

SAF-RC-182
ARRA 100-F Remaining Sites
Remediation – Soil In-Process
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt H4-21 KW 4/14/11
INITIAL/DATE

COMMENTS:

SDG J01046 SAF-RC-182

Rad only Chem only Rad & Chem

Complete Partial

Sample Location: 100-F-56



ANALYTICAL REPORT

Job Number: 280-13670-1

SDG Number: J01046

Job Description: SAF# RC-182

For:

Washington Closure Hanford

2620 Fermi Avenue

Richland, WA 99354

Attention: Joan H Kessner



Approved for release.
Kae E Yoder
Project Manager II
4/12/2011 4:34 PM

Kae E Yoder
Project Manager II
kae.yoder@testamericainc.com
04/12/2011

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: 280-13670-1

SDG #: J01046

SAF#: RC-182

Date SDG Closed: March 18, 2011

Data Deliverable: 15 Day / Summary

<u>CLIENT ID</u>	<u>LAB ID</u>	<u>ANALYSES REQUESTED</u>	<u>ANALYSES PERFORMED</u>
J1FKJ6	280-13670-1	6010/7471	6010B/7471A

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 sample was received on 3/18/2011; the sample arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 2.4 C, 2.7 C, 3.4 C and 4.7 C.

TOTAL METALS - SW846 6010B/7471A

Serial dilution of a digestate in batch 280-58374 indicates that physical and chemical interferences are present for several elements. Results have been flagged with an "X".

Low levels of Barium and Chromium are present in the method blank associated with batch 280-58374. Because the concentrations in the method blank are not present at levels greater than the reporting limits, corrective action is deemed unnecessary.

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 J1FKJ6; therefore, control limits are not applicable.

The Matrix Spike performed on sample J1FKJ6 exhibited percent recoveries outside the control limits for Silicon and Mercury, and the associated sample results have been flagged "N". 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: 280-13670-1

Sdg Number: J01046

<u>Lab Section</u>	<u>Qualifier</u>	<u>Description</u>
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.
	N	Recovery exceeds upper or lower control limits
	X	Serial dilution in the analytical batch indicates that physical and chemical interferences are present.

METHOD SUMMARY

Client: Washington Closure Hanford

Job Number: 280-13670-1
Sdg Number: J01046

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Metals	TAL DEN		SW846 3050B
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: 280-13670-1
Sdg Number: J01046

Method	Analyst	Analyst ID
SW846 6010B	Bowen, Heidi E	HEB
SW846 7471A	Stoltz, Katie	KS
ASTM D-2216	Berry III, Paul B	PBB

SAMPLE SUMMARY

Client: Washington Closure Hanford

Job Number: 280-13670-1
Sdg Number: J01046

<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Client Matrix</u>	<u>Date/Time Sampled</u>	<u>Date/Time Received</u>
280-13670-1	J1FKJ6	Solid	03/16/2011 0940	03/18/2011 0930

SAMPLE RESULTS

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-13670-1

Sdg Number: J01046

Client Sample ID: J1FKJ6

Lab Sample ID: 280-13670-1

Date Sampled: 03/16/2011 0940

Client Matrix: Solid

% Moisture: 9.2

Date Received: 03/18/2011 0930

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	280-58882	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-58374	Lab File ID:	26b032211.asc
Dilution:	1.0			Initial Weight/Volume:	1.10 g
Analysis Date:	03/22/2011 1920			Final Weight/Volume:	100 mL
Prep Date:	03/21/2011 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Aluminum		6520	X	1.6	5.0
Antimony		0.38	U	0.38	0.60
Arsenic		2.6		0.66	1.0
Barium		86.9	X	0.076	0.50
Beryllium		0.038	B	0.033	0.20
Boron		3.3		0.98	2.0
Cadmium		0.11	B	0.041	0.20
Calcium		4840	X	14.1	50.1
Chromium		40.9	X	0.058	0.20
Cobalt		6.0	X	0.10	1.0
Copper		14.3	X	0.22	1.0
Iron		14600	X	3.8	5.0
Lead		14.6	X	0.27	0.50
Magnesium		3740	X	3.7	20.0
Manganese		298	X	0.10	1.0
Molybdenum		0.26	U	0.26	2.0
Nickel		9.1	X	0.12	4.0
Potassium		1310		41.0	300
Selenium		0.86	U	0.86	1.0
Silicon		206	N	5.7	10.0
Silver		0.16	U	0.16	0.20
Vanadium		36.9	X	0.094	2.0
Zinc		38.5	X	0.40	1.0

