0078541

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

COMPLETE COPY OF DATA PACKAGE TO:

Rick Kerkow	L6-06	KW 7/21/08 Initials/Date
Kathy Wendt	H4-21	KW 7/21/08 Initials/Date

COMMENTS:

SDG J00184 **SAF-RC-087**

Rad only X Chem only Rad & Chem

X Complete Partial

WASTE SITE: 618-7 Burial Ground Floor

RECEIVED
JUL 31 2008
EDMC

Analytical Data Package Prepared For

Washington Closure Hanford

RECEIVED
JUL 2008

Analysis Provided By

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

SDG Number:J00184

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

Washington Closure Hanford
2620 Fermi Avenue
Richland, WA 99354

July 18, 2008

Attention: Joan Kessner

SAF Number	:	RC-087
Date SDG Closed	:	July 18, 2008
Number of Samples	:	Twenty (20)
Sample Type	:	Soil
SDG Number	:	J00184
Data Deliverable	:	Quick Turn Metals / Summary

CASE NARRATIVE

I. Introduction

Between June 30, 2008 and July 15, 2008 twenty soils 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
J172L3	KQV0C	SOIL	06/30/08
J172L5	KQV0F	SOIL	06/30/08
J172L6	KQV0G	SOIL	06/30/08
J172L7	KQV0H	SOIL	06/30/08
J172L8	KQV0J	SOIL	06/30/08
J172L9	KQV0K	SOIL	06/30/08
J172M0	KQ0R0	SOIL	07/02/08
J172M1	KQ0R2	SOIL	07/02/08
J172M2	KQ0R6	SOIL	07/02/08
J172M5	KQ5AH	SOIL	07/07/08
J172M8	KQ5AQ	SOIL	07/07/08
J172M9	KQ5AX	SOIL	07/07/08
J172X0	KQ5A1	SOIL	07/07/08
J172M3	KQ5PN	SOIL	07/07/08
J172M4	KQ5PP	SOIL	07/07/08
J172M6	KQ8M2	SOIL	07/09/08
J172M7	KQ8M7	SOIL	07/09/08
J172B0	KQ87E	SOIL	07/09/08
J172B1	KQ87P	SOIL	07/09/08
J172B3	KRJ8R	SOIL	07/15/08

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 6010A

IV. Quality Control

SDG J00184 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
Seven batches were analyzed in July 2008 for samples with the standard metal request list and add ons aluminum, beryllium, copper, iron, zinc and zirconium.

Batch 8182421:
The ICV and CCV had high iron recovery. It is suspected that high level iron samples are contaminating the system. Except as noted, the LCS, batch blank, sample, sample duplicate, MS, MSD, ICB, ICV, CCB and CCV results are within contractual limits.

Batch 8184498:
There is a significant difference between the aluminum results for sample J172M0 and it's duplicate, J172M0 DUP. Inhomogeniety in the sample is the suspected cause. Except as noted, the LCS, batch blank, sample, sample duplicate, MS, MSD, ICB, ICV, CCB and CCV results are within contractual limits.

Batch 8189265:
The MSD had a high Zinc recovery, 464.6%. Inhomogeniety in the sample is suspected. Except as noted, the LCS, batch blank, sample, sample duplicate, MS, MSD, ICB, ICV, CCB and CCV results are within contractual limits.

Batch 8190159:
One of the CCVs had a high iron recovery. It is suspected that high level iron samples are contaminating the system. The MSD had a high lead and copper. Inhomogeniety in the sample is the suspected cause. Except as noted, the LCS, batch blank, sample, sample duplicate, MS, MSD, ICB, ICV, CCB and CCV results are within contractual limits.

Batch 8191282:
The ICV and CCV had high iron recoveries. It is suspected that high level iron samples are contaminating the system. Except as noted, the LCS, batch blank, sample, sample duplicate, MS, MSD, ICB, ICV, CCB and CCV results are within contractual limits.

Batch 8191339:
The ICV and CCV had high iron recoveries. It is suspected that high level iron samples are contaminating the system. The LCS had a high iron recovery, 117.3%. Cause is uncertain, still under investigated. Except as noted, the LCS, batch blank, sample, sample duplicate, MS, MSD, ICB, ICV, CCB and CCV results are within contractual limits.

