0099001

SAF-RC-223
618-10 Burial Ground – Metal Turnings
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt H4-21 KW 8/23/11
INITIAL/DATE

COMMENTS:

SDG J01201 SAF-RC-223

Rad only ☑ Chem only Rad & Chem

☑ Complete Partial

Sample Location: Drum 618A-11-0125
Drum 618A-11-0063

RECEIVED
AUG 31 2011
EDMC

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

RECEIVED
AUG 2011

SDG Number:J01201

Data Package Contains 20 Pages

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

Washington Closure Hanford
2620 Fermi Avenue
Richland, WA 99354

August 11, 2011

Attention: Joan Kessner

SAF Number	:	RC-223
Date SDG Closed	:	July 28, 2011
Number of Samples	:	Two (2)
Sample Type	:	Other
SDG Number	:	J01201
Data Deliverable	:	Quick Turn Metals

CASE NARRATIVE

I. Introduction

On July 28, 2011, two soil samples were received at TestAmerica for ICP metals 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
J1KM09	MK88H	OTHER	7/28/11
J1KMK4	MK88G	OTHER	7/28/11

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 J01201 includes a minimum of one Laboratory Control Samples (LCS) and one method (reagent) blank. A duplicate sample, matrix spike sample and a matrix spike duplicate sample will be analyzed per 20 samples per month, or requested by the client, whichever is more frequent. 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

Batch 1210079:

Pyrophoric samples received in mineral oil were aliquoted by wet weight. The MS and MSD recoveries for Uranium and Lead were overwhelmed from the concentration in the sample. Due to the amount of Uranium in the samples the Thorium results could not be analyzed. 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: J01201
SAF: RC-223
BATCH: 1210079
MATRIX: OTHER
ANALYSIS DATE: 7/29/11

