SAF-RC-149
300 Area D4 Waste 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 JP0940 SAF-RC-149

Rad only ☑ Chem only Rad & Chem

☑ Complete Partial

Sample Location: 300 Area B North Queue

ANALYTICAL REPORT

Job Number: 280-67866-1

SDG Number: JP0940

Job Description: SAF# RC-149

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 9:34 AM

Kae E Yoder, Senior Project Manager
4955 Yarrow Street, Arvada, CO, 80002
(303)736-0190
kae.yoder@testamericainc.com
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.

Table of Contents

Cover Title Page 1
Report Narrative 3
Data Qualifiers 4
Sample Summary 5
Method Summary 6
Method / Analyst Summary 7
Sample Results 8
Sample Datasheets 9
QC Results 19
Surrogate Recovery Report 20
Qc Reports 21
Qc Association Summary 24
Client Chain of Custody 25

CASE NARRATIVE

Client: Washington Closure Hanford

Project: WASHINGTON CLOSURE HANFORD

Job Number: 280-67866-1

SDG #: JP0940
SAF#: RC-149

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

CLIENT ID	LAB ID	ANALYSES REQUESTED	ANALYSES PERFORMED
J1V675	280-67866-1	WTPH-D+	NWTPH-Dx
J1V676	280-67866-2	WTPH-D+	NWTPH-Dx
J1V677	280-67866-3	WTPH-D+	NWTPH-Dx
J1V678	280-67866-4	WTPH-D+	NWTPH-Dx
J1V679	280-67866-5	WTPH-D+	NWTPH-Dx

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 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 - NWTPH-Dx - DRO
Low levels of C10-C28 are present in the method blank associated with batch 280-272844. Because the concentration in the method blank is not present at a level 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: 280-67866-1
Sdg Number: JP0940

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: 280-67866-1
Sdg Number: JP0940

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-67866-1	J1V675	Solid	04/13/2015 1226	04/15/2015 0930
280-67866-2	J1V676	Solid	04/13/2015 1234	04/15/2015 0930
280-67866-3	J1V677	Solid	04/13/2015 1243	04/15/2015 0930
280-67866-4	J1V678	Solid	04/13/2015 1251	04/15/2015 0930
280-67866-5	J1V679	Solid	04/13/2015 1300	04/15/2015 0930

METHOD SUMMARY

Client: Washington Closure Hanford

Job Number: 280-67866-1
Sdg Number: JP0940

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
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: 280-67866-1
Sdg Number: JP0940

Method	Analyst	Analyst ID
NWTPH NWTPH-Dx	Moore, Tegan E	TEM
ASTM D-2216	Shaheen, Scott W	SWS

SAMPLE RESULTS

Client: Washington Closure Hanford

Job Number: 280-67866-1
Sdg Number: JP0940

Client Sample ID: **J1V675**

Lab Sample ID: 280-67866-1
Client Matrix: Solid
% Moisture: 3.4

Date Sampled: 04/13/2015 1226
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:	280-272844	Lab File ID:	04170021.D
Dilution:	1.0			Initial Weight/Volume:	30.0 g
Analysis Date:	04/17/2015 1857			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		27000		1000	4100
C10-C28		13000	B	700	4100

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	81		49 - 115

Client: Washington Closure Hanford

Job Number: 280-67866-1
Sdg Number: JP0940

Client Sample ID: **J1V676**

Lab Sample ID: 280-67866-2
Client Matrix: Solid
% Moisture: 2.6

Date Sampled: 04/13/2015 1234
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:	280-272844	Lab File ID:	04170022.D
Dilution:	1.0			Initial Weight/Volume:	31.0 g
Analysis Date:	04/17/2015 1925			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		18000		990	4000
C10-C28		9800	B	670	4000

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	72		49 - 115

Client: Washington Closure Hanford

Job Number: 280-67866-1
Sdg Number: JP0940

Client Sample ID: **J1V677**

Lab Sample ID: 280-67866-3
Client Matrix: Solid
% Moisture: 2.3

Date Sampled: 04/13/2015 1243
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:	280-272844	Lab File ID:	04170023.D
Dilution:	1.0			Initial Weight/Volume:	31.0 g
Analysis Date:	04/17/2015 1954			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		54000		990	4000
C10-C28		27000	B	670	4000

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

Client: Washington Closure Hanford

Job Number: 280-67866-1
Sdg Number: JP0940

Client Sample ID: **J1V678**

Lab Sample ID: 280-67866-4
Client Matrix: Solid
% Moisture: 3.4

Date Sampled: 04/13/2015 1251
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:	280-272844	Lab File ID:	04170024.D
Dilution:	1.0			Initial Weight/Volume:	30.4 g
Analysis Date:	04/17/2015 2022			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		5500		1000	4100
C10-C28		3800	J B	690	4100

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	83		49 - 115

Client: Washington Closure Hanford

Job Number: 280-67866-1
Sdg Number: JP0940

Client Sample ID: **J1V679**

Lab Sample ID: 280-67866-5
Client Matrix: Solid
% Moisture: 3.4

Date Sampled: 04/13/2015 1300
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:	280-272844	Lab File ID:	04170027.D
Dilution:	1.0			Initial Weight/Volume:	31.2 g
Analysis Date:	04/17/2015 2147			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		6600		990	4000
C10-C28		4600	B	670	4000

Surrogate	%Rec	Qualifier	Acceptance Limits
o-Terphenyl	86		49 - 115

Client: Washington Closure Hanford

Job Number: 280-67866-1
Sdg Number: JP0940

General Chemistry

Client Sample ID: **J1V675**

Lab Sample ID: 280-67866-1
Client Matrix: Solid

Date Sampled: 04/13/2015 1226
Date Received: 04/15/2015 0930

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	3.4		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-273372 Analysis Date: 04/18/2015 1325 DryWt Corrected: N

Client: Washington Closure Hanford

Job Number: 280-67866-1
Sdg Number: JP0940

General Chemistry

Client Sample ID: **J1V676**

Lab Sample ID: 280-67866-2
Client Matrix: Solid

Date Sampled: 04/13/2015 1234
Date Received: 04/15/2015 0930

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	2.6		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-273372 Analysis Date: 04/18/2015 1325 DryWt Corrected: N

General Chemistry

Client Sample ID: **J1V677**

Lab Sample ID: 280-67866-3
Client Matrix: Solid

Date Sampled: 04/13/2015 1243
Date Received: 04/15/2015 0930

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	2.3		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-273372 Analysis Date: 04/18/2015 1325 DryWt Corrected: N

Client: Washington Closure Hanford

Job Number: 280-67866-1
Sdg Number: JP0940

General Chemistry

Client Sample ID: **J1V678**

Lab Sample ID: 280-67866-4
Client Matrix: Solid

Date Sampled: 04/13/2015 1251
Date Received: 04/15/2015 0930

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	3.4		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-273372 Analysis Date: 04/18/2015 1325 DryWt Corrected: N

Client: Washington Closure Hanford

Job Number: 280-67866-1
Sdg Number: JP0940

General Chemistry

Client Sample ID: **J1V679**

Lab Sample ID: 280-67866-5
Client Matrix: Solid

Date Sampled: 04/13/2015 1300
Date Received: 04/15/2015 0930

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Percent Moisture	3.4		%	0.10	0.10	1.0	D-2216

Analysis Batch: 280-273372 Analysis Date: 04/18/2015 1325 DryWt Corrected: N

QUALITY CONTROL RESULTS

Client: Washington Closure Hanford

Job Number: 280-67866-1
Sdg Number: JP0940

Surrogate Recovery Report

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

Client Matrix: Solid

Lab Sample ID	Client Sample ID	OTPH %Rec
280-67866-1	J1V675	81
280-67866-2	J1V676	72
280-67866-3	J1V677	77
280-67866-4	J1V678	83
280-67866-5	J1V679	86
MB 280-272844/1-A		81
LCS 280-272844/2-A		80
280-67866-4 MS	J1V678 MS	75
280-67866-4 MSD	J1V678 MSD	85

Surrogate	Acceptance Limits
OTPH = o-Terphenyl	49-115

Client: Washington Closure Hanford

Job Number: 280-67866-1
Sdg Number: JP0940

Method Blank - Batch: 280-272844

Method: NWTPH-Dx
Preparation: 3550C

Lab Sample ID:	MB 280-272844/1-A	Analysis Batch:	280-273200	Instrument ID:	SGC_U
Client Matrix:	Solid	Prep Batch:	280-272844	Lab File ID:	04170019.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	32.7 g
Analysis Date:	04/17/2015 1800	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	910	U	910	3700
C10-C28	1200	J	620	3700

