815				
Leach Date:	05/03/2012 1518				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL

Client: Washington Closure Hanford

Job Number: 280-28431-1
Sdg Number: JP0387

Client Sample ID: **J1NPJ4**

Lab Sample ID: 280-28431-1
Client Matrix: Solid

Date Sampled: 05/02/2012 0952
Date Received: 05/03/2012 0900

6010B TCLP Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.022	U	0.022	0.50
Barium		0.46	B	0.0020	1.0
Cadmium		0.0020	U	0.0020	0.10
Chromium		0.0038	B M	0.0030	0.50
Lead		0.30	B	0.013	0.50
Selenium		0.024	U	0.024	0.10
Silver		0.0040	U	0.0040	0.50

7470A TCLP Mercury-TCLP

Analysis Method:	7470A	Analysis Batch:	280-118854	Instrument ID:	MT_033
Prep Method:	7470A	Prep Batch:	280-118466	Lab File ID:	120507aa.txt
Dilution:	1.0	Leach Batch:	280-118210	Initial Weight/Volume:	30 mL
Analysis Date:	05/07/2012 1730			Final Weight/Volume:	30 mL
Prep Date:	05/07/2012 1240				
Leach Date:	05/03/2012 1518				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		0.000030	U	0.000030	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-118620	Instrument ID:	MT_033
Prep Method:	7471A	Prep Batch:	280-118219	Lab File ID:	120504aa.txt
Dilution:	1.0			Initial Weight/Volume:	0.56 g
Analysis Date:	05/04/2012 1650			Final Weight/Volume:	50 mL
Prep Date:	05/04/2012 1220				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0061	U	0.0061	0.019

Client: Washington Closure Hanford

Job Number: 280-28431-1
Sdg Number: JP0387

Client Sample ID: **J1NPJ5**

Lab Sample ID: 280-28431-2
Client Matrix: Solid
% Moisture: 1.6

Date Sampled: 05/02/2012 1015
Date Received: 05/03/2012 0900

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-118572	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-118150	Lab File ID:	26c050412.asc
Dilution:	1.0			Initial Weight/Volume:	1.14 g
Analysis Date:	05/04/2012 2103			Final Weight/Volume:	100 mL
Prep Date:	05/04/2012 0830				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Antimony		0.48	B	0.34	0.53
Arsenic		1.5		0.59	0.89
Barium		47.5		0.068	0.45
Beryllium		0.17	B	0.029	0.18
Boron		0.87	U	0.87	1.8
Cadmium		0.093	B	0.037	0.18
Calcium		3190		12.6	44.6
Chromium		9.0		0.052	0.18
Cobalt		5.6	X	0.089	0.89
Copper		12.4		0.19	0.89
Iron		14700		3.4	4.5
Lead		18.0		0.24	0.45
Magnesium		3850		3.3	17.8
Manganese		248		0.089	0.89
Molybdenum		0.26	B	0.23	1.8
Nickel		9.8		0.11	3.6
Potassium		585		36.5	267
Selenium		0.77	U	0.77	0.89
Silicon		208		5.0	8.9
Silver		0.14	U	0.14	0.18
Sodium		200		52.6	107
Vanadium		42.6		0.084	1.8
Zinc		30.9		0.35	0.89

Analysis Method:	6010B	Analysis Batch:	280-118802	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-118150	Lab File ID:	26a050712.asc
Dilution:	1.0			Initial Weight/Volume:	1.14 g
Analysis Date:	05/07/2012 1630			Final Weight/Volume:	100 mL
Prep Date:	05/04/2012 0830				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6030		1.4	4.5

6010B TCLP Metals (ICP)-TCLP

Analysis Method:	6010B	Analysis Batch:	280-118805	Instrument ID:	MT_026
Prep Method:	3010A	Prep Batch:	280-118355	Lab File ID:	26c050712.asc
Dilution:	1.0	Leach Batch:	280-118210	Initial Weight/Volume:	10 mL
Analysis Date:	05/08/2012 0140			Final Weight/Volume:	50 mL
Prep Date:	05/07/2012 0815				
Leach Date:	05/03/2012 1518				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL

Client: Washington Closure Hanford

Job Number: 280-28431-1
Sdg Number: JP0387

Client Sample ID: **J1NPJ5**

Lab Sample ID: 280-28431-2
Client Matrix: Solid

Date Sampled: 05/02/2012 1015
Date Received: 05/03/2012 0900

6010B TCLP Metals (ICP)-TCLP

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Arsenic		0.022	U	0.022	0.50
Barium		0.19	B	0.0020	1.0
Cadmium		0.0020	U	0.0020	0.10
Chromium		0.0034	B	0.0030	0.50
Lead		0.024	B	0.013	0.50
Selenium		0.024	U	0.024	0.10
Silver		0.0040	U	0.0040	0.50

7470A TCLP Mercury-TCLP

Analysis Method:	7470A	Analysis Batch:	280-118854	Instrument ID:	MT_033
Prep Method:	7470A	Prep Batch:	280-118466	Lab File ID:	120507aa.txt
Dilution:	1.0	Leach Batch:	280-118210	Initial Weight/Volume:	30 mL
Analysis Date:	05/07/2012 1733			Final Weight/Volume:	30 mL
Prep Date:	05/07/2012 1240				
Leach Date:	05/03/2012 1518				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	MDL	RL
Mercury		0.000030	U	0.000030	0.0020

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-118620	Instrument ID:	MT_033
Prep Method:	7471A	Prep Batch:	280-118219	Lab File ID:	120504aa.txt
Dilution:	1.0			Initial Weight/Volume:	0.63 g
Analysis Date:	05/04/2012 1702			Final Weight/Volume:	50 mL
Prep Date:	05/04/2012 1220				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.0053	U	0.0053	0.016

General Chemistry

Client Sample ID: **J1NPJ4**

Lab Sample ID: 280-28431-1
Client Matrix: Solid

Date Sampled: 05/02/2012 0952
Date Received: 05/03/2012 0900

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	2.2		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-118367 Analysis Date: 05/04/2012 1145 DryWt Corrected: N

General Chemistry

Client Sample ID: **J1NPJ5**

Lab Sample ID: 280-28431-2
Client Matrix: Solid

Date Sampled: 05/02/2012 1015
Date Received: 05/03/2012 0900

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	1.6		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-118367 Analysis Date: 05/04/2012 1145 DryWt Corrected: N

