0077894

SAF-RC-087
618-7 Burial Ground - Soil
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Rick Kerkow	L6-06	KW 5/19/08 Initials/Date
Kathy Wendt	H4-21	KW 5/19/08 Initials/Date

COMMENTS:

SDG J00169 **SAF-RC-087**

Rad only X Chem only Rad & Chem

X Complete Partial

WASTE SITE: 618-7 Burial Ground/Stockpiles

RECEIVED
JUN 11 2008
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: TALR

RECEIVED
MAY 2008

SDG Number: J00169

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

Washington Closure Hanford
2620 Fermi Avenue
Richland, WA 99354

May 14, 2008

Attention: Joan Kessner

SAF Number	:	RC-087
Date SDG Closed	:	April 29, 2008
Number of Samples	:	Seventeen (17)
Sample Type	:	Soil
SDG Number	:	J00169
Data Deliverable	:	Quick Turn Metals / Summary

CASE NARRATIVE

I. Introduction

Between April 10, 2008 and April 17, 2008 seventeen 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#	STLR ID#	MATRIX	DATE OF RECEIPT
J16J67	KK203	SOIL	4/10/08
J16J68	KK204	SOIL	4/10/08
J16J70	KK9RK	SOIL	4/14/08
J16J71	KK9RP	SOIL	4/14/08
J16J69	KLD3A	SOIL	4/16/08
J16MB8	KLD3E	SOIL	4/16/08
J16MB9	KLD3H	SOIL	4/16/08
J16MC0	KLD3K	SOIL	4/16/08
J16J72	KLD3R	SOIL	4/16/08
J16MC1	KLD30	SOIL	4/16/08
J16MC2	KLD31	SOIL	4/16/08
J16MC3	KLD38	SOIL	4/16/08
J16MC4	KLD4C	SOIL	4/16/08
J16MC5	KLD4J	SOIL	4/16/08
J16MC6	KLGDD	SOIL	4/17/08
J16MC7	KLGDF	SOIL	4/17/08
J16MC8	KLGDG	SOIL	4/17/08

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-846 601

IV. Quality Control

SDG J00166 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 or per month, 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
Four batches were analyzed in April 2008 for samples with the standard metal request list with add ons aluminum, beryllium, copper, iron, zinc and zirconium.

Batch 8101260:
The LCS, batch blank, sample, sample duplicate, MS, MSD, ICB, ICV, CCB and CCV results are within contractual limits.

Batch 8105539:
The LCS, batch blank, sample, sample duplicate, MS, MSD, ICB, ICV, CCB and CCV results are within contractual limits.

Batch 8107259:
Iron in both the ICV and CCV recovered high. Suspect iron contamination in the system due to high level iron samples. The final CCB failed in Cr, Ca, Fe and Ni due to the auto sampler failure. Except as noted, the LCS, batch blank, sample, sample duplicate, MS, MSD and ICB results are within contractual limits.

Batch 8058416:
Iron in both the ICV and CCV recovered high. Suspect iron contamination in the system due to high level iron samples. Except as noted, the LCS, batch blank, sample, sample duplicate, MS, MSD, ICB and CCB results are within contractual limits.

Washington Closure Hanford
May 14, 2008

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:

Sandra Seger
Project Manager

SKS 4/14/08

SDG Number: ~~J00169~~ J00169
SAF Number: RC-087
Batch Number: 8101260

Sample Number	Client ID	Aliquant	Aluminum	Arsenic	Barium	Berylium	Cadmium	Copper	Chromium	Iron	Lead	Selenium	Silver	Zinc
		sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa
KK27A1AA-BLK		1.000	0.0237	-0.0018	0.0001	0.0001	0	0.0016	0.0004	0.0092	0.0012	0.02257	-0.0001	0.0064
KK27A1AJ-LCS		1.000	0.9779	1.012	0.9844	1.062	0.9631	0.9926	0.9466	1.172	0.9646	0.94383	0.965	1.127
LCS Recovery %			97.790%	101.200%	98.440%	106.200%	96.310%	99.260%	94.660%	117.200%	96.460%	94.383%	96.500%	112.700%
		g	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
KK2031AA	J16J67	0.5126	5213.61686	<MDL	55.63792	0.195084	2.106906	11.09052	7.647288	20025.361	4.525946	<MDL	<MDL	37.83652
KK2031A1-DUP	J16J67-DUP	0.4952	5118.13409	<MDL	64.60016	0.181745	2.211228	11.48021	7.491922	20749.192	6.159128	<MDL	<MDL	44.71931
KK2041AA	J16J68	0.5001	5554.88902	<MDL	65.64687	0.189962	2.579484	50.74985	11.11778	23825.235	12.27754	<MDL	<MDL	63.24735
KK2031AJ-MS	J16J67-MS	0.5065	N/A	100.3949	153.5044	104.7384	94.67917	108.8845	96.73248	N/A	96.38697	89.96841	92.28036	133.6624
% Recovery				100.395	97.867	104.543	92.572	97.794	89.085		91.861	89.968	92.280	95.826
KK2031AK-MSD	J16J67-MSD	0.509	N/A	98.91945	154.0275	102.947	93.02554	108.2515	95.30452	N/A	95.49116	89.6336	90.99214	132.3183
% Recovery				98.919	98.390	102.752	90.919	97.161	87.657		90.965	89.634	90.992	94.482

SDG Number: J00169
SAF Number: RC-087
Batch Number: 8105539

Sample Number	Client ID	Aliquant	Aluminum	Arsenic	Barium	Berylium	Cadmium	Copper	Chromium	Iron	Lead	Selenium	Silver	Zinc
		sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa
KK9XT1AA-BLK		1.000	0.0259	-0.0025	0.0002	0.0002	0.0001	-0.0001	0.0004	0.0125	0.0019	-0.00164	0	0.0074
KK9XT1AJ-LCS		1.000	1.006	1.02	0.9874	1.07	0.9739	0.9969	0.9466	1.105	0.9646	0.95233	0.959	0.976
LCS Recovery %			100.600%	102.000%	98.740%	107.000%	97.390%	99.690%	94.660%	110.500%	96.460%	95.233%	95.900%	97.600%
		g	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
KK9RK1AA	J16J70	0.5031	5827.86722	1.431127	68.97237	0.218644	1.928046	15.93123	7.791692	19936.394	9.113496	<MDL	<MDL	57.84138
KK9RK1A1	J16J70-DUP	0.4952	5653.27141	1.827544	65.04443	0.373586	1.827544	14.76171	7.491922	19113.489	14.67084	<MDL	<MDL	56.49233
KK9RP1AA	J16J71	0.5065	6215.20237	0.878578	91.05627	0.207305	2.438302	38.69694	10.9773	18914.116	22.5074	<MDL	<MDL	109.0819
KK9RK1AJ-MS	J16J70-MS	0.4975	N/A	101.608	166.9347	104.4221	94.56281	112.4623	98.48241	N/A	101.5075	91.42412	91.76884	211.1558
% Recovery				100.395	97.962	104.203	92.635	96.531	90.691		92.394	91.424	91.769	153.314
KK9RK1AR-MSD	J16J70-MSD	0.5175	N/A	98.26087	160.0966	100.6763	91.14976	114.5894	93.73913	N/A	104.2512	87.5343	88.68599	155.4589
% Recovery				98.919	91.124	100.458	89.222	98.658	85.947		95.138	87.534	88.686	97.618

SDG Number: J00169
SAF Number: RC-087
Batch Number: 8107259

Sample Number	Client ID	Aliquant	Aluminum	Arsenic	Barium	Berylium	Cadmium	Copper	Chromium	Iron	Lead	Selenium	Silver	Zinc
		sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa
KLEA01AA-BLK		1.000	-0.004	-0.002	0.0001	0.0001	0.0002	0.001	0.0004	0.015	0.0027	0.001	0.0001	0.007
KLEA01AJ-LCS		1.000	0.968	1.013	0.985	1.064	0.9628	1.001	0.9559	1.136	0.9587	0.937	0.953	0.987
LCS Recovery %			96.760%	101.300%	98.500%	106.400%	96.280%	100.100%	95.590%	113.600%	95.870%	93.739%	95.300%	98.690%
		g	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
KLD3K1AA	J16MC0	0.5047	13404.0024	0.842084	68.32772	0.208044	2.476719	129.4829	32.04874	21854.567	1619.774	<MDL	<MDL	106.0036
KLD3K1A1-DUP	J16MC0-DUP	0.4965	10946.6264	1.470292	67.41188	0.241692	2.618328	65.43807	26.67674	23293.051	1119.839	<MDL	<MDL	153.1722
KLD301AA	J16MC1	0.4973	1389.50332	<MDL	24.1303	<MDL	0.764126	3713.05	<MDL	3287.7539	4.242912	<MDL	1.960587	20.10859
KLD311AA	J16MC2	0.5048	9106.57686	<MDL	91.02615	0.356577	2.8229	82.69612	68.40333	25386.292	355.9826	<MDL	<MDL	162.9358
KLD381AA	J16MC3	0.5136	6172.11838	<MDL	71.85553	0.146028	2.803738	43.78894	13.95055	24581.386	32.95366	<MDL	<MDL	82.83684
KLD4C1AA	J16MC4	0.5008	5040.9345	0.409345	58.00719	<MDL	2.20647	11.16214	5.920527	20996.406	3.783946	<MDL	<MDL	36.73123
KLD4J1AA	J16MC5	0.5122	5744.82624	0.64428	64.91605	0.253807	2.723545	33.89301	8.483014	23779.774	11.20656	<MDL	<MDL	302.5185
KLD3E1AA	J16MB8	0.5084	9686.27065	0.944138	74.83281	0.196696	3.688041	2418.371	49.17388	23210.071	518.4894	<MDL	<MDL	774.0952
KLD3H1AA	J16MB9	0.4997	12097.2584	0.790474	68.24094	0.260156	2.731639	110.7665	27.14629	23584.15	1439.864	<MDL	<MDL	182.4094
KLD3A1AA	J16J69	0.5068	5479.47908	1.67719	57.8532	<MDL	<MDL	1023.086	25.91752	29173.244	79.60734	<MDL	13.66417	36.3457
KLD3R1AA	J16J72	0.4951	3237.72975	9.573823	1427.994	<MDL	6.534034	233.9931	578.772	59775.803	39.2547	<MDL	<MDL	36.75015
KLD3K1AJ-MS	J16MC0-MS	0.5003	N/A	101.739	168.4989	103.6378	94.6732	231.0614	117.6294	N/A	631.2213	88.5069	90.56566	214.5713
% Recovery				100.897	100.171	103.430	92.196	101.579	85.581		-988.553	88.507	90.566	108.568
KLD3K1AR-MSD	J16MC0-MSD	0.4962	N/A	101.3704	169.4881	104.7965	94.71987	164.8529	109.0286	N/A	1136.638	90.68722	93.02701	199.4156
% Recovery				100.528	101.160	104.588	92.243	35.370	76.980		-483.136	90.687	93.027	93.412

SDG Number: J00169
SAF Number: RC-087
Batch Number: 8108319

Sample Number	Client ID	Aliquant	Aluminum	Arsenic	Barium	Berylium	Cadmium	Copper	Chromium	Iron	Lead	Selenium	Silver	Zinc
		sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa
KLHAF1AA-BLK		1.000	0.004	-0.001	0.000	0.000	-0.0002	0.002	0.000	-0.001	0.0034	0.014	-0.001	0.010
KLHAF1AJ-LCS		1.000	0.953	0.983	0.973	1.037	0.9404	0.984	0.922	1.073	0.9384	0.925	0.936	0.950
LCS Recovery %			95.250%	98.250%	97.250%	103.700%	94.040%	98.380%	92.220%	107.300%	93.840%	92.533%	93.600%	94.990%
		g	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
KLGDD1AA	J16MC6	0.5145	8567.541	5.530	68.941	0.340136	3.770651	421.672	89.611	27881.438	262.0991	<MDL	<MDL	257.920
KLGDD1A1-DUP	J16MC6-DUP	0.5172	8803.171	<MDL	72.873	0.377	3.799304	91.493	46.297	25667.053	505.6071	<MDL	<MDL	218.194
KLGDF1AA	J16MC7	0.5065	9259.625	<MDL	81.540	0.247	2.66535	177.690	53.781	22221.125	362.1915	<MDL	<MDL	204.541
KLGDG1AA	J16MC8	0.5024	7199.443	1.344	67.367	0.199	2.58758	95.949	27.339	22661.226	118.5311	<MDL	<MDL	99.443
KLGDD1AJ-MS	J16MC6-MS	0.4914	N/A	99.125	171.144	104.090	93.91534	219.271	137.566	N/A	1589.337	90.227	91.880	374.542
% Recovery				93.595	102.203	103.750	90.145	-202.400	47.955		1327.237	90.227	91.880	116.622
KLGDD1AR-MSD	J16MC6-MSD	0.4923	N/A	99.147	167.682	103.697	99.38046	236.847	125.838	N/A	280.2153	90.620	92.037	363.599
% Recovery				93.617	98.742	103.357	95.610	-184.824	36.227		18.116	90.620	92.037	105.679

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-080	Page 1 of 1

Collector B Lawrence, E. Harries	**Company Contact** Joan Kessner	**Telephone No.** 509-375-4688	**Project Coordinator** KESSNER, JH	**Price Code** 2B	**Data Turnaround** 24 Hours
Project Designation 618-7 Burial Ground - Soil	**Sampling Location** 618-7 Burial Ground/Stockpiles		**SAF No.** RC-087		
Ice Chest No. RC-97-0977 wo 4/10/08	**Field Logbook No.** EL-1395-12	**COA** RG61872600	**Method of Shipment** GOVERNMENT VEHICLE		
Shipped To TestAmerica Incorporated, Richland	**Offsite Property No.** NA		**Bill of Lading/Air Bill No.** NA		

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None										
Type of Container	aG										
No. of Container(s)	1										
Volume	60mL										
SAMPLE ANALYSIS	See item (1) in Special Instructions.										

Sample No.	Matrix *	Sample Date	Sample Time										
J16J67 KK203	SOIL	4-8-08	0740	X								See #	H-001
J16J68 KK204	SOIL	4-8-08	0750	X								"	H-002
~~J16J69~~	~~SOIL~~												
~~J16J70~~	~~SOIL~~												

RC 4/16/08

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Received By/Stored In	Date/Time
Relinquished By/Removed From E. Harris/E. Harris	4/8/08 0805		RTCoffman/RTCoffman	4/8/08 0805
Relinquished By/Removed From RTCoffman/RTCoffman	4/8/08 1300		Rotor #1A	4/8/08 1300
Relinquished By/Removed From 1060/1A	4/10/08 0830		mskankovich	4/10/08 0830
Relinquished By/Removed From wch mskankovich	4/10/08 0900		WLANE TAL	4/10/08 0900
Relinquished By/Removed From	Date/Time		Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time		Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

None

(1) Metals by ICP - 6010 - Quick Turn {Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver}; Metals by ICP - 6010 - Quick Turn (Add On) {Aluminum, Beryllium, Copper, Iron, Zinc, Zirconium}

JSD100172
J00169
DUE 4/10/08

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

Radiological Counting Facility

Analysis Report for RCF19428

J16J48 SAF:RC-087 FF2/618-7 Burial Gound Soil

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19428
Sample Description	: J16J48 SAF:RC-087 FF2/618-7 Burial Gound Soil
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 5.400E+01 grams
Facility	: Default
Sample Taken On	: 4/8/2008 7:50:00AM
Acquisition Started	: 4/9/2008 7:26:06AM
Procedure	: 50 gram pill box
Operator	: RCT
Detector Name	: PGTWHITE
Geometry	: 50 ml Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3600.7 seconds
Dead Time	: 0.02 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 80 - 4096
Peak Area Range (in channels)	: 80 - 4096
Identification Energy Tolerance	: 1.300 keV
Energy Calibration Used Done On	: 1/31/2008
Efficiency Calibration Used Done On	: 2/4/2008
Efficiency Calibration Description	: 50ml Pill Box (1234-95-2) 2/4/2008
Sample Number	: 18535

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.995	1.54E+01	3.68E+00	
TH-232d		0.997	6.01E-01	1.88E-01	
U-235		0.540	3.89E-01	2.16E-01	
U-238d	@	0.998	6.32E+00	2.35E+00	

Analysis Report for RCF19428

J16J48 SAF:RC-087 FF2/618-7 Burial Gound Soil

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity
d = identified by daughter product energy lines assumed to be in secular equilibrium
Errors quoted at 2.000 sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 4/9/2008 8:26:13AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Rate (CPS)	Peak Rate (%) Uncertainty
2	77.08 86-212	3.70E-02	21.24

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

NP = No Peak
UK = Unknown

NUCLIDE MDA REPORT

Nuclide Library Used : \\GOZER\ApexRoot\Default\Library\RCF UNKNOWN.NLB

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	K-40	1460.83	*	10.67	1.54E+01	4.10E+00	4.10E+00
	CO-60	1173.24		99.90	9.57E-02	3.13E-01	3.57E-01
		1332.50		99.98	8.69E-04		3.13E-01
	NB-94	702.63		99.81	-1.41E-02	2.45E-01	2.45E-01
		871.10		99.89	2.13E-01		3.12E-01
	AG-108m	433.94		90.50	-2.22E-02	2.13E-01	2.13E-01
		614.28		89.80	-2.19E-01		2.95E-01
		722.94		90.80	3.45E-02		2.81E-01
	CS-137	661.66		85.21	-1.59E-01	2.74E-01	2.74E-01
	EU-152	40.12		38.40	7.57E-02	3.32E-01	3.57E-01
		45.38		11.10	2.48E-01		1.11E+00
		121.78		28.40	-5.17E-02		3.32E-01
		244.69		7.51	4.54E-01		2.29E+00
		344.29		26.60	7.13E-02		6.09E-01
		411.12		2.23	1.86E+00		8.62E+00
		443.89		2.80	1.79E-01		7.10E+00
		778.92		12.98	2.05E-01		1.81E+00
		867.38		4.21	6.48E-02		6.84E+00
		964.11		14.50	-1.66E+00		2.53E+00

Analysis Report for RCF19428

J16J48 SAF:RC-087 FF2/618-7 Burial Gound Soil

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		1085.89		9.94	-7.96E-01		3.04E+00
		1089.71		1.71	6.17E+00		1.82E+01
		1112.07		13.60	-3.35E-01		2.55E+00
		1212.93		1.40	-1.25E+01		2.39E+01
		1299.16		1.63	-9.55E-01		1.76E+01
		1408.00		20.80	2.52E-01		1.48E+00
	EU-154	123.10		40.50	4.27E-02	2.35E-01	2.35E-01
		723.36		19.70	1.59E-01		1.30E+00
		873.23		11.45	2.06E-01		2.73E+00
		1004.78		17.90	4.49E-01		1.78E+00
		1274.54		35.50	-1.81E-01		9.57E-01
	EU-155	86.54		34.00	3.96E-01	3.68E-01	3.68E-01
		105.31		20.60	-3.75E-01		4.70E-01
	PB-212	74.81		10.50	-8.33E-01	8.65E-01	1.19E+00
		77.11		17.70	1.52E+00		8.65E-01
		87.19		6.27	1.52E+00		2.09E+00
	RA-226d	186.11		3.28	1.18E+01	6.11E-01	5.92E+00
		241.92		7.46	1.56E+00		3.28E+00
		295.09		19.20	5.96E-01		9.29E-01
		351.87		37.10	5.65E-01		6.11E-01
		609.31		46.10	2.84E-01		6.46E-01
		1120.27		15.00	9.81E-01		2.43E+00
		1764.49		15.90	3.60E-01		2.31E+00
+	TH-232d	238.58	*	43.60	6.97E-01	4.35E-01	4.35E-01
		338.42	*	12.40	5.36E-01		1.05E+00
		583.02	*	30.87	3.74E-01		5.83E-01
		911.16	*	29.00	6.18E-01		6.99E-01
		968.97	*	17.40	9.57E-01		1.11E+00
+	U-235	143.79		10.50	4.41E-01	3.38E-01	1.11E+00
		163.38		4.70	4.14E-01		2.85E+00
		185.74	*	53.00	3.89E-01		3.38E-01
		205.33		4.70	-2.82E+00		2.81E+00
+	U-238d	63.29	*	3.80	6.32E+00	3.39E+00	3.52E+00
		92.56	*	5.41	6.83E+00		3.39E+00
	AM-241	59.54		35.70	-2.41E-01	2.64E-01	2.64E-01
	CM-243	99.52		14.40	6.58E-01	4.23E-01	7.35E-01
		103.73		23.00	8.34E-02		4.23E-01
		116.93		8.32	-4.81E-01		1.14E+00
		228.19		10.56	6.23E-01		1.47E+00
		277.60		14.00	4.83E-01		1.08E+00
	CM-245	99.52		21.10	4.49E-01	2.90E-01	5.02E-01
		103.73		33.60	5.71E-02		2.90E-01
		116.93		12.20	-3.28E-01		7.79E-01
		174.94		9.50	-8.98E-01		1.22E+00

Analysis Report for RCF19428

J16J48 SAF:RC-087 FF2/618-7 Burial Gound Soil

+ = 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

Reviewed and Approved: EDWARD S. WALLACE

APR 10 2008 Edward S. Wallace

(print/sign/date)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-073	Page 1 of 1

Collector B Lawrence, E. Harries	**Company Contact** Joan Kessner	**Telephone No.** 509-375-4688	**Project Coordinator** KESSNER, JH
Price Code 2A	**Data Turnaround** 24 Hours		
Project Designation 618-7 Burial Ground - Soil	**Sampling Location** 618-7 Burial Ground/Stockpiles		**SAF No.** RC-087
Ice Chest No.	**Field Logbook No.** EL-1395-12	**COA** RG61872600	**Method of Shipment** GOVERNMENT VEHICLE
Shipped To Radiological Counting Facility	**Offsite Property No.**		**Bill of Lading/Air Bill No.**

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None											
Type of Container	Snap Vial											
No. of Container(s)	1											
Volume	80g											
SAMPLE ANALYSIS	RCF GEA Shipping Screen											
Sample No.	Matrix *	Sample Date	Sample Time		RCF							
J16J47	SOIL	4-8-08	0740	X	19427							H-001
J16J48	SOIL	4-8-08	0750	X	19426							H-002
~~J16J49~~	~~SOIL~~											
~~J16J50~~	~~SOIL~~											