Surrogate	% Rec	Acceptance Limits
o-Terphenyl	81	49 - 115

Lab Control Sample - Batch: 280-272844

Method: NWTPH-Dx
Preparation: 3550C

Lab Sample ID:	LCS 280-272844/2-A	Analysis Batch:	280-273200	Instrument ID:	SGC_U
Client Matrix:	Solid	Prep Batch:	280-272844	Lab File ID:	04170020.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	31.7 g
Analysis Date:	04/17/2015 1829	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	63100	54600	86	57 - 115	
C10-C28	63100	53000	84	53 - 115	

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

Client: Washington Closure Hanford

Job Number: 280-67866-1
Sdg Number: JP0940

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-272844

Method: NWTPH-Dx
Preparation: 3550C

MS Lab Sample ID:	280-67866-4	Analysis Batch:	280-273200	Instrument ID:	SGC_U
Client Matrix:	Solid	Prep Batch:	280-272844	Lab File ID:	04170025.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.0 g
Analysis Date:	04/17/2015 2050			Final Weight/Volume:	1 mL
Prep Date:	04/15/2015 1948			Injection Volume:	1 uL
Leach Date:	N/A				

MSD Lab Sample ID:	280-67866-4	Analysis Batch:	280-273200	Instrument ID:	SGC_U
Client Matrix:	Solid	Prep Batch:	280-272844	Lab File ID:	04170026.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30.5 g
Analysis Date:	04/17/2015 2119			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	83	91	57 - 115	8	23		
C10-C28	80	88	56 - 115	8	23		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
o-Terphenyl	75	85	49 - 115

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-272844

Method: NWTPH-Dx
Preparation: 3550C

MS Lab Sample ID:	280-67866-4	Units:	ug/Kg	MSD Lab Sample ID:	280-67866-4
Client Matrix:	Solid			Client Matrix:	Solid
Dilution:	1.0			Dilution:	1.0
Analysis Date:	04/17/2015 2050			Analysis Date:	04/17/2015 2119
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	5500		69000	67900	62600	67600
C10-C28	3800	J	69000	67900	58900	63500

Client: Washington Closure Hanford

Job Number: 280-67866-1
Sdg Number: JP0940

Duplicate - Batch: 280-273372

Method: D-2216
Preparation: N/A

Lab Sample ID:	280-67866-1	Analysis Batch:	280-273372	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 1325	Units:	%	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Percent Moisture	3.4	4.2	20	20	

Client: Washington Closure Hanford

Job Number: 280-67866-1
Sdg Number: JP0940

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 280-272844					
LCS 280-272844/2-A	Lab Control Sample	T	Solid	3550C	
MB 280-272844/1-A	Method Blank	T	Solid	3550C	
280-67866-1	J1V675	T	Solid	3550C	
280-67866-2	J1V676	T	Solid	3550C	
280-67866-3	J1V677	T	Solid	3550C	
280-67866-4	J1V678	T	Solid	3550C	
280-67866-4MS	Matrix Spike	T	Solid	3550C	
280-67866-4MSD	Matrix Spike Duplicate	T	Solid	3550C	
280-67866-5	J1V679	T	Solid	3550C	
Analysis Batch:280-273200					
LCS 280-272844/2-A	Lab Control Sample	T	Solid	NWTPH-Dx	280-272844
MB 280-272844/1-A	Method Blank	T	Solid	NWTPH-Dx	280-272844
280-67866-1	J1V675	T	Solid	NWTPH-Dx	280-272844
280-67866-2	J1V676	T	Solid	NWTPH-Dx	280-272844
280-67866-3	J1V677	T	Solid	NWTPH-Dx	280-272844
280-67866-4	J1V678	T	Solid	NWTPH-Dx	280-272844
280-67866-4MS	Matrix Spike	T	Solid	NWTPH-Dx	280-272844
280-67866-4MSD	Matrix Spike Duplicate	T	Solid	NWTPH-Dx	280-272844
280-67866-5	J1V679	T	Solid	NWTPH-Dx	280-272844

Report Basis
T = Total

General Chemistry

Analysis Batch:280-273372					
280-67866-1	J1V675	T	Solid	D-2216	
280-67866-1DU	Duplicate	T	Solid	D-2216	
280-67866-2	J1V676	T	Solid	D-2216	
280-67866-3	J1V677	T	Solid	D-2216	
280-67866-4	J1V678	T	Solid	D-2216	
280-67866-5	J1V679	T	Solid	D-2216	

Report Basis
T = Total

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-149-151

Collector: ETHERINGTON, TW	Company Contact: Joan Kessner	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 8B	Data Turnaround: 7 Day		
Project Designation: 300 Area D4 Waste Sites	Sampling Location: 300 Area B North Queue		SAF No.: RC-149
Ice Chest No.: RCC-08-017	Field Logbook No.: EL-1663-08	COA: R3EXITY000	Method of Shipment: Commercial Carrier
Shipped To: TestAmerica Denver	Offsite Property No.: A131401		Bill of Lading/Air Bill No.: SEE OSPC

Other Labs Shipped To: Radiological Counting Facility
Test America Richland Lab
RCF39026/39027

280-67866 Chain of Custody

POSSIBLE SAMPLE HAZARDS/REMARKS
potentially radioactive < DOT. Limits 4/14/15 cmb

Special Handling and/or Storage
cooling as required

Preservation	Cool 4C	Cool 4C										
Type of Container	G/P	aG										
No. of Container(s)	4/14/15 cmb	1										
Volume	250mL	500mL										
Sample Analysis	See item (1) in Special Instructions	TPH-Diesel Range - WTPH-D +										

Sample No.	Matrix	Sample Date	Sample Time										
J1V675	SOIL	4-13-15	1226	4/14/15 cmb	✓								
J1V676	SOIL	4-13-15	1234	4/14/15 cmb	✓								
J1V677	SOIL	4-13-15	1243	✓	✓								
J1V678	SOIL	4-13-15	1251	✓	✓								
J1V679	SOIL	4-13-15	1300	✓	✓								

CHAIN OF POSSESSION / Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[illegible]	4-13-15 1310	DWSHEA 4/13/15 DWS (WCH)	4/13/15 1310
DWSHEA DWSHEA	4/13/15 1416	C. Bingham	4-13-15 1416
C. Bingham	4-13-15 1420	1060 Battelle fridge #2A	4-13-15 1420
1060 Battelle fridge #2A	4/14/15 0825	C. Bingham	4/14/15 0825
C. Bingham WCH	4/14/15 0830	fed EX 4/14/15 cmb	4/14/15
		[illegible]	4/15/15 9:30

FINAL SAMPLE DISPOSITION: Disposal Method | Disposed By | Date/Time

SPECIAL INSTRUCTIONS

~~(1) ICP Metals - 6010TR (Client List) (Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Tin, Uranium, Vanadium, Zinc, Zirconium); Mercury, 7471 - (CV) (Mercury)~~ 4/14/15 cmb

4.1 IRS +0.2
Transferred by NEO 4/15/15

REVIEWED BY K. Wood/Vacuol DATE 4-14-15

JP0940

WCH-EE-011

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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

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 #: 5P0940 NA[ ] SAF #: RC-149 NA [ ]

Job Number: 67866 Chain of Custody # RC-149-151

Shipping Container ID: RCC-08-017 Air Bill # 773363889335

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 IRS +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

J1512150223030uv

Ship Date: 14APR15
ActWgt: 70.0 LB
CAD: 105266502/INET3610

Delivery Address Bar Code

Ref # 01H5922800
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

637J2/8FCS/EE4B

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Analytical Data Package Prepared For

Washington Closure Hanford

Analysis Provided By

TestAmerica Richland
2800 George Washington Way
Richland WA, 99354
(509)375-3131
Assigned Laboratory Code: TARL

SDG Number: JP0940

Data Package Contains 10 Pages

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

Washington Closure Hanford
2620 Fermi Avenue
Richland, WA 99354

April 17, 2015

Attention: Joan Kessner

SAF Number	:	RC-149
Date SDG Closed	:	April 14, 2015
Number of Samples	:	Five (5)
Sample Type	:	Soil
SDG Number	:	JP0940
Data Deliverable	:	Quick Turn Metals / Summary

CASE NARRATIVE

I. Introduction

On April 14, 2015, five soil samples were received at TestAmerica for analysis. Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the Washington Closure Hanford (WCH) specific ID;

WCH ID#	TARL ID#	MATRIX	DATE OF RECEIPT
J1V675	M6K3G	SOIL	4/14/15
J1V676	M6K3H	SOIL	4/14/15
J1V677	M6K3J	SOIL	4/14/15
J1V678	M6K3K	SOIL	4/14/15
J1V679	M6K3M	SOIL	4/14/15

II. Sample Receipt

The samples were received in good condition and no anomalies were noted during check-in.