Analysis Method:	6010B	Analysis Batch:	280-59078	Instrument ID:	MT_026
Prep Method:	3050B	Prep Batch:	280-58374	Lab File ID:	26a032311.asc
Dilution:	1.0			Initial Weight/Volume:	1.10 g
Analysis Date:	03/23/2011 1449			Final Weight/Volume:	100 mL
Prep Date:	03/21/2011 1400				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Sodium		264		59.1	120

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	280-58997	Instrument ID:	MT_033
Prep Method:	7471A	Prep Batch:	280-58384	Lab File ID:	110322AD.txt
Dilution:	1.0			Initial Weight/Volume:	0.60 g
Analysis Date:	03/22/2011 2117			Final Weight/Volume:	50 mL
Prep Date:	03/22/2011 1255				

Analyte	DryWt Corrected: Y	Result (mg/Kg)	Qualifier	MDL	RL
Mercury		0.014	B N	0.0061	0.019

Analytical Data

Client: Washington Closure Hanford

Job Number: 280-13670-1

Sdg Number: J01046

General Chemistry

Client Sample ID: J1FKJ6

Lab Sample ID: 280-13670-1

Client Matrix: Solid

Date Sampled: 03/16/2011 0940

Date Received: 03/18/2011 0930

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	9.2		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-58514 Analysis Date: 03/21/2011 1057 DryWt Corrected: N

QUALITY CONTROL RESULTS

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-13670-1
Sdg Number: J01046

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-58374					
LCS 280-58374/2-A	Lab Control Sample	T	Solid	3050B	
MB 280-58374/1-A	Method Blank	T	Solid	3050B	
280-13670-1	J1FKJ6	T	Solid	3050B	
280-13670-1DU	Duplicate	T	Solid	3050B	
280-13670-1MS	Matrix Spike	T	Solid	3050B	
Prep Batch: 280-58384					
LCS 280-58384/2-A	Lab Control Sample	T	Solid	7471A	
MB 280-58384/1-A	Method Blank	T	Solid	7471A	
280-13670-1	J1FKJ6	T	Solid	7471A	
280-13670-1DU	Duplicate	T	Solid	7471A	
280-13670-1MS	Matrix Spike	T	Solid	7471A	
Analysis Batch:280-58882					
LCS 280-58374/2-A	Lab Control Sample	T	Solid	6010B	280-58374
MB 280-58374/1-A	Method Blank	T	Solid	6010B	280-58374
280-13670-1	J1FKJ6	T	Solid	6010B	280-58374
280-13670-1DU	Duplicate	T	Solid	6010B	280-58374
280-13670-1MS	Matrix Spike	T	Solid	6010B	280-58374
Analysis Batch:280-58997					
LCS 280-58384/2-A	Lab Control Sample	T	Solid	7471A	280-58384
MB 280-58384/1-A	Method Blank	T	Solid	7471A	280-58384
280-13670-1	J1FKJ6	T	Solid	7471A	280-58384
280-13670-1DU	Duplicate	T	Solid	7471A	280-58384
280-13670-1MS	Matrix Spike	T	Solid	7471A	280-58384
Analysis Batch:280-59078					
LCS 280-58374/2-A	Lab Control Sample	T	Solid	6010B	280-58374
MB 280-58374/1-A	Method Blank	T	Solid	6010B	280-58374
280-13670-1	J1FKJ6	T	Solid	6010B	280-58374
280-13670-1DU	Duplicate	T	Solid	6010B	280-58374
280-13670-1MS	Matrix Spike	T	Solid	6010B	280-58374