Client_id	Matrix	Result_type	Cas_nbr	Parameter	Result	Qualifi	Units	Reporting_l	Reporting_l	Uncertainty_1	Analyzed	Analyzi	Decision_le	LCSRec	AddedAr	Analysis_date_time	Batch_nbr	Test_M	Lab_sample_id
J1KMK4	SOLID	BS	7440-22-4	Ag	-7.99E+01	U	UG/G	5.26E+01	5.26E+01	7.00E+00	0.2612	G	5.78E+00			7/29/2011 16:50	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	BS	7429-90-5	Al	-2.43E+02	U	UG/G	1.53E+03	1.53E+03	1.90E+01	0.2612	G	1.56E+01			7/29/2011 16:50	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	BS	7440-38-2	As	1.40E+01	U	UG/G	2.07E+02	2.07E+02	5.10E+01	0.2612	G	4.18E+01			7/29/2011 16:50	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	BS	7440-39-3	Ba	-1.06E+02	U	UG/G	4.31E+01	4.31E+01	8.20E-01	0.2612	G	6.77E-01			7/29/2011 16:50	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	BS	7440-41-7	Beryllium	9.82E+00		UG/G	5.74E+00	5.74E+00	6.70E-01	0.2612	G	5.52E-01			7/29/2011 16:50	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	BS	7440-43-9	Cadmium	2.19E+00	U	UG/G	8.42E+01	8.42E+01	2.70E+00	0.2612	G	2.19E+00			7/29/2011 16:50	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	BS	Co	Co	3.46E+00	U	UG/G	7.18E+01	7.18E+01	3.50E+00	0.2612	G	2.89E+00			7/29/2011 16:50	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	BS	7440-47-3	Chromium	1.80E+00	U	UG/G	4.79E+01	4.79E+01	6.00E+00	0.2612	G	4.92E+00			7/29/2011 16:50	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	BS	7440-50-8	Cu	2.32E+01	U	UG/G	6.43E+02	6.43E+02	1.80E+01	0.2612	G	1.47E+01			7/29/2011 16:50	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	BS	7439-89-6	Fe	6.36E+02	U	UG/G	4.74E+03	4.74E+03	1.70E+02	0.2612	G	1.39E+02			7/29/2011 16:50	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	BS	7439-95-4	Mg	5.43E+01	U	UG/G	3.45E+03	3.45E+03	3.80E+01	0.2612	G	3.12E+01			7/29/2011 16:50	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	BS	7439-96-5	Mn	7.09E+00	U	UG/G	3.16E+01	3.16E+01	1.50E+00	0.2612	G	1.21E+00			7/29/2011 16:50	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	BS	7439-98-7	Mo	-5.28E+00	U	UG/G	8.89E+01	8.89E+01	7.30E+00	0.2612	G	5.98E+00			7/29/2011 16:50	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	BS	7440-02-0	Ni	1.98E+01	U	UG/G	2.51E+02	2.51E+02	7.10E+00	0.2612	G	5.82E+00			7/29/2011 16:50	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	BS	7439-92-1	Lead	1.06E+05		UG/G	1.67E+02	1.67E+02	8.50E+02	0.2612	G	7.03E+02			7/29/2011 16:50	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	BS	7782-49-2	Se	-1.02E+01	U	UG/G	4.00E+02	4.00E+02	2.60E+01	0.2612	G	2.18E+01			7/29/2011 16:50	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	BS	Ti	Ti	3.90E+01		UG/G	9.09E+00	9.09E+00	4.30E+00	0.2612	G	3.55E+00			7/29/2011 16:50	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	BS	7440-61-1	U	1.16E+05		UG/G	7.03E+03	7.03E+03	3.10E+02	0.2612	G	2.55E+02			7/29/2011 16:50	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	BS	7440-62-2	V	6.51E+00	U	UG/G	5.93E+01	5.93E+01	8.10E+00	0.2612	G	6.69E+00			7/29/2011 16:50	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	BS	Zn	Zn	5.00E+00	U	UG/G	4.79E+03	4.79E+03	1.20E+00	0.2612	G	9.57E-01			7/29/2011 16:50	1210079	46DQ	MK88G1A0
J1KM09	SOLID	BS	7440-22-4	Ag	-2.32E+02	U	UG/G	1.38E+02	1.38E+02	3.40E+01	0.2503	G	2.79E+01			7/29/2011 17:32	1210079	46DQ	MK88H1AA
J1KM09	SOLID	BS	7429-90-5	Al	-9.71E+02	U	UG/G	4.03E+03	4.03E+03	3.40E+01	0.2503	G	2.82E+01			7/29/2011 17:32	1210079	46DQ	MK88H1AA
J1KM09	SOLID	BS	7440-38-2	As	6.72E+01	U	UG/G	5.44E+02	5.44E+02	1.10E+02	0.2503	G	8.66E+01			7/29/2011 17:32	1210079	46DQ	MK88H1AA
J1KM09	SOLID	BS	7440-39-3	Ba	-2.69E+02	U	UG/G	1.13E+02	1.13E+02	3.10E+00	0.2503	G	2.53E+00			7/29/2011 17:32	1210079	46DQ	MK88H1AA
J1KM09	SOLID	BS	7440-41-7	Beryllium	1.23E+01	U	UG/G	1.51E+01	1.51E+01	1.50E+00	0.2503	G	1.25E+00			7/29/2011 17:32	1210079	46DQ	MK88H1AA
J1KM09	SOLID	BS	7440-43-9	Cadmium	5.78E+00	U	UG/G	2.21E+02	2.21E+02	1.80E+00	0.2503	G	1.46E+00			7/29/2011 17:32	1210079	46DQ	MK88H1AA
J1KM09	SOLID	BS	Co	Co	6.70E+00	U	UG/G	1.89E+02	1.89E+02	1.20E+01	0.2503	G	9.61E+00			7/29/2011 17:32	1210079	46DQ	MK88H1AA
J1KM09	SOLID	BS	7440-47-3	Chromium	-7.68E+00	U	UG/G	1.26E+02	1.26E+02	2.40E+01	0.2503	G	1.97E+01			7/29/2011 17:32	1210079	46DQ	MK88H1AA
J1KM09	SOLID	BS	7440-50-8	Cu	3.90E+01	U	UG/G	1.69E+03	1.69E+03	2.30E+01	0.2503	G	1.85E+01			7/29/2011 17:32	1210079	46DQ	MK88H1AA
J1KM09	SOLID	BS	7439-89-6	Fe	-4.80E+02	U	UG/G	1.25E+04	1.25E+04	2.20E+02	0.2503	G	1.85E+02			7/29/2011 17:32	1210079	46DQ	MK88H1AA
J1KM09	SOLID	BS	7439-95-4	Mg	-9.93E+01	U	UG/G	9.07E+03	9.07E+03	3.10E+01	0.2503	G	2.55E+01			7/29/2011 17:32	1210079	46DQ	MK88H1AA
J1KM09	SOLID	BS	7439-96-5	Mn	3.37E+01	U	UG/G	8.31E+01	8.31E+01	4.40E+00	0.2503	G	3.60E+00			7/29/2011 17:32	1210079	46DQ	MK88H1AA
J1KM09	SOLID	BS	7439-98-7	Mo	-1.88E+01	U	UG/G	2.34E+02	2.34E+02	7.70E+00	0.2503	G	6.31E+00			7/29/2011 17:32	1210079	46DQ	MK88H1AA
J1KM09	SOLID	BS	7440-02-0	Ni	3.70E+01	U	UG/G	6.59E+02	6.59E+02	1.10E+01	0.2503	G	9.19E+00			7/29/2011 17:32	1210079	46DQ	MK88H1AA
J1KM09	SOLID	BS	7439-92-1	Lead	5.34E+01	U	UG/G	4.38E+02	4.38E+02	6.40E+01	0.2503	G	5.29E+01			7/29/2011 17:32	1210079	46DQ	MK88H1AA
J1KM09	SOLID	BS	7782-49-2	Se	-3.44E+00	U	UG/G	1.05E+03	1.05E+03	5.10E+01	0.2503	G	4.20E+01			7/29/2011 17:32	1210079	46DQ	MK88H1AA
J1KM09	SOLID	BS	Ti	Ti	1.08E+01	U	UG/G	2.39E+01	2.39E+01	6.50E+00	0.2503	G	5.32E+00			7/29/2011 17:32	1210079	46DQ	MK88H1AA
J1KM09	SOLID	BS	7440-61-1	U	2.96E+05		UG/G	1.85E+04	1.85E+04	3.90E+03	0.2503	G	3.23E+03			7/29/2011 17:32	1210079	46DQ	MK88H1AA
J1KM09	SOLID	BS	7440-62-2	V	-8.40E+00	U	UG/G	1.56E+02	1.56E+02	2.30E+01	0.2503	G	1.90E+01			7/29/2011 17:32	1210079	46DQ	MK88H1AA
J1KM09	SOLID	BS	Zn	Zn	4.21E+01	U	UG/G	1.26E+04	1.26E+04	2.30E+00	0.2503	G	1.93E+00			7/29/2011 17:32	1210079	46DQ	MK88H1AA
INTRA-LA	SOLID	BLK	7440-22-4	Ag	-1.01E-02	U	MG/L	5.50E-03	5.50E-03	9.10E-04	1	L	7.49E-04			7/29/2011 16:19	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	BLK	7429-90-5	Al	-3.88E-02	U	MG/L	1.60E-01	1.60E-01	5.20E-03	1	L	4.27E-03			7/29/2011 16:19	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	BLK	7440-38-2	As	1.02E-03	U	MG/L	2.16E-02	2.16E-02	2.40E-03	1	L	2.00E-03			7/29/2011 16:19	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	BLK	7440-39-3	Ba	5.85E-05	U	MG/L	4.50E-03	4.50E-03	9.90E-06	1	L	8.11E-06			7/29/2011 16:19	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	BLK	7440-41-7	Beryllium	-5.31E-06	U	MG/L	6.00E-04	6.00E-04	4.60E-05	1	L	3.82E-05			7/29/2011 16:19	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	BLK	7440-43-9	Cadmium	2.56E-04	U	MG/L	8.80E-03	8.80E-03	3.30E-04	1	L	2.68E-04			7/29/2011 16:19	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	BLK	Co	Co	-2.64E-05	U	MG/L	7.50E-03	7.50E-03	3.70E-04	1	L	3.04E-04			7/29/2011 16:19	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	BLK	7440-47-3	Chromium	-5.17E-04	U	MG/L	5.00E-03	5.00E-03	9.30E-04	1	L	7.62E-04			7/29/2011 16:19	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	BLK	7440-50-8	Cu	-2.61E-04	U	MG/L	6.72E-02	6.72E-02	1.10E-03	1	L	8.89E-04			7/29/2011 16:19	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	BLK	7439-89-6	Fe	1.52E-02	U	MG/L	4.95E-01	4.95E-01	6.90E-03	1	L	5.64E-03			7/29/2011 16:19	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	BLK	7439-95-4	Mg	-7.24E-04	U	MG/L	3.60E-01	3.60E-01	3.80E-03	1	L	3.11E-03			7/29/2011 16:19	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	BLK	7439-96-5	Mn	7.22E-05	U	MG/L	3.30E-03	3.30E-03	1.10E-04	1	L	9.42E-05			7/29/2011 16:19	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	BLK	7439-98-7	Mo	-1.25E-03	U	MG/L	9.29E-03	9.29E-03	6.10E-04	1	L	5.06E-04			7/29/2011 16:19	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	BLK	7440-02-0	Ni	1.72E-04	U	MG/L	2.62E-02	2.62E-02	3.60E-04	1	L	2.93E-04			7/29/2011 16:19	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	BLK	7439-92-1	Lead	4.95E-04	U	MG/L	1.74E-02	1.74E-02	2.40E-03	1	L	1.94E-03			7/29/2011 16:19	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	BLK	7782-49-2	Se	3.33E-04	U	MG/L	4.18E-02	4.18E-02	5.30E-03	1	L	4.35E-03			7/29/2011 16:19	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	BLK	Ti	Ti	3.15E-04	U	MG/L	9.50E-04	9.50E-04	1.10E-05	1	L	9.26E-06			7/29/2011 16:19	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	BLK	7440-61-1	U	-1.77E-02	U	MG/L	7.34E-01	7.34E-01	2.70E-02	1	L	2.25E-02			7/29/2011 16:19	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	BLK	7440-62-2	V	-3.55E-04	U	MG/L	6.20E-03	6.20E-03	2.20E-03	1	L	1.80E-03			7/29/2011 16:19	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	BLK	Zn	Zn	1.00E-02	U	MG/L	5.00E-01	5.00E-01	8.90E-05	1	L	7.36E-05			7/29/2011 16:19	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	LCS	7440-22-4	Ag	8.57E-01		MG/L	5.50E-03	5.50E-03	1.20E-02	1	L	9.78E-03	0.86	1	7/29/2011 16:22	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	LCS	7429-90-5	Al	9.29E-01		MG/L	1.60E-01	1.60E-01	9.60E-03	1	L	7.90E-03	0.93	1	7/29/2011 16:22	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	LCS	7440-38-2	As	8.79E-01		MG/L	2.16E-02	2.16E-02	8.50E-03	1	L	7.03E-03	0.88	1	7/29/2011 16:22	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	LCS	7440-39-3	Ba	9.07E-01		MG/L	4.50E-03	4.50E-03	2.80E-02	1	L	2.32E-02	0.91	1	7/29/2011 16:22	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	LCS	7440-41-7	Beryllium	9.05E-01		MG/L	6.00E-04	6.00E-04	1.00E-02	1	L	8.42E-03	0.9	1	7/29/2011 16:22	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	LCS	7440-43-9	Cadmium	8.78E-01		MG/L	8.80E-03	8.80E-03	6.40E-03	1	L	5.30E-03	0.88	1	7/29/2011 16:22	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	LCS	Co	Co	9.01E-01		MG/L	7.50E-03	7.50E-03	8.60E-03	1	L	7.08E-03	0.9	1	7/29/2011 16:22	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	LCS	7440-47-3	Chromium	8.81E-01		MG/L	5.00E-03	5.00E-03	1.00E-02	1	L	8.34E-03	0.88	1	7/29/2011 16:22	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	LCS	7440-50-8	Cu	9.00E-01		MG/L	6.72E-02	6.72E-02	1.10E-02	1	L	9.24E-03	0.9	1	7/29/2011 16:22	1210079	46DQ	MK9MN1A1