III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors. The requested analyses were:

ICP Metals
ICP Metals by method SW-846 6010A

IV. Quality Control

SDG JP0940 includes a minimum of one Laboratory Control Samples (LCS), one method (reagent)

blank, a duplicate sample, matrix spike sample and a matrix spike duplicate sample. Any exceptions have been noted in the "Comments" section.

Blanks and LCS are reported in mg/L units, other QC and sample results are reported in the same units.

V. Comments

ICP Metals

ICP Metals by method SW-846 6010A

One batch was analyzed for the samples with the standard metal request list.

Batch 5104028:

A 1:2 dilution was performed on samples J1V675, J1V676, sample duplicate, MS and MSD; Aluminum was above the Linear Range. The MS and MSD recovery for Barium was not within the acceptance limits due to the high concentration of Barium in the sample. Except as noted; the LCS, batch blank, samples, sample duplicate, MS, MSD,ICB, ICV, CCB and CCV results are within contractual limits.

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. 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 following signature.

Reviewed and approved:

Rhonda Wagar
Project Manager

SDG: JP0940
SAF #: RC-149
BATCH: 5104028
MATRIX: SOIL
ANALYSIS DATE: 4/14/15

Client_id	Matrix	Result_t	Cas_nbr	Parameter	Result	Qualifier	Units	Reporting_Limits_s	Reporting_Limits	Uncertainty_1s	Analyzed_s	Analyze	Decision_LCS	Reco	Added	Analysis_date_time	Batch_nbr	Test_Metho	Lab_sample_id
J1V675	SOIL	CS	7440-22-4	Silver	1.00E-01	U	UG/G	1.93E+00	1.93E+00	1.40E-01	0.249	G				4/14/2015 15:34	5104028	46DQ	M6K3G1A0
J1V675	SOIL	CS	7440-38-2	Arsenic	3.46E+00	U	UG/G	1.75E+00	1.75E+00	1.10E+00	0.249	G				4/14/2015 15:34	5104028	46DQ	M6K3G1A0
J1V675	SOIL	CS	7440-39-3	Ba	1.61E+03		UG/G	4.02E-01	4.02E-01	1.40E+01	0.249	G				4/14/2015 15:34	5104028	46DQ	M6K3G1A0
J1V675	SOIL	CS	7440-43-9	Cadmium	4.05E-01	U	UG/G	2.01E-01	2.01E-01	7.50E-02	0.249	G				4/14/2015 15:34	5104028	46DQ	M6K3G1A0
J1V675	SOIL	CS	7440-47-3	Chromium	1.25E+01		UG/G	8.03E-01	8.03E-01	4.30E-01	0.249	G				4/14/2015 15:34	5104028	46DQ	M6K3G1A0
J1V675	SOIL	CS	7439-92-1	Lead	2.76E+01		UG/G	8.63E-01	8.63E-01	9.80E-01	0.249	G				4/14/2015 15:34	5104028	46DQ	M6K3G1A0
J1V675	SOIL	CS	7782-49-2	Selenium	1.37E+00	U	UG/G	2.41E+00	2.41E+00	4.30E-01	0.249	G				4/14/2015 15:34	5104028	46DQ	M6K3G1A0
J1V676	SOIL	CS	7440-22-4	Silver	-8.51E-02	U	UG/G	3.89E+00	3.89E+00	1.00E-01	0.2467	G				4/14/2015 16:45	5104028	46DQ	M6K3H1AA
J1V676	SOIL	CS	7440-38-2	Arsenic	3.44E+00	U	UG/G	3.53E+00	3.53E+00	9.30E-01	0.2467	G				4/14/2015 16:45	5104028	46DQ	M6K3H1AA
J1V676	SOIL	CS	7440-39-3	Ba	2.45E+03		UG/G	8.11E-01	8.11E-01	3.90E+01	0.2467	G				4/14/2015 16:45	5104028	46DQ	M6K3H1AA
J1V676	SOIL	CS	7440-43-9	Cadmium	4.92E-01	U	UG/G	4.05E-01	4.05E-01	1.20E-01	0.2467	G				4/14/2015 16:45	5104028	46DQ	M6K3H1AA
J1V676	SOIL	CS	7440-47-3	Chromium	1.59E+01	U	UG/G	1.62E+00	1.62E+00	5.00E-01	0.2467	G				4/14/2015 16:45	5104028	46DQ	M6K3H1AA
J1V676	SOIL	CS	7439-92-1	Lead	5.22E+01		UG/G	1.74E+00	1.74E+00	5.50E-01	0.2467	G				4/14/2015 16:45	5104028	46DQ	M6K3H1AA
J1V676	SOIL	CS	7782-49-2	Selenium	1.41E+00	U	UG/G	4.86E+00	4.86E+00	6.40E-01	0.2467	G				4/14/2015 16:45	5104028	46DQ	M6K3H1AA
J1V677	SOIL	CS	7440-22-4	Silver	-2.72E-02	U	UG/G	1.89E+00	1.89E+00	2.40E-01	0.2536	G				4/14/2015 15:59	5104028	46DQ	M6K3J1AA
J1V677	SOIL	CS	7440-38-2	Arsenic	3.83E+00	U	UG/G	1.72E+00	1.72E+00	1.20E+00	0.2536	G				4/14/2015 15:59	5104028	46DQ	M6K3J1AA
J1V677	SOIL	CS	7440-39-3	Ba	9.94E+02		UG/G	3.94E-01	3.94E-01	4.90E+01	0.2536	G				4/14/2015 15:59	5104028	46DQ	M6K3J1AA
J1V677	SOIL	CS	7440-43-9	Cadmium	2.99E-01	U	UG/G	1.97E-01	1.97E-01	6.00E-02	0.2536	G				4/14/2015 15:59	5104028	46DQ	M6K3J1AA
J1V677	SOIL	CS	7440-47-3	Chromium	1.25E+01		UG/G	7.89E-01	7.89E-01	9.40E-02	0.2536	G				4/14/2015 15:59	5104028	46DQ	M6K3J1AA
J1V677	SOIL	CS	7439-92-1	Lead	2.37E+01		UG/G	8.48E-01	8.48E-01	3.40E-01	0.2536	G				4/14/2015 15:59	5104028	46DQ	M6K3J1AA
J1V677	SOIL	CS	7782-49-2	Selenium	1.31E+00	U	UG/G	2.37E+00	2.37E+00	1.20E+00	0.2536	G				4/14/2015 15:59	5104028	46DQ	M6K3J1AA
J1V678	SOIL	CS	7440-22-4	Silver	-3.61E-02	U	UG/G	1.94E+00	1.94E+00	2.40E-01	0.2476	G				4/14/2015 16:03	5104028	46DQ	M6K3K1AA
J1V678	SOIL	CS	7440-38-2	Arsenic	9.10E+00	U	UG/G	1.76E+00	1.76E+00	1.20E+00	0.2476	G				4/14/2015 16:03	5104028	46DQ	M6K3K1AA
J1V678	SOIL	CS	7440-39-3	Ba	9.44E+01		UG/G	4.04E-01	4.04E-01	2.10E-01	0.2476	G				4/14/2015 16:03	5104028	46DQ	M6K3K1AA
J1V678	SOIL	CS	7440-43-9	Cadmium	1.29E-01	U	UG/G	2.02E-01	2.02E-01	3.40E-02	0.2476	G				4/14/2015 16:03	5104028	46DQ	M6K3K1AA
J1V678	SOIL	CS	7440-47-3	Chromium	1.05E+01		UG/G	8.08E-01	8.08E-01	2.60E-01	0.2476	G				4/14/2015 16:03	5104028	46DQ	M6K3K1AA
J1V678	SOIL	CS	7439-92-1	Lead	1.60E+01		UG/G	8.68E-01	8.68E-01	3.20E-01	0.2476	G				4/14/2015 16:03	5104028	46DQ	M6K3K1AA
J1V678	SOIL	CS	7782-49-2	Selenium	1.10E+00	U	UG/G	2.42E+00	2.42E+00	1.80E+00	0.2476	G				4/14/2015 16:03	5104028	46DQ	M6K3K1AA
J1V679	SOIL	CS	7440-22-4	Silver	1.48E-01	U	UG/G	1.90E+00	1.90E+00	4.00E-01	0.2524	G				4/14/2015 16:21	5104028	46DQ	M6K3M1AA
J1V679	SOIL	CS	7440-38-2	Arsenic	7.38E+00	U	UG/G	1.72E+00	1.72E+00	9.60E-01	0.2524	G				4/14/2015 16:21	5104028	46DQ	M6K3M1AA