QUALITY CONTROL RESULTS

Client: Washington Closure Hanford

Job Number: 280-28431-1
Sdg Number: JP0387

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-118150					
LCS 280-118150/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-118150/1-A	Method Blank	T	Solid	3050B	
280-28431-1	J1NPJ4	T	Solid	3050B	
280-28431-1DU	Duplicate	T	Solid	3050B	
280-28431-1MS	Matrix Spike	T	Solid	3050B	
280-28431-2	J1NPJ5	T	Solid	3050B	
Prep Batch: 280-118210					
LCS 280-118210/2-B	Lab Control Sample	P	Solid	1311	
LCS 280-118210/2-C	Lab Control Sample	P	Solid	1311	
LB 280-118210/1-B	TCLP SPLPE Leachate Blank	P	Solid	1311	
LB 280-118210/1-C	TCLP SPLPE Leachate Blank	P	Solid	1311	
280-28431-1	J1NPJ4	P	Solid	1311	
280-28431-1DU	Duplicate	P	Solid	1311	
280-28431-1MS	Matrix Spike	P	Solid	1311	
280-28431-2	J1NPJ5	P	Solid	1311	
280-28431-2DU	Duplicate	P	Solid	1311	
280-28431-2MS	Matrix Spike	P	Solid	1311	
Prep Batch: 280-118219					
LCS 280-118219/2-A	Lab Control Sample	T	Solid	7471A	
MB 280-118219/1-A	Method Blank	T	Solid	7471A	
280-28431-1	J1NPJ4	T	Solid	7471A	
280-28431-1DU	Duplicate	T	Solid	7471A	
280-28431-1MS	Matrix Spike	T	Solid	7471A	
280-28431-2	J1NPJ5	T	Solid	7471A	
Prep Batch: 280-118355					
LCS 280-118210/2-B	Lab Control Sample	P	Solid	3010A	280-118210
LB 280-118210/1-B	TCLP SPLPE Leachate Blank	P	Solid	3010A	280-118210
280-28431-1	J1NPJ4	P	Solid	3010A	280-118210
280-28431-1DU	Duplicate	P	Solid	3010A	280-118210
280-28431-1MS	Matrix Spike	P	Solid	3010A	280-118210
280-28431-2	J1NPJ5	P	Solid	3010A	280-118210
Prep Batch: 280-118466					
LCS 280-118210/2-C	Lab Control Sample	P	Solid	7470A	280-118210
LB 280-118210/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	280-118210
280-28431-1	J1NPJ4	P	Solid	7470A	280-118210
280-28431-2	J1NPJ5	P	Solid	7470A	280-118210
280-28431-2DU	Duplicate	P	Solid	7470A	280-118210
280-28431-2MS	Matrix Spike	P	Solid	7470A	280-118210

Client: Washington Closure Hanford

Job Number: 280-28431-1
Sdg Number: JP0387

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:280-118572					
LCS 280-118150/2-A	Lab Control Sample	T	Solid	6010B	280-118150
MB 280-118150/1-A	Method Blank	T	Solid	6010B	280-118150
280-28431-1	J1NPJ4	T	Solid	6010B	280-118150
280-28431-1DU	Duplicate	T	Solid	6010B	280-118150
280-28431-1MS	Matrix Spike	T	Solid	6010B	280-118150
280-28431-2	J1NPJ5	T	Solid	6010B	280-118150
Analysis Batch:280-118620					
LCS 280-118219/2-A	Lab Control Sample	T	Solid	7471A	280-118219
MB 280-118219/1-A	Method Blank	T	Solid	7471A	280-118219
280-28431-1	J1NPJ4	T	Solid	7471A	280-118219
280-28431-1DU	Duplicate	T	Solid	7471A	280-118219
280-28431-1MS	Matrix Spike	T	Solid	7471A	280-118219
280-28431-2	J1NPJ5	T	Solid	7471A	280-118219
Analysis Batch:280-118802					
LCS 280-118150/2-A	Lab Control Sample	T	Solid	6010B	280-118150
MB 280-118150/1-A	Method Blank	T	Solid	6010B	280-118150
280-28431-1	J1NPJ4	T	Solid	6010B	280-118150
280-28431-1DU	Duplicate	T	Solid	6010B	280-118150
280-28431-1MS	Matrix Spike	T	Solid	6010B	280-118150
280-28431-2	J1NPJ5	T	Solid	6010B	280-118150
Analysis Batch:280-118805					
LCS 280-118210/2-B	Lab Control Sample	P	Solid	6010B	280-118355
LB 280-118210/1-B	TCLP SPLPE Leachate Blank	P	Solid	6010B	280-118355
280-28431-1	J1NPJ4	P	Solid	6010B	280-118355
280-28431-1DU	Duplicate	P	Solid	6010B	280-118355
280-28431-1MS	Matrix Spike	P	Solid	6010B	280-118355
280-28431-2	J1NPJ5	P	Solid	6010B	280-118355
Analysis Batch:280-118854					
LCS 280-118210/2-C	Lab Control Sample	P	Solid	7470A	280-118466
LB 280-118210/1-C	TCLP SPLPE Leachate Blank	P	Solid	7470A	280-118466
280-28431-1	J1NPJ4	P	Solid	7470A	280-118466
280-28431-2	J1NPJ5	P	Solid	7470A	280-118466
280-28431-2DU	Duplicate	P	Solid	7470A	280-118466
280-28431-2MS	Matrix Spike	P	Solid	7470A	280-118466