Batch 8197491:
The MSD had low recoveries for lead, copper and zinc. Inhomogeniety in the sample is the suspected cause. Except as noted, the LCS, batch blank, sample, sample duplicate, MS, MSD, ICB, ICV, CCB and CCV results are within contractual limits.

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the following signature.

Reviewed and approved:

Sandra Seger
Project Manager

SDG Number: ~~RC-087~~ J00184
SAF Number: R.C.-087
Batch Number: 8182421

SKS 7/1/08

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/s
J8F300000-421-B		1.000	-0.0174	-0.0026	0.0001	-0.0001	0.0001	-0.0002	0.0014	0.017	0.0032	0.00127	0.0002	0.00
J8F300000-421-C		1.000	0.8872	0.9117	0.9578	0.984	0.9016	0.9614	0.9033	1.066	0.9137	0.78302	0.8909	0.91
LCS Recovery %			88.720%	91.170%	95.780%	98.400%	90.160%	96.140%	90.330%	106.600%	91.370%	78.302%	89.090%	91.16
		g	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/k
J8F300194-001	J172L3'	0.5076	8462.45768	1.25473	73.13284	0.288787	1.752639	121.5893	55.21808	24815.774	455.7857	<MDL	<MDL	102.5
J8F300194-001-X	J172L3 DUP'	0.5141	7832.13383	0.923945	71.10484	0.291772	2.042404	133.1453	44.61194	28788.174	124.7812	<MDL	<MDL	137.2
J8F300194-002	J172L5'	0.504	15277.7778	1.984127	88.19444	0.327381	2.956349	167.9563	40.76389	30763.889	569.3452	<MDL	<MDL	498.9
J8F300194-003	J172L6'	0.4981	6454.5272	<MDL	79.37161	0.240915	1.35515	75.37643	31.1584	21210.6	1680.385	<MDL	<MDL	69.19
J8F300194-004	J172L7'	0.5043	9244.49732	3.480071	379.2385	0.267698	3.886575	138.608	64.08884	44606.385	240.3331	29.86318	<MDL	667.3
J8F300194-005	J172L8'	0.5064	5148.10427	1.204581	128.0608	0.21722	1.639021	18.42417	6.388231	23133.886	12.09518	<MDL	<MDL	66.18
J8F300194-006	J172L9'	0.4971	7542.74794	0.925367	92.7077	0.251458	2.323476	79.65198	61.30557	27398.914	535.1036	21.02193	<MDL	149.6
J8F300194-001-S	J172L3'-MS	0.5086	N/A	89.35313	160.2438	94.68148	85.92214	200.7471	128.6866	N/A	1857.059	77.09202	83.27762	187.
% Recovery				88.098	87.111	94.393	84.170	79.158	73.469		1401.273	77.092	83.278	85.1
J8F300194-001-D	J172L3'-MSD	0.5098	N/A	88.43664	159.6705	94.55669	85.9847	260.5924	123.8721	N/A	582.2872	76.56924	83.00314	211.7
% Recovery				87.182	86.538	94.268	84.232	139.003	68.654		126.501	76.569	83.003	109.1

TESTAMERICA

SDG Number: J70184
SAF Number: RC-087
Batch Number: 8184498

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/s
J8G020000-498-B		1.000	0.0094	0	0.0004	0	0.0002	0.0003	0.0016	0.0671	0.0027	0.00226	0	0.00
J8G020000-498-C		1.000	0.9216	0.9512	0.9405	0.9969	0.9168	0.9466	0.8986	1.041	0.9278	0.80263	0.9108	0.93
LCS Recovery %			92.160%	95.120%	94.050%	99.690%	91.680%	94.660%	89.860%	104.100%	92.780%	80.263%	91.080%	93.16
		g	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/k
J8G020136-001	J172M0	0.5088	6125.19654	1.257862	69.66392	0.275157	1.621462	3504.324	100.8255	25481.525	262.4803	<MDL	<MDL	211.7
J8G020136-001-X	J172M0-DUP	0.5053	6722.73897	2.196715	64.43697	0.277063	1.880071	1985.949	16.04987	23431.625	244.6072	<MDL	<MDL	164.
J8G020136-002	J172M1	0.5047	5516.14821	0.881712	54.17079	0.297206	1.119477	26.62968	10.64989	19387.755	6.162076	<MDL	<MDL	55.83
J8G020136-003	J172M2	0.5086	5851.35667	1.032245	107.5501	0.245773	1.248525	21.67715	8.749508	19455.368	8.130161	<MDL	<MDL	52.2
J8G020136-001-S	J172M0-S	0.4994	N/A	91.04926	146.5759	92.89147	84.86183	164.6976	99.4994	N/A	119.5435	78.5793	82.499	201.2
% Recovery				89.791	76.912	92.616	83.240	-3339.626	-1.326		-142.937	78.579	82.499	-10.5
J8G020136-001-D	J172M0-D	0.5016	N/A	92.0953	157.496	94.53748	86.13437	573.4649	99.00319	N/A	166.9657	79.39494	83.65231	213.9
% Recovery				90.837	87.832	94.262	84.513	-2930.859	-1.822		-95.515	79.395	83.652	2.14