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
E. Harries / E. Harries	4/8/08 0805	RT Coffman / RT Coffman	4/8/08 0805
RT Coffman / RT Coffman	4/8/08 1340	RL [illegible] / RL [illegible]	4/8/08 1340

SPECIAL INSTRUCTIONS

None

COPY

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

RCF 19427

Radiological Counting Facility

Analysis Report for RCF19427

J16J47 SAF:RC-087 FF2/618-7 Burial Grounds Soil

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19427
Sample Description	: J16J47 SAF:RC-087 FF2/618-7 Burial Grounds Soil
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 5.800E+01 grams
Facility	: Default
Sample Taken On	: 4/8/2008 7:40:00AM
Acquisition Started	: 4/9/2008 6:18:32AM
Procedure	: 50 gram pill box
Operator	: RCT
Detector Name	: PGTWHITE
Geometry	: 50 ml Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3600.7 seconds
Dead Time	: 0.02 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 80 - 4096
Peak Area Range (in channels)	: 80 - 4096
Identification Energy Tolerance	: 1.300 keV
Energy Calibration Used Done On	: 1/31/2008
Efficiency Calibration Used Done On	: 2/4/2008
Efficiency Calibration Description	: 50ml Pill Box (1234-95-2) 2/4/2008
Sample Number	: 18530

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.996	2.08E+01	3.80E+00	
PB-212	0.709	5.49E-01	1.90E-01	
TH-232d	0.416	8.14E-01	2.42E-01	
U-235	0.540	1.49E-01	1.55E-01	
U-238d	0.342	1.58E+00	1.35E+00	

Analysis Report for RCF19427

J16J47 SAF:RC-087 FF2/618-7 Burial Grounds Soil

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity
d = identified by daughter product energy lines assumed to be in secular equilibrium
Errors quoted at 2.000 sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 4/9/2008 7:18:39AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

Peak No.	Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
6	295.47	Pb-214	1.67E-02	25.11
7	352.01	Pb-214	1.09E-02	34.23
8	511.13	Annihilation Photon	7.16E-03	55.22

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

NP = No Peak
UK = Unknown

NUCLIDE MDA REPORT

Nuclide Library Used : \\GOZER\ApexRoot\Default\Library\RCF UNKNOWN.NLB

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	K-40	1460.83	*	10.67	2.08E+01	3.49E+00	3.49E+00
	CO-60	1173.24		99.90	9.75E-02	2.60E-01	3.32E-01
		1332.50		99.98	-2.43E-01		2.60E-01
	NB-94	702.63		99.81	-1.71E-01	2.26E-01	2.36E-01
		871.10		99.89	-1.05E-01		2.26E-01
	AG-108m	433.94		90.50	-4.31E-02	1.91E-01	1.91E-01
		614.28		89.80	-1.46E-01		2.58E-01
		722.94		90.80	1.36E-01		2.52E-01
	CS-137	661.66		85.21	5.11E-02	2.47E-01	2.47E-01
	EU-152	40.12		38.40	3.31E-03	3.07E-01	3.07E-01
		45.38		11.10	1.07E+00		1.04E+00
		121.78		28.40	-2.83E-02		3.24E-01
		244.69		7.51	-1.65E+00		1.94E+00
		344.29		26.60	-3.10E-01		6.02E-01
		411.12		2.23	4.98E+00		8.02E+00
		443.89		2.80	3.94E+00		6.86E+00
		778.92		12.98	-2.50E-01		1.66E+00

Analysis Report for RCF19427

J16J47 SAF:RC-087 FF2/618-7 Burial Grounds Soil

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		867.38		4.21	-2.57E+00		5.73E+00
		964.11		14.50	8.88E-01		2.18E+00
		1085.89		9.94	-3.71E-01		2.91E+00
		1089.71		1.71	1.16E+01		1.90E+01
		1112.07		13.60	5.64E-01		2.21E+00
		1212.93		1.40	1.43E+00		2.26E+01
		1299.16		1.63	1.36E+00		2.12E+01
		1408.00		20.80	9.89E-02		1.24E+00
	EU-154	123.10		40.50	2.11E-01	2.33E-01	2.33E-01
		723.36		19.70	6.29E-01		1.16E+00
		873.23		11.45	8.08E-01		2.01E+00
		1004.78		17.90	4.13E-01		1.66E+00
		1274.54		35.50	2.09E-01		8.34E-01
	EU-155	86.54		34.00	-1.26E-01	3.19E-01	3.19E-01
		105.31		20.60	-1.29E-01		4.17E-01
+	PB-212	74.81	*	10.50	3.76E-01	4.61E-01	7.66E-01
		77.11	*	17.70	6.43E-01		4.61E-01
		87.19		6.27	1.52E+00		1.81E+00
	RA-226d	186.11		3.28	4.42E+00	5.92E-01	4.47E+00
		241.92		7.46	-5.76E-01		3.02E+00
		295.09		19.20	1.04E+00		9.61E-01
		351.87		37.10	6.52E-01		5.92E-01
		609.31		46.10	7.35E-01		6.33E-01
		1120.27		15.00	-3.13E-02		2.19E+00
		1764.49		15.90	1.35E+00		2.10E+00
+	TH-232d	238.58	*	43.60	8.16E-01	4.31E-01	4.31E-01
		338.42		12.40	9.17E-01		1.56E+00
		583.02	*	30.87	8.10E-01		6.22E-01
		911.16		29.00	1.60E+00		1.18E+00
		968.97		17.40	1.62E+00		1.99E+00
+	U-235	143.79		10.50	2.14E-01	2.52E-01	9.74E-01
		163.38		4.70	1.28E+00		2.54E+00
		185.74	*	53.00	1.49E-01		2.52E-01
		205.33		4.70	3.15E-01		2.79E+00
+	U-238d	63.29		3.80	2.21E+00	2.19E+00	2.81E+00
		92.56	*	5.41	1.58E+00		2.19E+00
	AM-241	59.54		35.70	-1.34E-03	2.39E-01	2.39E-01
	CM-243	99.52		14.40	2.21E-01	3.63E-01	6.07E-01
		103.73		23.00	-1.18E-02		3.63E-01
		116.93		8.32	-2.88E-01		1.06E+00
		228.19		10.56	2.88E-01		1.27E+00
		277.60		14.00	3.54E-01		1.07E+00
	CM-245	99.52		21.10	1.51E-01	2.48E-01	4.14E-01
		103.73		33.60	-8.05E-03		2.48E-01
		116.93		12.20	-1.96E-01		7.20E-01
		174.94		9.50	3.01E-01		1.31E+00

Analysis Report for RCF19427

J16J47 SAF:RC-087 FF2/618-7 Burial Grounds Soil

+ = 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

Reviewed and Approved: EDWARD S. WALLACE

APR 10 2008 (print/sign/date)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-073	Page 1 of 1

Collector B Lawrence, E. Harries	Company Contact Joan Kessner	Telephone No. 509-375-4688	Project Coordinator KESSNER, JH
Project Designation 618-7 Burial Ground - Soil	Sampling Location 618-7 Burial Ground/Stockpiles		SAF No. RC-087
Ice Chest No.	Field Logbook No. EL-1395-12	COA RG61872600	Method of Shipment GOVERNMENT VEHICLE
Shipped To Radiological Counting Facility	Offsite Property No.		Bill of Lading/Air Bill No.

Price Code: 2A

Data Turnaround: 24 Hours

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None										
Type of Container	Snap Vial										
No. of Container(s)	1										
Volume	80g										
SAMPLE ANALYSIS	RCF GEA Shipping Screen										

Sample No.	Matrix *	Sample Date	Sample Time		RCF								
J16J47	SOIL	4-8-08	0740	X	19427							Soil	H-001
J16J48	SOIL	4-8-08	0750	X	19428							"	H-002
~~J16J49~~	~~SOIL~~												
~~J16J50~~	~~SOIL~~												

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
E. Harries / E. Harries	4/8/08 0805	RT Coffman / RT Coffman	0805 4/8/08
RT Coffman / RT Coffman	1340 4/8/08	R Cunningham / RT Coffman	1340 4/8/08

SPECIAL INSTRUCTIONS

None

COPY

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
Ve=Vegetation
X=Other

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

WCH-EE-011

RCF 19428

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 41008 0900 GM Screen Result 0.1K

Client: WCH SDG #: J00169 NA[ ] SAF #: RC-087 NA [ ]

Work Order Number: J8D100172 Chain of Custody # RC-087-080

Shipping Container ID: _____ Air Bill # _____

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: _____ NA [✓] 5. Vermiculite/packing materials is NA [✓] Wet [ ] Dry [ ]
6. Number of samples in shipping container: 2
7. Sample holding times exceeded? NA [✓] Yes [ ] No [ ]
8. Samples have:
   - ____ Tape
   - ✓ Custody Seals
   - ____ Hazard Lables
   - ✓ Appropriate Sample Lables
9. Samples are:
   - ✓ In Good Condition
   - ____ Broken
   - ____ Leaking
   - ____ Have Air Bubbles
   - (Only for samples requiring no head space.)
10. Sample pH taken? NA [✓] SOIL pH<2 [ ] pH>2 [ ] pH>9 [ ] Amount HNO_3 Added _____
11. Sample Location, Sample Collector Listed? *
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [✓]
13. Description of anomalies (include sample numbers): _____

Sample Custodian: [signature] Date: 4 10 08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

LS-023, Rev. 7, 1/03

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-090	Page 1 of 1

Collector B Lawrence, E. Harries	**Company Contact** Joan Kessner **Telephone No.** 509-375-4688	**Project Coordinator** KESSNER, JH	**Price Code** 2B **Data Turnaround** 24 Hours
Project Designation 618-7 Burial Ground - Soil	**Sampling Location** 618-7 Burial Ground/Stockpiles	**SAF No.** RC-087	
Ice Chest No.	**Field Logbook No.** EL-1395-12 **COA** RG61872600	**Method of Shipment** Government Vehicle	
Shipped To TestAmerica Incorporated, Richland	**Offsite Property No.**	**Bill of Lading/Air Bill No.**	

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None										
Type of Container	aG										
No. of Container(s)	1										
Volume	60mL										
SAMPLE ANALYSIS	See item (1) in Special Instructions.								TIE TO		Stockpile Segment
Sample No.	Matrix *	Sample Date	Sample Time								
J16J70 KK9RK	SOIL	4-10-08	0725	X						J16J50		H004
J16J71 KK9RP	SOIL	4-10-08	0735	X						J16J51		H003

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
E. Harries/E. Harries	4/10/08 0845	RT Coffman/RT Coffman	0845 4/10/08
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
RT Coffman/RT Coffman	4/10/08 1130	MStankovich	1130 4/10/08
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
MStankovich	4/14/08 14:00	DAVID HARRISON	14:00 4/14/08
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

None

(1) Metals by ICP - 6010 - Quick Turn (Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver); Metals by ICP - 6010 - Quick Turn (Add On) (Aluminum, Beryllium, Copper, Iron, Zinc, Zirconium)

J8D140202
J00169
DUE 41508

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

Radiological Counting Facility

Analysis Report for RCF19441

J16J50 SAF:RC-087 FF2/618-7 Burial Ground Soil

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19441
Sample Description	: J16J50 SAF:RC-087 FF2/618-7 Burial Ground Soil
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 5.700E+01 grams
Facility	: Default
Sample Taken On	: 4/10/2008 7:25:00AM
Acquisition Started	: 4/10/2008 3:01:52PM
Procedure	: 50 gram pill box
Operator	: RCT
Detector Name	: PGTWHITE
Geometry	: 50 ml Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3600.7 seconds
Dead Time	: 0.02 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 80 - 4096
Peak Area Range (in channels)	: 80 - 4096
Identification Energy Tolerance	: 1.300 keV
Energy Calibration Used Done On	: 1/31/2008
Efficiency Calibration Used Done On	: 2/4/2008
Efficiency Calibration Description	: 50ml Pill Box (1234-95-2) 2/4/2008
Sample Number	: 18597

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		1.000	1.20E+01	3.19E+00	
PB-212		0.709	1.01E+00	2.15E-01	
TH-232d		0.675	8.09E-01	1.97E-01	
U-235		0.795	1.44E+00	2.37E-01	
U-238d	@	1.000	1.28E+01	2.92E+00	

Analysis Report for RCF19441

J16J50 SAF:RC-087 FF2/618-7 Burial Ground Soil

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity
d = identified by daughter product energy lines assumed to be in secular equilibrium
Errors quoted at 2.000 sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 4/10/2008 4:01:59PM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

Peak No.	Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
9	609.17	Bi-214	1.31E-02	26.12

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

NP = No Peak
UK = Unknown

NUCLIDE MDA REPORT

Nuclide Library Used : \\GOZER\ApexRoot\Default\Library\RCF UNKNOWN.NLB

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	K-40	1460.83	*	10.67	1.20E+01	3.63E+00	3.63E+00
	CO-60	1173.24		99.90	2.67E-01	3.08E-01	3.72E-01
		1332.50		99.98	2.14E-01		3.08E-01
	NB-94	702.63		99.81	5.36E-02	2.22E-01	2.22E-01
		871.10		99.89	1.01E-01		2.71E-01
	AG-108m	433.94		90.50	-1.10E-01	2.00E-01	2.00E-01
		614.28		89.80	1.08E-01		2.97E-01
		722.94		90.80	4.84E-02		3.13E-01
	CS-137	661.66		85.21	2.01E-01	2.69E-01	2.69E-01
	EU-152	40.12		38.40	-7.41E-02	3.32E-01	3.32E-01
		45.38		11.10	6.27E-01		1.14E+00
		121.78		28.40	1.51E-01		3.61E-01
		244.69		7.51	1.01E+00		2.01E+00
		344.29		26.60	-3.34E-01		5.95E-01
		411.12		2.23	5.76E+00		8.21E+00
		443.89		2.80	2.84E+00		6.77E+00
		778.92		12.98	2.24E-01		1.80E+00
		867.38		4.21	9.38E-01		6.41E+00
		964.11		14.50	4.89E-02		2.18E+00

Analysis Report for RCF19441

J16J50 SAF:RC-087 FF2/618-7 Burial Ground Soil

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		1085.89		9.94	-2.10E+00		2.79E+00
		1089.71		1.71	-1.45E+01		1.70E+01
		1112.07		13.60	-3.89E-01		1.99E+00
		1212.93		1.40	6.63E+00		2.71E+01
		1299.16		1.63	-1.34E+01		1.74E+01
		1408.00		20.80	2.64E-01		1.50E+00
	EU-154	123.10		40.50	1.36E-01	2.58E-01	2.58E-01
		723.36		19.70	2.23E-01		1.44E+00
		873.23		11.45	7.98E-01		2.45E+00
		1004.78		17.90	2.85E-01		1.90E+00
		1274.54		35.50	-5.10E-01		8.48E-01
	EU-155	86.54		34.00	-2.98E-01	4.09E-01	4.09E-01
		105.31		20.60	-3.08E-01		4.90E-01
+	PB-212	74.81	*	10.50	1.35E+00	6.01E-01	9.43E-01
		77.11	*	17.70	8.81E-01		6.01E-01
		87.19		6.27	-1.27E+00		2.27E+00
	RA-226d	186.11		3.28	2.49E+01	5.77E-01	7.40E+00
		241.92		7.46	9.96E-01		2.98E+00
		295.09		19.20	3.88E-01		9.01E-01
		351.87		37.10	6.68E-01		5.77E-01
		609.31		46.10	7.85E-01		6.80E-01
		1120.27		15.00	9.87E-01		2.28E+00
		1764.49		15.90	8.88E-01		2.34E+00
+	TH-232d	238.58	*	43.60	7.46E-01	3.67E-01	3.67E-01
		338.42		12.40	4.04E-01		1.43E+00
		583.02	*	30.87	7.79E-01		5.12E-01
		911.16	*	29.00	1.16E+00		7.47E-01
		968.97		17.40	9.05E-01		1.88E+00
+	U-235	143.79	*	10.50	1.48E+00	3.08E-01	1.03E+00
		163.38		4.70	7.62E-01		2.85E+00
		185.74	*	53.00	1.43E+00		3.08E-01
		205.33		4.70	-8.72E-01		3.08E+00
+	U-238d	63.29	*	3.80	1.28E+01	2.85E+00	4.10E+00
		92.56	*	5.41	1.55E+01		2.85E+00
	AM-241	59.54		35.70	5.03E-02	3.16E-01	3.16E-01
	CM-243	99.52		14.40	5.05E-01	4.58E-01	7.95E-01
		103.73		23.00	9.87E-02		4.58E-01
		116.93		8.32	-1.41E+00		1.24E+00
		228.19		10.56	7.07E-01		1.30E+00
		277.60		14.00	-1.84E-01		9.70E-01
	CM-245	99.52		21.10	3.44E-01	3.14E-01	5.42E-01
		103.73		33.60	6.76E-02		3.14E-01
		116.93		12.20	-9.63E-01		8.47E-01
		174.94		9.50	7.72E-01		1.34E+00

Analysis Report for RCF19441

J16J50 SAF:RC-087 FF2/618-7 Burial Ground Soil

+ = 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

Reviewed and Approved: EDWARD S. WALLACE

APR 14 2008 Edward S. Wallace

(print/sign/date)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-091	Page 1 of 1

Collector B Lawrence, E. Harries	Company Contact Joan Kessner	Telephone No. 509-375-4688	Project Coordinator KESSNER, JH	Price Code 2A	Data Turnaround 24 Hours
Project Designation 618-7 Burial Ground - Soil	Sampling Location 618-7 Burial Ground/Stockpiles		SAF No. RC-087		
Ice Chest No.	Field Logbook No. EL-1395-12	COA RG61872600	Method of Shipment Government Vehicle		
Shipped To Radiological Counting Facility	Offsite Property No. NA		Bill of Lading/Air Bill No. NA		

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None										
Type of Container	Snap Vial										
No. of Container(s)	1										
Volume	80g										
SAMPLE ANALYSIS	RCF GEA Shipping Screen										STOCKPILE SEGMENT
Sample No. / Matrix * / Sample Date / Sample Time		RCF									
J16J50 / SOIL / 4-10-08 / 0735	X	19441								Sec.	H004
J16J51 / SOIL / 4-10-08 / 0735	X	19442								"	H003

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time 4/10/08	Received By/Stored In	Date/Time 0845
E. Harries / E. Harries 0845		RT Coffman / RT Coffman 4/10/08	
Relinquished By/Removed From	Date/Time 1130	Received By/Stored In	Date/Time 1130
RT Coffman / RT Coffman 4/10/08		MSTankouch 4/10/08	
Relinquished By/Removed From	Date/Time 1330	Received By/Stored In	Date/Time RCF
MSTankouch 4/10/08		[illegible] 4/10/08	1330
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

None

COPY

Matrix *

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

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

WCH-EF-011

RCF 19441

Radiological Counting Facility

Analysis Report for RCF19442

J16J51 SAF:RC-087 FF2/618-7 Burial Ground Soil

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19442
Sample Description	: J16J51 SAF:RC-087 FF2/618-7 Burial Ground Soil
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 5.800E+01 grams
Facility	: Default
Sample Taken On	: 4/10/2008 7:35:00AM
Acquisition Started	: 4/14/2008 7:23:29AM
Procedure	: 50 gram pill box
Operator	: RCT
Detector Name	: PGTWHITE
Geometry	: 50 ml Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3600.7 seconds
Dead Time	: 0.02 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 80 - 4096
Peak Area Range (in channels)	: 80 - 4096
Identification Energy Tolerance	: 1.300 keV
Energy Calibration Used Done On	: 1/31/2008
Efficiency Calibration Used Done On	: 2/4/2008
Efficiency Calibration Description	: 50ml Pill Box (1234-95-2) 2/4/2008
Sample Number	: 18608

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		1.000	1.27E+01	3.10E+00	
PB-212		0.708	1.14E+00	2.59E-01	
TH-232d		0.420	6.22E-01	2.36E-01	
U-235		0.999	5.22E+00	4.14E-01	
U-238d	@	0.999	4.24E+01	4.52E+00	

Analysis Report for RCF19442

J16J51 SAF:RC-087 FF2/618-7 Burial Ground Soil

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity
d = identified by daughter product energy lines assumed to be in secular equilibrium
Errors quoted at 2.000 sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 4/14/2008 8:23:34AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
	4	84.18	Th-231	3.96E-02	27.66
M	5	89.88	NP Pa	1.29E-02	31.51
	7	113.15	NP Pa	1.60E-02	49.30
	13	295.12	Pb-214	8.25E-03	44.58
	14	352.06	Pb-214	7.09E-03	56.60
	16	1001.17	Pa-234m	1.37E-02	17.29

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

NP = No Peak
UK = Unknown

NUCLIDE MDA REPORT

Nuclide Library Used : \\GOZER\ApexRoot\Default\Library\RCF UNKNOWN.NLB

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	K-40	1460.83	*	10.67	1.27E+01	3.27E+00	3.27E+00
	CO-60	1173.24		99.90	7.88E-02	3.16E-01	3.16E-01
		1332.50		99.98	1.92E-01		3.25E-01
	NB-94	702.63		99.81	-6.65E-02	2.55E-01	2.67E-01
		871.10		99.89	-1.31E-01		2.55E-01
	AG-108m	433.94		90.50	3.94E-02	2.19E-01	2.19E-01
		614.28		89.80	-1.06E-01		2.87E-01
		722.94		90.80	-1.28E-01		3.09E-01
	CS-137	661.66		85.21	-1.06E-01	2.83E-01	2.83E-01
	EU-152	40.12		38.40	-4.57E-02	4.12E-01	4.12E-01
		45.38		11.10	7.80E-01		1.42E+00
		121.78		28.40	1.80E-01		4.63E-01
		244.69		7.51	-2.34E-01		2.22E+00
		344.29		26.60	-6.52E-01		6.25E-01
		411.12		2.23	-2.01E+00		7.98E+00