Client_id	Matrix	Result_type	Cas_nbr	Parameter	Result	Qualifi	Units	Reporting_l	Reporting_l	Uncertainty_1	Analyzed	Analyzi	Decision_le	LCSRec	AddedAr	Analysis_date_time	Batch_nbr	Test_M	Lab_sample_id
INTRA-LA	SOLID	LCS	7439-89-6	Fe	9.88E-01		MG/L	4.95E-01	4.95E-01	3.10E-02	1	L	2.54E-02	0.99	1	7/29/2011 16:22	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	LCS	7439-95-4	Mg	9.40E-01		MG/L	3.60E-01	3.60E-01	9.90E-03	1	L	8.16E-03	0.94	1	7/29/2011 16:22	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	LCS	7439-96-5	Mn	9.12E-01		MG/L	3.30E-03	3.30E-03	9.50E-03	1	L	7.82E-03	0.91	1	7/29/2011 16:22	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	LCS	7439-98-7	Mo	9.21E-01		MG/L	9.29E-03	9.29E-03	1.00E-02	1	L	8.39E-03	0.92	1	7/29/2011 16:22	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	LCS	7440-02-0	Ni	8.83E-01		MG/L	2.62E-02	2.62E-02	9.70E-03	1	L	7.98E-03	0.88	1	7/29/2011 16:22	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	LCS	7439-92-1	Lead	8.79E-01		MG/L	1.74E-02	1.74E-02	5.50E-03	1	L	4.54E-03	0.88	1	7/29/2011 16:22	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	LCS	7782-49-2	Se	8.42E-01		MG/L	4.18E-02	4.18E-02	1.10E-02	1	L	8.72E-03	0.84	1	7/29/2011 16:22	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	LCS	Ti	Ti	9.35E-01		MG/L	9.50E-04	9.50E-04	9.80E-03	1	L	8.04E-03	0.94	1	7/29/2011 16:22	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	LCS	7440-61-1	U	1.03E+00		MG/L	7.34E-01	7.34E-01	6.50E-02	1	L	5.36E-02	1.03	1	7/29/2011 16:22	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	LCS	7440-62-2	V	9.13E-01		MG/L	6.20E-03	6.20E-03	9.40E-03	1	L	7.74E-03	0.91	1	7/29/2011 16:22	1210079	46DQ	MK9MN1A1
INTRA-LA	SOLID	LCS	Zn	Zn	9.04E-01		MG/L	5.00E-01	5.00E-01	7.80E-03	1	L	6.43E-03	0.9	1	7/29/2011 16:22	1210079	46DQ	MK9MN1A1
J1KMK4 [	SOLID	DUP	7440-22-4	Ag	-1.53E+02	U	UG/G	1.06E+02	1.06E+02	1.70E+01	0.2629	G	1.43E+01			7/29/2011 17:08	1210079	46DQ	MK88G1A0
J1KMK4 [	SOLID	DUP	7429-90-5	Al	-5.48E+02	U	UG/G	3.08E+03	3.08E+03	6.20E+01	0.2629	G	5.07E+01			7/29/2011 17:08	1210079	46DQ	MK88G1A0
J1KMK4 [	SOLID	DUP	7440-38-2	As	2.66E+01	U	UG/G	4.15E+02	4.15E+02	1.20E+02	0.2629	G	9.76E+01			7/29/2011 17:08	1210079	46DQ	MK88G1A0
J1KMK4 [	SOLID	DUP	7440-39-3	Ba	-1.68E+02	U	UG/G	8.64E+01	8.64E+01	4.80E-01	0.2629	G	3.95E-01			7/29/2011 17:08	1210079	46DQ	MK88G1A0
J1KMK4 [	SOLID	DUP	7440-41-7	Beryllium	1.77E+01		UG/G	1.15E+01	1.15E+01	1.40E+00	0.2629	G	1.15E+00			7/29/2011 17:08	1210079	46DQ	MK88G1A0
J1KMK4 [	SOLID	DUP	7440-43-9	Cadmium	4.43E+00	U	UG/G	1.69E+02	1.69E+02	6.70E+00	0.2629	G	5.54E+00			7/29/2011 17:08	1210079	46DQ	MK88G1A0
J1KMK4 [	SOLID	DUP	Co	Co	7.25E+00	U	UG/G	1.44E+02	1.44E+02	8.30E+00	0.2629	G	6.81E+00			7/29/2011 17:08	1210079	46DQ	MK88G1A0
J1KMK4 [	SOLID	DUP	7440-47-3	Chromium	1.53E+01	U	UG/G	9.60E+01	9.60E+01	9.80E+00	0.2629	G	8.05E+00			7/29/2011 17:08	1210079	46DQ	MK88G1A0
J1KMK4 [	SOLID	DUP	7440-50-8	Cu	3.32E+01	U	UG/G	1.29E+03	1.29E+03	1.50E+01	0.2629	G	1.26E+01			7/29/2011 17:08	1210079	46DQ	MK88G1A0
J1KMK4 [	SOLID	DUP	7439-89-6	Fe	1.41E+03	U	UG/G	9.51E+03	9.51E+03	2.30E+02	0.2629	G	1.93E+02			7/29/2011 17:08	1210079	46DQ	MK88G1A0
J1KMK4 [	SOLID	DUP	7439-95-4	Mg	6.24E+01	U	UG/G	6.92E+03	6.92E+03	1.40E+02	0.2629	G	1.17E+02			7/29/2011 17:08	1210079	46DQ	MK88G1A0
J1KMK4 [	SOLID	DUP	7439-96-5	Mn	1.41E+01	U	UG/G	6.34E+01	6.34E+01	1.20E+00	0.2629	G	9.55E-01			7/29/2011 17:08	1210079	46DQ	MK88G1A0
J1KMK4 [	SOLID	DUP	7439-98-7	Mo	-1.28E+01	U	UG/G	1.78E+02	1.78E+02	5.30E+00	0.2629	G	4.33E+00			7/29/2011 17:08	1210079	46DQ	MK88G1A0
J1KMK4 [	SOLID	DUP	7440-02-0	Ni	3.55E+01	U	UG/G	5.03E+02	5.03E+02	5.10E+00	0.2629	G	4.16E+00			7/29/2011 17:08	1210079	46DQ	MK88G1A0
J1KMK4 [	SOLID	DUP	7439-92-1	Lead	1.68E+05		UG/G	3.34E+02	3.34E+02	4.40E+02	0.2629	G	3.66E+02			7/29/2011 17:08	1210079	46DQ	MK88G1A0
J1KMK4 [	SOLID	DUP	7782-49-2	Se	1.98E+01	U	UG/G	8.03E+02	8.03E+02	1.20E+02	0.2629	G	9.86E+01			7/29/2011 17:08	1210079	46DQ	MK88G1A0
J1KMK4 [	SOLID	DUP	Ti	Ti	6.59E+01		UG/G	1.82E+01	1.82E+01	1.40E+00	0.2629	G	1.13E+00			7/29/2011 17:08	1210079	46DQ	MK88G1A0
J1KMK4 [	SOLID	DUP	7440-61-1	U	1.84E+05		UG/G	1.41E+04	1.41E+04	5.00E+02	0.2629	G	4.09E+02			7/29/2011 17:08	1210079	46DQ	MK88G1A0
J1KMK4 [	SOLID	DUP	7440-62-2	V	6.70E+00	U	UG/G	1.19E+02	1.19E+02	2.00E+01	0.2629	G	1.65E+01			7/29/2011 17:08	1210079	46DQ	MK88G1A0
J1KMK4 [	SOLID	DUP	Zn	Zn	7.02E+01	U	UG/G	9.60E+03	9.60E+03	5.50E+00	0.2629	G	4.54E+00			7/29/2011 17:08	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MS	7440-22-4	Ag	1.13E+02		% REC	5.43E+01	5.43E+01	2.10E+00	0.2531	L	1.70E+00	0.57	197.1	7/29/2011 17:00	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MS	7440-38-2	As	1.76E+02	U	% REC	2.13E+02	2.13E+02	2.30E+01	0.2531	L	1.93E+01	0.89	197.1	7/29/2011 17:00	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MS	7440-39-3	Ba	1.22E+02		% REC	4.44E+01	4.44E+01	1.40E+00	0.2531	L	1.17E+00	0.62	197.1	7/29/2011 17:00	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MS	7440-41-7	Beryllium	1.74E+02		% REC	5.93E+00	5.93E+00	2.10E+00	0.2531	L	1.69E+00	0.89	197.1	7/29/2011 17:00	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MS	7440-43-9	Cadmium	1.83E+02		% REC	8.69E+01	8.69E+01	2.20E+00	0.2531	L	1.84E+00	