SDC Number: J00184
SAF Number: RC-087
Batch Number: 8189265

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/s
J8G070000-265-B		1.000	0.0037	-0.0006	0.0001	0	0	-0.0001	0.0021	0.0498	0.0023	0.00494	0	0.00
J8G070000-265-C		1.000	0.9082	0.9297	0.9479	0.9945	0.9184	0.9548	0.9293	1.058	0.9314	0.79943	0.91	0.92
LCS Recovery %			90.820%	92.970%	94.790%	99.450%	91.840%	95.480%	92.930%	105.800%	93.140%	79.943%	91.000%	92.61
		g	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/k
J8G070118-001	J172M5	0.5006	6021.77387	<MDL	1286.456	0.2497	2.996404	128.0463	69.8362	24021.175	58.79944	<MDL	<MDL	134.6
J8G070118-001-X	J172M5-DUP	0.5012	5919.7925	0.997606	1284.916	0.27933	1.406624	106.8436	36.06345	23363.927	31.69393	<MDL	<MDL	244.6
J8G070118-002	J172M8	0.5092	6004.51689	<MDL	755.4006	0.324038	1.757659	117.6355	66.01532	29418.696	67.15436	<MDL	<MDL	634.6
J8G070118-003	J172M9	0.5032	5698.52941	0.784976	236.1884	0.228537	1.27186	44.45548	17.39865	20548.49	52.77226	<MDL	<MDL	57.29
J8G070118-004	J172X0	0.5005	4964.03596	<MDL	83.91608	0.18981	1.538462	57.86214	21.12887	20299.7	53.98601	<MDL	<MDL	87.48
J8G070118-001-S	J172M5-MS	0.5057	N/A	90.24125	1387.186	94.66087	86.76093	193.4942	124.5798	N/A	112.0229	79.23077	84.65493	229.6
% Recovery				90.241	100.730	94.411	83.765	65.448	54.744		53.223	79.231	84.655	95.04
J8G070118-001-D	J172M5-MSD	0.5032	N/A	90.73927	1456.677	94.8132	87.03299	187.1025	120.4293	N/A	126.5898	78.67349	85.21463	595.5
% Recovery				90.739	170.221	94.563	84.037	59.056	50.593		67.790	78.673	85.215	460.9