Analysis Report for RCF19442

J16J51 SAF:RC-087 FF2/618-7 Burial Ground Soil

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		443.89		2.80	4.93E-01		6.74E+00
		778.92		12.98	9.09E-01		2.12E+00
		867.38		4.21	-9.14E+00		5.74E+00
		964.11		14.50	1.96E+00		2.44E+00
		1085.89		9.94	-5.30E-01		3.14E+00
		1089.71		1.71	4.80E+00		1.85E+01
		1112.07		13.60	-1.20E+00		1.99E+00
		1212.93		1.40	-1.87E+00		2.53E+01
		1299.16		1.63	-9.22E+00		1.67E+01
		1408.00		20.80	8.06E-02		1.53E+00
	EU-154	123.10		40.50	1.57E-01	3.29E-01	3.29E-01
		723.36		19.70	-5.91E-01		1.43E+00
		873.23		11.45	-1.85E+00		2.28E+00
		1004.78		17.90	-3.53E-01		2.13E+00
		1274.54		35.50	3.82E-01		9.45E-01
	EU-155	86.54		34.00	1.67E-01	5.78E-01	5.78E-01
		105.31		20.60	4.46E-02		6.77E-01
+	PB-212	74.81	*	10.50	1.19E+00	7.62E-01	1.24E+00
		77.11	*	17.70	1.12E+00		7.62E-01
		87.19		6.27	9.02E-01		3.19E+00
	RA-226d	186.11		3.28	8.91E+01	5.82E-01	1.24E+01
		241.92		7.46	1.42E+00		3.09E+00
		295.09		19.20	4.40E-01		9.26E-01
		351.87		37.10	6.80E-01		5.82E-01
		609.31		46.10	6.71E-01		6.53E-01
		1120.27		15.00	9.95E-01		2.31E+00
		1764.49		15.90	1.39E-02		2.20E+00
+	TH-232d	238.58	*	43.60	6.07E-01	4.38E-01	4.38E-01
		338.42		12.40	9.04E-01		1.65E+00
		583.02	*	30.87	6.53E-01		6.31E-01
		911.16		29.00	3.46E-01		1.28E+00
		968.97		17.40	2.42E+00		2.16E+00
+	U-235	143.79	*	10.50	4.75E+00	3.49E-01	1.50E+00
		163.38	*	4.70	5.22E+00		3.18E+00
		185.74	*	53.00	5.30E+00		3.49E-01
		205.33	*	4.70	5.15E+00		3.98E+00
+	U-238d	63.29	*	3.80	4.24E+01	2.78E+00	4.63E+00
		92.56	*	5.41	4.09E+01		2.78E+00
	AM-241	59.54		35.70	1.59E-02	4.21E-01	4.21E-01
	CM-243	99.52		14.40	-5.30E-01	5.82E-01	9.85E-01
		103.73		23.00	4.54E-01		5.82E-01
		116.93		8.32	-4.58E-01		1.53E+00
		228.19		10.56	-1.33E+00		1.36E+00
		277.60		14.00	2.71E-01		1.23E+00
	CM-245	99.52		21.10	-3.62E-01	3.98E-01	6.72E-01
		103.73		33.60	3.11E-01		3.98E-01
		116.93		12.20	-3.12E-01		1.04E+00
		174.94		9.50	6.75E-02		1.56E+00

Analysis Report for RCF19442

J16J51 SAF:RC-087 FF2/618-7 Burial Ground Soil

+ = 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

Reviewed and Approved: EDWARD S. WALLACE

APR 14 2008 Edward S Wallace

(print/sign/date)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-091	Page 1 of 1

Collector B Lawrence, E. Harries	**Company Contact** Joan Kessner	**Telephone No.** 509-375-4688	**Project Coordinator** KESSNER, JH
Price Code 2A	**Data Turnaround** 24 Hours		
Project Designation 618-7 Burial Ground - Soil	**Sampling Location** 618-7 Burial Ground/Stockpiles		**SAF No.** RC-087
Ice Chest No.	**Field Logbook No.** EL-1395-12	**COA** RG61872600	**Method of Shipment** Government Vehicle
Shipped To Radiological Counting Facility	**Offsite Property No.** NA		**Bill of Lading/Air Bill No.** NA

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None											
Type of Container	Snap Vial											
No. of Container(s)	1											
Volume	80g											
SAMPLE ANALYSIS	RCF GEA Shipping Screen											STOCKPILE SEDIMENT
Sample No.	Matrix *	Sample Date	Sample Time		RCF							
J16J50	SOIL	4-10-08	0725	X	19441						Seq.	H004
J16J51	SOIL	4-10-08	0735	X	19442						"	H003

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS	Matrix *
Relinquished By/Removed From: E. Harries/E. Harries — Date/Time 4/10/08 0845	Received By/Stored In: RT Coffman/RT Coffman — Date/Time 0845 4/10/08	None	S=Soil SE=Sediment SO=Solid Sl=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids Ts=Tissue Wi=Wipe Li=Liquid V=Vegetation X=Other
Relinquished By/Removed From: RT Coffman/RT Coffman — Date/Time 11:30 4/10/08	Received By/Stored In: MStankovich — Date/Time 1130 4/10/08		
Relinquished By/Removed From: MStankovich — Date/Time 1330 4/10/08	Received By/Stored In: [illegible] — Date/Time RCF 4/10/08 1330		
Relinquished By/Removed From — Date/Time	Received By/Stored In — Date/Time		
Relinquished By/Removed From — Date/Time	Received By/Stored In — Date/Time		
Relinquished By/Removed From — Date/Time	Received By/Stored In — Date/Time		

COPY

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

WCH-EE-011

RCF 19442

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 41408 1400 GM Screen Result 0.1K

Client: WGH SDG #: J00169 NA[ ] SAF #: RC-087 NA [ ]

Work Order Number: J8D140202 Chain of Custody # RC-087-090

Shipping Container ID: _____ Air Bill # _____

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: _____ NA [✓] 5. Vermiculite/packing materials is NA [✓] Wet [ ] Dry [ ]
6. Number of samples in shipping container: 2
7. Sample holding times exceeded? NA [✓] Yes [ ] No [ ]
8. Samples have:
   - ____ Tape
   - ✓ Custody Seals
   - ____ Hazard Lables
   - ✓ Appropriate Sample Lables
9. Samples are:
   - ✓ In Good Condition
   - ____ Broken
   - ____ Leaking
   - ____ Have Air Bubbles
   - (Only for samples requiring no head space.)
10. Sample pH taken? NA [✓] SOIL pH<2 [ ] pH>2 [ ] pH>9 [ ] Amount HNO_3 Added _____
11. Sample Location, Sample Collector Listed? *
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [✓]
13. Description of anomalies (include sample numbers): _____

Sample Custodian: RJP Date: 41408

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

LS-023, Rev. 7, 1/08

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-081	Page 1 of 1

Collector B Lawrence, E. Harries	**Company Contact** Joan Kessner	**Telephone No.** 509-375-4688	**Project Coordinator** KESSNER, JH
Price Code 2B	**Data Turnaround** 24 Hours		
Project Designation 618-7 Burial Ground - Soil	**Sampling Location** 618-7 Burial Ground/Stockpiles		**SAF No.** RC-087
Ice Chest No. ERC-97-079 4/16/08	**Field Logbook No.** EL-1395-12	**COA** RG61872600	**Method of Shipment** GOVERNMENT VEHICLE
Shipped To TestAmerica Incorporated, Richland	**Offsite Property No.** NA		**Bill of Lading/Air Bill No.** NA

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None										
Type of Container	aG										
No. of Container(s)	1										
Volume	60mL										
SAMPLE ANALYSIS	See item (1) in Special Instructions.							TE TO			
Sample No.	Matrix *	Sample Date	Sample Time								
J16J69	SOIL	4-9-08	1100	X					J16J49		GREEN YELLOW	POWDER W/THERMIMS
~~J16J70~~	~~SOIL~~										

RK 4-5-08

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: B Lawrence	1130 4-9-08	Received By/Stored In: RB KERKOW / RB Kerk	1130 4-9-08
Relinquished By/Removed From: RB KERKOW / RB Kerk	1320 4-9-08	Received By/Stored In: REF 1A (1060 Rock)	1320 4-9-08
Relinquished By/Removed From: 1060/1A 4/16/08	0800	Received By/Stored In: MS Stankovich	0800 4/16/08
Relinquished By/Removed From: MS Stankovich	0825 4/16/08	Received By/Stored In: RJ LLAME TAL	0825 41608
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

None

(1) Metals by ICP - 6010 - Quick Turn {Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver}; Metals by ICP - 6010 - Quick Turn (Add On) {Aluminum, Beryllium, Copper, Iron, Zinc, Zirconium}

J8D160153
J00169
D4E 41708
KLD3A

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab

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-087-104	Page 1 of 1

Collector B Lawrence, E. Harries	**Company Contact** Joan Kessner	**Telephone No.** 509-375-4688	**Project Coordinator** KESSNER, JH
Price Code 2B	**Data Turnaround** 24 Hours		
Project Designation 618-7 Burial Ground - Soil	**Sampling Location** 618-7 Burial Ground/Stockpiles		**SAF No.** RC-087
Ice Chest No. ERC-97-079	**Field Logbook No.** EL-1395-12	**COA** RG61872600	**Method of Shipment** Government Vehicle
Shipped To TestAmerica Incorporated, Richland	**Offsite Property No.** NA		**Bill of Lading/Air Bill No.** NA

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None											
Type of Container	P											
No. of Container(s)	1											
Volume	60mL											
SAMPLE ANALYSIS	See item (1) in Special Instructions.								TIE TO			
Sample No.	**Matrix ***	**Sample Date**	**Sample Time**									
J16MB8 KLD3E	SOIL	4·11·08	0730	X							J16M78	I003
J16MB9 KLD3H	SOIL	4·11·08	0740	X							J16M79	I002
J16MC0 KLD3K	SOIL	4·11·08	0750	X							J16M80	I001

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From B Lawrence	Date/Time 845 4-11-08	Received By/Stored In R. Fahlberg R. Fahlberg	Date/Time 0845 4·11·08
Relinquished By/Removed From R. Fahlberg R. Fahlberg	Date/Time 0920 4·11·08	Received By/Stored In Shipping Facility 1-A	Date/Time 093 4·11·08
Relinquished By/Removed From 1060/1A	Date/Time 4/16/08 0800	Received By/Stored In MStankovich	Date/Time 0800 4/16/08
Relinquished By/Removed From WCH MStankovich	Date/Time 0825 4/16/08	Received By/Stored In TAL	Date/Time 0825 4/16/08
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

None

(1) Metals by ICP - 6010 - Quick Turn {Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver}: Metals by ICP - 6010 - Quick Turn (Add On) {Aluminum, Beryllium, Copper, Iron, Zinc, Zirconium}

J8D160153
J00169
DUE 41708

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab

Matrix *
S=Soil
SE=Sediment
SO=Solid
SL=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
W1=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-087-093	Page 1 of 1

Collector B Lawrence, E. Harries	**Company Contact** Joan Kessner	**Telephone No.** 509-375-4688	**Project Coordinator** KESSNER, JH
Price Code 2B	**Data Turnaround** 24 Hours		
Project Designation 618-7 Burial Ground - Soil	**Sampling Location** 618-7 Burial Ground/Stockpiles		**SAF No.** RC-087
Ice Chest No. EKC-97-079	**Field Logbook No.** EL-1395-12	**COA** RG61872600	**Method of Shipment** Government Vehicle
Shipped To TestAmerica Incorporated, Richland	**Offsite Property No.** NA		**Bill of Lading/Air Bill No.** NA

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None										
Type of Container	aG										
No. of Container(s)	1										
Volume	60mL										
SAMPLE ANALYSIS	See item (1) in Special Instructions.								TIE TO		
Sample No. / Matrix * / Sample Date / Sample Time											
J16J72 KLD3R / SOIL / 4-11-08 / 1340	x								J16J52		LIME GRAY
J16MC1 KLD30 / Soil / 4-11-08 / 1410	x								J16M81		GRAY PINK

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time 1515	Received By/Stored In	Date/Time 1515
B Lawrence	4-11-08	R. Fahlberg R. Fahlberg	4-11-08
Relinquished By/Removed From	Date/Time 1600	Received By/Stored In	Date/Time 1600
R. Fahlberg R. Fahlberg	4-11-08	Shpg fac 1-17	4-11-08
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time 0800
1060/1A	4/16/08 0800	M Stankovich	4/16/08
Relinquished By/Removed From WCH	Date/Time 0825	Received By/Stored In	Date/Time 0825
M Stankovich	4/16/08	K L LANE TAL	4/16/08
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

None

(1) Metals by ICP - 6010 - Quick Turn {Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver}; Metals by ICP - 6010 - Quick Turn (Add On) {Aluminum, Beryllium, Copper, Iron, Zinc, Zirconium}

J8D160153
J00169
DUE 41708

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab

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
Va=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-087-105	Page 1 of 1

Collector B Lawrence, E. Harries	**Company Contact** Joan Kessner	**Telephone No.** 509-375-4688	**Project Coordinator** KESSNER, JH
Price Code 2B	**Data Turnaround** 24 Hours		
Project Designation 618-7 Burial Ground - Soil	**Sampling Location** 618-7 Burial Ground/Stockpiles		**SAF No.** RC-087
Ice Chest No. ERC-97-079	**Field Logbook No.** EL-1395-12	**COA** RG61872600	**Method of Shipment** Government Vehicle
Shipped To TestAmerica Incorporated, Richland	**Offsite Property No.** NA		**Bill of Lading/Air Bill No.** NA

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None RL 4/14/08										
Type of Container	26										
No. of Container(s)	1										
Volume	60mL										
SAMPLE ANALYSIS	See item (1) in Special Instructions.										

Sample No.	Matrix *	Sample Date	Sample Time										
RL 4/11/08 ~~J16MC1~~	~~SOIL~~											SEG.	I-003
J16MC2 KLD31	SOIL	4/14/08	0740	X								"	I-002
J16MC3 KLD38	SOIL	4/14/08	0745	X								"	I-001
J16MC4 KLD4C	SOIL	4/14/08	0750	X									

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: E. Harries / E. Harries	4/14/08 0835	Received By/Stored In: R T Coffman / R T Coffman	4/14/08 0835
Relinquished By/Removed From: R T Coffman / R T Coffman	4/14/08 1300	Received By/Stored In: REFER # 1A, 1060 BLDG, 4/14/08	1300
Relinquished By/Removed From: 1060/1A 4/16/08	0800	Received By/Stored In: MCW mstankovich	4/16/08 0800
Relinquished By/Removed From: WCH MCW mstankovich	4/16/08 0825	Received By/Stored In: RJL WLANE TAL	4/16/08 0825
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

None

(1) Metals by ICP - 6010 - Quick Turn {Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver}; Metals by ICP - 6010 - Quick Turn (Add On) {Aluminum, Beryllium, Copper, Iron, Zinc, Zirconium}

J8D160153
J00169
DUE 41708

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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
Vs=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-087-106 B	Page 1 of 1

Collector B Lawrence, E. Harries	**Company Contact** Joan Kessner	**Telephone No.** 509-375-4688	**Project Coordinator** KESSNER, JH
Price Code 2B	**Data Turnaround** 24 Hours		
Project Designation 618-7 Burial Ground - Soil	**Sampling Location** 618-7 Burial Ground/Stockpiles		**SAF No.** RC-087
Ice Chest No. EKC-97-079	**Field Logbook No.** EL-1395-12	**COA** RG61872600	**Method of Shipment** Government Vehicle
Shipped To TestAmerica Incorporated, Richland	**Offsite Property No.** NA		**Bill of Lading/Air Bill No.** NA

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None										
Type of Container	~~P~~ 2G RK 4/15/08										
No. of Container(s)	1										
Volume	60mL										
SAMPLE ANALYSIS	See item (1) in Special Instructions.								HG TO		
Sample No.	Matrix *	Sample Date	Sample Time								
~~J16MC4~~	~~SOIL~~										
J16MC5 KLD4J	SOIL	4-15-08	0950	X						J16M85	I004
~~J16MC6~~	~~SOIL~~										

RK 4/15/08

RK 4/15/08

CHAIN OF POSSESSION	Sign/Print Names	
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
E. Harries / E. Harries	4/15/08 1015	RKerkow / RKerk	1015 4/15/08
RB Kerkow / RB Kerk	1105 4/15/08	REF / B	1105 4-15-08
1060 / 1060	4/16/08 0800	MS / MStankovich	0800 4/16/08
wch / MS Stankovich	0825 4/16/08	KRW LANE / TAL	0825 4/16/08

SPECIAL INSTRUCTIONS

None

(1) Metals by ICP - 6010 - Quick Turn (Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver); Metals by ICP - 6010 - Quick Turn (Add On) (Aluminum, Beryllium, Copper, Iron, Zinc, Zirconium)

J8D160153
J00169
DUE 4/7/08

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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
Va=Vegetation
X=Other

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

WCH-EE-011

Radiological Counting Facility

Analysis Report for RCF19465

J16M85 SAF:RC-087 FF2/618-7 STOCKPILE SOIL SAMPLE

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19465
Sample Description	: J16M85 SAF:RC-087 FF2/618-7 STOCKPILE SOIL SAMPLE
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 5.400E+01 grams
Facility	: Default
Sample Taken On	: 4/15/2008 9:50:00AM
Acquisition Started	: 4/15/2008 12:21:42PM
Procedure	: 50 gram pill box
Operator	: RCT
Detector Name	: REGIE02
Geometry	: 50 ml Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3642.8 seconds
Dead Time	: 1.17 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 80 - 4096
Peak Area Range (in channels)	: 80 - 4096
Identification Energy Tolerance	: 1.300 keV
Energy Calibration Used Done On	: 1/10/2008
Efficiency Calibration Used Done On	: 1/11/2008
Efficiency Calibration Description	: 50g Pill Box 1-10-2008
Sample Number	: 18677

~~J16mJT~~
J16mCS

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		1.000	1.20E+01	2.92E+00	
PB-212		0.710	7.23E-01	1.67E-01	
RA-226d		0.403	2.79E-01	1.42E-01	
TH-232d		0.682	5.93E-01	1.61E-01	
U-235		0.795	8.41E-01	1.59E-01	
U-238d	@	1.000	1.25E+01	1.92E+00	

Analysis Report for RCF19465

J16M85 SAF:RC-087 FF2/618-7 STOCKPILE SOIL SAMPLE

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity
d = identified by daughter product energy lines assumed to be in secular equilibrium
Errors quoted at 2.000 sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 4/15/2008 1:22:32PM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

Peak No.		Energy (keV)	Peak Rate (CPS)	Peak Rate (%) Uncertainty
m	5	98.50 No Peak	1.56E-02	19.27
	10	511.23 Annihilation Photon	6.57E-03	62.13

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

NP = No Peak
UK = Unknown

NUCLIDE MDA REPORT

Nuclide Library Used : \\GOZER\ApexRoot\Default\Library\RCF UNKNOWN.NLB

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	K-40	1460.83	*	10.67	1.20E+01	3.19E+00	3.19E+00
	CO-60	1173.24		99.90	3.62E-02	2.82E-01	2.95E-01
		1332.50		99.98	1.18E-01		2.82E-01
	NB-94	702.63		99.81	2.42E-01	2.52E-01	2.52E-01
		871.10		99.89	-8.00E-02		2.53E-01
	AG-108m	433.94		90.50	9.51E-02	1.96E-01	1.96E-01
		614.28		89.80	-2.95E-01		2.87E-01
		722.94		90.80	1.22E-02		2.43E-01
	CS-137	661.66		85.21	8.53E-02	2.32E-01	2.32E-01
	EU-152	40.12		38.40	-1.56E-02	3.32E-01	3.32E-01
		45.38		11.10	-3.03E-01		1.08E+00
		121.78		28.40	-8.20E-02		3.50E-01
		244.69		7.51	-6.04E-01		1.80E+00
		344.29		26.60	-1.31E-01		6.24E-01
		411.12		2.23	4.64E+00		7.58E+00
		443.89		2.80	1.57E+00		5.80E+00
		778.92		12.98	-2.41E-01		1.87E+00

Analysis Report for RCF19465

J16M85 SAF:RC-087 FF2/618-7 STOCKPILE SOIL SAMPLE

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		867.38		4.21	7.74E-02		6.04E+00
		964.11		14.50	1.77E+00		2.16E+00
		1085.89		9.94	-9.01E-02		2.46E+00
		1089.71		1.71	8.10E-01		1.34E+01
		1112.07		13.60	-3.22E+00		1.72E+00
		1212.93		1.40	-1.23E+01		1.74E+01
		1299.16		1.63	5.92E+00		1.59E+01
		1408.00		20.80	-1.97E-01		1.03E+00
	EU-154	123.10		40.50	-4.96E-02	2.46E-01	2.46E-01
		723.36		19.70	1.99E-01		1.14E+00
		873.23		11.45	6.36E-01		2.28E+00
		1004.78		17.90	3.61E-01		1.56E+00
		1274.54		35.50	-5.13E-01		7.61E-01
	EU-155	86.54		34.00	1.19E-01	3.73E-01	3.73E-01
		105.31		20.60	4.52E-02		5.22E-01
+	PB-212	74.81	*	10.50	7.70E-01	4.18E-01	7.69E-01
		77.11	*	17.70	7.05E-01		4.18E-01
		87.19		6.27	5.11E-01		2.08E+00
+	RA-226d	186.11	*	3.28	1.42E+01	2.89E-01	3.41E+00
		241.92		7.46	-7.32E-01		2.34E+00
		295.09		19.20	4.29E-01		8.37E-01
		351.87	*	37.10	2.44E-01		2.89E-01
		609.31	*	46.10	3.26E-01		3.31E-01
		1120.27		15.00	5.48E-01		1.88E+00
		1764.49		15.90	1.28E+00		2.14E+00
+	TH-232d	238.58	*	43.60	5.86E-01	3.04E-01	3.04E-01
		338.42		12.40	4.13E-01		1.36E+00
		583.02	*	30.87	4.58E-01		4.99E-01
		911.16	*	29.00	8.35E-01		5.39E-01
		968.97		17.40	5.33E-01		1.72E+00
+	U-235	143.79	*	10.50	6.53E-01	2.11E-01	8.60E-01
		163.38		4.70	9.25E-01		2.50E+00
		185.74	*	53.00	8.76E-01		2.11E-01
		205.33		4.70	-1.00E+00		2.72E+00
+	U-238d	63.29	*	3.80	1.25E+01	1.31E+00	2.24E+00
		92.56	*	5.41	1.14E+01		1.31E+00
	AM-241	59.54		35.70	-2.23E+00	4.25E-01	4.25E-01
	CM-243	99.52		14.40	-7.15E-02	4.73E-01	7.98E-01
		103.73		23.00	-8.91E-02		4.73E-01
		116.93		8.32	-4.68E-01		1.25E+00
		228.19		10.56	2.17E-01		1.16E+00
		277.60		14.00	-3.01E-01		9.61E-01
	CM-245	99.52		21.10	-4.88E-02	3.24E-01	5.45E-01
		103.73		33.60	-6.10E-02		3.24E-01
		116.93		12.20	-3.19E-01		8.52E-01
		174.94		9.50	-2.93E-01		1.14E+00