0.93	197.1	7/29/2011 17:00	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MS	Co	Co	1.82E+02		% REC	7.41E+01	7.41E+01	7.60E+00	0.2531	L	6.26E+00	0.92	197.1	7/29/2011 17:00	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MS	7440-47-3	Chromium	1.85E+02		% REC	4.94E+01	4.94E+01	5.70E+00	0.2531	L	4.73E+00	0.94	197.1	7/29/2011 17:00	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MS	7440-50-8	Cu	1.78E+02	U	% REC	6.64E+02	6.64E+02	3.20E+00	0.2531	L	2.60E+00	0.9	197.1	7/29/2011 17:00	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MS	7439-89-6	Fe	2.56E+02	U	% REC	4.89E+03	4.89E+03	2.90E+02	0.2531	L	2.39E+02	1.3	197.1	7/29/2011 17:00	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MS	7439-95-4	Mg	2.20E+02	U	% REC	3.56E+03	3.56E+03	3.60E+01	0.2531	L	2.97E+01	1.11	197.1	7/29/2011 17:00	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MS	7439-96-5	Mn	1.96E+02		% REC	3.26E+01	3.26E+01	2.40E+00	0.2531	L	2.00E+00	0.99	197.1	7/29/2011 17:00	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MS	7439-98-7	Mo	1.72E+02		% REC	9.18E+01	9.18E+01	4.30E+00	0.2531	L	3.53E+00	0.87	197.1	7/29/2011 17:00	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MS	7440-02-0	Ni	1.73E+02	U	% REC	2.59E+02	2.59E+02	3.40E+00	0.2531	L	2.82E+00	0.88	197.1	7/29/2011 17:00	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MS	7439-92-1	Lead	-4.42E+04	U	% REC	1.72E+02	1.72E+02	4.80E+02	0.2531	L	3.91E+02			7/29/2011 17:00	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MS	7782-49-2	Se	1.90E+02	U	% REC	4.13E+02	4.13E+02	3.40E+01	0.2531	L	2.84E+01	0.97	197.1	7/29/2011 17:00	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MS	Ti	Ti	1.76E+02		% REC	9.38E+00	9.38E+00	3.10E+00	0.2531	L	2.55E+00	0.89	197.1	7/29/2011 17:00	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MS	7440-61-1	U	-4.93E+04	U	% REC	7.25E+03	7.25E+03	5.40E+02	0.2531	L	4.48E+02			7/29/2011 17:00	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MS	7440-62-2	V	1.73E+02		% REC	6.12E+01	6.12E+01	9.90E+00	0.2531	L	8.12E+00	0.88	197.1	7/29/2011 17:00	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MS	Zn	Zn	1.83E+02	U	% REC	4.94E+03	4.94E+03	2.20E+00	0.2531	L	1.78E+00	0.93	197.1	7/29/2011 17:00	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MSD	7440-22-4	Ag	9.95E+01		% REC	5.57E+01	5.57E+01	8.60E+00	0.2468	L	7.10E+00	0.49	201.9	7/29/2011 17:03	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MSD	7440-38-2	As	1.85E+02	U	% REC	2.19E+02	2.19E+02	1.20E+01	0.2468	L	9.61E+00	0.92	201.9	7/29/2011 17:03	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MSD	7440-39-3	Ba	8.38E+01		% REC	4.56E+01	4.56E+01	1.50E+00	0.2468	L	1.20E+00	0.42	201.9	7/29/2011 17:03	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MSD	7440-41-7	Beryllium	2.05E+02		% REC	6.08E+00	6.08E+00	9.40E-01	0.2468	L	7.75E-01	1.02	201.9	7/29/2011 17:03	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MSD	7440-43-9	Cadmium	1.88E+02		% REC	8.91E+01	8.91E+01	1.30E+00	0.2468	L	1.04E+00	0.93	201.9	7/29/2011 17:03	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MSD	Co	Co	1.91E+02		% REC	7.60E+01	7.60E+01	6.70E+00	0.2468	L	5.51E+00	0.95	201.9	7/29/2011 17:03	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MSD	7440-47-3	Chromium	1.94E+02		% REC	5.06E+01	5.06E+01	7.30E+00	0.2468	L	5.98E+00	0.96	201.9	7/29/2011 17:03	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MSD	7440-50-8	Cu	1.88E+02	U	% REC	6.81E+02	6.81E+02	3.00E+00	0.2468	L	2.51E+00	0.93	201.9	7/29/2011 17:03	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MSD	7439-89-6	Fe	6.31E+02	U	% REC	5.01E+03	5.01E+03	1.30E+02	0.2468	L	1.03E+02	3.12	201.9	7/29/2011 17:03	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MSD	7439-95-4	Mg	2.36E+02	U	% REC	3.65E+03	3.65E+03	6.60E+01	0.2468	L	5.43E+01	1.17	201.9	7/29/2011 17:03	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MSD	7439-96-5	Mn	1.99E+02		% REC	3.34E+01	3.34E+01	3.30E+00	0.2468	L	2.68E+00	0.98	201.9	7/29/2011 17:03	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MSD	7439-98-7	Mo	1.61E+02		% REC	9.41E+01	9.41E+01	4.20E+00	0.2468	L	3.43E+00	0.9	201.9	7/29/2011 17:03	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MSD	7440-02-0	Ni	1.87E+02	U	% REC	2.65E+02	2.65E+02	1.30E+01	0.2468	L	1.09E+01	0.93	201.9	7/29/2011 17:03	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MSD	7439-92-1	Lead	-5.75E+03	U	% REC	1.76E+02	1.76E+02	1.60E+03	0.2468	L	1.31E+03			7/29/2011 17:03	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MSD	7782-49-2	Se	1.89E+02	U	% REC	4.23E+02	4.23E+02	3.20E+01	0.2468	L	2.63E+01	0.94	201.9	7/29/2011 17:03	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MSD	Ti	Ti	1.91E+02		% REC	9.62E+00	9.62E+00	8.80E+00	0.2468	L	7.20E+00	0.95	201.9	7/29/2011 17:03	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MSD	7440-61-1	U	-5.85E+03	U	% REC	7.44E+03	7.44E+03	2.80E+02	0.2468	L	2.34E+02			7/29/2011 17:03	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MSD	7440-62-2	V	1.77E+02		% REC	6.28E+01	6.28E+01	5.20E+00	0.2468	L	4.24E+00	0.88	201.9	7/29/2011 17:03	1210079	46DQ	MK88G1A0
J1KMK4	SOLID	MSD	Zn	Zn	1.96E+02	U	% REC	5.06E+03	5.06E+03	1.60E+01	0.2468	L	1.28E+01	0.97	201.9	7/29/2011 17:03	1210079	46DQ	MK88G1A0