TESTAMERICA

SDG Number: J00184
SAF Number: RC-087
Batch Number: 8190159

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/s
J8G080000-159-B		1.000	-0.0161	-0.0017	0.0013	0.0011	0.0014	0.0009	0.0011	0.0236	0.0035	0.00425	0.0016	0.013
J8G080000-159-C		1.000	0.8784	0.9112	0.9404	0.958	0.8841	0.9563	0.8772	1.086	0.9036	0.78719	0.8838	0.88
LCS Recovery %			87.840%	91.120%	94.040%	95.800%	88.410%	95.630%	87.720%	108.600%	90.360%	78.719%	88.380%	88.30
		g	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/k
J8G070150-001	J172M3	0.5031	5993.8382	1.04353	80.44126	0.228583	1.123037	40.63804	11.36951	22013.516	37.61678	<MDL	<MDL	86.41
J8G070150-001-X	J172M3-DUP	0.5089	6645.70643	0.815484	87.44351	0.216152	1.100413	30.84103	9.795638	20966.791	117.9014	<MDL	<MDL	72.46
J8G070150-002	J172M4	0.5053	8592.9151	2.592519	437.166	0.207797	2.414407	119.8298	36.47338	39382.545	330.9915	<MDL	<MDL	132.3
J8G070150-001-S	J172M3-MS	0.5075	N/A	88.58128	170.4433	91.53695	83.34975	126.1084	90.59113	N/A	116.0591	77.54778	82.47291	155.8
% Recovery				88.581	90.002	91.308	82.227	85.470	79.222		78.442	77.548	82.473	69.44
J8G070150-001-D	J172M3-MSD	0.5003	N/A	92.93424	182.6904	96.69198	87.79732	1950.83	95.70258	N/A	240.9554	81.30322	85.95842	161.5
% Recovery				92.934	102.249	96.463	86.674	1910.191	84.333		203.339	81.303	85.958	75.08

SDG Number: J00184
SAF Number: RC-087
Batch Number: 8191282

Sample Number	Client ID	Aliquant	Aluminum	Arsenic	Barium	Berylium	Cadmium	Copper	Chromium	Iron	Lead	Selenium	Silver	Zin
		sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/s
J8G090000-282-B		1.000	0.0127	-0.002	0.0002	0.0001	0.0004	0.0008	0.0007	0.0694	0.0021	0.00431	0.0002	0.00
J8G090000-282-C		1.000	0.983	0.9932	1.013	1.034	0.9518	1.028	0.9654	1.13	0.9642	0.83093	0.9452	0.94
LCS Recovery %			98.300%	99.320%	101.300%	103.400%	95.180%	102.800%	96.540%	113.000%	96.420%	83.093%	94.520%	94.97
		g	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/k
J8G090168-001	J172M6	0.5072	11484.6215	0.975946	1460.962	0.266167	1.547713	96.27366	28.23344	25591.483	507.7879	<MDL	<MDL	95.72
J8G090168-001-X	J172M6-DUP	0.5068	8376.08524	<MDL	96.99092	0.246646	1.341752	51.85478	15.6472	27397.395	117.9014	<MDL	<MDL	74.80
J8G090168-002	J172M7	0.4966	11095.4491	0.956504	172.9762	0.251712	1.610954	431.9372	28.51389	26520.338	490.0322	<MDL	<MDL	176.8
J8G090168-001-S	J172M6-MS	0.4983	N/A	96.29741	197.5717	97.83263	89.23339	143.2872	107.7664	N/A	1027.493	81.37467	87.37708	174.7
% Recovery				96.297	-1263.390	97.566	87.686	47.014	79.533		519.706	81.375	87.377	79.07
J8G090168-001-D	J172M6-MSD	0.4996	N/A	96.91753	196.9576	98.59888	89.70176	139.2114	106.8855	N/A	438.0504	82.19275	88.5008	176.6
% Recovery				96.918	-1264.005	98.333	88.154	42.938	78.652		-69.737	82.193	88.501	80.92

TESTAMERICA

SDG Number: J00184
SAF Number: RC-087
Batch Number: 8191339

Sample Number	Client ID	Aliquant	Aluminum	Arsenic	Barium	Berylium	Cadmium	Copper	Chromium	Iron	Lead	Selenium	Silver	Zin
		sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/s
J8G090000-339-B		1.000	0.0063	-0.0023	0	0.0001	0	0.0001	0.0005	0.0102	0.0017	0.00465	-0.0005	0.01
J8G090000-339-C		1.000	1.014	1.042	1.046	1.073	0.994	1.057	1	1.173	1.005	0.8692	0.9807	1.00
LCS Recovery %			101.400%	104.200%	104.600%	107.300%	99.400%	105.700%	100.000%	117.300%	100.500%	86.920%	98.070%	100.4
		g	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/
J8G090248-001	J172B0	0.507	4629.19132	<MDL	58.31361	0.207101	0.81854	17.13018	5.81854	22287.968	2.001972	<MDL	<MDL	36.30
J8G090248-001-X	J172B0-DUP	0.5099	5506.96215	<MDL	66.58168	0.215729	0.853108	14.38517	7.187684	21935.674	3.510492	<MDL	<MDL	37.28
J8G090248-002	J172B1	0.5036	5983.91581	0.774424	76.94599	0.238284	0.754567	12.12272	7.426529	19847.101	2.879269	<MDL	<MDL	38.51
J8G090248-001-S	J172B0-MS	0.5014	N/A	102.2138	168.8273	103.1113	94.05664	118.2688	109.1943	N/A	97.90586	86.15178	91.7132	129.7
% Recovery				102.214	110.514	102.904	93.238	101.139	103.376		95.904	86.152	91.713	93.4
J8G090248-001-D	J172B0-MSD	0.5047	N/A	105.6073	167.2281	103.4278	94.39271	118.6844	103.8241	N/A	97.82049	86.98435	91.86646	140.8
% Recovery				105.607	108.914	103.221	93.574	101.554	98.006		95.819	86.984	91.866	104.5