Report Basis

T = Total

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-13670-1
Sdg Number: J01046

QC Association Summary

<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Report Basis</u>	<u>Client Matrix</u>	<u>Method</u>	<u>Prep Batch</u>
General Chemistry					
Analysis Batch:280-58514					
280-13670-1	J1FKJ6	T	Solid	D-2216	
280-13670-1DU	Duplicate	T	Solid	D-2216	

Report Basis

T = Total

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-13670-1
Sdg Number: J01046

Method Blank - Batch: 280-58374

Method: 6010B
Preparation: 3050B

Lab Sample ID: MB 280-58374/1-A
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 03/22/2011 1916
Prep Date: 03/21/2011 1400
Leach Date: N/A

Analysis Batch: 280-58882
Prep Batch: 280-58374
Leach Batch: N/A
Units: mg/Kg

Instrument ID: MT_026
Lab File ID: 26b032211.asc
Initial Weight/Volume: 1.0 g
Final Weight/Volume: 100 mL

Analyte	Result	Qual	MDL	RL
Aluminum	1.6	U	1.6	5.0
Antimony	0.38	U	0.38	0.60
Arsenic	0.66	U	0.66	1.0
Barium	0.143	B	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	0.0780	B	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
Vanadium	0.094	U	0.094	2.0
Zinc	0.40	U	0.40	1.0

Method Blank - Batch: 280-58374

Method: 6010B
Preparation: 3050B

Lab Sample ID: MB 280-58374/1-A
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 03/23/2011 1445
Prep Date: 03/21/2011 1400
Leach Date: N/A

Analysis Batch: 280-59078
Prep Batch: 280-58374
Leach Batch: N/A
Units: mg/Kg

Instrument ID: MT_026
Lab File ID: 26a032311.asc
Initial Weight/Volume: 1.0 g
Final Weight/Volume: 100 mL

Analyte	Result	Qual	MDL	RL
Sodium	59.0	U	59.0	120

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-13670-1
Sdg Number: J01046

Lab Control Sample - Batch: 280-58374

Method: 6010B
Preparation: 3050B

Lab Sample ID: LCS 280-58374/2-A
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 03/22/2011 1918
Prep Date: 03/21/2011 1400
Leach Date: N/A

Analysis Batch: 280-58882
Prep Batch: 280-58374
Leach Batch: N/A
Units: mg/Kg

Instrument ID: MT_026
Lab File ID: 26b032211.asc
Initial Weight/Volume: 1.0 g
Final Weight/Volume: 100 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	194.2	97	82 - 116	
Antimony	50.0	49.37	99	82 - 110	
Arsenic	100	97.85	98	85 - 110	
Barium	200	211.0	106	87 - 112	
Beryllium	5.00	4.86	97	84 - 114	
Boron	100	97.57	98	81 - 110	
Cadmium	10.0	9.71	97	87 - 110	
Calcium	5000	4831	97	82 - 114	
Chromium	20.0	20.08	100	84 - 114	
Cobalt	50.0	49.32	99	87 - 110	
Copper	25.0	25.40	102	88 - 110	
Iron	100	93.49	93	87 - 120	
Lead	50.0	50.15	100	86 - 110	
Magnesium	5000	4923	98	90 - 110	
Manganese	50.0	49.57	99	88 - 110	
Molybdenum	100	101.4	101	86 - 110	
Nickel	50.0	49.39	99	87 - 110	
Potassium	5000	5524	110	89 - 110	
Selenium	200	203.0	102	83 - 110	
Silicon	1000	149.3	15	10 - 70	
Silver	5.00	5.00	100	87 - 114	
Vanadium	50.0	50.12	100	88 - 110	
Zinc	50.0	49.77	100	76 - 114	

Lab Control Sample - Batch: 280-58374

Method: 6010B
Preparation: 3050B

Lab Sample ID: LCS 280-58374/2-A
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 03/23/2011 1447
Prep Date: 03/21/2011 1400
Leach Date: N/A