J1V679	SOIL	CS	7440-39-3	Ba	1.29E+02		UG/G	3.96E-01	3.96E-01	3.20E+00	0.2524	G				4/14/2015 16:21	5104028	46DQ	M6K3M1AA
J1V679	SOIL	CS	7440-43-9	Cadmium	1.85E-01	U	UG/G	1.98E-01	1.98E-01	5.60E-02	0.2524	G				4/14/2015 16:21	5104028	46DQ	M6K3M1AA
J1V679	SOIL	CS	7440-47-3	Chromium	1.13E+01		UG/G	7.92E-01	7.92E-01	3.60E-01	0.2524	G				4/14/2015 16:21	5104028	46DQ	M6K3M1AA
J1V679	SOIL	CS	7439-92-1	Lead	8.47E+00	U	UG/G	8.52E-01	8.52E-01	5.00E-01	0.2524	G				4/14/2015 16:21	5104028	46DQ	M6K3M1AA
J1V679	SOIL	CS	7782-49-2	Selenium	1.55E+00	U	UG/G	2.38E+00	2.38E+00	2.00E-01	0.2524	G				4/14/2015 16:21	5104028	46DQ	M6K3M1AA
INTRA-LAB BLANK	SOIL	BLK	7440-22-4	Silver	1.39E-01	U	MG/L	1.94E+00	1.94E+00	2.10E-01	0.2468	L				4/14/2015 15:20	5104028	46DQ	M6K3T1AA
INTRA-LAB BLANK	SOIL	BLK	7440-38-2	Arsenic	-6.73E-02	U	MG/L	1.76E+00	1.76E+00	9.80E-01	0.2468	L				4/14/2015 15:20	5104028	46DQ	M6K3T1AA
INTRA-LAB BLANK	SOIL	BLK	7440-39-3	Ba	5.19E-02	U	MG/L	4.05E-01	4.05E-01	1.30E-02	0.2468	L				4/14/2015 15:20	5104028	46DQ	M6K3T1AA
INTRA-LAB BLANK	SOIL	BLK	7440-43-9	Cadmium	6.42E-02	U	MG/L	2.03E-01	2.03E-01	4.90E-02	0.2468	L				4/14/2015 15:20	5104028	46DQ	M6K3T1AA
INTRA-LAB BLANK	SOIL	BLK	7440-47-3	Chromium	2.40E-01	U	MG/L	8.10E-01	8.10E-01	1.80E-01	0.2468	L				4/14/2015 15:20	5104028	46DQ	M6K3T1AA
INTRA-LAB BLANK	SOIL	BLK	7439-92-1	Lead	1.72E-02	U	MG/L	8.71E-01	8.71E-01	7.90E-01	0.2468	L				4/14/2015 15:20	5104028	46DQ	M6K3T1AA
INTRA-LAB BLANK	SOIL	BLK	7782-49-2	Selenium	5.23E-01	U	MG/L	2.43E+00	2.43E+00	7.10E-01	0.2468	L				4/14/2015 15:20	5104028	46DQ	M6K3T1AA
INTRA-LAB CHECK	SOIL	LCS	7440-22-4	Silver	2.23E+02		MG/L	1.95E+00	1.95E+00	8.80E+00	0.246	L		1.1	203.3	4/14/2015 15:24	5104028	46DQ	M6K3T1AA
INTRA-LAB CHECK	SOIL	LCS	7440-38-2	Arsenic	2.05E+02		MG/L	1.77E+00	1.77E+00	1.60E+00	0.246	L		1.01	203.3	4/14/2015 15:24	5104028	46DQ	M6K3T1AA
INTRA-LAB CHECK	SOIL	LCS	7440-39-3	Ba	2.17E+02		MG/L	4.07E-01	4.07E-01	9.90E+00	0.246	L		1.07	203.3	4/14/2015 15:24	5104028	46DQ	M6K3T1AA
INTRA-LAB CHECK	SOIL	LCS	7440-43-9	Cadmium	2.04E+02		MG/L	2.03E-01	2.03E-01	3.90E-01	0.246	L		1.01	203.3	4/14/2015 15:24	5104028	46DQ	M6K3T1AA
INTRA-LAB CHECK	SOIL	LCS	7440-47-3	Chromium	2.24E+02		MG/L	8.13E-01	8.13E-01	1.10E+01	0.246	L		1.1	203.3	4/14/2015 15:24	5104028	46DQ	M6K3T1AA
INTRA-LAB CHECK	SOIL	LCS	7439-92-1	Lead	2.01E+02		MG/L	8.74E-01	8.74E-01	1.20E+00	0.246	L		0.99	203.3	4/14/2015 15:24	5104028	46DQ	M6K3T1AA
INTRA-LAB CHECK	SOIL	LCS	7782-49-2	Selenium	2.05E+02		MG/L	2.44E+00	2.44E+00	8.90E-01	0.246	L		1.01	203.3	4/14/2015 15:24	5104028	46DQ	M6K3T1AA
J1V675 DUP	SOIL	DUP	7440-22-4	Silver	6.84E-02	U	UG/G	3.86E+00	3.86E+00	3.70E-01	0.2485	G				4/14/2015 16:41	5104028	46DQ	M6K3G1A0
J1V675 DUP	SOIL	DUP	7440-38-2	Arsenic	4.01E+00	U	UG/G	3.50E+00	3.50E+00	1.10E+00	0.2485	G				4/14/2015 16:41	5104028	46DQ	M6K3G1A0
J1V675 DUP	SOIL	DUP	7440-39-3	Ba	2.03E+03		UG/G	8.05E-01	8.05E-01	1.10E+01	0.2485	G				4/14/2015 16:41	5104028	46DQ	M6K3G1A0
J1V675 DUP	SOIL	DUP	7440-43-9	Cadmium	4.38E-01	U	UG/G	4.02E-01	4.02E-01	8.90E-02	0.2485	G				4/14/2015 16:41	5104028	46DQ	M6K3G1A0
J1V675 DUP	SOIL	DUP	7440-47-3	Chromium	1.28E+01	U	UG/G	1.61E+00	1.61E+00	2.40E-01	0.2485	G				4/14/2015 16:41	5104028	46DQ	M6K3G1A0
J1V675 DUP	SOIL	DUP	7439-92-1	Lead	2.57E+01		UG/G	1.73E+00	1.73E+00	1.30E+00	0.2485	G				4/14/2015 16:41	5104028	46DQ	M6K3G1A0
J1V675 DUP	SOIL	DUP	7782-49-2	Selenium	1.76E+00	U	UG/G	4.83E+00	4.83E+00	2.50E+00	0.2485	G				4/14/2015 16:41	5104028	46DQ	M6K3G1A0
J1V675	SOIL	MS	7440-22-4	Silver	2.11E+02		% RECC	3.82E+00	3.82E+00	3.10E+00	0.2515	L		1.06	198.8	4/14/2015 16:29	5104028	46DQ	M6K3G1A0
J1V675	SOIL	MS	7440-38-2	Arsenic	2.00E+02		% RECC	3.46E+00	3.46E+00	1.90E+00	0.2515	L		1.01	198.8	4/14/2015 16:29	5104028	46DQ	M6K3G1A0
J1V675	SOIL	MS	7440-39-3	Ba	-1.14E+03		% RECC	7.95E-01	7.95E-01	5.80E+00	0.2515	L				4/14/2015 16:29	5104028	46DQ	M6K3G1A0
J1V675	SOIL	MS	7440-43-9	Cadmium	1.99E+02		% RECC	3.98E-01	3.98E-01	1.10E+00	0.2515	L		1	198.8	4/14/2015 16:29	5104028	46DQ	M6K3G1A0
J1V675	SOIL	MS	7440-47-3	Chromium	1.96E+02		% RECC	1.59E+00	1.59E+00	1.50E+00	0.2515	L		0.98	198.8	4/14/2015 16:29	5104028	46DQ	M6K3G1A0
J1V675	SOIL	MS	7439-92-1	Lead	1.57E+02		% RECC	1.71E+00	1.71E+00	1.30E+00	0.2515	L		0.79	198.8	4/14/2015 16:29	5104028	46DQ	M6K3G1A0
J1V675	SOIL	MS	7782-49-2	Selenium	2.01E+02		% RECC	4.77E+00	4.77E+00	6.00E+00	0.2515	L		1.01	198.8	4/14/2015 16:29	5104028	46DQ	M6K3G1A0
J1V675	SOIL	MSD	7440-22-4	Silver	2.15E+02		% RECC	3.78E+00	3.78E+00	1.30E+00	0.2538	L		1.09	197	4/14/2015 16:35	5104028	46DQ	M6K3G1A0
J1V675	SOIL	MSD	7440-38-2	Arsenic	2.00E+02		% RECC	3.43E+00	3.43E+00	1.50E+00	0.2538	L		1.01	197	4/14/2015 16:35	5104028	46DQ	M6K3G1A0
J1V675	SOIL	MSD	7440-39-3	Ba	-9.70E+02		% RECC	7.88E-01	7.88E-01	8.00E+01	0.2538	L				4/14/2015 16:35	5104028	46DQ	M6K3G1A0
J1V675	SOIL	MSD	7440-43-9	Cadmium	1.99E+02		% RECC	3.94E-01	3.94E-01	5.20E-01	0.2538	L		1.01	197	4/14/2015 16:35	5104028	46DQ	M6K3G1A0
J1V675	SOIL	MSD	7440-47-3	Chromium	1.98E+02		% RECC	1.58E+00	1.58E+00	7.60E-01	0.2538	L		1.01	197	4/14/2015 16:35	5104028	46DQ	M6K3G1A0
J1V675	SOIL	MSD	7439-92-1	Lead	1.53E+02		% RECC	1.69E+00	1.69E+00	3.00E+00	0.2538	L		0.78	197	4/14/2015 16:35	5104028	46DQ	M6K3G1A0