Clouseau
Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: **10-18893**
NCM Initiated By: Tim Armstrong
Date Opened: 08/01/2011
Date Closed: 08/01/2011

Classification: **Anomaly**
Status: **CLOSED**
Production Area: Classical Chemistry
Tests: 6010A
Lot #'s (Sample #'s): J1G280507 (1,2), J1G290000 (79),
QC Batches: 1210079,

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

Problem Description / Root Cause

Name	Date	Description
Tim Armstrong	08/01/2011	Pyrophoric samples recieved in mineral oil. Aliquoted by wet weight. Duplicate is not homogenous. Matrix spike is overwhelmed for uranium and lead. Thorium unable to be analyzed.

Corrective Action

Name	Date	Corrective Action
Tim Armstrong	08/01/2011	Report data 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
NAGELS		Verified/completed	

Approval History

Date Approved	Approved By	Position

Date Printed: 8/1/2011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-223-006	Page 1 of 1

Collector: Orozco, Loren	Company Contact: Joan Kesner	Telephone No.: (509) 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9L	Data Turnaround: ~~21~~ 7 Days SV 7/28/11		
Project Designation: 618-10 Burial Ground - Metal Turnings	Sampling Location: drum 618A-11-0125		SAF No.: RC-223
Ice Chest No.: N/A 4G Hazmat Box JR	Field Logbook No.: EL-1648-01	COA: S618AC8100	Method of Shipment: ~~Fed Ex~~ / Gov't Vehicle SV 7/28/11
Shipped To: TestAmerica Richland ~~EBERLINE SERVICES / LIONVILLE~~ / RCF TRE 7-28-11	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: See HMSR

POSSIBLE SAMPLE HAZARDS/REMARKS

Radioactive, Pryophoric

Special Handling and/or Storage

Store in oil

TRE 7-28-11

Preservation	None	None	Cool 4C	None							
Type of Container	aG	aG	aG	aG							
No. of Container(s)	1	0	0	0							
Volume	250mL	250mL	250mL	250mL							
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Ignitability - 1010	PCBs - 8082	RCF GEA Shipping Screen							

Sample No.	Matrix *	Sample Date	Sample Time						RCF				
J1KM09	OTHER	7/28/11	1015	X	X	X	X		29642		122g		
MK88H													

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Loren Orozco / Loren Orozco	1045 07/28/11	Controlled Storage / S. van Den Heuvel	7/28/11 1045
Controlled Storage / S. van Den Heuvel	7/28/11 1330	M06106 / T.R. Edmondson / T.R. Edmondson	7-28-11 1330
M06106 / T.R. Edmondson / T.R. Edmondson	7-28-11 1400	RCF / M. Groff / M. Groff	7-28-11 1400
M. Groff / M. Groff	7-28-11 1640	T.R. Edmondson / T.R. Edmondson	7-28-11 1640
WCH / T.R. Edmondson / T.R. Edmondson	7-28-11 1650	TALR / Cameron Krapa	7-28-11 1650
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

Contact Joan Kessner with any questions. Analyse both oil and solids for ICP metals.

(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, Silver, Sodium, Uranium, Vanadium, Zinc}; Mercury - 7471 - (CV) {Mercury}

SDG# J01201

Lot# J1G280507

Due 8-4-11

RW 7/28/11

REVIEWED BY CAK DATE 7-28-11

Matrix *

S=Soil
SE=Sediment
SO=Solid
SL=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wi=Wipe
L=Liquid
V=Vegetation
X=Other

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-223-014	Page 1 of 1

Collector: Orozco, Loren	Company Contact: Joan Kesner	Telephone No.: (509) 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9L	Data Turnaround: ~~21~~ 7 Days SY 7/28/11		
Project Designation: 618-10 Burial Ground - Metal Turnings	Sampling Location: drum 618A-11-0063		SAF No.: RC-223
Ice Chest No.: N/A	Field Logbook No.: EL-1648-01	COA: S618AC8100 TRE 7-28-11	Method of Shipment: ~~Fed Ex~~ / Gov't Vehicle
Shipped To: Test America Richland ~~EBERLINE SERVICES~~ / LIONVILLE / RCE TRE 7-28-11	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: See HMSR

POSSIBLE SAMPLE HAZARDS/REMARKS

Radioactive, Pryophoric

Special Handling and/or Storage

Store in oil TRE 7-28-11

Preservation	None	None										
Type of Container	aG	aG										
No. of Container(s)	1	0										
Volume	250mL	250mL										
SAMPLE ANALYSIS	See item (1) in Special Instructions.	RCF GEA Shipping Screen										

Sample No.	Matrix *	Sample Date	Sample Time				RCE						
J1KMK4	OTHER	7/28/11	1000	X	X		29641		66g				
MK88G													

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: Loren Orozco / Loren Orozco	Date/Time: 07/28/11 1045	Received By/Stored In: S. VanDenHende / Controlled Storage MD6106	Date/Time: 7/28/11 1045
Relinquished By/Removed From: S. VanDenHende / Controlled Storage MD6106	Date/Time: 7/28/11 1330	Received By/Stored In: J.R. Glandon	Date/Time: 7-28-11 1330
Relinquished By/Removed From: J.R. Glandon WCH	Date/Time: 7-28-11 1400	Received By/Stored In: M. Gurroff / RLF	Date/Time: 7-28-11 1400
Relinquished By/Removed From: RCE D. Miller / D. Miller	Date/Time: 7-28-11 1640	Received By/Stored In: J.R. Glandon	Date/Time: 7-28-11 1640
Relinquished By/Removed From: J.R. Glandon WCH	Date/Time: 7-28-11 1650	Received By/Stored In: TALR / Carl Krupa / Carl Krupa	Date/Time: 7-28-11 1650
Relinquished By/Removed From:	Date/Time:	Received By/Stored In:	Date/Time:

SPECIAL INSTRUCTIONS

Contact Joan Kessner with any questions. Do not analyze oil, it is only there for shipping purposes.