Analysis Report for RCF19465

J16M85 SAF:RC-087 FF2/618-7 STOCKPILE SOIL SAMPLE

+ = 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

Reviewed and Approved: EDWARD S. WALLACE

APR 15 2008 Edward S. Wallace

(print/sign/date)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-096 B	Page 1 of 1

Collector B Lawrence, E. Harries	**Company Contact** Joan Kessner	**Telephone No.** 509-375-4688	**Project Coordinator** KESSNER, JH
Project Designation 618-7 Burial Ground - Soil	**Sampling Location** 618-7 Burial Ground/Stockpiles		**SAF No.** RC-087
Ice Chest No.	**Field Logbook No.** EL-1395-12	**COA** RG61872600	**Method of Shipment** Government Vehicle
Shipped To Radiological Counting Facility	**Offsite Property No.** NA		**Bill of Lading/Air Bill No.** NA

Price Code 2A

Data Turnaround 24 Hours

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None											
Type of Container	P											
No. of Container(s)	1											
Volume	60mL											
SAMPLE ANALYSIS	RCF GEA Shipping Screen											
Sample No.	Matrix *	Sample Date	Sample Time									
~~J16M84~~	~~SOIL~~					RCF						
J16M85	SOIL	4-15-08	0950	X		194165						
~~J16M86~~	~~SOIL~~											I-004

RR 4/14/08

LK 4/15/08

CHAIN OF POSSESSION	Sign/Print Names	
Relinquished By/Removed From: E. Harries / E. Harries — Date/Time 4/15/08 1015	Received By/Stored In: R. Kerkow / R. Kerkow — Date/Time 4/15/08 1015	
Relinquished By/Removed From: R. Kerkow / R. Kerkow — Date/Time 4/15/08 1050	Received By/Stored In: RCF D. Miller / D. Miller — Date/Time 4-15-08 1050	
Relinquished By/Removed From — Date/Time	Received By/Stored In — Date/Time	
Relinquished By/Removed From — Date/Time	Received By/Stored In — Date/Time	
Relinquished By/Removed From — Date/Time	Received By/Stored In — Date/Time	
Relinquished By/Removed From — Date/Time	Received By/Stored In — Date/Time	

SPECIAL INSTRUCTIONS

None

COPY

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

Radiological Counting Facility

Analysis Report for RCF19460

J16M84 SAF:RC-087 FF2/618-7 STOCKPILE SOIL SAMPLE

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19460
Sample Description	: J16M84 SAF:RC-087 FF2/618-7 STOCKPILE SOIL SAMPLE
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 7.400E+01 grams
Facility	: Default
Sample Taken On	: 4/14/2008 7:50:00AM
Acquisition Started	: 4/15/2008 9:43:19AM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: PGTWHITE
Geometry	: 80 Gram Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3600.6 seconds
Dead Time	: 0.02 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 80 - 4096
Peak Area Range (in channels)	: 80 - 4096
Identification Energy Tolerance	: 1.300 keV
Energy Calibration Used Done On	: 1/31/2008
Efficiency Calibration Used Done On	: 2/5/2008
Efficiency Calibration Description	: 80g Pill box 2/5/2008
Sample Number	: 18669

J16 mc4

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.988	1.32E+01	3.67E+00	
PB-212	0.707	5.83E-01	1.36E-01	
RA-226d	0.349	1.91E-01	1.25E-01	
TH-232d	0.854	4.27E-01	1.32E-01	

Analysis Report for RCF19460

J16M84 SAF:RC-087 FF2/618-7 STOCKPILE SOIL SAMPLE

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity
d = identified by daughter product energy lines assumed to be in secular equilibrium
Errors quoted at 2.000 sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 4/15/2008 10:43:27AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Rate (CPS)	Peak Rate (%) Uncertainty

All peaks were identified.

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet
NP = No Peak
UK = Unknown
Errors quoted at 2.000 sigma

NUCLIDE MDA REPORT

Nuclide Library Used : \\GOZER\ApexRoot\Default\Library\RCF UNKNOWN.NLB

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	K-40	1460.83	*	10.67	1.32E+01	1.96E+00	1.96E+00
	CO-60	1173.24		99.90	-1.68E-02	1.76E-01	1.76E-01
		1332.50		99.98	1.20E-01		1.95E-01
	NB-94	702.63		99.81	-2.19E-02	1.45E-01	1.49E-01
		871.10		99.89	-3.66E-02		1.45E-01
	AG-108m	433.94		90.50	3.59E-02	1.18E-01	1.18E-01
		614.28		89.80	-2.13E-02		1.59E-01
		722.94		90.80	0.00E+00		1.70E-01
	CS-137	661.66		85.21	6.06E-02	1.56E-01	1.56E-01
	EU-152	40.12		38.40	3.09E-02	1.95E-01	2.19E-01
		45.38		11.10	6.85E-01		7.22E-01
		121.78		28.40	-1.15E-01		1.95E-01
		244.69		7.51	-5.74E-01		1.06E+00
		344.29		26.60	-5.39E-02		3.03E-01
		411.12		2.23	-4.36E-01		3.90E+00
		443.89		2.80	-2.40E+00		3.61E+00
		778.92		12.98	6.86E-02		1.06E+00
		867.38		4.21	-1.77E+00		3.62E+00
		964.11		14.50	5.01E-01		1.31E+00
		1085.89		9.94	3.36E-01		1.59E+00

Analysis Report for RCF19460

J16M84 SAF:RC-087 FF2/618-7 STOCKPILE SOIL SAMPLE

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		1089.71		1.71	-7.27E-01		9.10E+00
		1112.07		13.60	-1.57E+00		1.23E+00
		1212.93		1.40	-3.29E+00		1.57E+01
		1299.16		1.63	-7.53E-02		1.27E+01
		1408.00		20.80	2.37E-01		7.89E-01
	EU-154	123.10		40.50	1.74E-01	1.45E-01	1.45E-01
		723.36		19.70	0.00E+00		7.85E-01
		873.23		11.45	9.04E-02		1.21E+00
		1004.78		17.90	-5.52E-01		9.85E-01
		1274.54		35.50	-1.51E-01		5.31E-01
	EU-155	86.54		34.00	2.19E-01	2.26E-01	2.26E-01
		105.31		20.60	-1.97E-01		2.59E-01
+	PB-212	74.81	*	10.50	5.68E-01	3.20E-01	5.94E-01
		77.11	*	17.70	5.90E-01		3.20E-01
		87.19		6.27	1.10E+00		1.22E+00
+	RA-226d	186.11		3.28	2.36E+00	2.69E-01	2.52E+00
		241.92		7.46	6.95E-02		1.60E+00
		295.09		19.20	6.51E-01		5.38E-01
		351.87	*	37.10	1.69E-01		2.69E-01
		609.31	*	46.10	2.14E-01		2.82E-01
		1120.27		15.00	8.51E-01		1.40E+00
		1764.49		15.90	6.97E-01		1.38E+00
+	TH-232d	238.58	*	43.60	4.85E-01	2.00E-01	2.00E-01
		338.42	*	12.40	5.06E-01		6.37E-01
		583.02	*	30.87	3.15E-01		3.77E-01
		911.16	*	29.00	4.34E-01		4.03E-01
		968.97		17.40	1.28E+00		1.25E+00
	U-235	143.79		10.50	-3.48E-01	1.56E-01	5.72E-01
		163.38		4.70	-2.60E-01		1.30E+00
		185.74		53.00	1.46E-01		1.56E-01
		205.33		4.70	-8.36E-01		1.46E+00
	U-238d	63.29		3.80	1.49E+00	1.47E+00	1.86E+00
		92.56		5.41	2.17E+00		1.47E+00
	AM-241	59.54		35.70	-5.30E-02	1.62E-01	1.62E-01
	CM-243	99.52		14.40	3.01E-01	2.43E-01	4.38E-01
		103.73		23.00	-9.94E-02		2.43E-01
		116.93		8.32	-1.56E-01		6.68E-01
		228.19		10.56	-2.34E-01		6.35E-01
		277.60		14.00	3.17E-01		6.07E-01
	CM-245	99.52		21.10	2.05E-01	1.66E-01	2.99E-01
		103.73		33.60	-6.80E-02		1.66E-01
		116.93		12.20	-1.06E-01		4.56E-01
		174.94		9.50	2.50E-01		6.80E-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

Analysis Report for RCF19460

J16M84 SAF:RC-087 FF2/618-7 STOCKPILE SOIL SAMPLE

Reviewed and Approved: **EDWARD S. WALLACE** Edward S Wallace

APR 15 2008 (print/sign/date)

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-087-095 | Page 1 of 1

Collector: B Lawrence, E. Harries	Company Contact: Joan Kessner	Telephone No.: 509-375-4688	Project Coordinator: KESSNER, JH
Project Designation: 618-7 Burial Ground - Soil	Sampling Location: 618-7 Burial Ground/Stockpiles		SAF No.: RC-087
Ice Chest No.	Field Logbook No.: EL-1395-12	COA: RG61872600	Method of Shipment: Government Vehicle
Shipped To: Radiological Counting Facility	Offsite Property No.: NA		Bill of Lading/Air Bill No.: NA

Price Code: 2A

Data Turnaround: 24 Hours

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None											
Type of Container	P											
No. of Container(s)	1											
Volume	60mL											
SAMPLE ANALYSIS	RCF GEA Shipping Screen											
Sample No.	Matrix *	Sample Date	Sample Time									
~~J16M81~~	~~SOIL~~											
J16M82	SOIL	4/14/08	0740	X			RCF# 19458	60g			SEG	I-003
J16M83	SOIL	4/14/08	0745	X			19459	60g			"	I-002
J16M84	SOIL	4/14/08	0750	X			19460	74g			"	I-001

RF 14/08

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
E. Harris/E. Harries	4/14/08 0835	RFreeman/RFoffma	4/14/08 0835
RFreeman/RFoffma	4/14/08 1400	T. Miller	4-14-08 1400

SPECIAL INSTRUCTIONS

None

COPY

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

RCF 19460

Radiological Counting Facility

Analysis Report for RCF19459

J16M83 SAF:RC-087 FF2/618-7 STOCKPILE SOIL SAMPLE

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19459
Sample Description	: J16M83 SAF:RC-087 FF2/618-7 STOCKPILE SOIL SAMPLE
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 6.200E+01 grams
Facility	: Default
Sample Taken On	: 4/14/2008 7:45:00AM
Acquisition Started	: 4/15/2008 8:35:13AM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: REGIE02
Geometry	: 80 Gram Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3647.8 seconds
Dead Time	: 1.31 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 80 - 4096
Peak Area Range (in channels)	: 80 - 4096
Identification Energy Tolerance	: 1.300 keV
Energy Calibration Used Done On	: 1/10/2008
Efficiency Calibration Used Done On	: 1/11/2008
Efficiency Calibration Description	: 80g Pill Box 71385A-238 1/10/2008
Sample Number	: 18660

J16MC3

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.999	1.21E+01	2.71E+00	
PB-212		0.707	6.29E-01	1.62E-01	
RA-226d		0.406	3.63E-01	1.64E-01	
TH-232d		0.680	3.39E-01	1.53E-01	
U-235		0.894	8.90E-01	2.24E-01	
U-238d	@	1.000	1.18E+01	1.94E+00	

Analysis Report for RCF19459

J16M83 SAF:RC-087 FF2/618-7 STOCKPILE SOIL SAMPLE

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity
d = identified by daughter product energy lines assumed to be in secular equilibrium
Errors quoted at 2.000 sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 4/15/2008 9:36:04AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
M	4	84.34	Th-231	1.31E-02	25.76
m	5	89.74	Pb-214	8.92E-03	31.77
	15	1000.97	Pa-234m	4.83E-03	32.76

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

NP = No Peak
UK = Unknown

NUCLIDE MDA REPORT

Nuclide Library Used : \\GOZER\ApexRoot\Default\Library\RCF UNKNOWN.NLB

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	K-40	1460.83	*	10.67	1.21E+01	2.70E+00	2.70E+00
	CO-60	1173.24		99.90	1.34E-01	2.24E-01	2.63E-01
		1332.50		99.98	7.87E-03		2.24E-01
	NB-94	702.63		99.81	-5.85E-02	1.72E-01	1.72E-01
		871.10		99.89	4.63E-02		2.13E-01
	AG-108m	433.94		90.50	1.61E-02	1.39E-01	1.39E-01
		614.28		89.80	-9.21E-02		2.46E-01
		722.94		90.80	1.96E-02		2.25E-01
	CS-137	661.66		85.21	-7.41E-02	2.00E-01	2.00E-01
	EU-152	40.12		38.40	1.40E-01	2.50E-01	2.50E-01
		45.38		11.10	-3.92E-01		8.37E-01
		121.78		28.40	6.18E-02		3.29E-01
		244.69		7.51	-7.99E-01		1.59E+00
		344.29		26.60	-1.30E-01		5.11E-01
		411.12		2.23	-1.26E+00		6.13E+00
		443.89		2.80	1.72E+00		4.79E+00

Analysis Report for RCF19459

J16M83 SAF:RC-087 FF2/618-7 STOCKPILE SOIL SAMPLE

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		778.92		12.98	-8.17E-01		1.37E+00
		867.38		4.21	4.94E-01		5.29E+00
		964.11		14.50	1.42E-01		1.61E+00
		1085.89		9.94	-4.70E-01		2.20E+00
		1089.71		1.71	6.21E+00		1.39E+01
		1112.07		13.60	-9.12E-02		1.84E+00
		1212.93		1.40	-4.51E+00		1.84E+01
		1299.16		1.63	-1.67E+00		1.54E+01
		1408.00		20.80	-2.25E-01		8.38E-01
	EU-154	123.10		40.50	1.97E-03	2.30E-01	2.30E-01
		723.36		19.70	-3.07E-01		1.02E+00
		873.23		11.45	-7.27E-01		1.88E+00
		1004.78		17.90	1.25E-01		1.36E+00
		1274.54		35.50	1.79E-01		7.28E-01
	EU-155	86.54		34.00	-1.45E+00	3.57E-01	3.57E-01
		105.31		20.60	2.40E-01		4.75E-01
+	PB-212	74.81	*	10.50	6.40E-01	3.88E-01	7.05E-01
		77.11	*	17.70	6.24E-01		3.88E-01
		87.19		6.27	-2.23E+01		1.98E+00
+	RA-226d	186.11	*	3.28	1.57E+01	2.51E-01	2.48E+00
		241.92		7.46	-5.55E-01		2.08E+00
		295.09		19.20	-5.21E-01		6.34E-01
		351.87	*	37.10	5.03E-01		2.51E-01
		609.31	*	46.10	2.56E-01		3.42E-01
		1120.27		15.00	-1.01E-01		1.76E+00
		1764.49		15.90	2.01E-01		1.72E+00
+	TH-232d	238.58	*	43.60	4.03E-01	2.15E-01	2.15E-01
		338.42		12.40	4.85E-01		1.17E+00
		583.02	*	30.87	2.09E-01		4.05E-01
		911.16	*	29.00	4.57E-01		5.56E-01
		968.97		17.40	3.59E-01		1.37E+00
+	U-235	143.79	*	10.50	6.71E-01	1.54E-01	6.74E-01
		163.38		4.70	2.04E-01		2.23E+00
		185.74	*	53.00	9.71E-01		1.54E-01
		205.33	*	4.70	1.54E+00		2.06E+00
+	U-238d	63.29	*	3.80	1.18E+01	1.24E+00	2.31E+00
		92.56	*	5.41	8.99E+00		1.24E+00
	AM-241	59.54		35.70	-1.28E-01	3.92E-01	3.92E-01
	CM-243	99.52		14.40	6.93E-02	3.99E-01	6.49E-01
		103.73		23.00	-8.82E-01		3.99E-01
		116.93		8.32	-5.39E-01		1.12E+00
		228.19		10.56	1.07E-02		1.05E+00
		277.60		14.00	6.64E-01		8.98E-01
	CM-245	99.52		21.10	4.73E-02	2.73E-01	4.43E-01
		103.73		33.60	-6.04E-01		2.73E-01
		116.93		12.20	-3.67E-01		7.64E-01
		174.94		9.50	1.13E-01		1.09E+00

Analysis Report for RCF19459

J16M83 SAF:RC-087 FF2/618-7 STOCKPILE SOIL SAMPLE

+ = 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

Reviewed and Approved: EDWARD S. WALLACE

APR 15 2008 (print/sign/date) Edward S Wallace

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-087-095

Collector B Lawrence, E. Harries	**Company Contact** Joan Kessner	**Telephone No.** 509-375-4688	**Project Coordinator** KESSNER, JH
Project Designation 618-7 Burial Ground - Soil	**Sampling Location** 618-7 Burial Ground/Stockpiles		**SAF No.** RC-087
Ice Chest No.	**Field Logbook No.** EL-1395-12	**COA** RG61872600	**Method of Shipment** Government Vehicle
Shipped To Radiological Counting Facility	**Offsite Property No.** NA		**Bill of Lading/Air Bill No.** NA

Price Code 2-A-

Data Turnaround 24 Hours

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None											
Type of Container	P											
No. of Container(s)	1											
Volume	60mL											
SAMPLE ANALYSIS	RCF GEA Shipping Screen											

Sample No.	Matrix *	Sample Date	Sample Time										
~~J16M81~~	~~SOIL~~												
J16M82	SOIL	4/14/08	0740	X			RCF# 19458	60g				Seg	I-003
J16M83	SOIL	4/14/08	0745	X			19459	60g				"	I-002
J16M84	SOIL	4/14/08	0750	X			19460	74g				"	I-001

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
E. Harries/E. Harries	4/14/08 0835	RT Coffman/RT Coffman	0835 4/14/08
RT Coffman/RT Coffman	4/14/08 1400	T. Miller/T. Miller	1400 4-14-08
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

None

COPY

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
Li=Liquid
V=Vegetation
X=Other

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

WCH-EE-011

RCF 19459

Radiological Counting Facility

Analysis Report for RCF19458

J16M82 SAF:RC-087 FF2/618-7 STOCKPILE SOIL SAMPLE

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19458
Sample Description	: J16M82 SAF:RC-087 FF2/618-7 STOCKPILE SOIL SAMPLE
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 6.000E+01 grams
Facility	: Default
Sample Taken On	: 4/14/2008 7:40:00AM
Acquisition Started	: 4/15/2008 8:35:04AM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: PGTWHITE
Geometry	: 80 Gram Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3600.9 seconds
Dead Time	: 0.02 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 80 - 4096
Peak Area Range (in channels)	: 80 - 4096
Identification Energy Tolerance	: 1.300 keV
Energy Calibration Used Done On	: 1/31/2008
Efficiency Calibration Used Done On	: 2/5/2008
Efficiency Calibration Description	: 80g Pill box 2/5/2008
Sample Number	: 18659

J16mc2

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.997	9.64E+00	3.11E+00	
RA-226d		0.404	2.97E-01	1.90E-01	
U-235		0.999	1.31E+01	1.84E+00	
U-238d	@	1.000	1.39E+02	1.42E+01	

Analysis Report for RCF19458

J16M82 SAF:RC-087 FF2/618-7 STOCKPILE SOIL SAMPLE

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity
d = identified by daughter product energy lines assumed to be in secular equilibrium
Errors quoted at 2.000 sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 4/15/2008 9:35:12AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
	1	53.36	U-234	7.68E-02	19.74
M	3	81.16	Th-231	3.83E-02	16.66
m	4	84.20	Th-231	2.06E-01	4.98
M	5	89.95	Th-231	8.94E-02	8.55
M	7	98.48	Pa-234	5.58E-02	36.03
m	8	109.15	U-235	2.96E-02	35.52
m	9	112.70	No Peak	5.03E-02	35.23
M	13	202.18	No Peak	2.73E-02	12.22
	15	238.54	Pb-212	2.32E-02	36.04
	18	766.65	No Peak	1.80E-02	22.31
	19	1001.17	Pa-234m	5.28E-02	8.37

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

NP = No Peak
UK = Unknown

NUCLIDE MDA REPORT

Nuclide Library Used : \\GOZER\ApexRoot\Default\Library\RCF UNKNOWN.NLB

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	K-40	1460.83	*	10.67	9.64E+00	2.36E+00	2.36E+00
	CO-60	1173.24		99.90	2.04E-01	1.83E-01	2.70E-01
		1332.50		99.98	1.37E-02		1.83E-01
	NB-94	702.63		99.81	-4.31E-02	2.39E-01	2.39E-01
		871.10		99.89	1.67E-02		2.51E-01
	AG-108m	433.94		90.50	-2.33E-02	1.73E-01	1.73E-01
		614.28		89.80	-1.21E-01		2.39E-01
		722.94		90.80	2.55E-02		2.65E-01
	CS-137	661.66		85.21	3.73E-02	2.57E-01	2.57E-01
	EU-152	40.12		38.40	-2.74E-01	5.78E-01	6.02E-01