Report Basis
P = TCLP
T = Total

Client: Washington Closure Hanford

Job Number: 280-28431-1
Sdg Number: JP0387

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-118367					
280-28431-1	J1NPJ4	T	Solid	D-2216	
280-28431-2	J1NPJ5	T	Solid	D-2216	
280-28431-2DU	Duplicate	T	Solid	D-2216	

Report Basis
T = Total

Client: Washington Closure Hanford

Job Number: 280-28431-1
Sdg Number: JP0387

Method Blank - Batch: 280-118150

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 280-118150/1-A	Analysis Batch:	280-118572	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-118150	Lab File ID:	26c050412.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	05/04/2012 2048	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	05/04/2012 0830				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Antimony	0.38	U	0.38	0.60
Arsenic	0.66	U	0.66	1.0
Barium	0.076	U	0.076	0.50
Beryllium	0.033	U	0.033	0.20
Boron	0.98	U	0.98	2.0
Cadmium	0.041	U	0.041	0.20
Calcium	14.1	U	14.1	50.0
Chromium	0.058	U	0.058	0.20
Cobalt	0.10	U	0.10	1.0
Copper	0.22	U	0.22	1.0
Iron	3.8	U	3.8	5.0
Lead	0.27	U	0.27	0.50
Magnesium	3.7	U	3.7	20.0
Manganese	0.10	U	0.10	1.0
Molybdenum	0.26	U	0.26	2.0
Nickel	0.12	U	0.12	4.0
Potassium	41.0	U	41.0	300
Selenium	0.86	U	0.86	1.0
Silicon	5.7	U	5.7	10.0
Silver	0.16	U	0.16	0.20
Sodium	59.0	U	59.0	120
Vanadium	0.094	U	0.094	2.0
Zinc	0.40	U	0.40	1.0

Method Blank - Batch: 280-118150

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 280-118150/1-A	Analysis Batch:	280-118802	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-118150	Lab File ID:	26a050712.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	05/07/2012 1615	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	05/04/2012 0830				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	1.6	U	1.6	5.0

Client: Washington Closure Hanford

Job Number: 280-28431-1
Sdg Number: JP0387

Lab Control Sample - Batch: 280-118150

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 280-118150/2-A	Analysis Batch:	280-118572	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-118150	Lab File ID:	26c050412.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	05/04/2012 2051	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	05/04/2012 0830				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony	50.0	49.95	100	82 - 110	
Arsenic	100	99.46	99	85 - 110	
Barium	200	203.4	102	87 - 112	
Beryllium	5.00	4.71	94	84 - 114	
Boron	100	99.19	99	81 - 110	
Cadmium	10.0	10.45	105	87 - 110	
Calcium	5000	4775	96	82 - 114	
Chromium	20.0	20.55	103	84 - 114	
Cobalt	50.0	50.64	101	87 - 110	
Copper	25.0	24.53	98	88 - 110	
Iron	100	94.90	95	87 - 120	
Lead	50.0	49.22	98	86 - 110	
Magnesium	5000	4809	96	90 - 110	
Manganese	50.0	49.19	98	88 - 110	
Molybdenum	100	102.7	103	86 - 110	
Nickel	50.0	49.51	99	87 - 110	
Potassium	5000	5205	104	89 - 110	
Selenium	200	194.3	97	83 - 110	
Silicon	1000	135.1	14	10 - 70	
Silver	5.00	5.25	105	87 - 114	
Sodium	5000	5165	103	90 - 112	
Vanadium	50.0	53.19	106	88 - 110	
Zinc	50.0	49.47	99	76 - 114	