(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, Silver, Sodium, Uranium, Vanadium, Zinc, Zirconium}; Mercury - 7471 - (CV) {Mercury}

SDG# J01201

Lot# J1G280507

REVIEWED BY CR DATE 7-28-11

Due 8-4-11 RW 7-28-11

Matrix *

S=Soil
SE=Sediment
SO=Solid
SI=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
WI=Wipe
L=Liquid
V=Vegetation
X=Other

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

WCH-EE-011

Apex™

Analysis Report for RCF29641

J1KMK4 SAF:RC-223 618-10/ drum 618A-11-0063 250mL aG jar

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF29641
Sample Description	: J1KMK4 SAF:RC-223 618-10/ drum 618A-11-0063 250mL aG jar
Sample Type	: Hi Act. Non Standard Geometry
Sample Size	: 6.600E+01 grams
Facility	: Default
Sample Taken On	: 7/28/2011 10:00:00AM
Acquisition Started	: 7/28/2011 2:31:59PM
Procedure	: High Activity Non Standard Geome
Operator	: RCT
Detector Name	: PGTLYNX
Geometry	: High Activity Non Standard Geometry
Live Time	: 1200.0 seconds
Real Time	: 1203.3 seconds
Dead Time	: 0.28 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 40 - 4096
Peak Area Range (in channels)	: 40 - 4096
Identification Energy Tolerance	: 1.000 keV
Energy Calibration Used Done On	: 3/3/2011
Efficiency Calibration Used Done On	: 3/17/2011
Efficiency Calibration Description	: PGTL HANSTD 031611EC SN82751A-238
Sample Number	: 17627

QUALITATIVE ONLY

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
EU-155		0.331	9.09E+01	1.09E+01	
Pa-234		0.889	3.91E+04	1.42E+03	
U-235	@	0.887	1.87E+02	1.55E+01	
U-238d	@	0.988	8.78E+03	5.62E+02	
AM-241		0.997	3.76E+01	7.72E+00	

CAB COMMENTS

Analysis Report for RCF29641

J1KMK4 SAF:RC-223 618-10/ drum 618A-11-0063 250mL aG jar

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 2.000 sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 7/28/2011 2:55:42PM
Peak Locate From Channel : 40
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
M	1	55.78	1.86169E-01	17.44	U-238 HIGH ACTIVITY COMPTON REGION	
m	2	57.89	2.59997E-01	12.89		
m	4	61.18	5.09641E-01	7.27		
M	6	72.85	3.62019E+00	1.85	U-235 TOL	
m	7	75.02	5.91136E+00	1.39	U-235 TOL	
M	8	83.41	4.39672E-01	11.85	NO PEAK	

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000 sigma

NUCLIDE MDA REPORT

Nuclide Library Used : \\WC98582\ApexRoot\Default\Library\RCF UNKNOWN HA URANIUM.NLB

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
K-40	1460.83	10.67	3.16E+01	5.22E+01	5.22E+01
CO-60	1173.24	99.90	5.49E-01	3.99E+00	4.27E+00
	1332.50	99.98	-6.20E-01		3.99E+00
NB-94	702.63	99.81	4.76E+00	5.88E+00	7.81E+00
	871.10	99.89	-1.86E+00		5.88E+00
AG-108m	433.94	90.50	-2.82E+00	7.64E+00	7.64E+00
	614.28	89.80	2.31E+00		8.12E+00
	722.94	90.80	-1.02E+01		7.83E+00
CS-137	661.66	85.21	-5.36E+00	8.61E+00	8.61E+00
EU-152	40.12	38.40	1.53E-01	1.84E+01	1.84E+01
	45.38	11.10	-6.26E+01		6.86E+01
	121.78	28.40	-7.17E+00		2.56E+01
	244.69	7.51	-6.95E+01		8.53E+01
	344.29	26.60	-2.62E+00		2.44E+01

Analysis Report for RCF29641

J1KMK4 SAF:RC-223 618-10/ drum 618A-11-0063 250mL aG jar

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	EU-152	411.12		2.23	-3.57E+01	1.84E+01	2.88E+02
		443.89		2.80	-1.11E+02		2.36E+02
		778.92		12.98	3.65E+01		6.70E+01
		867.38		4.21	1.08E+02		1.43E+02
		964.11		14.50	-1.37E+01		2.98E+01
		1085.89		9.94	-4.85E+00		3.80E+01
		1089.71		1.71	-7.53E+01		2.12E+02
		1112.07		13.60	-7.41E+00		2.35E+01
		1212.93		1.40	-2.18E+01		3.30E+02
		1299.16		1.63	1.82E+02		2.59E+02
		1408.00		20.80	1.25E+01		2.60E+01
	EU-154	123.10		40.50	-3.31E+00	1.06E+01	1.79E+01
		723.36		19.70	-4.68E+01		3.61E+01
		873.23		11.45	-2.24E+01		5.21E+01
		1004.78		17.90	-2.63E+00		1.54E+02
		1274.54		35.50	-2.14E+00		1.06E+01
+	EU-155	86.54	*	34.00	9.09E+01	2.76E+01	2.76E+01
		105.31		20.60	1.09E+01		4.00E+01
	PB-212	74.81		10.50	3.14E+03	8.67E+01	1.73E+02
		77.11		17.70	-2.91E+00		8.67E+01
		87.19		6.27	7.77E+02		1.95E+02
	RA-226d	186.11		3.28	-4.61E+02	1.55E+01	3.64E+02
		241.92		7.46	-1.21E+01		8.85E+01
		295.09		19.20	-1.36E+01		3.50E+01
		351.87		37.10	2.53E+00		1.78E+01
		609.31		46.10	-4.72E-01		1.55E+01
		1120.27		15.00	5.42E+00		3.00E+01
		1764.49		15.90	1.27E+01		3.02E+01
	TH-232d	238.58		43.60	6.70E-01	1.56E+01	1.56E+01
		338.42		12.40	3.76E+01		5.35E+01
		583.02		30.87	1.30E+01		2.46E+01
		911.16		29.00	1.83E+00		1.69E+01
		968.97		17.40	2.48E+00		2.56E+01
+	Pa-234	73.90		0.01	3.07E+06	1.00E+03	1.68E+05
		94.65	*	0.12	3.93E+04		5.98E+03
		98.43	*	0.19	4.38E+04		3.48E+03
		111.03	*	0.07	4.86E+04		1.00E+04
		114.87	*	0.02	5.96E+04		2.76E+04
		258.18	*	0.06	2.69E+04		1.21E+04
		691.00		0.01	7.23E+04		1.43E+05
		701.85		0.01	-1.03E+04		1.38E+05
		740.90		0.01	3.81E+05		1.69E+05
		742.82	*	0.06	5.76E+04		2.04E+04
		766.41	*	0.21	4.03E+04		3.62E+03
		782.80		0.01	6.36E+04		1.98E+05
		786.29	*	0.03	2.41E+04		2.41E+04
		805.87		0.00	5.63E+04		2.46E+05
		851.72		0.00	6.38E+04		1.57E+05
		887.50		0.01	2.31E+04		1.54E+05
		921.96		0.01	7.29E+04		8.96E+04
		946.02	*	0.01	8.93E+04		7.24E+04
		995.00		0.00	-6.67E+03		3.29E+05