Analysis Report for RCF19458

J16M82 SAF:RC-087 FF2/618-7 STOCKPILE SOIL SAMPLE

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		45.38		11.10	4.28E-01		1.99E+00
		121.78		28.40	4.38E-01		5.79E-01
		244.69		7.51	7.45E-01		1.86E+00
		344.29		26.60	1.81E-01		5.78E-01
		411.12		2.23	-3.44E+00		7.31E+00
		443.89		2.80	7.90E-01		6.26E+00
		778.92		12.98	7.36E-01		1.95E+00
		867.38		4.21	-1.19E+00		5.98E+00
		964.11		14.50	-6.40E-01		1.73E+00
		1085.89		9.94	1.47E+00		2.66E+00
		1089.71		1.71	4.10E+00		1.51E+01
		1112.07		13.60	-3.24E-01		2.08E+00
		1212.93		1.40	4.18E+00		2.04E+01
		1299.16		1.63	1.92E+00		1.42E+01
		1408.00		20.80	5.71E-01		1.19E+00
	EU-154	123.10		40.50	1.97E-01	4.08E-01	4.08E-01
		723.36		19.70	1.18E-01		1.22E+00
		873.23		11.45	-3.11E-01		2.15E+00
		1004.78		17.90	1.20E-01		2.89E+00
		1274.54		35.50	9.55E-02		7.78E-01
	EU-155	86.54		34.00	6.12E-02	7.95E-01	7.95E-01
		105.31		20.60	-1.51E+00		8.83E-01
	PB-212	74.81		10.50	2.33E-01	1.42E+00	2.09E+00
		77.11		17.70	9.36E-01		1.42E+00
		87.19		6.27	3.32E-01		4.40E+00
+	RA-226d	186.11	*	3.28	2.17E+02	3.63E-01	5.10E+00
		241.92		7.46	5.50E-01		2.35E+00
		295.09		19.20	8.26E-01		7.67E-01
		351.87	*	37.10	3.38E-01		3.63E-01
		609.31	*	46.10	2.43E-01		4.73E-01
		1120.27		15.00	2.23E-01		1.83E+00
		1764.49		15.90	1.46E+00		1.77E+00
	TH-232d	238.58		43.60	4.88E-01	3.96E-01	3.96E-01
		338.42		12.40	-3.20E-01		1.24E+00
		583.02		30.87	5.51E-01		7.45E-01
		911.16		29.00	6.37E-01		1.06E+00
		968.97		17.40	2.58E-01		1.66E+00
+	U-235	143.79	*	10.50	1.30E+01	3.16E-01	1.54E+00
		163.38	*	4.70	1.26E+01		3.97E+00
		185.74	*	53.00	1.34E+01		3.16E-01
		205.33	*	4.70	1.36E+01		2.14E+00
+	U-238d	63.29	*	3.80	1:39E+02	3.64E+00	6.65E+00
		92.56	*	5.41	1.35E+02		3.64E+00
	AM-241	59.54		35.70	-6.98E-02	6.23E-01	6.23E-01
	CM-243	99.52		14.40	1.88E-01	7.56E-01	1.44E+00
		103.73		23.00	1.30E-01		7.56E-01
		116.93		8.32	-2.59E+00		1.98E+00
		228.19		10.56	-7.03E-02		1.23E+00

Analysis Report for RCF19458

J16M82 SAF:RC-087 FF2/618-7 STOCKPILE SOIL SAMPLE

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	277.60	14.00	5.15E-01		9.50E-01
CM-245	99.52	21.10	1.28E-01	5.17E-01	9.85E-01
	103.73	33.60	8.93E-02		5.17E-01
	116.93	12.20	-1.77E+00		1.35E+00
	174.94	9.50	1.12E-01		1.50E+00

+ = 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

Reviewed and Approved: EDWARD S. WALLACE

APR 15 2008 Edward S Wallace

(print/sign/date)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-095	Page 1 of 1

Collector B Lawrence, E. Harries	**Company Contact** Joan Kessner	**Telephone No.** 509-375-4688	**Project Coordinator** KESSNER, JH
Price Code 2A	**Data Turnaround** 24 Hours		
Project Designation 618-7 Burial Ground - Soil	**Sampling Location** 618-7 Burial Ground/Stockpiles		**SAF No.** RC-087
Ice Chest No.	**Field Logbook No.** EL-1395-12	**COA** RG61872600	**Method of Shipment** Government Vehicle
Shipped To Radiological Counting Facility	**Offsite Property No.** NA		**Bill of Lading/Air Bill No.** NA

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None											
Type of Container	P											
No. of Container(s)	1											
Volume	60mL											
SAMPLE ANALYSIS	RCF GEA Shipping Screen											
Sample No.	**Matrix ***	**Sample Date**	**Sample Time**									
~~J16M81~~	~~SOIL~~						RCF#				SEG	I-003
J16M82	SOIL	4/14/08	0740	X			19458		60g		"	I-002
J16M83	SOIL	4/14/08	0745	X			19459		60g		"	I-001
J16M84	SOIL	4/14/08	0750	X			19460		74g			

FK 1/14/08

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time 4/14/08 0935	Received By/Stored In	Date/Time 0935
E. Harries/E. Harries		RJ Coffman/RJ Coffman	4/14/08
Relinquished By/Removed From	Date/Time 1400	Received By/Stored In	Date/Time 1400
RJ Coffman/RJ Coffman	4/14/08	T. Miller	4-14-08
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

None

COPY

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-EF-011

RCF 19455

Radiological Counting Facility

Analysis Report for RCF19450

J16M81 SAF:RC-087 FF2/618-7 STOCKPILE SOIL SAMPLE

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19450
Sample Description	: J16M81 SAF:RC-087 FF2/618-7 STOCKPILE SOIL SAMPLE
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 8.200E+01 grams
Facility	: Default
Sample Taken On	: 4/11/2008 2:10:00PM
Acquisition Started	: 4/14/2008 2:39:41PM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: PGTWHITE
Geometry	: 80 Gram Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3600.9 seconds
Dead Time	: 0.02 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 80 - 4096
Peak Area Range (in channels)	: 80 - 4096
Identification Energy Tolerance	: 1.300 keV
Energy Calibration Used Done On	: 1/31/2008
Efficiency Calibration Used Done On	: 2/5/2008
Efficiency Calibration Description	: 80g Pill box 2/5/2008
Sample Number	: 18647

J16mc1

INTERFERENCE CORRECTED REPORT

	Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
X	EU-155		0.375			
	PB-212		1.000	7.55E+00	4.85E-01	
	RA-226d		0.899	2.46E+00	3.12E-01	
	TH-232d		0.998	5.37E+00	5.14E-01	
	U-235		0.548	3.37E-01	2.09E-01	
	U-238d	@	0.992	6.25E+00	2.57E+00	

Analysis Report for RCF19450

J16M81 SAF:RC-087 FF2/618-7 STOCKPILE SOIL SAMPLE

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity
d = identified by daughter product energy lines assumed to be in secular equilibrium
Errors quoted at 2.000 sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 4/14/2008 3:39:49PM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
M	5	84.32	Pb-212	4.13E-02	13.17
m	7	89.96	Pb-212	8.75E-02	6.95
	9	99.38	No Peak	1.57E-02	59.74
	10	128.98	Ac-228	3.15E-02	34.11
	12	209.33	Ac-228	4.03E-02	23.00
	15	269.91	Ac-228	4.54E-02	15.34
m	17	300.11	No Peak	2.27E-02	14.05
	18	327.90	Ac-228	2.28E-02	24.24
	21	462.92	Ac-228	2.25E-02	23.65
	22	510.71	Annihilation Photon	3.49E-02	18.40
	23	560.11	UK	6.23E-02	9.44
	26	727.36	Bi-212	3.73E-02	13.20
	27	768.45	Bi-214	6.51E-03	58.87
	28	795.00	Ac-228	1.77E-02	25.74
	29	860.93	Tl-208	1.66E-02	21.08
M	31	964.81	Ac-228	1.77E-02	14.00

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

NP = No Peak
UK = Unknown

NUCLIDE MDA REPORT

Nuclide Library Used : \\GOZER\ApexRoot\Default\Library\RCF UNKNOWN.NLB

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
K-40	1460.83	10.67	2.87E+00	2.82E+00	2.82E+00
CO-60	1173.24	99.90	9.17E-02	2.04E-01	2.14E-01
	1332.50	99.98	5.11E-02		2.04E-01
NB-94	702.63	99.81	1.23E-01	2.02E-01	2.10E-01

Analysis Report for RCF19450

J16M81 SAF:RC-087 FF2/618-7 STOCKPILE SOIL SAMPLE

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		871.10		99.89	1.12E-01		2.02E-01
	AG-108m	433.94		90.50	-4.76E-03	1.61E-01	1.61E-01
		614.28		89.80	-1.60E-02		2.92E-01
		722.94		90.80	5.39E-02		3.21E-01
	CS-137	661.66		85.21	-5.31E-02	2.02E-01	2.02E-01
	EU-152	40.12		38.40	9.28E-02	3.23E-01	3.45E-01
		45.38		11.10	1.19E+00		1.10E+00
		121.78		28.40	-3.96E-01		3.23E-01
		244.69		7.51	-6.67E-01		1.95E+00
		344.29		26.60	-1.38E+00		4.96E-01
		411.12		2.23	2.31E+00		6.81E+00
		443.89		2.80	4.68E-01		5.02E+00
		778.92		12.98	-1.39E+00		1.63E+00
		867.38		4.21	-2.25E+00		4.83E+00
		964.11		14.50	-3.68E-01		2.95E+00
		1085.89		9.94	-8.01E-01		2.08E+00
		1089.71		1.71	7.26E-01		1.28E+01
		1112.07		13.60	-7.96E-01		1.52E+00
		1212.93		1.40	8.13E-01		1.59E+01
		1299.16		1.63	-1.62E+00		1.21E+01
		1408.00		20.80	2.37E-01		1.17E+00
	EU-154	123.10		40.50	-8.16E-02	2.31E-01	2.31E-01
		723.36		19.70	2.49E-01		1.48E+00
		873.23		11.45	-3.82E-02		1.70E+00
		1004.78		17.90	5.81E-01		1.18E+00
		1274.54		35.50	-2.58E-01		5.56E-01
	EU-155	86.54	*	34.00	1.30E+00	3.02E-01	3.02E-01
		105.31		20.60	-4.77E-02		4.99E-01
+	PB-212	74.81	*	10.50	8.35E+00	6.15E-01	9.95E-01
		77.11	*	17.70	7.34E+00		6.15E-01
		87.19	*	6.27	7.06E+00		1.64E+00
+	RA-226d	186.11	*	3.28	7.91E+00	3.36E-01	3.93E+00
		241.92	*	7.46	3.71E+00		1.20E+00
		295.09	*	19.20	2.46E+00		4.86E-01
		351.87	*	37.10	2.31E+00		3.36E-01
		609.31	*	46.10	2.38E+00		3.71E-01
		1120.27	*	15.00	2.46E+00		1.23E+00
		1764.49		15.90	3.32E+00		2.27E+00
+	TH-232d	238.58	*	43.60	5.73E+00	2.07E-01	2.07E-01
		338.42	*	12.40	4.58E+00		8.86E-01
		583.02	*	30.87	5.03E+00		5.87E-01
		911.16	*	29.00	5.92E+00		6.14E-01
		968.97	*	17.40	5.60E+00		9.65E-01
+	U-235	143.79		10.50	4.13E-01	2.43E-01	9.84E-01
		163.38		4.70	1.43E+00		2.30E+00
		185.74	*	53.00	4.90E-01		2.43E-01
		205.33		4.70	-3.39E-02		2.37E+00
+	U-238d	63.29	*	3.80	6.25E+00	1.73E+00	3.97E+00

Analysis Report for RCF19450

J16M81 SAF:RC-087 FF2/618-7 STOCKPILE SOIL SAMPLE

Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	92.56	*	5.41	9.14E+00		1.73E+00
AM-241	59.54		35.70	3.94E-02	3.13E-01	3.13E-01
CM-243	99.52		14.40	2.04E-01	4.36E-01	6.89E-01
	103.73		23.00	2.61E-01		4.36E-01
	116.93		8.32	-2.99E-01		1.16E+00
	228.19		10.56	-6.88E-02		1.13E+00
	277.60		14.00	1.24E+00		9.09E-01
CM-245	99.52		21.10	1.39E-01	2.98E-01	4.70E-01
	103.73		33.60	1.78E-01		2.98E-01
	116.93		12.20	-2.04E-01		7.94E-01
	174.94		9.50	-3.95E-01		1.07E+00

+ = 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

Reviewed and Approved: EDWARD S. WALLACE

APR 14 2008 Edward S Wallace

(print/sign/date)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-092	Page 1 of 1
Collector: B Lawrence, E. Harries	Company Contact: Joan Kessner; Telephone No.: 509-375-4688	Project Coordinator: KESSNER, JH	Price Code: 2A; Data Turnaround: 24 Hours
Project Designation: 618-7 Burial Ground - Soil	Sampling Location: 618-7 Burial Ground/Stockpiles	SAF No.: RC-087	
Ice Chest No.: ERC-97-079	Field Logbook No.: EL-1395-12; COA: RG61872600	Method of Shipment: Government Vehicle	
Shipped To: Radiological Counting Facility	Offsite Property No.	Bill of Lading/Air Bill No.	

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None										
Type of Container	Snap Vial										
No. of Container(s)	1										
Volume	80g										
SAMPLE ANALYSIS	RCF GEA Shipping Screen										

Sample No.	Matrix *	Sample Date	Sample Time			RCF #							
J16J52	SOIL	4-11-08	1340	X		19449							
J16M81	SOIL	4-11-08	1410	X		19450							

CHAIN OF POSSESSION	Sign/Print Names	
Relinquished By/Removed From: B Lawrence, E. Harries; Date/Time: 4-11-08 1515	Received By/Stored In: R Fahlberg R Fahlberg; Date/Time: 4-11-08 1515	
Relinquished By/Removed From: R Fahlberg R Fahlberg; Date/Time: 4-11-08 1600	Received By/Stored In: S Yi Fan; Date/Time: 4-11-08 1600	
Relinquished By/Removed From: 1060/1A; Date/Time: 4/14/08 1030	Received By/Stored In: M Stankovich; Date/Time: 4/14/08 1030	
Relinquished By/Removed From: 1150 M Stankovich; Date/Time: 4/14/08	Received By/Stored In: 1150 D. Miller; Date/Time: 4/14/08	
Relinquished By/Removed From:	Date/Time:	Received By/Stored In: Date/Time:
Relinquished By/Removed From:	Date/Time:	Received By/Stored In: Date/Time:

SPECIAL INSTRUCTIONS

None

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

COPY

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

RCF 19450

Radiological Counting Facility

Analysis Report for RCF19449

J16J52 FF2/618-7 STOCKPILES SOIL SAMPLE

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19449
Sample Description	: J16J52 FF2/618-7 STOCKPILES SOIL SAMPLE
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 3.900E+01 grams
Facility	: Default
Sample Taken On	: 4/11/2008 1:40:00PM
Acquisition Started	: 4/14/2008 2:39:32PM
Procedure	: 50 gram pill box
Operator	: RCT
Detector Name	: REGIE02
Geometry	: 50 ml Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3655.7 seconds
Dead Time	: 1.52 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 80 - 4096
Peak Area Range (in channels)	: 80 - 4096
Identification Energy Tolerance	: 1.300 keV
Energy Calibration Used Done On	: 1/10/2008
Efficiency Calibration Used Done On	: 1/11/2008
Efficiency Calibration Description	: 50g Pill Box 1-10-2008
Sample Number	: 18646

J16J72

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		1.000	6.07E+00	2.94E+00	
U-235		0.548	1.79E-01	1.48E-01	
U-238d	@	1.000	1.76E+00	1.43E+00	

Analysis Report for RCF19449

J16J52 FF2/618-7 STOCKPILES SOIL SAMPLE

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity
d = identified by daughter product energy lines assumed to be in secular equilibrium
Errors quoted at 2.000 sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 4/14/2008 3:40:31PM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

Peak No.		Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
m	2	77.19	Pb-212	1.34E-02	22.28
	5	238.56	Pb-212	1.23E-02	40.63
	6	295.24	Pb-214	6.17E-03	52.27

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

NP = No Peak
UK = Unknown

NUCLIDE MDA REPORT

Nuclide Library Used : \\GOZER\ApexRoot\Default\Library\RCF UNKNOWN.NLB

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	K-40	1460.83	*	10.67	6.07E+00	4.05E+00	4.05E+00
	CO-60	1173.24		99.90	3.48E-01	2.93E-01	4.14E-01
		1332.50		99.98	-2.10E-01		2.93E-01
	NB-94	702.63		99.81	9.37E-02	2.87E-01	2.87E-01
		871.10		99.89	8.10E-02		3.14E-01
	AG-108m	433.94		90.50	6.53E-02	2.30E-01	2.30E-01
		614.28		89.80	6.61E-02		3.38E-01
		722.94		90.80	5.46E-02		3.14E-01
	CS-137	661.66		85.21	7.38E-02	2.81E-01	2.81E-01
	EU-152	40.12		38.40	-3.10E-02	3.70E-01	3.70E-01
		45.38		11.10	2.87E-01		1.15E+00
		121.78		28.40	-2.47E-01		4.05E-01
		244.69		7.51	9.38E-01		2.24E+00
		344.29		26.60	-1.06E+00		7.38E-01
		411.12		2.23	-1.78E+00		1.02E+01
		443.89		2.80	-1.98E-01		7.26E+00
		778.92		12.98	7.71E-01		2.28E+00

Analysis Report for RCF19449

J16J52 FF2/618-7 STOCKPILES SOIL SAMPLE

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		867.38		4.21	3.73E-01		7.60E+00
		964.11		14.50	-2.19E+00		2.19E+00
		1085.89		9.94	-2.41E+00		2.94E+00
		1089.71		1.71	1.58E+01		2.02E+01
		1112.07		13.60	-8.29E-01		2.47E+00
		1212.93		1.40	-2.95E+00		2.60E+01
		1299.16		1.63	4.72E+00		1.75E+01
		1408.00		20.80	-1.39E-01		1.53E+00
	EU-154	123.10		40.50	-7.50E-02	2.92E-01	2.92E-01
		723.36		19.70	3.00E-01		1.45E+00
		873.23		11.45	5.94E-02		2.78E+00
		1004.78		17.90	2.47E-01		1.82E+00
		1274.54		35.50	4.97E-01		9.54E-01
	EU-155	86.54		34.00	-7.03E-02	3.95E-01	3.95E-01
		105.31		20.60	-7.79E-02		5.42E-01
	PB-212	74.81		10.50	-2.95E-01	8.23E-01	1.38E+00
		77.11		17.70	8.82E-01		8.23E-01
		87.19		6.27	4.38E-01		2.19E+00
	RA-226d	186.11		3.28	5.46E+00	6.13E-01	5.40E+00
		241.92		7.46	2.31E-01		2.79E+00
		295.09		19.20	-1.36E-01		9.95E-01
		351.87		37.10	4.04E-01		6.13E-01
		609.31		46.10	5.36E-01		6.83E-01
		1120.27		15.00	6.17E-01		2.36E+00
		1764.49		15.90	3.87E-02		1.85E+00
	TH-232d	238.58		43.60	4.13E-01	4.70E-01	4.70E-01
		338.42		12.40	5.74E-02		1.69E+00
		583.02		30.87	2.73E-01		9.23E-01
		911.16		29.00	-2.88E-01		1.10E+00
		968.97		17.40	1.37E-01		1.99E+00
+	U-235	143.79		10.50	-4.17E-01	2.36E-01	1.22E+00
		163.38		4.70	-8.09E-02		2.84E+00
		185.74	*	53.00	1.79E-01		2.36E-01
		205.33		4.70	-4.01E-01		3.17E+00
+	U-238d	63.29	*	3.80	1.76E+00	2.24E+00	2.27E+00
		92.56	*	5.41	3.47E+00		2.24E+00
	AM-241	59.54		35.70	7.20E-02	3.45E-01	3.45E-01
	CM-243	99.52		14.40	-4.31E-01	4.65E-01	7.75E-01
		103.73		23.00	-4.17E-01		4.65E-01
		116.93		8.32	-7.31E-02		1.39E+00
		228.19		10.56	5.41E-02		1.64E+00
		277.60		14.00	-3.59E-02		1.25E+00
	CM-245	99.52		21.10	-2.94E-01	3.18E-01	5.29E-01
		103.73		33.60	-2.86E-01		3.18E-01
		116.93		12.20	-4.99E-02		9.51E-01
		174.94		9.50	-5.26E-02		1.45E+00

Analysis Report for RCF19449

J16J52 FF2/618-7 STOCKPILES SOIL SAMPLE

+ = 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

Reviewed and Approved: EDWARD S. WALLACE

APR 14 2008 Edward S Wallace

(print/sign/date)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-087-092	Page 1 of 1
Collector B Lawrence, E. Harries	Company Contact Joan Kessner	Telephone No. 509-375-4688	Project Coordinator KESSNER, JH	Price Code 2A
Project Designation 618-7 Burial Ground - Soil	Sampling Location 618-7 Burial Ground/Stockpiles		SAF No. RC-087	Data Turnaround 24 Hours
Ice Chest No. ERC-97-079	Field Logbook No. EL-1395-12	COA RG61872600	Method of Shipment Government Vehicle	
Shipped To Radiological Counting Facility	Offsite Property No.		Bill of Lading/Air Bill No.	