Client_id	Matrix	Result_t	Cas_nbr	Parameter	Result	Qualifier	Units	Reporting_Limits_:	Reporting_Limits	Uncertainty_1s	Analyzed_:	Analyze	Decision_LCS	Recc	AddedA	Analysis_date_time	Batch_nbr	Test_Metho	Lab_sample_id
J1V675	SOIL	MSD	7782-49-2	Selenium	2.01E+02		% REC(	4.73E+00	4.73E+00	6.10E-01	0.2538	L		1.02	197	4/14/2015 16:35	5104028	46DQ	M6K3G1A0

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Data Review/Verification Checklist

CHEMISTRY, First/Second Level Review

4/15/2015 9:18:25 AM

Lot No., Due Date: J5D140411; 04/15/2015
Client, Site: 127642; S00W235B00 HANFORD
QC Batch No., Method Test: 5104028; M6010_S 6010A
SDG, Matrix: JP0940; SOIL

	Yes	No	N/A	2nd
1.0 Initial Calibration				
1.1 Performed at required frequency with required number of levels?	✓			✓
1.2 Correlation coefficient within QC limits?	✓			✓
1.3 Initial calibration verification (ICV) analyzed immediately after calibr. and results within QC limits of +/- 10% at 0.75 ppm?	✓			✓
1.4 ICB analyzed immediately after ICV and concentration of all parameters +/- report limit from zero? RL per RadCalc.	✓			✓
2.0 Continuing Calibration				
2.1 CCV analyzed at required frequency and all parameters within QC limits or +/- 10% at 0.7500 ppm?	✓			✓
2.2 CCB analyzed at required frequency and all results +/- reporting limit from zero?	✓			✓
3.0 Sample Analysis				
3.1 Were any samples with concentration above the linear range diluted and reanalyzed?	✓			✓
3.2 Were all sample holding times met?	✓			✓
4.0 QC Samples				
4.1 All results for the preparation blank < reporting limits?	✓			✓
4.2 MS or MS/MSD recoveries within 25% at 1 ppm and within 20% RPD (for MSD)?		✓		✓
4.3 LCS precent recovery within 20% at 1 ppm and 20% RPD (for LCSD)?	✓			✓
4.4 "ICP Only: Sample and DUP within 35% RPD?"	✓			✓
4.5 ICP only: One serial dilution performed and within 10% of parent per SDG?	✓			✓
4.6 ICP only: RLV run per batch and within 20% of current values?	✓			✓
4.7 ICP only: ICSA,ICSAB analyzed at the required frequencies and within 20% of values per dilution record?	✓			✓
5.0 Other				
5.1 Are all nonconformances included and noted?	✓			✓
5.2 Is the correct date and time of analysis shown?	✓			✓
5.3 Did the analyst sign and date the digestion log for the analytical run?	✓			✓
5.4 Correct methodology used?	✓			✓
5.5 Transcriptions checked?	✓			✓
5.6 Calculations checked at minimum frequency?	✓			✓
5.7 Units checked?	✓			✓
5.8 Verified that appropriate data transferred to ReportDB?	✓			✓

6.0 Comments on any 'No' response:

First Level H. Rahari **Date** 4/15/15 **Second** [illegible] **Date** 04/15/15

TestAmerica Richland
QAS_RADCALCv4.8.66.3

Page 1

Clouseau
Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: **10-30557**
NCM Initiated By: Hooshang Rahavi
Date Opened: 04/15/2015
Date Closed: 04/15/2015

Classification: **Observation**
Status: **CLOSED**
Production Area: Classical Chemistry
Tests: None
Lot #'s (Sample #'s): J5D140411 (1,2),
QC Batches: None.,

Nonconformance: QA/QC Observation
Subcategory: Data accepted

Problem Description / Root Cause

Name	Date	Description
Hooshang Rahavi	04/15/2015	The following samples were above the Linear Range (LR) for Aluminum, A 1:2 Dilution were performed as specified by SOP; M6K3G1AJ ('J1V675') M6K3G1AK ('J1V675') M6K3G1A1 ('J1V675 DUP') M6K3H1AA ('J1V676')

Corrective Action

Name	Date	Corrective Action
Hooshang Rahavi	04/15/2015	

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note	Response	Response Note

Quality Assurance Verification

Verified By	Due Date	Status	Notes
		This section not yet completed by QA.	

Approval History

Date Approved	Approved By	Position

Date Printed: 4/15/2015

Clouseau
Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: **10-30558**
NCM Initiated By: Hooshang Rahavi
Date Opened: 04/15/2015
Date Closed:

Classification: **Anomaly**
Status: **PMREVIEW**
Production Area: Classical Chemistry
Tests: 6010A
Lot #'s (Sample #'s): J5D140000 (28), J5D140411 (1,2,3,4,5),
QC Batches: 5104028,

Nonconformance: Other (describe in detail)
Subcategory: Other (explanation required)

Problem Description / Root Cause

Name	Date	Description
Hooshang Rahavi	04/15/2015	Recovery of Matrix spike and Matrix spike duplicate not in the acceptable range for Barium, because of high concentration Barium in sample.

Corrective Action

Name	Date	Corrective Action
Hooshang Rahavi	04/15/2015	Report data as is for client review.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note	Response	Response Note

Quality Assurance Verification

Verified By	Due Date	Status	Notes
		This section not yet completed by QA.	

Approval History

Date Approved	Approved By	Position

Date Printed: 4/15/2015

Page 1 of 1

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-149-151

Collector: ETHERINGTON, TW	Company Contact: Joan Kessner	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Project Designation: 300 Area D4 Waste Sites	Sampling Location: 300 Area B North Queue		SAF No.: RC-149
Ice Chest No.: NCH-11-017	Field Logbook No.: EL-1663-08	COA: R3EXITY000	Method of Shipment: ~~Commercial Carrier~~ Local Delivery 4/14/15 cmB
Shipped To: 4/14/15 cmB TestAmerica ~~Denver~~ Richland	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: ~~SEE OSPC~~ 4/14/15 cmB N/A

Price Code: QT ~~8B~~ Data Turnaround: ~~7 Day~~ 4/14/15 cmB

Other Labs Shipped To: Radiological Counting Facility

RCF 39026 / 39027

POSSIBLE SAMPLE HAZARDS/REMARKS

potentially radioactive ← D.O.T. Limits 4/14/15 cmB

Special Handling and/or Storage

cooling as required

Preservation	4/14/15 cmB ~~Cool 4C~~ NONE	Cool 4C										
Type of Container	G/P	aG										
No. of Container(s)	1	1										
Volume	250mL	500mL										
Sample Analysis	See item (1) in Special Instructions	TPH-Diesel Range - WTPH-D +										

4/14/15 cmB

Sample No.	Matrix	Sample Date	Sample Time										
J1V675 M6K3G	SOIL	4-13-15	1226	✓	✓								
J1V676 M6K3H	SOIL	4-13-15	1234	✓	✓								
J1V677 M6K3J	SOIL	4-13-15	1243	✓	✓								
J1V678 M6K3K	SOIL	4-13-15	1251	✓	✓								
J1V679 M6K3M	SOIL	4-13-15	1300	✓	✓								