TESTAMERICA

SDG Number: J00184
SAF Number: RC-087
Batch Number: 8197491

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/s
J8G150000-491-B		1.000	0.0006	-0.0032	0	0	0.0002	0.0003	0.0012	0.0218	0.0019	0.00324	-0.0005	0.00(
J8G150000-491-C		1.000	0.8973	0.8978	0.9167	0.9422	0.871	0.9238	0.8748	1.07	0.8907	0.76316	0.8844	0.897
LCS Recovery %			89.730%	89.780%	91.670%	94.220%	87.100%	92.380%	87.480%	107.000%	89.070%	76.316%	88.440%	89.73(
		g	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/k
J8G150292-001	J172B3'	0.502	25268.9243	2.211155	32.56972	2.241036	1.035857	566.0359	66.71315	21832.669	2291.833	<MDL	15.209	2330(
J8G150292-001-X	J172B3 DUP'	0.5047	24687.9334	2.149792	23.85576	2.456905	0.604319	570.636	69.24906	25777.69	1671.29	<MDL	16.891	2191
J8G150292-001-S	J172B3'	0.5075	N/A	84.00985	108.7685	88.28571	78.87685	568.7685	137.931	N/A	1614.778	63.61675	96.2266	19921
% Recovery				81.799	76.199	86.045	77.841	2.733	71.218		-677.054	63.617	81.017	-3385.
J8G150292-001-D	J172B3'	0.5068	N/A	83.42541	111.4838	90.2131	80.46567	584.7474	140.292	N/A	2040.253	63.13536	99.74349	1991
% Recovery				81.214	78.914	87.972	79.430	18.712	73.579		-251.580	63.135	84.534	-3387.

TESTAMERICA

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Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-226	Page 1 of 1

Collector B Lawrence, E. Harries	**Company Contact** Joan Kessner **Telephone No.** 509-375-4688	**Project Coordinator** KESSNER, JH	**Price Code** JB **Data Turnaround** 24 Hours
Project Designation 618-7 Burial Ground - Soil	**Sampling Location** 618-7 Burial Ground - Floor	**SAF No.** RC-087	
Ice Chest No. Jeep #1	**Field Logbook No.** EL-1395-13 **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	sG											
No. of Container(s)	1											
Volume	60mL											
SAMPLE ANALYSIS	See item (1) in Special Instructions.			RCF								
Sample No.	**Matrix ***	**Sample Date**	**Sample Time**									
J172L3 KQYDC	SOIL	6-25-08	0630	X		19971						G008

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Lawrence	0645 6-25-08	Bill Hudson B Hudson	6/25/08 0645
B Hudson B Hudson	0735 6/25/08	1060 #1B	6/25/08 0735
1060 #1B	6-30-08 0900	T R Edmundson	6-30-08 0900
T.R. Edmundson WCH T R Edmundson	6-30-08 1345	LJ LANE TAL	1345 63008

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}

J8F300194
J00184
DUE 7108

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
Ve=Vegetation
X=Other

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

WCH-EE-011

* KW

TESTAMERICA

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-087-228	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
Project Designation: 618-7 Burial Ground - Soil	Sampling Location: 618-7 Burial Ground - Floor		SAF No.: RC-087	Data Turnaround: 24 Hours
Ice Chest No.: Jeep #1	Field Logbook No.: EL-1395-13	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.		RCF								