Analysis Report for RCF29641

J1KMK4 SAF:RC-223 618-10/ drum 618A-11-0063 250mL aG jar

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	Pa-234	1001.00	*	0.65	3.36E+04	1.00E+03	1.00E+03
		1193.74		0.01	1.78E+04		6.02E+04
		1237.21		0.00	-1.30E+04		1.32E+05
		1435.40		0.01	6.23E+04		8.34E+04
		1510.11		0.01	3.85E+04		6.37E+04
		1737.80		0.01	3.39E+04		4.11E+04
		1765.70		0.01	4.45E+04		7.88E+04
		1831.70		0.01	3.62E+04		4.66E+04
		1867.97		0.01	8.50E+03		9.20E+04
		1875.20		0.01	-3.91E+03		8.62E+04
		1911.44		0.00	7.35E+04		1.21E+05
+	U-235	84.20	*	6.60	1.57E+03	1.61E+01	1.44E+02
		89.96		4.26	2.15E+03		4.68E+02
		143.79	*	10.50	1.49E+02		9.00E+01
		163.38	*	4.70	1.11E+02		1.46E+02
		185.74	*	53.00	1.95E+02		1.61E+01
		202.13		1.00	-5.97E+02		7.43E+02
		205.33	*	4.70	1.07E+02		1.73E+02
+	U-238d	49.55		0.07	5.21E+03	1.54E+02	1.24E+04
		63.29	*	3.80	8.75E+03		2.28E+02
		92.56	*	5.41	8.34E+03		1.54E+02
		110.50	*	0.02	1.42E+05		2.92E+04
		112.80	*	0.24	1.61E+04		2.95E+03
+	AM-241	59.54	*	35.70	3.76E+01	2.29E+01	2.29E+01
	CM-243	99.52		14.40	9.03E+01	3.60E+01	8.00E+01
		103.73		23.00	9.75E+00		3.60E+01
		116.93		8.32	-2.68E+00		9.89E+01
		228.19		10.56	4.01E+00		6.65E+01
		277.60		14.00	-1.14E+01		4.76E+01
	CM-245	99.52		21.10	6.16E+01	2.46E+01	5.46E+01
		103.73		33.60	6.67E+00		2.46E+01
		116.93		12.20	-1.83E+00		6.74E+01
		174.94		9.50	3.44E+01		7.74E+01

+ = Nuclide identified during the nuclide identification
* = Energy line found in the spectrum
> = MDA value not calculated
@ = Half-life too short to be able to perform the decay correction

DATA REVIEW COMMENTS REPORT

Creation Date	Comment	User

Analysis Report for RCF29641

J1KMK4 SAF:RC-223 618-10/ drum 618A-11-0063 250mL aG jar

7/28/2011 3:09:07PM	Am-241 activity is inflated do to the high activity of the U-238 Compton region. Am-241 may not be present at all or if it is it is in much lower activity than what is communicated in the Interference Corrected Report.	eswallac

DAVID KAMERMAN

JUL 28 2011

Apex™

Analysis Report for RCF29642

J1KM09 SAF:RC-223 618-10/ drum 618A-11-0125 250mL aG jar

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF29642
Sample Description	: J1KM09 SAF:RC-223 618-10/ drum 618A-11-0125 250mL aG jar
Sample Type	: Hi Act. Non Standard Geometry
Sample Size	: 1.220E+02 grams
Facility	: Default
Sample Taken On	: 7/28/2011 10:15:00AM
Acquisition Started	: 7/28/2011 2:53:16PM
Procedure	: High Activity Non Standard Geome
Operator	: RCT
Detector Name	: PGTLYNX
Geometry	: High Activity Non Standard Geometry
Live Time	: 1200.0 seconds
Real Time	: 1216.7 seconds
Dead Time	: 1.38 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 40 - 4096
Peak Area Range (in channels)	: 40 - 4096
Identification Energy Tolerance	: 1.000 keV
Energy Calibration Used Done On	: 3/3/2011
Efficiency Calibration Used Done On	: 3/17/2011
Efficiency Calibration Description	: PGTL HANSTD 031611EC SN82751A-238
Sample Number	: 17630

QUALITATIVE ONLY

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
Pa-234		0.973	1.49E+05	3.66E+03	
U-235	@	0.980	5.00E+02	3.11E+01	
U-238d	@	0.988	1.64E+04	9.98E+02	
AM-241		0.941	7.19E+01	9.16E+00	

SEE COMMENTS

D.K.

Analysis Report for RCF29642

J1KM09 SAF:RC-223 618-10/ drum 618A-11-0125 250mL aG jar

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 2.000 sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 7/28/2011 3:15:17PM
Peak Locate From Channel : 40
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)	Peak Size (CPS)	Peak CPS (%) Uncertainty	Peak Type	Tolerance Nuclide
M	1	55.95	5.52471E-01	11.33		
m	2	57.50	9.43864E-01	7.08	U-238 HIGH ACTIVITY COMPTON REGION	
m	3	58.84	1.09603E+00	6.30		
m	5	61.51	1.56907E+00	4.65		
M	7	70.37	8.18530E-01	27.44	NO PEAK	
m	13	96.08	9.83467E-01	10.12	NO PEAK	
	18	131.39	2.26341E-01	49.23	NO PEAK	
	23	226.84	1.82665E-01	56.18	Sum	
	25	569.51	1.93672E-01	27.28	NO PEAK	
m	28	705.68	4.94107E-02	33.51	NO PEAK	
	29	733.50	1.07444E-01	28.66	NO PEAK	
	35	831.59	1.07964E-01	31.75	NO PEAK	
M	36	880.61	2.04611E-01	7.88	Sum	
m	37	883.49	1.79777E-01	8.38	Sum	
	39	899.00	4.73599E-02	36.84	Sum	
m	41	926.34	2.73270E-01	5.73	Sum	
M	42	942.33	4.16793E-02	21.86	NO PEAK	
	49	1553.71	4.76176E-02	19.26	Sum	
	51	1808.90	1.98878E-02	22.48	Sum	

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
Errors quoted at 2.000 sigma

NUCLIDE MDA REPORT

Nuclide Library Used : \\WC98582\ApexRoot\Default\Library\RCF UNKNOWN HA URANIUM.NLB

Analysis Report for RCF29642

J1KM09 SAF:RC-223 618-10/ drum 618A-11-0125 250mL aG jar

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	K-40	1460.83		10.67	-7.69E+00	4.51E+01	4.51E+01
	CO-60	1173.24		99.90	-3.13E+00	4.69E+00	4.69E+00
		1332.50		99.98	-1.46E+00		4.72E+00
	NB-94	702.63		99.81	-2.13E-01	8.03E+00	1.14E+01
		871.10		99.89	-3.26E+00		8.03E+00
	AG-108m	433.94		90.50	3.11E+00	1.15E+01	1.15E+01
		614.28		89.80	9.78E-01		1.15E+01
		722.94		90.80	3.58E+00		1.17E+01
	CS-137	661.66		85.21	1.58E+00	1.25E+01	1.25E+01
	EU-152	40.12		38.40	-1.65E+01	2.04E+01	2.15E+01
		45.38		11.10	-9.67E+00		7.98E+01
		121.78		28.40	1.94E+00		3.44E+01
		244.69		7.51	-5.62E+01		1.38E+02
		344.29		26.60	1.72E+01		3.81E+01
		411.12		2.23	-2.16E+02		4.34E+02
		443.89		2.80	4.85E+01		3.64E+02
		778.92		12.98	-1.63E+02		8.64E+01
		867.38		4.21	-7.22E-01		1.89E+02
		964.11		14.50	-6.76E+00		4.41E+01
		1085.89		9.94	9.27E+01		5.84E+01
		1089.71		1.71	-1.45E+02		3.19E+02
		1112.07		13.60	1.58E+01		3.94E+01
		1212.93		1.40	8.56E+00		3.40E+02
		1299.16		1.63	2.95E+02		3.06E+02
		1408.00		20.80	-1.62E+01		2.04E+01
	EU-154	123.10		40.50	1.19E+01	1.15E+01	2.43E+01
		723.36		19.70	1.65E+01		5.39E+01
		873.23		11.45	-8.60E+01		7.10E+01
		1004.78		17.90	1.04E+00		2.10E+02
		1274.54		35.50	-4.27E+00		1.15E+01
	EU-155	86.54		34.00	-5.08E+01	4.42E+01	4.42E+01
		105.31		20.60	-1.91E+01		6.78E+01
	PB-212	74.81		10.50	1.30E+02	7.22E+01	1.21E+02
		77.11		17.70	-1.36E+02		7.22E+01
		87.19		6.27	-7.70E+02		2.38E+02
	RA-226d	186.11		3.28	8.46E+03	2.26E+01	4.76E+02
		241.92		7.46	-1.06E+02		1.39E+02
		295.09		19.20	1.67E+01		5.49E+01
		351.87		37.10	-2.40E+01		2.70E+01
		609.31		46.10	-1.21E+01		2.26E+01
		1120.27		15.00	2.51E+01		4.08E+01
		1764.49		15.90	4.61E+01		3.30E+01
	TH-232d	238.58		43.60	2.06E+00	2.33E+01	2.39E+01
		338.42		12.40	5.02E+01		8.23E+01
		583.02		30.87	-1.92E+00		3.48E+01
		911.16		29.00	-1.79E+01		2.33E+01
		968.97		17.40	7.50E-01		3.71E+01
+	Pa-234	73.90	*	0.01	3.10E+05	7.29E+02	1.48E+05
		94.65	*	0.12	4.80E+05		1.04E+04
		98.43	*	0.19	5.25E+05		5.69E+03
		111.03	*	0.07	6.15E+05		1.74E+04
		114.87	*	0.02	7.53E+05		4.17E+04