4/14/15 cmB

J5D140411

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[signature]	4-13-15 1310	DWS (WCH) DWSHEA 4/13/15	4/13/15 1310
DWSHEA DWSHEA	4/13/15 1416	C. Bingham [signature]	4-13-15 1416
C. Bingham [signature]	4-13-15 1420	1060 Battelle fridge #2A	4-13-15 1420
1060 Battelle fridge #2A	4/14/15 0825	C. Bingham [signature]	4/14/15 0825
C. Bingham [signature]	4/14/15 0930 WCH	J. Friesz, TARL [signature]	4/14/15 0930

FINAL SAMPLE DISPOSITION — Disposal Method: | Disposed By: | Date/Time:

SPECIAL INSTRUCTIONS

~~(1) ICP Metals - 6010TR (Client List) (Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Tin, Uranium, Vanadium, Zinc, Zirconium); Mercury 7471 - (CV) (Mercury)~~ 4/14/15 cmB

(1) Metals by ICP - 6010 - Quick Turn
Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver. 4/14/15 cmB

J5D140411
SDG# JP0940
Due 4/15/15

JP0940
~~JP0940~~ 4/14/15 cmB

REVIEWED BY K. Wood Viaemel DATE 4-14-15

WCH-EE-011

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 4/14/15 0930 Container GM Screen Result: (Airlock) 20 cpm Initials[JF]
Sample GM Screen Result (Sample Receiving) 20 cpm Initials[JF]

Client: WCH SDG #: JP0940 SAF #: RC-149 NA [ ]

Lot Number: J5D140411

Chain of Custody # RC-149-151

Shipping Container ID or Air Bill Number : _____ NA [JF]

Samples received inside shipping container/cooler/box Yes [JF] Continue with 1 through 4. Initial appropriate response.
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [JF]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [JF]
3. Cooler temperature: 20.4 °C NOT ON ICE NA [ ]
4. Vermiculite/packing materials is NA [JF] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [JF] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 5
7. Containers received: 5x250ml p
8. Sample holding times exceeded? NA [ ] Yes [ ] No [JF]
9. Samples have: ____tape ____hazard labels JF custody seals JF appropriate sample labels
10. Matrix: JF A (FLT, Wipe, Solid, Soil) ____I (Water) ____S (Air, Niosh 7400) ____T (Biological, Ni-63)
11. Samples:
    JF are in good condition ____are leaking ____are broken
    ____have air bubbles (Only for samples requiring no head space) ____Other _____
12. Sample pH appropriate for analysis requested Yes [ ] No [ ] NA [JF]
    (If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO_3 added and pH after addition on table)
13. Were any anomalies identified in sample receipt? Yes [ ] No [JF]
14. Description of anomalies (include sample numbers): NA [JF] _____
15. Sample Location, Sample Collector Listed on COC? * Yes [ ] No [JF]
    *For documentation only. No corrective action needed.
16. Additional Information: N/A

[ ] Client/Courier denied temperature check. [ ] Client/Courier unpack cooler.

Sample Check-in List completed by Sample Custodian:
Signature: _____ Date: 4/14/15

Client Notification needed? Yes [ ] No [X] Date: _____
By: _____
Person contacted: _____

[X] No action necessary; process as is

Project Manager _____ Date 4/14/15

LS-023 Rev. 17, 05/13

Analytical Data Package Prepared For

Washington Closure Hanford

Analysis Provided By

TestAmerica Richland
2800 George Washington Way
Richland WA, 99354
(509)375-3131
Assigned Laboratory Code: TARL

SDG Number: JP0940

Data Package Contains 9 Pages

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

Washington Closure Hanford
2620 Fermi Avenue
Richland, WA 99354

April 20, 2015

Attention: Joan Kessner

SAF Number	:	RC-149
Date SDG Closed	:	April 15, 2015
Number of Samples	:	One (1)
Sample Type	:	Soil
SDG Number	:	JP0940
Data Deliverable	:	3-Day / Summary

CASE NARRATIVE

I. Introduction

On April 15, 2015, one soil sample was received at TestAmerica for analysis. Upon receipt, the sample was assigned the following laboratory ID numbers to correspond with the Washington Closure Hanford (WCH) specific ID;

WCH ID#	TARL ID#	MATRIX	DATE OF RECEIPT
J1V676	M6LG0	SOIL	4/15/15

II. Sample Receipt

The sample was received in good condition and no anomalies were noted during check-in.

III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors. The requested analyses were:

ICP Metals
Metals by ICP (TCLP) method SW-846 6010A

IV. Quality Control

SDG JP0940 includes a minimum of one Laboratory Control Samples (LCS) and one method (reagent) blank. Any exceptions have been noted in the "Comments" section.

QC and sample results are reported in the same units.

V. Comments

ICP Metals

Metals by ICP (TCLP) method SW-846 6010A

Batch 5105037:

A 1:2 dilution was performed on sample J1V676, the sample duplicate, MS and MSD; Calcium was above the Linear Range. The LCS recovery was not within the acceptance limits for Selenium, it was reanalyzed and similar results were obtained. The MS and MSD recovered outside the acceptance limits for Silver. Except as noted; the LCS, batch blank, sample, MS, MSD, ICB, ICV, CCB and CCV results are within contractual limits.

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. 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 following signature.

Reviewed and approved:

Rhonda Wagar
Project Manager

SDG: JP0940
SAF: RC-149
BATCH: 5105037 - TCLP
MATRIX: SOIL
ANALYSIS DATE: 4/20/15

Client_id	Matrix	Result_t	Cas_nbr	Parameter	Result	Qualifier	Units	Reporting_Limits_S	Reporting_Limits	Uncertainty_1s	Analyzed_sa	Analyzed_Decision_I	LCSReco	Added/	Analysis_date_time	Batch_nbr	Test_Metl	Lab_sample_id
J1V676	**SOLID**	**CS**	**7440-22-4**	**Silver**	**2.15E-04**	**U**	**MG/L**	2.09E-02	2.09E-02	4.10E-03	100.001	G			4/20/2015 9:40	5105037	JYDQ	M6LG01A0
J1V676	**SOLID**	**CS**	**7440-38-2**	**Arsenic**	**2.97E-02**	**U**	**MG/L**	1.05E-01	1.05E-01	3.90E-04	100.001	G			4/20/2015 9:40	5105037	JYDQ	M6LG01A0
J1V676	**SOLID**	**CS**	**7440-39-3**	**Ba**	**1.38E+00**		**MG/L**	1.05E-01	1.05E-01	9.70E-02	100.001	G			4/20/2015 9:40	5105037	JYDQ	M6LG01A0
J1V676	**SOLID**	**CS**	**7440-43-9**	**Cadmium**	**7.78E-04**	**U**	**MG/L**	1.05E-02	1.05E-02	3.20E-04	100.001	G			4/20/2015 9:40	5105037	JYDQ	M6LG01A0
J1V676	**SOLID**	**CS**	**7440-47-3**	**Chromium**	**9.70E-04**	**U**	**MG/L**	2.09E-02	2.09E-02	3.80E-04	100.001	G			4/20/2015 9:40	5105037	JYDQ	M6LG01A0
J1V676	**SOLID**	**CS**	**7439-92-1**	**Lead**	**1.79E-02**	**U**	**MG/L**	1.05E-01	1.05E-01	5.10E-04	100.001	G			4/20/2015 9:40	5105037	JYDQ	M6LG01A0
J1V676	**SOLID**	**CS**	**7782-49-2**	**Selenium**	**1.51E-02**	**U**	**MG/L**	1.05E-01	1.05E-01	1.40E-02	100.001	G			4/20/2015 9:40	5105037	JYDQ	M6LG01A0
INTRA-LAB BLANK	SOLID	BLK	7440-22-4	Silver	-6.01E-04	U	MG/L	1.00E-02	1.00E-02	2.10E-04	100.0098	L			4/20/2015 8:42	5105037	JYDQ	M6LKH1AA
INTRA-LAB BLANK	SOLID	BLK	7440-38-2	Arsenic	6.76E-03	U	MG/L	5.00E-02	5.00E-02	1.30E-03	100.0098	L			4/20/2015 8:42	5105037	JYDQ	M6LKH1AA
INTRA-LAB BLANK	SOLID	BLK	7440-39-3	Ba	1.81E-02	U	MG/L	5.00E-02	5.00E-02	4.20E-04	100.0098	L			4/20/2015 8:42	5105037	JYDQ	M6LKH1AA
INTRA-LAB BLANK	SOLID	BLK	7440-43-9	Cadmium	1.42E-04	U	MG/L	5.00E-03	5.00E-03	1.10E-04	100.0098	L			4/20/2015 8:42	5105037	JYDQ	M6LKH1AA
INTRA-LAB BLANK	SOLID	BLK	7440-47-3	Chromium	5.83E-04	U	MG/L	1.00E-02	1.00E-02	2.80E-04	100.0098	L			4/20/2015 8:42	5105037	JYDQ	M6LKH1AA
INTRA-LAB BLANK	SOLID	BLK	7439-92-1	Lead	1.04E-03	U	MG/L	5.00E-02	5.00E-02	1.70E-03	100.0098	L			4/20/2015 8:42	5105037	JYDQ	M6LKH1AA
INTRA-LAB BLANK	SOLID	BLK	7782-49-2	Selenium	1.40E-02	U	MG/L	5.00E-02	5.00E-02	2.90E-03	100.0098	L			4/20/2015 8:42	5105037	JYDQ	M6LKH1AA
INTRA-LAB CHECK	SOLID	LCS	7440-22-4	Silver	1.03E+00		MG/L	1.00E-02	1.00E-02	2.50E-02	100.0098	L	1.03	1	4/20/2015 9:58	5105037	JYDQ	M6LKH1AA
INTRA-LAB CHECK	SOLID	LCS	7440-38-2	Arsenic	1.13E+00		MG/L	5.00E-02	5.00E-02	3.70E-02	100.0098	L	1.13	1	4/20/2015 9:58	5105037	JYDQ	M6LKH1AA
INTRA-LAB CHECK	SOLID	LCS	7440-39-3	Ba	9.24E-01		MG/L	5.00E-02	5.00E-02	2.00E-02	100.0098	L	0.92	1	4/20/2015 9:58	5105037	JYDQ	M6LKH1AA
INTRA-LAB CHECK	SOLID	LCS	7440-43-9	Cadmium	1.01E+00		MG/L	5.00E-03	5.00E-03	3.70E-02	100.0098	L	1.01	1	4/20/2015 9:58	5105037	JYDQ	M6LKH1AA
INTRA-LAB CHECK	SOLID	LCS	7440-47-3	Chromium	9.32E-01		MG/L	1.00E-02	1.00E-02	3.80E-02	100.0098	L	0.93	1	4/20/2015 9:58	5105037	JYDQ	M6LKH1AA
INTRA-LAB CHECK	SOLID	LCS	7439-92-1	Lead	8.67E-01		MG/L	5.00E-02	5.00E-02	2.40E-02	100.0098	L	0.87	1	4/20/2015 9:58	5105037	JYDQ	M6LKH1AA
INTRA-LAB CHECK	SOLID	LCS	7782-49-2	Selenium	1.20E+00		MG/L	5.00E-02	5.00E-02	4.30E-02	100.0098	L	1.2	1	4/20/2015 9:58	5105037	JYDQ	M6LKH1AA
J1V676 DUP	SOLID	DUP	7440-22-4	Silver	1.71E-04	U	MG/L	2.09E-02	2.09E-02	1.50E-03	100.001	G			4/20/2015 9:55	5105037	JYDQ	M6LG01A0
J1V676 DUP	SOLID	DUP	7440-38-2	Arsenic	2.73E-02	U	MG/L	1.05E-01	1.05E-01	8.60E-03	100.001	G			4/20/2015 9:55	5105037	JYDQ	M6LG01A0
J1V676 DUP	SOLID	DUP	7440-39-3	Ba	1.34E+00		MG/L	1.05E-01	1.05E-01	1.50E-02	100.001	G			4/20/2015 9:55	5105037	JYDQ	M6LG01A0
J1V676 DUP	SOLID	DUP	7440-43-9	Cadmium	3.47E-04	U	MG/L	1.05E-02	1.05E-02	2.60E-04	100.001	G			4/20/2015 9:55	5105037	JYDQ	M6LG01A0
J1V676 DUP	SOLID	DUP	7440-47-3	Chromium	5.71E-04	U	MG/L	2.09E-02	2.09E-02	3.10E-04	100.001	G			4/20/2015 9:55	5105037	JYDQ	M6LG01A0
J1V676 DUP	SOLID	DUP	7439-92-1	Lead	1.87E-02	U	MG/L	1.05E-01	1.05E-01	3.00E-03	100.001	G			4/20/2015 9:55	5105037	JYDQ	M6LG01A0
J1V676 DUP	SOLID	DUP	7782-49-2	Selenium	1.38E-02	U	MG/L	1.05E-01	1.05E-01	9.40E-03	100.001	G			4/20/2015 9:55	5105037	JYDQ	M6LG01A0
J1V676	SOLID	MS	7440-22-4	Silver	4.59E-01		% REC	2.09E-02	2.09E-02	3.40E-02	100.001	L	0.44	1.045	4/20/2015 9:43	5105037	JYDQ	M6LG01A0
J1V676	SOLID	MS	7440-38-2	Arsenic	1.20E+00		% REC	1.05E-01	1.05E-01	4.90E-02	100.001	L	1.14	1.045	4/20/2015 9:43	5105037	JYDQ	M6LG01A0
J1V676	SOLID	MS	7440-39-3	Ba	9.61E-01		% REC	1.05E-01	1.05E-01	9.80E-02	100.001	L	0.92	1.045	4/20/2015 9:43	5105037	JYDQ	M6LG01A0
J1V676	SOLID	MS	7440-43-9	Cadmium	1.12E+00		% REC	1.05E-02	1.05E-02	4.10E-02	100.001	L	1.08	1.045	4/20/2015 9:43	5105037	JYDQ	M6LG01A0
J1V676	SOLID	MS	7440-47-3	Chromium	1.00E+00		% REC	2.09E-02	2.09E-02	6.80E-02	100.001	L	0.96	1.045	4/20/2015 9:43	5105037	JYDQ	M6LG01A0
J1V676	SOLID	MS	7439-92-1	Lead	9.62E-01		% REC	1.05E-01	1.05E-01	3.80E-02	100.001	L	0.92	1.045	4/20/2015 9:43	5105037	JYDQ	M6LG01A0
J1V676	SOLID	MS	7782-49-2	Selenium	1.25E+00		% REC	1.05E-01	1.05E-01	6.60E-02	100.001	L	1.19	1.045	4/20/2015 9:43	5105037	JYDQ	M6LG01A0
J1V676	SOLID	MSD	7440-22-4	Silver	5.21E-01		% REC	2.09E-02	2.09E-02	2.30E-02	100.001	L	0.5	1.045	4/20/2015 9:48	5105037	JYDQ	M6LG01A0
J1V676	SOLID	MSD	7440-38-2	Arsenic	1.20E+00		% REC	1.05E-01	1.05E-01	4.20E-02	100.001	L	1.15	1.045	4/20/2015 9:48	5105037	JYDQ	M6LG01A0
J1V676	SOLID	MSD	7440-39-3	Ba	8.99E-01		% REC	1.05E-01	1.05E-01	5.40E-02	100.001	L	0.86	1.045	4/20/2015 9:48	5105037	JYDQ	M6LG01A0
J1V676	SOLID	MSD	7440-43-9	Cadmium	1.13E+00		% REC	1.05E-02	1.05E-02	1.80E-02	100.001	L	1.08	1.045	4/20/2015 9:48	5105037	JYDQ	M6LG01A0
J1V676	SOLID	MSD	7440-47-3	Chromium	1.00E+00		% REC	2.09E-02	2.09E-02	3.70E-02	100.001	L	0.96	1.045	4/20/2015 9:48	5105037	JYDQ	M6LG01A0
J1V676	SOLID	MSD	7439-92-1	Lead	9.67E-01		% REC	1.05E-01	1.05E-01	2.10E-02	100.001	L	0.92	1.045	4/20/2015 9:48	5105037	JYDQ	M6LG01A0
J1V676	SOLID	MSD	7782-49-2	Selenium	1.26E+00		% REC	1.05E-01	1.05E-01	1.80E-02	100.001	L	1.21	1.045	4/20/2015 9:48	5105037	JYDQ	M6LG01A0

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

CHEMISTRY, First/Second Level Review

4/20/2015 11:56:18 AM

Lot No., Due Date: J5D150409; 04/20/2015
Client, Site: 127642; S00W235B00 HANFORD
QC Batch No., Method Test: 5105037; M6010_S 6010A
SDG, Matrix: JP0940; SOIL