Analysis Batch: 280-59078
Prep Batch: 280-58374
Leach Batch: N/A
Units: mg/Kg

Instrument ID: MT_026
Lab File ID: 26a032311.asc
Initial Weight/Volume: 1.0 g
Final Weight/Volume: 100 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Sodium	5000	5079	102	90 - 112	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-13670-1
Sdg Number: J01046

Matrix Spike - Batch: 280-58374

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-13670-1	Analysis Batch:	280-58882	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-58374	Lab File ID:	26b032211.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.16 g
Analysis Date:	03/22/2011 1927	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	03/21/2011 1400				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	6520	190	7452	489	50 - 200	4
Antimony	0.38 U	47.5	20.24	43	20 - 200	
Arsenic	2.6	94.9	81.63	83	76 - 111	
Barium	86.9	190	251.9	87	52 - 159	
Beryllium	0.038 B	4.75	4.07	85	72 - 105	
Boron	3.3	94.9	84.41	85	75 - 107	
Cadmium	0.11 B	9.49	8.21	85	40 - 130	
Calcium	4840	4750	9842	105	43 - 165	
Chromium	40.9	19.0	56.64	83	70 - 200	
Cobalt	6.0	47.5	47.07	87	72 - 106	
Copper	14.3	23.7	36.59	94	37 - 187	
Iron	14600	94.9	16320	1767	70 - 200	4
Lead	14.6	47.5	54.17	83	70 - 200	
Magnesium	3740	4750	7956	89	64 - 145	
Manganese	298	47.5	310.2	26	40 - 200	4
Molybdenum	0.26 U	94.9	81.77	86	75 - 103	
Nickel	9.1	47.5	48.78	84	61 - 126	
Potassium	1310	4750	6037	100	56 - 172	
Selenium	0.86 U	190	165.2	87	76 - 104	
Silicon	206	949	218.1	1	20 - 200	N
Silver	0.16 U	4.75	4.21	89	75 - 141	
Vanadium	36.9	47.5	79.37	90	50 - 169	
Zinc	38.5	47.5	77.66	83	70 - 200	

Matrix Spike - Batch: 280-58374

Method: 6010B
Preparation: 3050B

Lab Sample ID:	280-13670-1	Analysis Batch:	280-59078	Instrument ID:	MT_026
Client Matrix:	Solid	Prep Batch:	280-58374	Lab File ID:	26a032311.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.16 g
Analysis Date:	03/23/2011 1457	Units:	mg/Kg	Final Weight/Volume:	100 mL
Prep Date:	03/21/2011 1400				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Sodium	264	4750	4861	97	78 - 111	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-13670-1
Sdg Number: J01046

Duplicate - Batch: 280-58374

**Method: 6010B
Preparation: 3050B**

Lab Sample ID: 280-13670-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 03/22/2011 1925
Prep Date: 03/21/2011 1400
Leach Date: N/A

Analysis Batch: 280-58882
Prep Batch: 280-58374
Leach Batch: N/A
Units: mg/Kg

Instrument ID: MT_026
Lab File ID: 26b032211.asc
Initial Weight/Volume: 1.10 g
Final Weight/Volume: 100 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Aluminum	6520	6650	2	40	
Antimony	0.38 U	0.38	NC	40	U
Arsenic	2.6	2.20	15	30	
Barium	86.9	75.76	14	30	
Beryllium	0.038 B	0.033	NC	30	U
Boron	3.3	2.69	22	30	
Cadmium	0.11 B	0.120	11	30	B
Calcium	4840	4934	2	30	
Chromium	40.9	43.72	7	40	
Cobalt	6.0	6.12	2	30	
Copper	14.3	14.40	0.6	30	
Iron	14600	14690	0.3	40	
Lead	14.6	17.40	17	40	
Magnesium	3740	3826	2	30	
Manganese	298	282.9	5	40	
Molybdenum	0.26 U	0.26	NC	30	U
Nickel	9.1	8.83	3	30	
Potassium	1310	1371	5	40	
Selenium	0.86 U	0.86	NC	30	U
Silicon	206	153.2	29	40	
Silver	0.16 U	0.16	NC	30	U
Vanadium	36.9	37.88	3	30	
Zinc	38.5	41.44	7	40	