Analysis Report for RCF29642

J1KM09 SAF:RC-223 618-10/ drum 618A-11-0125 250mL aG jar

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	Pa-234	258.18	*	0.06	8.23E+04	7.29E+02	1.42E+04
		691.00	*	0.01	1.42E+05		1.33E+05
		701.85	*	0.01	9.83E+04		1.06E+05
		740.90	*	0.01	1.29E+05		1.18E+05
		742.82	*	0.06	1.51E+05		1.46E+04
		766.41	*	0.21	1.38E+05		7.64E+03
		782.80		0.01	-1.43E+05		2.70E+05
		786.29	*	0.03	1.35E+05		2.86E+04
		805.87	*	0.00	2.78E+05		3.08E+05
		851.72		0.00	1.44E+05		2.14E+05
		887.50	*	0.01	1.13E+05		1.02E+05
		921.96	*	0.01	1.30E+05		6.37E+04
		946.02	*	0.01	4.53E+05		6.99E+04
		995.00	*	0.00	1.43E+05		1.63E+05
		1001.00	*	0.65	1.19E+05		7.29E+02
		1193.74	*	0.01	1.24E+05		4.75E+04
		1237.21	*	0.00	1.00E+05		8.65E+04
		1435.40		0.01	1.73E+05		1.08E+05
		1510.11	*	0.01	1.20E+05		3.17E+04
		1737.80	*	0.01	1.27E+05		2.27E+04
		1765.70		0.01	1.13E+05		8.56E+04
		1831.70	*	0.01	1.27E+05		1.80E+04
		1867.97	*	0.01	1.36E+05		5.81E+04
		1875.20		0.01	1.19E+05		1.26E+05
		1911.44		0.00	1.19E+05		1.12E+05
+	U-235	84.20	*	6.60	3.80E+02	2.61E+01	3.80E+02
		89.96	*	4.26	4.37E+02		3.08E+02
		143.79	*	10.50	4.07E+02		1.33E+02
		163.38	*	4.70	4.00E+02		2.29E+02
		185.74	*	53.00	5.23E+02		2.61E+01
		202.13		1.00	4.40E+01		1.13E+03
		205.33	*	4.70	4.58E+02		2.81E+02
+	U-238d	49.55		0.07	-9.84E+03	2.47E+02	1.34E+04
		63.29	*	3.80	1.62E+04		2.47E+02
		92.56	*	5.41	3.30E+04		2.47E+02
		110.50	*	0.02	1.80E+06		5.08E+04
		112.80	*	0.24	6.95E+04		4.47E+03
+	AM-241	59.54	*	35.70	7.19E+01	2.47E+01	2.47E+01
	CM-243	99.52		14.40	1.77E+03	6.09E+01	1.67E+02
		103.73		23.00	-1.70E+01		6.09E+01
		116.93		8.32	-2.13E+01		1.58E+02
		228.19		10.56	3.79E-01		1.01E+02
		277.60		14.00	-5.19E+01		7.57E+01
	CM-245	99.52		21.10	1.21E+03	4.17E+01	1.14E+02
		103.73		33.60	-1.17E+01		4.17E+01
		116.93		12.20	-1.45E+01		1.07E+02
		174.94		9.50	9.47E+00		1.14E+02

Analysis Report for RCF29642

J1KM09 SAF:RC-223 618-10/ drum 618A-11-0125 250mL aG jar

+ = Nuclide identified during the nuclide identification
* = Energy line found in the spectrum
> = MDA value not calculated
@ = Half-life too short to be able to perform the decay correction

DATA REVIEW COMMENTS REPORT

Creation Date	Comment	User
7/28/2011 3:14:23PM	Am-241 activity is inflated do to the high activity of the U-238 Compton region. Am-241 may not be present at all or if it is it is in much lower activity than what is communicated in the Interference Corrected Report.	cswallac

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Sample Check-in List

Date/Time Received: 7-28-11 / 1650 GM Screen Result: (Airlock) 102 Initials [KB]
(Sample Receiving) 15 Initials [KB]

Client: WCH SDG #: J01201 NA [ ] SAF #: RC-223 NA [ ]

Lot Number: J1G280507

Chain of Custody # RC-223-006, RC-223-014

Shipping Container ID: hand deliver. NA [ ]

Samples received inside shipping container/cooler/box Yes [KB] 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 [KB]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [KB]
3. Cooler temperature: _____°C NA [KB]
4. Vermiculite/packing materials is NA [KB] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [KB] No [ ] 2 CK 7.28.11
6. Number of samples received (Each sample may contain multiple bottles): X Samples
7. Containers received: 250 mAg each, 2
8. Sample holding times exceeded? NA [ ] Yes [ ] No [CK]
9. Samples have:
   _____tape
   [KB] custody seals
   [KB] hazard labels
   [KB] appropriate sample labels
10. Matrix:
    [KB] A (FLT, Wipe, Solid, Soil)
    _____S (Air, Niosh 7400)
    _____I (Water)
    _____T (Biological, Ni-63)
11. Samples:
    [KB] are in good condition
    _____are broken
    _____are leaking
    _____have air bubbles (Only for samples requiring no head space)
    _____Other _____
12. Sample pH appropriate for analysis requested Yes [ ] No [ ] NA [KB]
    (If acidification is necessary, then document sample ID, initial pH, amount of HNO_3 added and pH after addition on table overleaf)
    RPL ID # of preservative used : N/A
13. Were any anomalies identified in sample receipt? Yes [ ] No [KB]
14. Description of anomalies (include sample numbers): NA [KB]

LS-023, Rev. 14, 06/11 See over for additional information.

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15. Sample Location, Sample Collector Listed on COC? * Yes [✓] No [ ]
*For documentation only. No corrective action needed.

16. Additional Information: _____

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

Sample Custodian: [illegible] / 1450 Date: 7-28-11

Client Informed on _____ by _____ Person contacted _____

[✓] No action necessary, process as is

Project Manager [illegible] Date 7/29/11

SAMPLE ID	Initial pH	Acid Amt	Final pH	SAMPLE ID	Initial pH	Acid Amt	Final pH