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None										
Type of Container	Snap Vial										
No. of Container(s)	1										
Volume	80g										
SAMPLE ANALYSIS	RCF GEA Shipping Screen										

Sample No.	Matrix *	Sample Date	Sample Time			RCF #							
J16J52	SOIL	4-11-08	1340	X		19449							
J16M81	SOIL	4-11-08	1410	X		19450							

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Lawrence	4/11/08 1515	R Fahlberg R Fahlberg	4-11-08 1515
R Fahlberg R Fahlberg	4-11-08 1600	Shipping	4-11-08 1600
1060/1A	4/14/08 1030	M Stankovich	4/14/08 1030
M Stankovich	1150 4/14/08	D. Miller	1150 4/14/08

SPECIAL INSTRUCTIONS

None

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

COPY

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

RCF 19449

Radiological Counting Facility

Analysis Report for RCF19448

J16M80 SAF:RC-087 FF2/618-7 STOCKPILE

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19448
Sample Description	: J16M80 SAF:RC-087 FF2/618-7 STOCKPILE
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 6.100E+01 grams
Facility	: Default
Sample Taken On	: 4/11/2008 7:50:00AM
Acquisition Started	: 4/14/2008 1:23:00PM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: REGIE02
Geometry	: 80 Gram Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3655.6 seconds
Dead Time	: 1.52 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 80 - 4096
Peak Area Range (in channels)	: 80 - 4096
Identification Energy Tolerance	: 1.300 keV
Energy Calibration Used Done On	: 1/10/2008
Efficiency Calibration Used Done On	: 1/11/2008
Efficiency Calibration Description	: 80g Pill Box 71385A-238 1/10/2008
Sample Number	: 18634

J16M80

INTERFERENCE CORRECTED REPORT

	Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
	K-40		0.998	1.44E+01	2.80E+00	
X	EU-155		0.378			
	PB-212		0.999	1.04E+00	1.96E-01	
	RA-226d		0.678	3.73E-01	1.50E-01	
	TH-232d		0.608	7.15E-01	2.23E-01	
	U-235		0.901	2.51E+00	4.45E-01	
	U-238d	@	1.000	3.57E+01	3.44E+00	

Analysis Report for RCF19448

J16M80 SAF:RC-087 FF2/618-7 STOCKPILE

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity
d = identified by daughter product energy lines assumed to be in secular equilibrium
Errors quoted at 2.000 sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 4/14/2008 2:24:00PM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

Peak No.		Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
M	4	84.27	Th-231	3.77E-02	12.72
m	7	98.37	Th-231	3.19E-02	12.66
	8	112.84	No Peak	3.29E-02	28.09
	18	1000.87	Pa-234(m)	1.62E-02	15.98

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

NP = No Peak
UK = Unknown

NUCLIDE MDA REPORT

Nuclide Library Used : \\GOZER\ApexRoot\Default\Library\RCF UNKNOWN.NLB

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	K-40	1460.83	*	10.67	1.44E+01	2.30E+00	2.30E+00
	CO-60	1173.24		99.90	-9.44E-02	2.18E-01	2.64E-01
		1332.50		99.98	-7.28E-02		2.18E-01
	NB-94	702.63		99.81	1.46E-02	2.01E-01	2.01E-01
		871.10		99.89	-4.14E-02		2.38E-01
	AG-108m	433.94		90.50	-2.77E-02	1.66E-01	1.66E-01
		614.28		89.80	-7.34E-03		2.74E-01
		722.94		90.80	4.81E-02		2.41E-01
	CS-137	661.66		85.21	5.90E-02	2.44E-01	2.44E-01
	EU-152	40.12		38.40	7.63E-02	3.23E-01	3.23E-01
		45.38		11.10	-6.87E-01		1.20E+00
		121.78		28.40	-2.93E-01		3.77E-01
		244.69		7.51	-9.86E-01		1.70E+00
		344.29		26.60	-7.91E-02		4.95E-01
		411.12		2.23	-7.96E-01		6.94E+00

Analysis Report for RCF19448

J16M80 SAF:RC-087 FF2/618-7 STOCKPILE

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		443.89		2.80	6.78E-01		5.48E+00
		778.92		12.98	-2.03E+00		1.51E+00
		867.38		4.21	-9.39E-01		5.47E+00
		964.11		14.50	-1.22E-01		1.88E+00
		1085.89		9.94	-1.81E-01		2.40E+00
		1089.71		1.71	7.17E-01		1.40E+01
		1112.07		13.60	-1.86E+00		1.59E+00
		1212.93		1.40	7.12E+00		2.06E+01
		1299.16		1.63	-1.60E+01		1.40E+01
		1408.00		20.80	3.77E-01		1.07E+00
	EU-154	123.10		40.50	-1.05E-01	2.69E-01	2.69E-01
		723.36		19.70	6.11E-01		1.13E+00
		873.23		11.45	6.54E-01		2.08E+00
		1004.78		17.90	-4.19E-01		1.82E+00
		1274.54		35.50	3.92E-01		6.94E-01
	EU-155	86.54	*	34.00	2.31E-01	2.74E-01	2.74E-01
		105.31		20.60	-3.47E-01		5.87E-01
+	PB-212	74.81	*	10.50	1.20E+00	5.25E-01	9.15E-01
		77.11	*	17.70	9.29E-01		5.25E-01
		87.19	*	6.27	1.25E+00		1.48E+00
+	RA-226d	186.11	*	3.28	3.89E+01	2.76E-01	3.13E+00
		241.92		7.46	-6.96E-01		2.22E+00
		295.09	*	19.20	4.18E-01		5.86E-01
		351.87	*	37.10	4.20E-01		2.76E-01
		609.31	*	46.10	3.19E-01		3.38E-01
		1120.27		15.00	1.08E+00		1.86E+00
		1764.49		15.90	-6.42E-01		1.75E+00
+	TH-232d	238.58	*	43.60	7.11E-01	2.76E-01	2.76E-01
		338.42	*	12.40	5.95E-01		8.23E-01
		583.02	*	30.87	7.59E-01		4.46E-01
		911.16		29.00	7.55E-01		9.54E-01
		968.97		17.40	4.20E-01		1.56E+00
+	U-235	143.79	*	10.50	2.88E+00	1.94E-01	1.06E+00
		163.38	*	4.70	1.93E+00		2.25E+00
		185.74	*	53.00	2.40E+00		1.94E-01
		205.33		4.70	3.64E+00		2.98E+00
+	U-238d	63.29	*	3.80	3.57E+01	1.59E+00	2.97E+00
		92.56	*	5.41	3.33E+01		1.59E+00
	AM-241	59.54		35.70	-1.77E-01	6.30E-01	6.30E-01
	CM-243	99.52		14.40	-4.56E-02	5.26E-01	9.67E-01
		103.73		23.00	-3.42E-01		5.26E-01
		116.93		8.32	-4.05E-01		1.53E+00
		228.19		10.56	-2.36E-01		1.17E+00
		277.60		14.00	1.32E-01		8.99E-01
	CM-245	99.52		21.10	-3.11E-02	3.60E-01	6.60E-01
		103.73		33.60	-2.34E-01		3.60E-01
		116.93		12.20	-2.76E-01		1.04E+00
		174.94		9.50	-1.79E-01		1.28E+00

Analysis Report for RCF19448

J16M80 SAF:RC-087 FF2/618-7 STOCKPILE

+ = 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

Reviewed and Approved: EDWARD S. WALLACE

APR 15 2008 (print/sign/date)

Stankovich, Michael T

From: St John, David A
Sent: Thursday, April 10, 2008 1:17 PM
To: Stankovich, Michael T; Weiss, Richard L
Subject: RE: RCF 19436 & 19439

Mike -

I thought that you were a trained shipper....

At 100 gms 19436 is not regulated because it does not exceed the activity consignment limits.

19439 is regulated and you will need to do a DOT/IATA rad shipment. You need to add Sr-90 equal to the Cs-137 value and add Pu-239/40 at 5 times the Am-241 value.

Rich -

Do we need to let the lab know this is coming?

Dave

From: Stankovich, Michael T
Sent: Thursday, April 10, 2008 12:24 PM
To: St John, David A
Subject: RCF 19436 & 19439
Importance: High

Dave, did you have a chance to look at this two rad screens?

19436 – 100 grams to TAR

19439 – 300 grams to Lionville
56 grams to Eberline

Mike

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-087-094

Collector B Lawrence, E. Harries	**Company Contact** Joan Kessner	**Telephone No.** 509-375-4688	**Project Coordinator** KESSNER, JH
Project Designation 618-7 Burial Ground - Soil	**Sampling Location** 618-7 Burial Ground/Stockpiles		**SAF No.** RC-087
Ice Chest No. ERC-97-079	**Field Logbook No.** EL-1395-12	**COA** RG61872600	**Method of Shipment** Government Vehicle
Shipped To Radiological Counting Facility	**Offsite Property No.** NA		**Bill of Lading/Air Bill No.** NA

Price Code 2A

Data Turnaround 24 Hours

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None											
Type of Container	P											
No. of Container(s)	1											
Volume	60mL											
SAMPLE ANALYSIS	RCF CEA Shipping Screen											
Sample No.	**Matrix ***	**Sample Date**	**Sample Time**									
J16M78	SOIL	04·11·08	0730	X		RCF						
J16M79	SOIL	04·11·08	0740	X		19446	65g					
J16M80	SOIL	04·11·08	0750	X		19447	62g					
						19448	61g					

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[signature]	0845 4-11-08	R. Fallon R. Fallon 4-11-08	0845
R. Fallon R. Fallon 4-11-08	0930	Shipping Facility 1-A	04-11-08 0930
1060/1A 4/14/08	10 30	M Standcourt 4/14/08	10.30
M Standcourt 4/14/08	1150	D. Miller [signature] 4-14-08	1150

SPECIAL INSTRUCTIONS

None

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

COPY

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
Lq=Liquid
Ve=Vegetation
X=Other

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

WCH-EE-011

RCF 19448

Radiological Counting Facility

Analysis Report for RCF19447

J16M79 SAF:RC-087 FF2/618-7 STOCKPILE

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19447
Sample Description	: J16M79 SAF:RC-087 FF2/618-7 STOCKPILE
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 6.100E+01 grams
Facility	: Default
Sample Taken On	: 4/11/2008 7:40:00AM
Acquisition Started	: 4/14/2008 1:22:51PM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: PGTWHITE
Geometry	: 80 Gram Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3600.8 seconds
Dead Time	: 0.02 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 80 - 4096
Peak Area Range (in channels)	: 80 - 4096
Identification Energy Tolerance	: 1.300 keV
Energy Calibration Used Done On	: 1/31/2008
Efficiency Calibration Used Done On	: 2/5/2008
Efficiency Calibration Description	: 80g Pill box 2/5/2008
Sample Number	: 18633

J16M89

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.998	1.13E+01	3.52E+00	
PB-212		0.706	1.11E+00	2.61E-01	
RA-226d		0.404	3.29E-01	1.58E-01	
TH-232d		0.430	4.63E-01	1.81E-01	
U-235		0.999	3.75E+00	6.97E-01	
U-238d	@	1.000	6.54E+01	7.37E+00	

Analysis Report for RCF19447

J16M79 SAF:RC-087 FF2/618-7 STOCKPILE

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity
d = identified by daughter product energy lines assumed to be in secular equilibrium
Errors quoted at 2.000 sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 4/14/2008 2:22:58PM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
	4	84.31	Th-231	5.39E-02	25.89
M	5	89.82	Th-231	2.30E-02	23.78
	7	98.45	Th-234	2.88E-02	39.10
	8	112.88	No Peak	4.46E-02	22.51
	17	727.33	Bi-212	4.81E-03	48.29
	18	766.24	Bi-211	1.33E-02	24.36
	19	1001.30	Pa-234m	2.48E-02	13.16

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

NP = No Peak
UK = Unknown

NUCLIDE MDA REPORT

Nuclide Library Used : \\GOZER\ApexRoot\Default\Library\RCF UNKNOWN.NLB

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	K-40	1460.83	*	10.67	1.13E+01	2.62E+00	2.62E+00
	CO-60	1173.24		99.90	7.87E-02	2.16E-01	2.38E-01
		1332.50		99.98	1.02E-01		2.16E-01
	NB-94	702.63		99.81	2.87E-02	1.81E-01	2.02E-01
		871.10		99.89	-2.63E-02		1.81E-01
	AG-108m	433.94		90.50	-7.72E-03	1.48E-01	1.48E-01
		614.28		89.80	-3.61E-02		2.26E-01
		722.94		90.80	5.62E-02		2.35E-01
	CS-137	661.66		85.21	-8.62E-02	2.10E-01	2.10E-01
	EU-152	40.12		38.40	4.34E-02	4.09E-01	4.28E-01
		45.38		11.10	6.13E-01		1.47E+00
		121.78		28.40	-6.95E-02		4.09E-01

Analysis Report for RCF19447

J16M79 SAF:RC-087 FF2/618-7 STOCKPILE

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		244.69		7.51	-7.33E-01		1.60E+00
		344.29		26.60	-5.08E-01		4.72E-01
		411.12		2.23	3.41E-01		5.89E+00
		443.89		2.80	-1.62E+00		4.74E+00
		778.92		12.98	-8.94E-01		1.48E+00
		867.38		4.21	-1.16E+00		4.60E+00
		964.11		14.50	5.92E-01		1.57E+00
		1085.89		9.94	1.61E+00		2.43E+00
		1089.71		1.71	1.21E+00		1.43E+01
		1112.07		13.60	-5.84E-01		1.86E+00
		1212.93		1.40	8.97E-01		1.88E+01
		1299.16		1.63	2.16E+00		1.50E+01
		1408.00		20.80	3.45E-01		8.15E-01
	EU-154	123.10		40.50	1.38E-01	2.91E-01	2.91E-01
		723.36		19.70	2.59E-01		1.09E+00
		873.23		11.45	-1.20E+00		1.52E+00
		1004.78		17.90	-2.35E-01		2.11E+00
		1274.54		35.50	-1.33E-01		6.22E-01
	EU-155	86.54		34.00	9.69E-02	5.76E-01	5.76E-01
		105.31		20.60	-2.72E-01		6.30E-01
+	PB-212	74.81	*	10.50	1.56E+00	7.61E-01	1.33E+00
		77.11	*	17.70	9.57E-01		7.61E-01
		87.19		6.27	5.25E-01		3.15E+00
+	RA-226d	186.11	*	3.28	6.92E+01	3.07E-01	4.12E+00
		241.92		7.46	-1.12E+00		2.08E+00
		295.09		19.20	7.50E-01		7.00E-01
		351.87	*	37.10	2.21E-01		3.07E-01
		609.31	*	46.10	4.95E-01		3.63E-01
		1120.27		15.00	1.23E+00		1.95E+00
		1764.49		15.90	-1.88E-01		1.68E+00
+	TH-232d	238.58	*	43.60	3.64E-01	2.92E-01	2.92E-01
		338.42		12.40	2.56E-02		1.05E+00
		583.02	*	30.87	6.73E-01		4.38E-01
		911.16		29.00	6.31E-01		8.60E-01
		968.97		17.40	9.27E-01		1.37E+00
+	U-235	143.79	*	10.50	3.34E+00	2.55E-01	1.18E+00
		163.38	*	4.70	3.85E+00		2.66E+00
		185.74	*	53.00	4.28E+00		2.55E-01
		205.33	*	4.70	3.65E+00		2.55E+00
+	U-238d	63.29	*	3.80	6.54E+01	2.79E+00	4.91E+00
		92.56	*	5.41	6.30E+01		2.79E+00
	AM-241	59.54		35.70	1.78E-02	4.62E-01	4.62E-01
	CM-243	99.52		14.40	-4.59E-02	5.48E-01	1.06E+00
		103.73		23.00	-1.51E-01		5.48E-01
		116.93		8.32	-8.74E-01		1.41E+00
		228.19		10.56	-1.85E-02		1.00E+00
		277.60		14.00	-5.43E-01		8.22E-01
	CM-245	99.52		21.10	-3.13E-02	3.75E-01	7.23E-01

Analysis Report for RCF19447

J16M79 SAF:RC-087 FF2/618-7 STOCKPILE

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	103.73	33.60	-1.03E-01		3.75E-01
	116.93	12.20	-5.96E-01		9.64E-01
	174.94	9.50	3.35E-02		1.13E+00

+ = 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

Reviewed and Approved: EDWARD S. WALLACE

APR 14 2008 Edward S Wallace
(print/sign/date)

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-087-094

Collector	B Lawrence, E. Harries
Company Contact	Joan Kessner
Telephone No.	509-375-4688
Project Coordinator	KESSNER, JH
Project Designation	618-7 Burial Ground - Soil
Sampling Location	618-7 Burial Ground/Stockpiles
SAF No.	RC-087
Price Code	2A
Data Turnaround	24 Hours
Ice Chest No.	ERC-97-079
Field Logbook No.	EL-1395-12
COA	RG61872600
Shipped To	Radiological Counting Facility
Offsite Property No.	NA
Method of Shipment	Government Vehicle
Bill of Lading/Air Bill No.	NA

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

SAMPLE ANALYSIS

Preservation	None													
Type of Container	P													
No. of Container(s)	1													
Volume	60mL													
	RCF GEA Shipping Screen													
Sample No.	Matrix *	Sample Date	Sample Time			RCF								
J16M78	SOIL	04.11.08	0730	X		19446	61g							
J16M79	SOIL	04.11.08	0740	X		19447	61g							
J16M80	SOIL	04.11.08	0750	X		19448	61g							

CHAIN OF POSSESSION

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[signature]	0845 4-11-08	R. Fahlberg R. Fahlberg	0845 4-11-08
R. Fahlberg R. Fahlberg 4-11-08	0930	04-11-08 Shipping Facility 1-A	0930
1060/1A 4/14/08	1030	M Stankovich 4/14/08	1030
M Stankovich 4/14/08	1150	D. Miller [signature] 4-14-08	1150

Sign/Print Names

SPECIAL INSTRUCTIONS

None

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

COPY

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
Ve=Vegetation
X=Other

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

WCH-EE-011

RCF 19417

Radiological Counting Facility

Analysis Report for RCF19446

J16M78 SAF:RC-087 FF2/618-7 STOCKPILES

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19446
Sample Description	: J16M78 SAF:RC-087 FF2/618-7 STOCKPILES
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 6.500E+01 grams
Facility	: Default
Sample Taken On	: 4/11/2008 7:30:00AM
Acquisition Started	: 4/14/2008 12:08:11PM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: REGIE02
Geometry	: 80 Gram Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3648.1 seconds
Dead Time	: 1.32 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 80 - 4096
Peak Area Range (in channels)	: 80 - 4096
Identification Energy Tolerance	: 1.300 keV
Energy Calibration Used Done On	: 1/10/2008
Efficiency Calibration Used Done On	: 1/11/2008
Efficiency Calibration Description	: 80g Pill Box 71385A-238 1/10/2008
Sample Number	: 18624

J16M88

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.997	1.20E+01	2.57E+00	
PB-212		0.706	6.29E-01	2.02E-01	
RA-226d		0.678	3.34E-01	1.44E-01	
TH-232d		0.855	5.79E-01	1.79E-01	
U-235		1.000	3.42E+00	4.88E-01	
U-238d	@	1.000	5.42E+01	4.87E+00	

Analysis Report for RCF19446

J16M78 SAF:RC-087 FF2/618-7 STOCKPILES

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity
d = identified by daughter product energy lines assumed to be in secular equilibrium
Errors quoted at 2.000 sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 4/14/2008 1:09:03PM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

Peak No.		Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
M	2	72.81	Tl-207	2.17E-02	23.63
M	5	84.11	Th-231	6.94E-02	9.20
m	6	89.96	Th-231	3.46E-02	15.01
m	8	98.39	No peak	3.97E-02	11.87
	9	112.70	No peak	3.85E-02	23.98
	20	766.30	No peak	8.87E-03	28.57
	22	1000.97	U-234m	2.63E-02	11.59

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

NP = No Peak
UK = Unknown

NUCLIDE MDA REPORT

Nuclide Library Used : \\GOZER\ApexRoot\Default\Library\RCF UNKNOWN.NLB

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	K-40	1460.83	*	10.67	1.20E+01	2.41E+00	2.41E+00
	CO-60	1173.24		99.90	-1.77E-01	2.18E-01	2.18E-01
		1332.50		99.98	-6.04E-03		2.41E-01
	NB-94	702.63		99.81	-1.74E-02	2.03E-01	2.28E-01
		871.10		99.89	6.18E-02		2.03E-01
	AG-108m	433.94		90.50	-7.12E-02	1.54E-01	1.54E-01
		614.28		89.80	1.65E-02		2.66E-01
		722.94		90.80	-1.34E-01		2.17E-01
	CS-137	661.66		85.21	9.89E-02	2.22E-01	2.22E-01
	EU-152	40.12		38.40	-3.48E-02	3.50E-01	3.50E-01
		45.38		11.10	4.50E-01		1.30E+00
		121.78		28.40	1.12E-01		4.13E-01

Analysis Report for RCF19446

J16M78 SAF:RC-087 FF2/618-7 STOCKPILES

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		244.69		7.51	-1.62E+00		1.66E+00
		344.29		26.60	3.25E-01		5.42E-01
		411.12		2.23	-1.18E+00		6.65E+00
		443.89		2.80	1.37E+00		5.24E+00
		778.92		12.98	4.80E-02		1.65E+00
		867.38		4.21	-9.98E-01		5.45E+00
		964.11		14.50	1.45E+00		1.91E+00
		1085.89		9.94	-6.60E-01		2.48E+00
		1089.71		1.71	4.72E-01		1.45E+01
		1112.07		13.60	-2.64E+00		1.81E+00
		1212.93		1.40	7.75E+00		1.96E+01
		1299.16		1.63	2.15E+00		1.37E+01
		1408.00		20.80	6.16E-01		1.13E+00
	EU-154	123.10		40.50	9.43E-03	2.90E-01	2.90E-01
		723.36		19.70	-4.29E-01		1.01E+00
		873.23		11.45	-2.28E+00		1.59E+00
		1004.78		17.90	2.81E+00		2.09E+00
		1274.54		35.50	2.46E-02		7.15E-01
	EU-155	86.54		34.00	-8.64E+00	5.84E-01	5.84E-01
		105.31		20.60	1.20E-01		6.52E-01
+	PB-212	74.81	*	10.50	1.31E+00	5.76E-01	1.01E+00
		77.11	*	17.70	4.71E-01		5.76E-01
		87.19		6.27	-1.17E+02		3.34E+00
+	RA-226d	186.11	*	3.28	5.46E+01	3.21E-01	2.98E+00
		241.92		7.46	-1.17E+00		2.23E+00
		295.09	*	19.20	6.82E-01		5.15E-01
		351.87	*	37.10	2.39E-01		3.25E-01
		609.31	*	46.10	3.46E-01		3.21E-01
		1120.27		15.00	-7.64E-01		1.80E+00
		1764.49		15.90	-4.43E-01		1.01E+00
+	TH-232d	238.58	*	43.60	6.17E-01	2.15E-01	2.15E-01
		338.42	*	12.40	4.01E-01		8.24E-01
		583.02	*	30.87	5.92E-01		3.96E-01
		911.16	*	29.00	6.03E-01		7.03E-01
		968.97		17.40	4.00E-01		1.58E+00
+	U-235	143.79	*	10.50	3.40E+00	1.84E-01	9.91E-01
		163.38	*	4.70	3.96E+00		1.66E+00
		185.74	*	53.00	3.38E+00		1.84E-01
		205.33	*	4.70	2.64E+00		2.72E+00
+	U-238d	63.29	*	3.80	5.42E+01	1.83E+00	4.60E+00
		92.56	*	5.41	5.11E+01		1.83E+00
	AM-241	59.54		35.70	4.68E-02	7.36E-01	7.36E-01
	CM-243	99.52		14.40	-9.46E-02	5.76E-01	1.04E+00
		103.73		23.00	-1.01E-01		5.76E-01
		116.93		8.32	-1.02E+00		1.64E+00
		228.19		10.56	5.75E-02		1.14E+00
		277.60		14.00	-8.72E-02		9.76E-01
	CM-245	99.52		21.10	-6.45E-02	3.94E-01	7.09E-01