Duplicate - Batch: 280-58374

**Method: 6010B
Preparation: 3050B**

Lab Sample ID: 280-13670-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 03/23/2011 1454
Prep Date: 03/21/2011 1400
Leach Date: N/A

Analysis Batch: 280-59078
Prep Batch: 280-58374
Leach Batch: N/A
Units: mg/Kg

Instrument ID: MT_026
Lab File ID: 26a032311.asc
Initial Weight/Volume: 1.10 g
Final Weight/Volume: 100 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Sodium	264	244.7	8	30	

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-13670-1
Sdg Number: J01046

Method Blank - Batch: 280-58384

Method: 7471A
Preparation: 7471A

Lab Sample ID: MB 280-58384/1-A
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 03/22/2011 2108
Prep Date: 03/22/2011 1255
Leach Date: N/A

Analysis Batch: 280-58997
Prep Batch: 280-58384
Leach Batch: N/A
Units: mg/Kg

Instrument ID: MT_033
Lab File ID: 110322AD.txt
Initial Weight/Volume: 0.60 g
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Mercury	0.0055	U	0.0055	0.017

Lab Control Sample - Batch: 280-58384

Method: 7471A
Preparation: 7471A

Lab Sample ID: LCS 280-58384/2-A
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 03/22/2011 2115
Prep Date: 03/22/2011 1255
Leach Date: N/A

Analysis Batch: 280-58997
Prep Batch: 280-58384
Leach Batch: N/A
Units: mg/Kg

Instrument ID: MT_033
Lab File ID: 110322AD.txt
Initial Weight/Volume: 0.60 g
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.417	0.441	106	87 - 111	

Matrix Spike - Batch: 280-58384

Method: 7471A
Preparation: 7471A

Lab Sample ID: 280-13670-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 03/22/2011 2122
Prep Date: 03/22/2011 1255
Leach Date: N/A

Analysis Batch: 280-58997
Prep Batch: 280-58384
Leach Batch: N/A
Units: mg/Kg

Instrument ID: MT_033
Lab File ID: 110322AD.txt
Initial Weight/Volume: 0.63 g
Final Weight/Volume: 50 mL

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.014 B	0.437	0.385	85	87 - 111	N

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-13670-1
Sdg Number: J01046

Duplicate - Batch: 280-58384

Method: 7471A
Preparation: 7471A

Lab Sample ID: 280-13670-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 03/22/2011 2119
Prep Date: 03/22/2011 1255
Leach Date: N/A

Analysis Batch: 280-58997
Prep Batch: 280-58384
Leach Batch: N/A
Units: mg/Kg

Instrument ID: MT_033
Lab File ID: 110322AD.txt
Initial Weight/Volume: 0.68 g
Final Weight/Volume: 50 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Mercury	0.014 B	0.0164	19	20	B

Quality Control Results

Client: Washington Closure Hanford

Job Number: 280-13670-1
Sdg Number: J01046

Duplicate - Batch: 280-58514

**Method: D-2216
Preparation: N/A**

Lab Sample ID: 280-13670-1
Client Matrix: Solid
Dilution: 1.0
Analysis Date: 03/21/2011 1057
Prep Date: N/A
Leach Date: N/A

Analysis Batch: 280-58514
Prep Batch: N/A
Leach Batch: N/A
Units: %

Instrument ID: No Equipment
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume:

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	9.2	9.5	3	20	

Company Contact: S. Van Den Hendel
 Telephone No: 509-551-3934
 Sampling Location: 100-F-56
 Field Logbook No.: EL-1651
 Offsite Property No.: NA
 Project Coordinator: KESSNER, JH
 SAF No.: RC-182
 Method of Shipment: FedEx
 Bill of Lading/Air Bill No.: 7968 8392 9225 7968 8736 8644 500 3-17-11