	Yes	No	N/A	2nd
1.0 Initial Calibration				
1.1 Performed at required frequency with required number of levels?	✓			✓
1.2 Correlation coefficient within QC limits?	✓			✓
1.3 Initial calibration verification (ICV) analyzed immediately after calibr. and results within QC limits of +/- 10% at 0.75 ppm?	✓			✓
1.4 ICB analyzed immediately after ICV and concentration of all parameters +/- report limit from zero? RL per RadCalc.	✓			✓
2.0 Continuing Calibration				
2.1 CCV analyzed at required frequency and all parameters within QC limits or +/- 10% at 0.7500 ppm?	✓			✓
2.2 CCB analyzed at required frequency and all results +/- reporting limit from zero?	✓			✓
3.0 Sample Analysis				
3.1 Were any samples with concentration above the linear range diluted and reanalyzed?	✓			✓
3.2 Were all sample holding times met?	✓			✓
4.0 QC Samples				
4.1 All results for the preparation blank < reporting limits?	✓			✓
4.2 MS or MS/MSD recoveries within 25% at 1 ppm and within 20% RPD (for MSD)?		✓		✓
4.3 LCS precent recovery within 20% at 1 ppm and 20% RPD (for LCSD)?		✓		✓
4.4 "ICP Only: Sample and DUP within 35% RPD?"	✓			✓
4.5 ICP only: One serial dilution performed and within 10% of parent per SDG?	✓			✓
4.6 ICP only: RLV run per batch and within 20% of current values?	✓			✓
4.7 ICP only: ICSA,ICSAB analyzed at the required frequencies and within 20% of values per dilution record?	✓			✓
5.0 Other				
5.1 Are all nonconformances included and noted?	✓			✓
5.2 Is the correct date and time of analysis shown?	✓			✓
5.3 Did the analyst sign and date the digestion log for the analytical run?	✓			✓
5.4 Correct methodology used?	✓			✓
5.5 Transcriptions checked?	✓			✓
5.6 Calculations checked at minimum frequency?	✓			✓
5.7 Units checked?	✓			✓
5.8 Verified that appropriate data transferred to ReportDB?	✓			✓

6.0 Comments on any 'No' response:

First Level H. Rahal **Date** 4/20/15 **Second** [illegible] **Date** 04/20/15

TestAmerica Richland
QAS_RADCALCv4.8.66.3

Clouseau
Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: **10-30583**
NCM Initiated By: Hooshang Rahavi
Date Opened: 04/20/2015
Date Closed: 04/20/2015

Classification: **Observation**
Status: **CLOSED**
Production Area: Classical Chemistry
Tests: None
Lot #'s (Sample #'s): J5D150409 (1),
QC Batches: None.,

Nonconformance: QA/QC Observation
Subcategory: Data accepted

Problem Description / Root Cause

Name	Date	Description
Hooshang Rahavi	04/20/2015	The following samples were above the Linear Range (LR) for Calcium, A 1:2 dilution were performed as specified by SOP; M6LG01AA ('J1V676') M6LG01AK ('J1V676') M6LG01AL('J1V676') M6LG01A4 ('J1V676 DUP')

Corrective Action

Name	Date	Corrective Action
Hooshang Rahavi	04/20/2015	

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note	Response	Response Note

Quality Assurance Verification

Verified By	Due Date	Status	Notes
		This section not yet completed by QA.	

Approval History

Date Approved	Approved By	Position

Date Printed: 4/20/2015

Page 1 of 1

Clouseau
Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: **10-30584**
NCM Initiated By: Hooshang Rahavi
Date Opened: 04/20/2015
Date Closed:

Classification: **Anomaly**
Status: **PMREVIEW**
Production Area: Classical Chemistry
Tests: 6010A
Lot #'s (Sample #'s): J5D150000 (37), J5D150409 (1),
QC Batches: 5105037,

Nonconformance: LCS result out of limits
Subcategory: Analyte was recovered high in the LCS

Problem Description / Root Cause

Name	Date	Description
Hooshang Rahavi	04/20/2015	The Laboratory Control Sample (LCS) recovered high and outside of the acceptance criteria for Selenium. There were not enough samples for re-preparation and reanalysis.

Corrective Action

Name	Date	Corrective Action
Hooshang Rahavi	04/20/2015	The LCS was reanalyzed and similar results were obtained. The data was reported as is; submitted for client review.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note	Response	Response Note

Quality Assurance Verification

Verified By	Due Date	Status	Notes
		This section not yet completed by QA.	

Approval History

Date Approved	Approved By	Position

Date Printed: 4/20/2015

Clouseau
Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: **10-30585**
NCM Initiated By: Hooshang Rahavi
Date Opened: 04/20/2015
Date Closed:

Classification: **Anomaly**
Status: **PMREVIEW**
Production Area: Classical Chemistry
Tests: 6010A
Lot #'s (Sample #'s): J5D150000 (37), J5D150409 (1),
QC Batches: 5105037,

Nonconformance: QC data exceeded criteria
Subcategory: MS/MSD accuracy and/or precision out of control

Problem Description / Root Cause

Name	Date	Description
Hooshang Rahavi	04/20/2015	The Matrix Spike (MS) and Matrix Spike Duplicate (MSD) recovered low and outside of acceptance criteria for Silver.

Corrective Action

Name	Date	Corrective Action
Hooshang Rahavi	04/20/2015	The data was reported as is; submitted for client review.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note	Response	Response Note

Quality Assurance Verification

Verified By	Due Date	Status	Notes
		This section not yet completed by QA.	

Approval History

Date Approved	Approved By	Position

Date Printed: 4/20/2015

Page 1 of 1

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-149-151

Page 1 of 1

Collector: ETHERINGTON, TW	Company Contact: Joan Kessner	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Project Designation: 300 Area D4 Waste Sites	Sampling Location: 300 Area B North Queue		SAF No.: RC-149
Ice Chest No.: WCH-11-017	Field Logbook No.: EL-1663-08	COA: R3EXITY000	Method of Shipment: ~~Commercial Carrier~~ Local Delivery 4/14/15 cmB
Shipped To: TestAmerica ~~Denver~~ Richland 4/14/15 cmB	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: ~~SEE OSPC~~ 4/14/15 cmB N/A

Price Code: QT ~~8B~~ ~~7 Day~~ 4/14/15 cmB

Data Turnaround

Other Labs Shipped To: Radiological Counting Facility

RCF 39026 / 39027

POSSIBLE SAMPLE HAZARDS/REMARKS

potentially radioactive < D.O.T. Limits 4/14/15 cmB

Special Handling and/or Storage

cooling as required

Preservation	4/14/15 cmB ~~Cool 4C~~ NONE	Cool 4C
Type of Container	G/P	aG
No. of Container(s)	1	1
Volume	250mL	500mL
Sample Analysis	See item (1) in Special Instructions	TPH-Diesel Range - WTPH-D +

4/14/15 cmB

J5D150409

~~J5D140411~~ fw 4/15/15

Sample No.	Matrix	Sample Date	Sample Time			
J1V675 M6K3G	SOIL	4-13-15	1226	✓	✓	
J1V676 ⊛ ~~M6K3H~~	SOIL	4-13-15	1234	✓	✓	M6LGO
J1V677 M6K3J	SOIL	4-13-15	1243	✓	✓	
J1V678 M6K3K	SOIL	4-13-15	1251	✓	✓	
J1V679 M6K3M	SOIL	4-13-15	1300	✓	✓	

4/14/15 cmB

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Etherington	4-13-15 1310	DWShea DWSHEA 4/13/15	4/13/15 1310
DWShea DWSHEA	4/13/15 1416	C. Bingham	4-13-15 1416
C. Bingham	4-13-15 1420	1060 Battelle, fridge #2A	4-13-15 1420
1060 Battelle, fridge #2A	4/14/15 0825	C. Bingham	4/14/15 0825
C. Bingham	4/14/15 0930 WCH	J. Friesz, TARL	4/14/15 0930

FINAL SAMPLE DISPOSITION — Disposal Method — Disposed By — Date/Time

WCH-EE-011

SPECIAL INSTRUCTIONS

~~(1) ICP Metals - 6010TR (Client List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Tin, Uranium, Vanadium, Zinc, Zirconium}, Mercury 7471 - (CV) {Mercury}~~ 4/14/15 cmB

(1) Metals by ICP - 6010 - Quick Turn
Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver. 4/14/15 cmB

J5D150409 ~~J5D140411~~ fw 4/15/15

SDG# JP0940

⊛ TCLP Metals Requested on 4/15/15. ~~Due 4/15/15~~

JP0940

~~JP0940~~ 4/14/15 cmB

Due: 4/20/15

REVIEWED BY K. Wood Vlaemme DATE 4-14-15