Analysis Report for RCF19446

J16M78 SAF:RC-087 FF2/618-7 STOCKPILES

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	103.73	33.60	-6.89E-02		3.94E-01
	116.93	12.20	-6.97E-01		1.12E+00
	174.94	9.50	8.80E-01		1.35E+00

+ = 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

Reviewed and Approved: EDWARD S. WALLACE

APR 14 2008 Edward S Wallace

(print/sign/date)

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-087-094 | Page 1 of 1

Collector B Lawrence, E. Harries	**Company Contact** Joan Kessner	**Telephone No.** 509-375-4688	**Project Coordinator** KESSNER, JH
Project Designation 618-7 Burial Ground - Soil	**Sampling Location** 618-7 Burial Ground/Stockpiles		**SAF No.** RC-087
Ice Chest No. E RC-97-079	**Field Logbook No.** EL-1395-12	**COA** RG61872600	**Method of Shipment** Government Vehicle
Shipped To Radiological Counting Facility	**Offsite Property No.** NA		**Bill of Lading/Air Bill No.** NA

Price Code 2A

Data Turnaround 24 Hours

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

SAMPLE ANALYSIS

			Preservation	None									
			Type of Container	P									
			No. of Container(s)	1									
			Volume	60mL									
				RCF GEA Shipping Screen									
Sample No.	**Matrix ***	**Sample Date**	**Sample Time**			RCF							
J16M78	SOIL	04.11.08	0730	X		19446	65g						
J16M79	SOIL	04.11.08	0740	X		19447	63g						
J16M80	SOIL	04.11.08	0750	X		19448	61g						

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[signature]	4-11-08 0845	R. Fallon R. Fallon	4-11-08 0845
R. Fallon R. Fallon	4-11-08 0930	Shipping Facility 1-A	04-11-08 0930
1060/1A	4/14/08 1030	M Stankovich	4/14/08 1030
M Stankovich	4/14/08 1150	D. Miller	4-14-08 1150

SPECIAL INSTRUCTIONS

None

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

COPY

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
Va=Vegetation
X=Other

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

WCH-EE-011

RCF 19446

Radiological Counting Facility

Analysis Report for RCF19436

J16J49 SAF:RC-087 FF2/618-7 Burial Grounds Soil

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19436
Sample Description	: J16J49 SAF:RC-087 FF2/618-7 Burial Grounds Soil
Sample Type	: High Activity No
Unit	:
Sample Point	
Sample Size	: 5.600E+01 grams
Facility	: Default
Sample Taken On	: 4/9/2008 11:00:00AM
Acquisition Started	: 4/9/2008 1:33:51PM
Procedure	: High Activity Non Standard Geome
Operator	: RCT
Detector Name	: REGIE02
Geometry	: Non Standard Geo
Live Time	: 3600.0 seconds
Real Time	: 3660.5 seconds
Dead Time	: 1.65 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 80 - 4096
Peak Area Range (in channels)	: 80 - 4096
Identification Energy Tolerance	: 1.300 keV
Energy Calibration Used Done On	: 1/10/2008
Efficiency Calibration Used Done On	: 1/11/2008
Efficiency Calibration Description	: Non-Standard Geometry (1234-95-2) 1/11/2008
Sample Number	: 18556

QUALITATIVE ONLY

J16569

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
U-235		1.000	3.06E+02	1.06E+01	
U-238d	@	1.000	1.73E+03	1.02E+02	
AM-241		0.930	6.21E+00	7.95E-01	

Analysis Report for RCF19436

J16J49 SAF:RC-087 FF2/618-7 Burial Grounds Soil

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity
d = identified by daughter product energy lines assumed to be in secular equilibrium
Errors quoted at 2.000 sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 4/9/2008 2:34:58PM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
M	1	49.32	No Peak	1.91E-01	13.31
m	2	53.16	No Peak	5.37E-01	5.07
M	5	72.97	No Peak	9.04E-01	3.97
m	6	75.08	No Peak	1.09E+00	3.34
m	7	81.67	No Peak	2.23E+00	1.86
m	8	84.17	Th-228	5.88E+00	0.91
m	9	89.86	No Peak	5.03E+00	1.02
m	11	94.64	Th-228	2.12E+01	0.41
m	12	98.39	No Peak	3.35E+01	0.30
m	13	102.32	No Peak	1.85E+00	1.91
m	14	105.37	No Peak	2.78E+00	1.40
m	15	111.05	U-234	1.59E+01	0.45
m	16	114.40	No Peak	6.60E+00	0.76
m	17	120.87	No Peak	2.93E-01	9.57
	18	131.32	U-238	1.16E-01	55.08
M	19	140.77	No Peak	1.37E-01	17.02
	21	152.80	U-234	1.91E-01	38.25
M	23	182.71	No Peak	3.36E-01	7.18
M	25	194.98	No Peak	3.95E-01	5.65
m	26	202.15	No Peak	6.98E-01	3.41
	28	226.95	U-234	2.25E-01	37.38
	29	258.26	No Peak	7.52E-01	6.91
	30	293.73	No Peak	7.85E-02	49.19
	31	569.31	Cs-134	1.20E-01	17.61
M	32	691.34	No Peak	6.42E-02	13.23
m	33	698.98	No Peak	5.08E-02	15.79
m	34	702.06	No Peak	4.35E-02	18.16
m	35	705.69	No Peak	4.05E-02	19.66
M	36	733.22	No Peak	9.16E-02	9.54
m	37	742.71	No Peak	7.48E-01	2.13
	38	766.26	Pb-211	2.35E+00	1.39
M	39	781.51	No Peak	5.23E-02	14.95
m	40	786.21	No Peak	3.64E-01	3.42
M	41	796.49	No Peak	4.22E-02	18.28
m	42	805.60	Bi-214	7.30E-02	10.78
M	43	818.91	No Peak	2.68E-02	24.60
m	44	824.94	No Peak	4.60E-02	14.65
m	45	831.16	Pb-211	5.56E-02	12.37
	46	851.46	No Peak	3.49E-02	32.27
M	47	876.04	No Peak	3.05E-02	16.79
m	48	880.38	U-234	1.49E-01	5.20

Analysis Report for RCF19436

J16J49 SAF:RC-087 FF2/618-7 Burial Grounds Soil

	Peak No.	Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
m	49	883.12	No Peak	1.58E-01	4.99
m	50	887.22	No Peak	4.31E-02	12.15
	51	898.66	No Peak	4.59E-02	23.55
M	52	921.75	No Peak	8.76E-02	7.54
m	53	925.89	Unknown	2.17E-01	3.80
	54	945.95	Pa-234	2.05E-01	6.04
M	55	995.09	No Peak	3.33E-02	13.57
m	56	1001.05	Pa-234	5.08E+00	0.72
	57	1193.79	Unknown	7.47E-02	9.36
	58	1237.42	Pb-214	3.95E-02	17.34
	59	1393.78	No Peak	2.11E-02	20.37
	60	1413.67	No Peak	1.10E-02	32.75
	61	1434.12	No Peak	4.09E-02	14.24
M	62	1452.84	No Peak	6.33E-03	31.00
	63	1510.64	No Peak	5.22E-02	10.51
	64	1527.59	No Peak	1.20E-02	30.66
	65	1554.09	No Peak	3.34E-02	13.66
	66	1593.81	No Peak	1.77E-02	23.26
	67	1694.39	No Peak	6.38E-03	37.54
	68	1737.84	No Peak	7.30E-02	6.75
	69	1765.78	No Peak	2.79E-02	12.38
M	70	1809.11	No Peak	1.42E-02	14.16
m	71	1819.62	No Peak	4.12E-03	29.36
m	72	1831.50	No Peak	6.46E-02	6.24
M	73	1867.85	No Peak	2.87E-02	10.40
m	74	1875.30	No Peak	2.70E-02	10.18
	75	1893.65	No Peak	7.17E-03	21.45
	76	1911.33	No Peak	2.15E-02	12.13
	77	1936.95	No Peak	1.04E-02	17.52

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

NP = No Peak
UK = Unknown

NUCLIDE MDA REPORT

Nuclide Library Used : \\GOZER\ApexRoot\Default\Library\RCF Unknown.NLB

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
K-40	1460.83	10.67	-5.54E-01	7.59E+00	7.59E+00
CO-60	1173.24	99.90	-7.54E-02	7.19E-01	7.72E-01
	1332.50	99.98	-3.09E-02		7.19E-01
NB-94	702.63	99.81	2.80E+00	1.24E+00	1.59E+00
	871.10	99.89	2.63E-01		1.24E+00
AG-108m	433.94	90.50	-7.89E-01	1.52E+00	1.52E+00

Analysis Report for RCF19436

J16J49 SAF:RC-087 FF2/618-7 Burial Grounds Soil

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		614.28		89.80	-2.02E-01		1.60E+00
		722.94		90.80	-4.67E-01		1.63E+00
	CS-137	661.66		85.21	-1.78E+00	1.66E+00	1.66E+00
	EU-152	40.12		38.40	-3.59E+00	3.67E+00	4.56E+00
		45.38		11.10	-4.11E+00		1.17E+01
		121.78		28.40	3.83E-01		3.78E+00
		244.69		7.51	1.59E+00		1.85E+01
		344.29		26.60	1.11E+00		5.36E+00
		411.12		2.23	-5.93E+00		6.24E+01
		443.89		2.80	-3.04E+01		4.94E+01
		778.92		12.98	2.52E-01		1.31E+01
		867.38		4.21	-1.55E+01		2.85E+01
		964.11		14.50	-2.70E+00		6.84E+00
		1085.89		9.94	4.55E+00		8.51E+00
		1089.71		1.71	2.41E+01		4.89E+01
		1112.07		13.60	-8.92E-01		5.74E+00
		1212.93		1.40	-1.94E+01		5.44E+01
		1299.16		1.63	2.13E+01		4.83E+01
		1408.00		20.80	-1.57E+00		3.67E+00
	EU-154	123.10		40.50	3.50E-01	2.13E+00	2.65E+00
		723.36		19.70	-1.80E+00		7.54E+00
		873.23		11.45	8.55E-01		1.15E+01
		1004.78		17.90	-2.74E+00		2.93E+01
		1274.54		35.50	-4.19E-01		2.13E+00
	EU-155	86.54		34.00	-6.09E+02	5.75E+00	5.75E+00
		105.31		20.60	-8.59E+02		7.88E+00
	PB-212	74.81		10.50	2.22E+01	8.64E+00	1.43E+01
		77.11		17.70	-3.50E+01		8.64E+00
		87.19		6.27	-8.04E+03		3.28E+01
	RA-226d	186.11		3.28	-6.64E-01	3.11E+00	1.02E+02
		241.92		7.46	1.06E+01		1.87E+01
		295.09		19.20	4.58E-01		7.35E+00
		351.87		37.10	2.01E-01		3.85E+00
		609.31		46.10	-5.48E-01		3.11E+00
		1120.27		15.00	8.65E+00		5.95E+00
		1764.49		15.90	1.10E+01		5.24E+00
	TH-232d	238.58		43.60	1.80E+00	3.21E+00	3.21E+00
		338.42		12.40	5.80E+00		1.15E+01
		583.02		30.87	2.80E+00		4.79E+00
		911.16		29.00	1.41E+00		3.61E+00
		968.97		17.40	4.92E+00		5.78E+00
+	U-235	143.79	*	10.50	2.07E+02	1.73E+00	6.66E+00
		163.38	*	4.70	3.11E+02		3.01E+01
		185.74	*	53.00	4.17E+02		1.73E+00
		205.33	*	4.70	4.76E+02		1.92E+01
+	U-238d	63.29	*	3.80	1.73E+03	1.65E+01	2.05E+01
		92.56	*	5.41	4.00E+03		1.65E+01
+	AM-241	59.54	*	35.70	6.21E+00	2.09E+00	2.09E+00

Analysis Report for RCF19436

J16J49 SAF:RC-087 FF2/618-7 Burial Grounds Soil

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
CM-243	99.52	14.40	1.90E+02	7.38E+00	1.93E+01
	103.73	23.00	-1.38E+03		7.38E+00
	116.93	8.32	-6.19E+02		1.93E+01
	228.19	10.56	-2.84E+00		1.34E+01
	277.60	14.00	-4.15E+00		1.01E+01
CM-245	99.52	21.10	1.30E+02	5.05E+00	1.32E+01
	103.73	33.60	-9.41E+02		5.05E+00
	116.93	12.20	-4.22E+02		1.31E+01
	174.94	9.50	1.31E+00		1.51E+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

Reviewed and Approved: EDWARD S. WALLACE

APR 10 2008

Edward S Wallace

(print/sign/date)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-074	Page 1 of 1

Collector B Lawrence, E. Harries	**Company Contact** Joan Kessner	**Telephone No.** 509-375-4688	**Project Coordinator** KESSNER, JH
Project Designation 618-7 Burial Ground - Soil	**Sampling Location** 618-7 Burial Ground/Stockpiles		**SAF No.** RC-087
Ice Chest No.	**Field Logbook No.** EL-1395-12	**COA** RG61872600	**Method of Shipment** GOVERNMENT VEHICLE.
Shipped To Radiological Counting Facility	**Offsite Property No.**		**Bill of Lading/Air Bill No.**

Price Code 2A

Data Turnaround 24 Hours

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None											
Type of Container	Snap Vial											
No. of Container(s)	1											
Volume	80g											
SAMPLE ANALYSIS	RCF GEA Shipping Screen				RCF							
Sample No.	Matrix *	Sample Date	Sample Time									
J16J49	SOIL	4-9-08	1100	X			19436				GRN PAINT YELLOW	30-gal DRUM
~~J16J50~~	~~SOIL~~											

WHITE TURNINGS

RK 4-9-08

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time 1130 4-9-08	Received By/Stored In RB KERKOW/RB Kerkow	Date/Time 1130 4-9-08
Relinquished By/Removed From RB KERKOW/RB Kerkow	Date/Time 1305 4-9-08	Received By/Stored In RCF Mike Rook	Date/Time 1305 4-9-08
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

None

COPY

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 4 16 08 0825 GM Screen Result 0.2K

Client: WCH SDG #: J00169 NA[ ] SAF #: RC-087 NA [ ]

Work Order Number: J8D160153 Chain of Custody # RC-087-081, -104, -093, -105, -106B

Shipping Container ID: _____ Air Bill # _____

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: _____ NA [✓] 5. Vermiculite/packing materials is NA [✓] Wet [ ] Dry [ ]
6. Number of samples in shipping container: 10
7. Sample holding times exceeded? NA [✓] Yes [ ] No [ ]
8. Samples have:
   - ____ Tape
   - ✓ Custody Seals
   - ____ Hazard Lables
   - ✓ Appropriate Sample Lables
9. Samples are:
   - ✓ In Good Condition
   - ____ Broken
   - ____ Leaking
   - ____ Have Air Bubbles
   - (Only for samples requiring no head space.)
10. Sample pH taken? NA [✓] SOIL pH<2 [ ] pH>2 [ ] pH>9 [ ] Amount HNO_3 Added _____
11. Sample Location, Sample Collector Listed? *
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [✓]
13. Description of anomalies (include sample numbers): _____

Sample Custodian: RJR Date: 41608

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

LS-023, Rev. 7, 1/08

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-107	Page 1 of 1

Collector B Lawrence, E. Harries	**Company Contact** Joan Kessner	**Telephone No.** 509-375-4688	**Project Coordinator** KESSNER, JH
Price Code 2B	**Data Turnaround** 24 Hours		
Project Designation 618-7 Burial Ground - Soil	**Sampling Location** 618-7 Burial Ground/Stockpiles		**SAF No.** RC-087
Ice Chest No. FRC-97-079	**Field Logbook No.** EL-1395-12	**COA** RG61872600	**Method of Shipment** Government Vehicle
Shipped To TestAmerica Incorporated, Richland	**Offsite Property No.** NA		**Bill of Lading/Air Bill No.** NA

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None										
Type of Container	P/G										
No. of Container(s)	1										
Volume	60mL										
SAMPLE ANALYSIS	See item (1) in Special Instructions.										
Sample No.	Matrix *	Sample Date	Sample Time								
J16MC6 KLGDD	SOIL	4/16/08	0800	X						See #	I-005
J16MC7 KLGDF	SOIL	4/16/08	0810	X						"	I-006
J16MC8 KLGDG	SOIL	4/16/08	0820	X						"	I-007
~~J16MC9~~	~~SOIL~~										

RK 4/16/08

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
E. Harries / E. Harries	0905 4/16/08	RT Coffman / RT Coffman	0905 4/16/08
RT Coffman / RT Coffman	1145 4/16/08	REF# 1A, 1060 BLDG	1145 4/16/08
1060 / 1A	4/17/08 0800	MS / MStankovich	0800 4/17/08
WCH / MS / MStankovich	0840 4/17/08	RK / LJ LANE TAL	0840 41708

SPECIAL INSTRUCTIONS

None

(1) Metals by ICP - 6010 - Quick Turn {Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver}; Metals by ICP - 6010 - Quick Turn (Add On) {Aluminum, Beryllium, Copper, Iron, Zinc, Zirconium}

J8D170156
J00169
DUE 41808

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

Radiological Counting Facility

Analysis Report for RCF19467

J16M87 SAF:RC-087 FF2/618-7 Burial Ground /Stockpiles

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19467
Sample Description	: J16M87 SAF:RC-087 FF2/618-7 Burial Ground /Stockpiles
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 5.800E+01 grams
Facility	: Default
Sample Taken On	: 4/16/2008 8:10:00AM
Acquisition Started	: 4/16/2008 10:57:13AM
Procedure	: 50 gram pill box
Operator	: RCT
Detector Name	: REGIE02
Geometry	: 50 ml Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3657.9 seconds
Dead Time	: 1.58 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 80 - 4096
Peak Area Range (in channels)	: 80 - 4096
Identification Energy Tolerance	: 1.300 keV
Energy Calibration Used Done On	: 1/10/2008
Efficiency Calibration Used Done On	: 1/11/2008
Efficiency Calibration Description	: 50g Pill Box 1-10-2008
Sample Number	: 18704

INTERFERENCE CORRECTED REPORT

	Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
	K-40		0.995	1.17E+01	2.70E+00	
X	EU-155		0.384			
	PB-212		0.998	1.72E+00	2.42E-01	
	RA-226d		0.402	3.92E-01	1.63E-01	
	TH-232d		0.997	1.34E+00	1.99E-01	
	U-235		0.999	3.82E+00	2.64E-01	
	U-238d	@	1.000	5.62E+01	4.38E+00	

Analysis Report for RCF19467

J16M87 SAF:RC-087 FF2/618-7 Burial Ground /Stockpiles

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity
d = identified by daughter product energy lines assumed to be in secular equilibrium
Errors quoted at 2.000 sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 4/16/2008 11:58:39AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
	1	53.08	Pb-214	2.95E-02	36.61
M	5	84.20	Th-231	6.47E-02	9.60
m	7	89.88	Bi-214	4.21E-02	12.83
m	9	98.43	Pa-234	4.84E-02	10.62
	10	112.72	No Peak	1.16E-02	57.00
m	15	209.07	U-235	7.85E-03	30.04
	21	766.09	No Peak	1.18E-02	29.18
	24	1000.90	Pa-234m	1.76E-02	17.35

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

NP = No Peak
UK = Unknown

NUCLIDE MDA REPORT

Nuclide Library Used : \\GOZER\ApexRoot\Default\Library\RCF UNKNOWN.NLB

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	K-40	1460.83	*	10.67	1.17E+01	2.79E+00	2.79E+00
	CO-60	1173.24		99.90	2.24E-01	2.32E-01	2.75E-01
		1332.50		99.98	1.41E-01		2.32E-01
	NB-94	702.63		99.81	-3.15E-02	2.47E-01	2.48E-01
		871.10		99.89	5.92E-02		2.47E-01
	AG-108m	433.94		90.50	1.91E-02	2.02E-01	2.02E-01
		614.28		89.80	3.50E-02		3.28E-01
		722.94		90.80	1.51E-01		3.24E-01
	CS-137	661.66		85.21	6.74E-02	3.09E-01	3.09E-01
	EU-152	40.12		38.40	-8.22E-03	4.69E-01	4.78E-01
		45.38		11.10	-5.71E-01		1.55E+00