RC-182-061
 Price Code: 8L
 Data Turnaround: 21 Days
 15 Days

Sample No.	Matrix *	Sample Date	Sample Time	Preservation	Cool 4C	None	Cool 4C	None
J1FKJ6	SOIL	3-16-11	0940	Type of Container	GP	GP	aG	None
J1FKJ7	SOIL			No. of Container(s)	1	1	1	1
J1FKJ8	SOIL			Volume	60mL	120mL	60mL	60g
J1FKJ9	SOIL							
J1FKK0	SOIL							

SPECIAL INSTRUCTIONS
 Please Leach and Hold TCLP Metals per Joan Kessner.
 (1) ICP Metals - 6010TR (Client List) (Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Vanadium, Zinc); Mercury - 7471 - (CV) (Mercury)
 (2) Metals by ICP (TCLP) - 1311/6010 (Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver); Mercury (TCLP) - 1311/7470 (Mercury)

REVIEWED BY: JFO
 DATE: 3-17-11

SD6#
 J01046

CHAIN OF POSSESSION

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
AJ Ojeda	3-16-11 1008	An Russell	3-16-11 1008
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
An Russell	3-16-11 1530	A. Freer	3-16-11 1530
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
A. Freer	3-17-11 0945	FedEx	Ex
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
			3-17-11 0930
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

LABORATORY SECTION
 Received By: Title
FINAL SAMPLE DISPOSITION
 Disposal Method: Disposed By
 Date/Time

Analytical Due:

Report Due: 4/4/11 (Rvsl 11/27/TAT)

Sample Check-in List

Date/Time Received: 3/8/11 0930 GM Screen Result 15 microR/hr

Client: Washington Closure Hanford SDG #: J01046 NA [] SAF #: RC-182 NA []

Job Number: 13670 Chain of Custody # RC-182-061

Shipping Container ID: AFS-04-120 ERC-02-002 Air Bill # 796883929270 796883929420
GWS-132 GWS-130 796883929225 796883929523

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: 2.4, 2.7, 3.4, 4.7 NA [] 5. Vermiculite/packing materials is NA [] Wet Dry []
6. Number of samples in shipping container: 1
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 HNO₃ Added _____
11. Sample Location, Sample Collector Listed? *
*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: 3/8/11

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[] No action necessary; process as is.

Project Manager [Signature] Date 3/21/11

From: (509) 375-4640
 WCH MAILROOM
 WASHINGTON CLOSURE HANFORD
 2620 FERMI AVE

Origin ID: PSCA



J11101012220225

RICHLAND, WA 99354

Ship Date: 17MAR11
 ActWgt: 80.0 LB
 CAD: 8897843/INET3130

Delivery Address Bar Code



SHIP TO: (303) 736-0100
Sample Recieving
Test America Denver
4955 YARROW ST

BILL SENDER

Ref #
 Invoice #
 PO #
 Dept #

ARVADA, CO 80002

1 of 4

FRI - 18 MAR A1
PRIORITY OVERNIGHT

TRK# 7968 8392 9225

0201

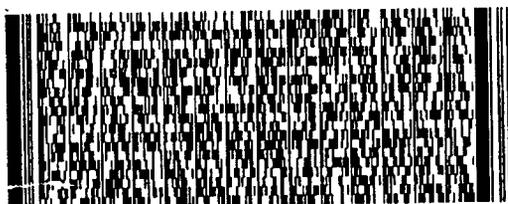
MASTER

80002

CO-US

DEN

XH WHHA



50D32/BDD9/7/EFB

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 WCH MAILROOM
 WASHINGTON CLOSURE HANFORD
 2620 FERMI AVE
 RICHLAND, WA 99354