Lab Control Sample - Batch: 280-118150

Method: 6010B
Preparation: 3050B

Lab Sample ID:	LCS 280-118150/2-A	Analysis Batch:	280-118802	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-118150	Lab File ID:	26a050712.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1 g
Analysis Date:	05/07/2012 1618	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	05/04/2012 0830				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	209.5	105	82 - 116	

Client: Washington Closure Hanford

Job Number: 280-28431-1
Sdg Number: JP0387

Matrix Spike - Batch: 280-118150

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-28431-1	Analysis Batch:	280-118572	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-118150	Lab File ID:	26c050412.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.17 g
Analysis Date:	05/04/2012 2101	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	05/04/2012 0830				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Antimony	0.48	B	43.7	25.99	58	20 - 200	
Arsenic	1.4		87.4	79.63	89	76 - 111	
Barium	47.9		175	215.3	96	52 - 159	
Beryllium	0.18	B	4.37	3.95	86	72 - 105	
Boron	0.95	U	87.4	75.79	87	75 - 107	
Cadmium	0.092	B	8.74	8.37	95	40 - 130	
Calcium	3670		4370	8789	117	43 - 165	
Chromium	10		17.5	28.20	104	70 - 200	
Cobalt	5.7		43.7	45.47	91	72 - 106	
Copper	15.5		21.8	32.10	76	37 - 187	
Iron	15300		87.4	16690	1653	70 - 200	4
Lead	7.4		43.7	52.76	104	70 - 200	
Magnesium	4170		4370	8561	101	64 - 145	
Manganese	249		43.7	312.4	146	40 - 200	4
Molybdenum	0.25	B	87.4	79.25	90	75 - 103	
Nickel	10.1		43.7	50.89	93	61 - 126	
Potassium	810		4370	5033	97	56 - 172	
Selenium	0.84	U	175	151.5	87	76 - 104	
Silicon	248		874	447.0	23	20 - 200	
Silver	0.16	U	4.37	4.09	94	75 - 141	
Sodium	212		4370	4475	98	78 - 111	
Vanadium	43.6		43.7	92.54	112	50 - 169	
Zinc	31.1		43.7	71.99	94	70 - 200	

Matrix Spike - Batch: 280-118150

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-28431-1	Analysis Batch:	280-118802	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-118150	Lab File ID:	26a050712.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.17 g
Analysis Date:	05/07/2012 1628	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	05/04/2012 0830				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	6390	175	7604	694	50 - 200	4

Client: Washington Closure Hanford

Job Number: 280-28431-1
Sdg Number: JP0387

Duplicate - Batch: 280-118150

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-28431-1	Analysis Batch:	280-118572	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-118150	Lab File ID:	26c050412.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.12 g
Analysis Date:	05/04/2012 2058	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	05/04/2012 0830				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Antimony	0.48	B	98.66	198	40	M
Arsenic	1.4		2.14	39	30	M
Barium	47.9		54.25	12	30	
Beryllium	0.18	B	0.172	3	30	B
Boron	0.95	U	0.89	NC	30	U
Cadmium	0.092	B	0.117	23	30	B
Calcium	3670		3506	5	30	
Chromium	10		10.63	6	40	
Cobalt	5.7		5.68	0.7	30	
Copper	15.5		13.77	12	30	
Iron	15300		14960	2	40	
Lead	7.4		1936	198	40	M
Magnesium	4170		3980	5	30	
Manganese	249		244.0	2	40	
Molybdenum	0.25	B	0.24	NC	30	U
Nickel	10.1		10.14	0.5	30	
Potassium	810		736.0	10	40	
Selenium	0.84	U	0.78	NC	30	U
Silicon	248		270.2	8	40	
Silver	0.16	U	0.15	NC	30	U
Sodium	212		212.4	0.4	30	
Vanadium	43.6		43.88	0.6	30	
Zinc	31.1		31.71	2	40	