Analysis Report for RCF19467

J16M87 SAF:RC-087 FF2/618-7 Burial Ground /Stockpiles

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		121.78		28.40	-1.95E-01		4.69E-01
		244.69		7.51	-3.11E+00		2.14E+00
		344.29		26.60	3.15E-01		6.84E-01
		411.12		2.23	-2.34E+00		8.08E+00
		443.89		2.80	1.22E+00		6.61E+00
		778.92		12.98	-8.00E-01		1.87E+00
		867.38		4.21	1.42E+00		6.23E+00
		964.11		14.50	-1.47E+00		2.51E+00
		1085.89		9.94	-1.22E+00		2.33E+00
		1089.71		1.71	1.10E+01		1.44E+01
		1112.07		13.60	-2.23E-01		2.15E+00
		1212.93		1.40	-7.01E+00		2.28E+01
		1299.16		1.63	5.74E+00		1.87E+01
		1408.00		20.80	6.44E-01		1.33E+00
	EU-154	123.10		40.50	2.21E-01	3.38E-01	3.38E-01
		723.36		19.70	1.05E+00		1.51E+00
		873.23		11.45	-3.77E-01		2.21E+00
		1004.78		17.90	-6.68E-01		2.20E+00
		1274.54		35.50	4.52E-01		8.86E-01
	EU-155	86.54	*	34.00	3.19E-01	3.32E-01	3.32E-01
		105.31		20.60	-4.60E-01		7.28E-01
+	PB-212	74.81	*	10.50	2.41E+00	6.15E-01	1.15E+00
		77.11	*	17.70	1.47E+00		6.15E-01
		87.19	*	6.27	1.73E+00		1.80E+00
+	RA-226d	186.11	*	3.28	6.36E+01	3.06E-01	3.65E+00
		241.92		7.46	-1.06E+00		3.18E+00
		295.09		19.20	-7.35E-01		9.02E-01
		351.87	*	37.10	4.03E-01		3.06E-01
		609.31	*	46.10	3.71E-01		4.12E-01
		1120.27		15.00	2.85E+00		2.15E+00
		1764.49		15.90	8.38E-01		2.07E+00
+	TH-232d	238.58	*	43.60	1.60E+00	3.53E-01	3.53E-01
		338.42	*	12.40	5.98E-01		1.07E+00
		583.02	*	30.87	1.35E+00		6.71E-01
		911.16	*	29.00	9.89E-01		7.70E-01
		968.97	*	17.40	1.14E+00		1.12E+00
+	U-235	143.79	*	10.50	4.16E+00	2.26E-01	1.38E+00
		163.38	*	4.70	3.30E+00		2.81E+00
		185.74	*	53.00	3.93E+00		2.26E-01
		205.33	*	4.70	2.67E+00		1.96E+00
+	U-238d	63.29	*	3.80	5.62E+01	1.95E+00	4.28E+00
		92.56	*	5.41	5.73E+01		1.95E+00
	AM-241	59.54		35.70	-2.20E-01	7.55E-01	7.55E-01
	CM-243	99.52		14.40	2.13E-01	6.35E-01	1.16E+00
		103.73		23.00	-3.95E-01		6.35E-01
		116.93		8.32	-8.17E-01		1.82E+00
		228.19		10.56	-3.00E-01		1.36E+00
		277.60		14.00	-7.68E-01		1.10E+00

Analysis Report for RCF19467

J16M87 SAF:RC-087 FF2/618-7 Burial Ground /Stockpiles

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
CM-245	99.52	21.10	1.45E-01	4.35E-01	7.93E-01
	103.73	33.60	-2.70E-01		4.35E-01
	116.93	12.20	-5.57E-01		1.24E+00
	174.94	9.50	-1.31E+00		1.48E+00

+ = 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

Reviewed and Approved: EDWARD S. WALLACE

APR 16 2008 (print/sign/date) Edward S Wallace

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-097	Page 1 of 1

Collector B Lawrence, E. Harries	**Company Contact** Joan Kessner **Telephone No.** 509-375-4688	**Project Coordinator** KESSNER, JH	**Price Code** 2A **Data Turnaround** 24 Hours
Project Designation 618-7 Burial Ground - Soil	**Sampling Location** 618-7 Burial Ground/Stockpiles	**SAF No.** RC-087	
Ice Chest No.	**Field Logbook No.** EL-1395-12 **COA** RG61872600	**Method of Shipment** Government Vehicle	
Shipped To Radiological Counting Facility	**Offsite Property No.** NA	**Bill of Lading/Air Bill No.** NA	

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None										
Type of Container	P										
No. of Container(s)	1										
Volume	60mL										
SAMPLE ANALYSIS	RCF GEA Shipping Screen										
Sample No. / Matrix * / Sample Date / Sample Time											
J16M86 / SOIL / 4/16/08 / 0800	X		19466							SEG II	I-005
J16M87 / SOIL / 4/16/08 / 0810	X		19467							"	I-006
J16M88 / SOIL / 4/16/08 / 0820	X		19468							"	I-007
~~J16M89 / SOIL~~											

JL 4/14/08

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
E. Harris / E. Harris	0905 4/16/08	R Coffman / R Coffman	0905 4/16/08
R Coffman / R Coffman	1030 4/16/08	D Miller / Deb Miller	1030 4-16-08

SPECIAL INSTRUCTIONS

None

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	Disposal By	Date/Time

COPY

WCH-EE-011

RCF 19467

Radiological Counting Facility

Analysis Report for RCF19466

J16M86 SAF:RC-087 FF2/618-7 Burial Ground /Stockpiles

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19466
Sample Description	: J16M86 SAF:RC-087 FF2/618-7 Burial Ground /Stockpiles
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 5.100E+01 grams
Facility	: Default
Sample Taken On	: 4/16/2008 8:00:00AM
Acquisition Started	: 4/16/2008 10:57:05AM
Procedure	: 50 gram pill box
Operator	: RCT
Detector Name	: PGTWHITE
Geometry	: 50 ml Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3600.7 seconds
Dead Time	: 0.02 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 80 - 4096
Peak Area Range (in channels)	: 80 - 4096
Identification Energy Tolerance	: 1.300 keV
Energy Calibration Used Done On	: 1/31/2008
Efficiency Calibration Used Done On	: 2/4/2008
Efficiency Calibration Description	: 50ml Pill Box (1234-95-2) 2/4/2008
Sample Number	: 18703

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		1.000	1.52E+01	3.53E+00	
TH-232d		0.417	9.20E-01	2.66E-01	
U-235		0.999	7.53E+00	5.42E-01	
U-238d	@	1.000	8.43E+01	7.30E+00	

Analysis Report for RCF19466

J16M86 SAF:RC-087 FF2/618-7 Burial Ground /Stockpiles

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity
d = identified by daughter product energy lines assumed to be in secular equilibrium
Errors quoted at 2.000 sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 4/16/2008 11:57:30AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
	1	53.38	Lead 214	2.78E-02	37.74
	3	84.22	Th 231	5.33E-02	24.22
M	4	89.90	Bi-214	2.74E-02	19.22
	6	98.43	Pa-234	2.70E-02	37.02
	7	112.89	No Peak	4.06E-02	22.98
	14	766.59	No Peak	1.00E-02	33.34
	15	1001.28	Pa-234m	1.65E-02	17.81

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

NP = No Peak
UK = Unknown

NUCLIDE MDA REPORT

Nuclide Library Used : \\GOZER\ApexRoot\Default\Library\RCF UNKNOWN.NLB

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	K-40	1460.83	*	10.67	1.52E+01	3.56E+00	3.56E+00
	CO-60	1173.24		99.90	8.23E-02	3.24E-01	3.44E-01
		1332.50		99.98	-9.49E-02		3.24E-01
	NB-94	702.63		99.81	-5.06E-02	3.06E-01	3.32E-01
		871.10		99.89	1.31E-02		3.06E-01
	AG-108m	433.94		90.50	2.55E-01	2.50E-01	2.50E-01
		614.28		89.80	-1.15E-01		3.36E-01
		722.94		90.80	4.35E-02		3.22E-01
	CS-137	661.66		85.21	9.86E-02	3.11E-01	3.11E-01
	EU-152	40.12		38.40	-3.16E-01	5.41E-01	5.41E-01
		45.38		11.10	1.00E+00		1.81E+00
		121.78		28.40	1.03E-01		5.73E-01
		244.69		7.51	-2.44E-01		2.37E+00
		344.29		26.60	-5.11E-01		7.25E-01

Analysis Report for RCF19466

J16M86 SAF:RC-087 FF2/618-7 Burial Ground /Stockpiles

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		411.12		2.23	4.66E+00		9.55E+00
		443.89		2.80	-1.14E-01		8.21E+00
		778.92		12.98	-4.32E-01		2.34E+00
		867.38		4.21	-3.35E+00		7.46E+00
		964.11		14.50	-2.54E-01		2.66E+00
		1085.89		9.94	9.86E-01		3.49E+00
		1089.71		1.71	-9.69E+00		1.82E+01
		1112.07		13.60	-6.66E-01		2.64E+00
		1212.93		1.40	5.84E+00		2.53E+01
		1299.16		1.63	-5.12E+00		1.86E+01
		1408.00		20.80	-5.33E-01		1.37E+00
	EU-154	123.10		40.50	2.36E-01	4.08E-01	4.08E-01
		723.36		19.70	2.01E-01		1.49E+00
		873.23		11.45	1.63E+00		2.76E+00
		1004.78		17.90	-2.20E-01		2.79E+00
		1274.54		35.50	-3.23E-01		1.04E+00
	EU-155	86.54		34.00	1.82E-01	7.48E-01	7.48E-01
		105.31		20.60	-4.13E-01		8.47E-01
	PB-212	74.81		10.50	3.18E-01	1.45E+00	2.06E+00
		77.11		17.70	2.27E+00		1.45E+00
		87.19		6.27	9.86E-01		4.17E+00
	RA-226d	186.11		3.28	1.28E+02	6.49E-01	1.60E+01
		241.92		7.46	3.55E-01		3.41E+00
		295.09		19.20	6.12E-01		1.14E+00
		351.87		37.10	7.39E-01		6.49E-01
		609.31		46.10	7.87E-01		7.20E-01
		1120.27		15.00	1.22E+00		2.76E+00
		1764.49		15.90	2.14E+00		2.93E+00
+	TH-232d	238.58	*	43.60	8.57E-01	4.74E-01	4.74E-01
		338.42		12.40	9.34E-01		1.84E+00
		583.02	*	30.87	1.06E+00		6.64E-01
		911.16		29.00	1.29E+00		1.33E+00
		968.97		17.40	1.24E+00		2.27E+00
+	U-235	143.79	*	10.50	7.50E+00	4.61E-01	1.50E+00
		163.38	*	4.70	8.05E+00		4.14E+00
		185.74	*	53.00	7.61E+00		4.61E-01
		205.33	*	4.70	5.39E+00		4.46E+00
+	U-238d	63.29	*	3.80	8.43E+01	3.64E+00	6.24E+00
		92.56	*	5.41	8.04E+01		3.64E+00
	AM-241	59.54		35.70	9.17E-02	5.64E-01	5.64E-01
	CM-243	99.52		14.40	-9.54E-02	7.34E-01	1.35E+00
		103.73		23.00	5.79E-02		7.34E-01
		116.93		8.32	-1.65E+00		1.95E+00
		228.19		10.56	5.67E-01		1.61E+00
		277.60		14.00	2.52E-01		1.29E+00
	CM-245	99.52		21.10	-6.51E-02	5.02E-01	9.21E-01
		103.73		33.60	3.96E-02		5.02E-01
		116.93		12.20	-1.12E+00		1.33E+00

Analysis Report for RCF19466

J16M86 SAF:RC-087 FF2/618-7 Burial Ground /Stockpiles

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	174.94	9.50	-3.68E-01		1.81E+00

+ = 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

Reviewed and Approved: EDWARD S. WALLACE

APR 16 2008 (print/sign/date)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-097	Page 1 of 1

Collector B Lawrence, E. Harries	**Company Contact** Joan Kessner **Telephone No.** 509-375-4688	**Project Coordinator** KESSNER, JH	**Price Code** 2A **Data Turnaround** 24 Hours
Project Designation 618-7 Burial Ground - Soil	**Sampling Location** 618-7 Burial Ground/Stockpiles	**SAF No.** RC-087	
Ice Chest No.	**Field Logbook No.** EL-1395-12 **COA** RG61872600	**Method of Shipment** Government Vehicle	
Shipped To Radiological Counting Facility	**Offsite Property No.** NA	**Bill of Lading/Air Bill No.** NA	

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None											
Type of Container	P											
No. of Container(s)	1											
Volume	60mL											
SAMPLE ANALYSIS	RCF OEA Shipping Screen											
Sample No.	Matrix *	Sample Date	Sample Time									
J16M86	SOIL	4/16/08	0800	X		19466					SEQ #	I-005
J16M87	SOIL	4/16/08	0810	X		19467					"	I-006
J16M88	SOIL	4/16/08	0820	X		19468					"	I-007
~~J16M89~~	~~SOIL~~											

22 1/14/08

CHAIN OF POSSESSION	Sign/Print Names	
Relinquished By/Removed From: E. Harris / E. Harris, Date/Time 0905 4/16/08	Received By/Stored In: R Coffman / R Coffman, Date/Time 0905 4/16/08	
Relinquished By/Removed From: R Coffman / R Coffman, Date/Time 1030 4/16/08	Received By/Stored In: D Miller / Deb Miller, Date/Time 1030 4-16-08	
Relinquished By/Removed From, Date/Time	Received By/Stored In, Date/Time	
Relinquished By/Removed From, Date/Time	Received By/Stored In, Date/Time	
Relinquished By/Removed From, Date/Time	Received By/Stored In, Date/Time	
Relinquished By/Removed From, Date/Time	Received By/Stored In, Date/Time	

SPECIAL INSTRUCTIONS

None

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

COPY

WCH-EE-011

RCF 19466

Radiological Counting Facility

Analysis Report for RCF19468

J16M88 SAF:RC-087 FF2/618-7 Burial Ground /Stockpiles

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19468
Sample Description	: J16M88 SAF:RC-087 FF2/618-7 Burial Ground /Stockpiles
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 4.700E+01 grams
Facility	: Default
Sample Taken On	: 4/16/2008 8:20:00AM
Acquisition Started	: 4/16/2008 12:09:05PM
Procedure	: 50 gram pill box
Operator	: RCT
Detector Name	: PGTWHITE
Geometry	: 50 ml Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3600.7 seconds
Dead Time	: 0.02 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 80 - 4096
Peak Area Range (in channels)	: 80 - 4096
Identification Energy Tolerance	: 1.300 keV
Energy Calibration Used Done On	: 1/31/2008
Efficiency Calibration Used Done On	: 2/4/2008
Efficiency Calibration Description	: 50ml Pill Box (1234-95-2) 2/4/2008
Sample Number	: 18705

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.996	1.04E+01	3.60E+00	
PB-212		0.709	3.13E+00	4.02E-01	
TH-232d		0.997	3.20E+00	3.60E-01	
U-235		0.901	2.53E+00	3.33E-01	
U-238d	@	0.999	3.18E+01	4.45E+00	

Analysis Report for RCF19468

J16M88 SAF:RC-087 FF2/618-7 Burial Ground /Stockpiles

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity
d = identified by daughter product energy lines assumed to be in secular equilibrium
Errors quoted at 2.000 sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 4/16/2008 1:09:13PM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
	9	270.17	Ac-228	1.14E-02	32.39
m	10	300.14	Pb-212	7.64E-03	26.67
	12	352.23	Pb-214	1.06E-02	44.12
	13	511.20	Annihilation Photon	1.37E-02	35.88
	14	560.82	No Peak	1.23E-02	30.00
	16	860.95	No Peak	5.98E-03	32.14
	19	1001.51	Pa-234m	6.12E-03	35.24

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

NP = No Peak
UK = Unknown

NUCLIDE MDA REPORT

Nuclide Library Used : \\GOZER\ApexRoot\Default\Library\RCF UNKNOWN.NLB

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	K-40	1460.83	*	10.67	1.04E+01	4.62E+00	4.62E+00
	CO-60	1173.24		99.90	1.72E-01	2.76E-01	3.99E-01
		1332.50		99.98	-9.88E-02		2.76E-01
	NB-94	702.63		99.81	8.46E-03	3.39E-01	3.58E-01
		871.10		99.89	2.83E-02		3.39E-01
	AG-108m	433.94		90.50	2.91E-02	2.60E-01	2.60E-01
		614.28		89.80	-1.88E-01		3.84E-01
		722.94		90.80	2.79E-01		4.34E-01
	CS-137	661.66		85.21	1.12E-01	3.77E-01	3.77E-01
	EU-152	40.12		38.40	-1.44E-01	5.00E-01	5.00E-01
		45.38		11.10	9.03E-01		1.65E+00
		121.78		28.40	4.91E-02		5.09E-01
		244.69		7.51	-4.39E-01		2.98E+00
		344.29		26.60	3.01E-01		7.99E-01

Analysis Report for RCF19468

J16M88 SAF:RC-087 FF2/618-7 Burial Ground /Stockpiles

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		411.12		2.23	1.10E+01		1.18E+01
		443.89		2.80	-3.50E+00		8.66E+00
		778.92		12.98	-2.54E+00		2.21E+00
		867.38		4.21	-2.10E+00		8.18E+00
		964.11		14.50	-7.94E-01		3.67E+00
		1085.89		9.94	-1.62E+00		3.49E+00
		1089.71		1.71	6.83E+00		2.36E+01
		1112.07		13.60	-3.40E-01		2.90E+00
		1212.93		1.40	-6.50E+00		2.83E+01
		1299.16		1.63	0.00E+00		2.15E+01
		1408.00		20.80	-2.22E-01		1.82E+00
	EU-154	123.10		40.50	-8.21E-02	3.53E-01	3.53E-01
		723.36		19.70	1.28E+00		2.00E+00
		873.23		11.45	3.74E-01		2.91E+00
		1004.78		17.90	3.01E-01		2.39E+00
		1274.54		35.50	2.12E-02		9.52E-01
	EU-155	86.54		34.00	5.67E-01	6.27E-01	6.27E-01
		105.31		20.60	-2.51E-01		7.26E-01
+	PB-212	74.81	*	10.50	3.34E+00	8.94E-01	1.46E+00
		77.11	*	17.70	3.03E+00		8.94E-01
		87.19		6.27	2.20E+00		3.50E+00
	RA-226d	186.11		3.28	4.41E+01	7.70E-01	1.05E+01
		241.92		7.46	6.20E-01		5.66E+00
		295.09		19.20	1.97E-01		1.13E+00
		351.87		37.10	8.14E-01		7.70E-01
		609.31		46.10	6.99E-01		7.98E-01
		1120.27		15.00	1.59E-01		2.58E+00
		1764.49		15.90	1.28E+00		3.07E+00
+	TH-232d	238.58	*	43.60	3.45E+00	6.82E-01	6.82E-01
		338.42	*	12.40	2.69E+00		1.49E+00
		583.02	*	30.87	3.33E+00		8.44E-01
		911.16	*	29.00	2.97E+00		1.05E+00
		968.97	*	17.40	2.69E+00		2.09E+00
+	U-235	143.79	*	10.50	2.41E+00	4.12E-01	1.34E+00
		163.38	*	4.70	3.95E+00		3.96E+00
		185.74	*	53.00	2.52E+00		4.12E-01
		205.33		4.70	-3.27E+00		4.02E+00
+	U-238d	63.29	*	3.80	3.18E+01	3.13E+00	5.35E+00
		92.56	*	5.41	2.94E+01		3.13E+00
	AM-241	59.54		35.70	-3.50E-02	4.65E-01	4.65E-01
	CM-243	99.52		14.40	1.08E+00	6.61E-01	1.17E+00
		103.73		23.00	-4.97E-02		6.61E-01
		116.93		8.32	-1.85E+00		1.80E+00
		228.19		10.56	1.63E+00		1.83E+00
		277.60		14.00	2.85E-02		1.47E+00
	CM-245	99.52		21.10	7.39E-01	4.52E-01	7.95E-01
		103.73		33.60	-3.40E-02		4.52E-01
		116.93		12.20	-1.26E+00		1.22E+00

Analysis Report for RCF19468

J16M88 SAF:RC-087 FF2/618-7 Burial Ground /Stockpiles

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	174.94	9.50	-1.87E+0C		1.80E+00

+ = 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

Reviewed and Approved: EDWARD S. WALLACE

APR 16 2008 Edward S Wallace

(print/sign/date)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-097	Page 1 of 1
Collector B Lawrence, E. Harries	**Company Contact** Joan Kessner **Telephone No.** 509-375-4688	**Project Coordinator** KESSNER, JH	**Price Code** 2A **Data Turnaround** 24 Hours
Project Designation 618-7 Burial Ground - Soil	**Sampling Location** 618-7 Burial Ground/Stockpiles	**SAF No.** RC-087	
Ice Chest No.	**Field Logbook No.** EL-1395-12 **COA** RG61872600	**Method of Shipment** Government Vehicle	
Shipped To Radiological Counting Facility	**Offsite Property No.** NA	**Bill of Lading/Air Bill No.** NA	

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None										
Type of Container	P										
No. of Container(s)	1										
Volume	60mL										
SAMPLE ANALYSIS	RCF OEA Shipping Screen										
Sample No. / Matrix * / Sample Date / Sample Time											
J16M86 / SOIL / 4/16/08 / 0800	X		19466							Seg #	I-005
J16M87 / SOIL / 4/16/08 / 0810	X		19467							"	I-006
J16M88 / SOIL / 4/16/08 / 0820	X		19468							"	I-007
~~J16M89 / SOIL~~											

ZC 1/14/08

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS
Relinquished By/Removed From: E. Harries / E. Harries — Date/Time 0905 4/16/08	Received By/Stored In: KL Coffman / KL Coffman — Date/Time 0905 4/16/08	None
Relinquished By/Removed From: RT Coffman / RT Coffman — Date/Time 1030 4/16/08	Received By/Stored In: D Miller / Deb Miller — Date/Time 1030 4-16-08	
Relinquished By/Removed From — Date/Time	Received By/Stored In — Date/Time	
Relinquished By/Removed From — Date/Time	Received By/Stored In — Date/Time	
Relinquished By/Removed From — Date/Time	Received By/Stored In — Date/Time	
Relinquished By/Removed From — Date/Time	Received By/Stored In — Date/Time	

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
Ve=Vegetation
Xo=Other

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

COPY

WCH-EE-011

RCF 19468

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 41708 0840 GM Screen Result 0.1 K

Client: WCH SDG #: J00169 NA[ ] SAF #: RC-087 NA [ ]

Work Order Number: J8D170156 Chain of Custody # RC-087-107

Shipping Container ID: _____ Air Bill # _____

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: _____ NA [✓] 5. Vermiculite/packing materials is NA [✓] Wet [ ] Dry [ ]
6. Number of samples in shipping container: 3
7. Sample holding times exceeded? NA [✓] Yes [ ] No [ ]
8. Samples have:
   - ____ Tape
   - ✓ Custody Seals
   - ✓ Hazard Lables
   - ✓ Appropriate Sample Lables
9. Samples are:
   - ✓ In Good Condition
   - ____ Broken
   - ____ Leaking
   - ____ Have Air Bubbles (Only for samples requiring no head space.)
10. Sample pH taken? NA [✓] SOIL pH<2 [ ] pH>2 [ ] pH>9 [ ] Amount HNO_3 Added _____
11. Sample Location, Sample Collector Listed? *
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [✓]
13. Description of anomalies (include sample numbers): _____

Sample Custodian: [signature] Date: 41708

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____