Origin ID: PSCA



J11101012220225

Ship Date: 17MAR11
 ActWgt: 48.0 LB
 CAD: 8897843JINET3130

Delivery Address Bar Code



SHIP TO: (303) 736-0100
Sample Recieving
Test America Denver
4955 YARROW ST

ARVADA, CO 80002

BILL SENDER

Ref #
 Invoice #
 PO #
 Dept #

2 of 4

FRI - 18 MAR A1
PRIORITY OVERNIGHT

MPS# 7968 8392 9270

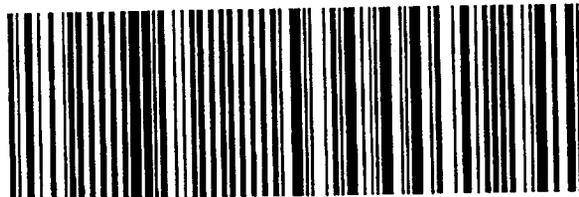
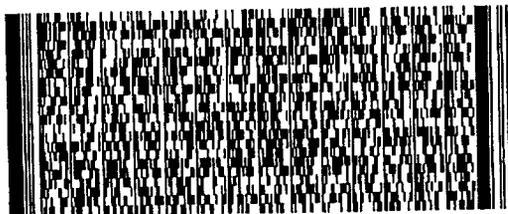
0263

Mstr# 7968 8392 9225

0201

80002
 CO-US
DEN

XH WHHA



50DG26DD97EF8

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WCH MAILROOM
WASHINGTON CLOSURE HANFORD
2620 FERMI AVE
RICHLAND, WA 99354

Origin ID: PSCA



Ship Date: 17MAR11
Act/Wgt: 65.0 LB
CAD: 8897843/NET3130

Delivery Address Bar Code



SHIP TO: (303) 736-0100
Sample Recieving
Test America Denver
4955 YARROW ST

ARVADA, CO 80002

BILL SENDER

Ref #
Invoice #
PO #
Dept #

3 of 4

FRI - 18 MAR A1
PRIORITY OVERNIGHT

MPS# 7968 8392 9420

0263

Mstr# 7968 8392 9225

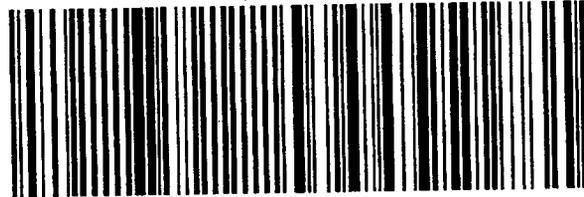
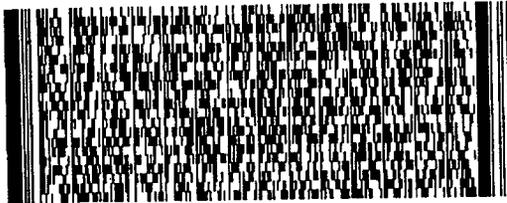
0201

80002

CO-US

DEN

XH WHHA



500G2/BDC9/TEFB

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 WCH MAILROOM
 WASHINGTON CLOSURE HANFORD
 2620 FERMI AVE
 RICHLAND, WA 99354

Origin ID: PSCA



J1110101220225

Ship Date: 17MAR11
 ActWgt: 71.0 LB
 CAD: 8897843/INET3130

Delivery Address Bar Code



SHIP TO: (303) 736-0100
Sample Receiving
Test America Denver
4955 YARROW ST

BILL SENDER

Ref #
 Invoice #
 PO #
 Dept #

ARVADA, CO 80002

4 of 4

FRI - 18 MAR A1
PRIORITY OVERNIGHT

MPS# 7968 8392 9523

0263

Mstr# 7968 8392 9225

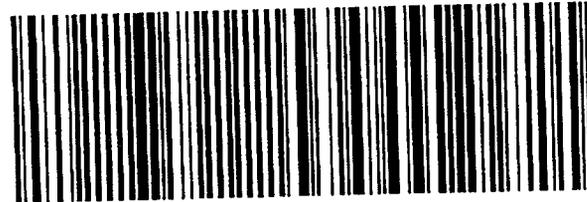
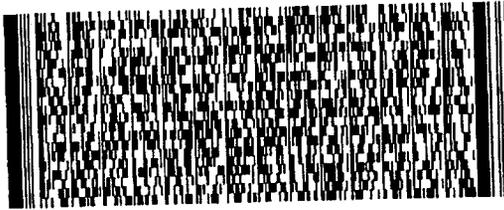
0201

80002

CO-US

DEN

XH WHHA



500G2/BDD9/7EF8

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