Duplicate - Batch: 280-118150

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-28431-1	Analysis Batch:	280-118802	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-118150	Lab File ID:	26a050712.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.12 g
Analysis Date:	05/07/2012 1625	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	05/04/2012 0830				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Aluminum	6390	6229	3	40	

Client: Washington Closure Hanford

Job Number: 280-28431-1
Sdg Number: JP0387

TCLP SPLPE Leachate Blank - Batch: 280-118355

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	LB 280-118210/1-B	Analysis Batch:	280-118805	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-118355	Lab File ID:	26c050712.asc
Dilution:	1.0	Leach Batch:	280-118210	Initial Weight/Volume:	10 mL
Analysis Date:	05/08/2012 0125	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	05/07/2012 0815				
Leach Date:	05/03/2012 1518				

Analyte	Result	Qual	MDL	RL
Arsenic	0.022	U	0.022	0.50
Barium	0.0158	B	0.0020	1.0
Cadmium	0.0020	U	0.0020	0.10
Chromium	0.0030	U	0.0030	0.50
Lead	0.013	U	0.013	0.50
Selenium	0.024	U	0.024	0.10
Silver	0.0040	U	0.0040	0.50

Lab Control Sample - Batch: 280-118355

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	LCS 280-118210/2-B	Analysis Batch:	280-118805	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-118355	Lab File ID:	26c050712.asc
Dilution:	1.0	Leach Batch:	280-118210	Initial Weight/Volume:	10 mL
Analysis Date:	05/08/2012 0127	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	05/07/2012 0815				
Leach Date:	05/03/2012 1518				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	4.00	3.67	92	80 - 120	
Barium	12.0	11.15	93	80 - 120	
Cadmium	1.10	1.02	92	80 - 120	
Chromium	5.20	4.83	93	80 - 120	
Lead	5.50	4.98	90	80 - 120	
Selenium	3.00	2.68	89	80 - 120	
Silver	1.05	0.957	91	80 - 120	

Client: Washington Closure Hanford

Job Number: 280-28431-1
Sdg Number: JP0387

Matrix Spike - Batch: 280-118355

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	280-28431-1	Analysis Batch:	280-118805	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-118355	Lab File ID:	26c050712.asc
Dilution:	1.0	Leach Batch:	280-118210	Initial Weight/Volume:	10 mL
Analysis Date:	05/08/2012 0138	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	05/07/2012 0815				
Leach Date:	05/03/2012 1518				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	0.022	U	4.00	3.87	97	80 - 120	
Barium	0.46	B	12.0	12.23	98	80 - 120	
Cadmium	0.0020	U	1.10	1.07	97	80 - 120	
Chromium	0.0038	B	5.20	5.09	98	80 - 120	
Lead	0.30	B	5.50	5.52	95	80 - 120	
Selenium	0.024	U	3.00	2.83	94	80 - 120	
Silver	0.0040	U	1.05	1.01	96	80 - 120	

Duplicate - Batch: 280-118355

Method: 6010B
Preparation: 3010A
TCLP

Lab Sample ID:	280-28431-1	Analysis Batch:	280-118805	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-118355	Lab File ID:	26c050712.asc
Dilution:	1.0	Leach Batch:	280-118210	Initial Weight/Volume:	10 mL
Analysis Date:	05/08/2012 0135	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	05/07/2012 0815				
Leach Date:	05/03/2012 1518				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Arsenic	0.022	U	0.022	NC	20	U
Barium	0.46	B	0.449	3	20	B
Cadmium	0.0020	U	0.0020	NC	20	U
Chromium	0.0038	B	0.00300	22	20	B M
Lead	0.30	B	0.294	3	20	B
Selenium	0.024	U	0.024	NC	20	U
Silver	0.0040	U	0.0040	NC	20	U

Client: Washington Closure Hanford

Job Number: 280-28431-1
Sdg Number: JP0387

TCLP SPLPE Leachate Blank - Batch: 280-118466

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	LB 280-118210/1-C	Analysis Batch:	280-118854	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-118466	Lab File ID:	120507aa.txt
Dilution:	1.0	Leach Batch:	280-118210	Initial Weight/Volume:	30 mL
Analysis Date:	05/07/2012 1726	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	05/07/2012 1240				
Leach Date:	05/03/2012 1518				

Analyte	Result	Qual	MDL	RL
Mercury	0.000030	U	0.000030	0.0020

Lab Control Sample - Batch: 280-118466

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	LCS 280-118210/2-C	Analysis Batch:	280-118854	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-118466	Lab File ID:	120507aa.txt
Dilution:	1.0	Leach Batch:	280-118210	Initial Weight/Volume:	30 mL
Analysis Date:	05/07/2012 1728	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	05/07/2012 1240				
Leach Date:	05/03/2012 1518				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00505	101	90 - 116	

Matrix Spike - Batch: 280-118466

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	280-28431-2	Analysis Batch:	280-118854	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-118466	Lab File ID:	120507aa.txt
Dilution:	1.0	Leach Batch:	280-118210	Initial Weight/Volume:	30 mL
Analysis Date:	05/07/2012 1742	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	05/07/2012 1240				
Leach Date:	05/03/2012 1518				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.000030	U	0.00500	0.00459	92	90 - 116	

Client: Washington Closure Hanford

Job Number: 280-28431-1
Sdg Number: JP0387

Duplicate - Batch: 280-118466

Method: 7470A
Preparation: 7470A
TCLP

Lab Sample ID:	280-28431-2	Analysis Batch:	280-118854	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-118466	Lab File ID:	120507aa.txt
Dilution:	1.0	Leach Batch:	280-118210	Initial Weight/Volume:	30 mL
Analysis Date:	05/07/2012 1735	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	05/07/2012 1240				
Leach Date:	05/03/2012 1518				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Mercury	0.000030	U	0.000030	NC	20	U

Client: Washington Closure Hanford

Job Number: 280-28431-1
Sdg Number: JP0387

Method Blank - Batch: 280-118219

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 280-118219/1-A	Analysis Batch:	280-118620	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-118219	Lab File ID:	120504aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.6 g
Analysis Date:	05/04/2012 1646	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	05/04/2012 1220				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.0055	U	0.0055	0.017

Lab Control Sample - Batch: 280-118219

Method: 7471A
Preparation: 7471A

Lab Sample ID:	LCS 280-118219/2-A	Analysis Batch:	280-118620	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-118219	Lab File ID:	120504aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.6 g
Analysis Date:	05/04/2012 1648	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	05/04/2012 1220				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.417	0.424	102	87 - 111	

Matrix Spike - Batch: 280-118219

Method: 7471A
Preparation: 7471A

Lab Sample ID:	280-28431-1	Analysis Batch:	280-118620	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-118219	Lab File ID:	120504aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.69 g
Analysis Date:	05/04/2012 1700	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	05/04/2012 1220				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.0061	U	0.370	0.384	104	87 - 111	

Client: Washington Closure Hanford

Job Number: 280-28431-1
Sdg Number: JP0387

Duplicate - Batch: 280-118219

Method: 7471A
Preparation: 7471A

Lab Sample ID:	280-28431-1	Analysis Batch:	280-118620	Instrument ID:	MT_033
Client Matrix:	Solid	Prep Batch:	280-118219	Lab File ID:	120504aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.54 g
Analysis Date:	05/04/2012 1657	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	05/04/2012 1220				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Mercury	0.0061	U	0.0063	NC	20	U

Client: Washington Closure Hanford

Job Number: 280-28431-1
Sdg Number: JP0387

Duplicate - Batch: 280-118367

Method: D-2216
Preparation: N/A

Lab Sample ID:	280-28431-2	Analysis Batch:	280-118367	Instrument ID:	No Equipment
Client Matrix:	Solid	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	05/04/2012 1145	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	1.6	1.6	0.1	20	