	Sample No.	Matrix *	Sample Date	Sample Time										
1	J172L5 KQVOF	SOIL	6/26/08	0630	x		19980							G008b
2	J172L6 KQVOG	SOIL	6/26/08	0640	x		19981							G009
3	J172L7 KQVOH	SOIL	6/26/08	0650	x		19982							G010
4	J172L8 KQVOJ	SOIL	6/26/08	0700	x		19983							G011
7	J172L9 KQVOK	SOIL	6/26/08	0710	x		19984							G012

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Lawrence	6-26-08 0800	BHUDSON Bhudson	6/26/08 0800
BHUDSON Bhudson	6/26/08 0830	1060 #1C	6/26/08 0830
1060#1C	6-30-08 0900	T.B. Edmundson JR Edmundson	6-30-08 0900
WCH TR Edmundson JR Edmundson	6-30-08 1345	LVLANE TAL	63008 1345

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}

J8F300194
J00184
DUE 7108

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

KW
KMW

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Radiological Counting Facility

Analysis Report for RCF19971

J172J3 SAF:RC-087 FF2/618-7 BURIAL GROUND FLOOR

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19971
Sample Description	: J172J3 SAF:RC-087 FF2/618-7 BURIAL GROUND FLOOR
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 6.600E+01 grams
Facility	: Default
Sample Taken On	: 6/25/2008 6:30:00AM
Acquisition Started	: 6/25/2008 7:55:29AM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: PGTWHITE
Geometry	: 80 Gram 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	: 2/5/2008
Efficiency Calibration Description	: 80g Pill box 2/5/2008
Sample Number	: 20257

for J172N3
J172L3

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.994	1.01E+01	3.19E+00	
PB-212		0.707	6.85E-01	2.14E-01	
RA-226d		0.771	5.72E-01	1.51E-01	
TH-232d		0.998	6.55E-01	1.63E-01	
U-235		0.999	2.40E+00	4.82E-01	
U-238d	@	0.999	3.97E+01	4.82E+00	

Analysis Report for RCF19971

J172J3 SAF:RC-087 FF2/618-7 BURIAL GROUND FLOOR

? = 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 : 6/25/2008 8:55:34AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)	Peak Rate (CPS)	Peak Rate (%) Uncertainty
	4	84.12 - Th231	2.03E-02	56.94
M	5	89.89 - U235	2.24E-02	19.27
	7	98.50 - U238d	3.86E-02	22.56
	8	112.82 - U238d	1.50E-02	58.20
	21	1001.22 - U238d	1.69E-02	17.28

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	1.01E+01	2.46E+00	2.46E+00
	CO-60	1173.24		99.90	4.29E-02	2.07E-01	2.31E-01
		1332.50		99.98	-1.13E-02		2.07E-01
	NB-94	702.63		99.81	2.63E-05	1.70E-01	1.70E-01
		871.10		99.89	-2.09E-02		1.84E-01
	AG-108m	433.94		90.50	6.49E-03	1.36E-01	1.36E-01
		614.28		89.80	2.44E-02		2.16E-01
		722.94		90.80	4.07E-02		2.03E-01
	CS-137	661.66		85.21	-6.36E-02	1.85E-01	1.85E-01
	EU-152	40.12		38.40	-1.15E-01	3.20E-01	3.69E-01
		45.38		11.10	3.83E-01		1.19E+00
		121.78		28.40	-1.49E-01		3.20E-01
		244.69		7.51	-1.23E+00		1.32E+00
		344.29		26.60	1.37E-01		4.26E-01

Analysis Report for RCF19971

J172J3 SAF:RC-087 FF2/618-7 BURIAL GROUND FLOOR

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		411.12		2.23	1.63E-01		5.08E+00
		443.89		2.80	-4.92E-01		4.43E+00
		778.92		12.98	3.38E-02		1.33E+00
		867.38		4.21	-2.07E+00		4.15E+00
		964.11		14.50	-7.69E-02		1.67E+00
		1085.89		9.94	-1.69E+00		2.06E+00
		1089.71		1.71	3.90E+00		1.41E+01
		1112.07		13.60	-1.55E+00		1.72E+00
		1212.93		1.40	-2.82E-01		1.68E+01
		1299.16		1.63	3.90E+00		1.32E+01
		1408.00		20.80	-5.81E-01		9.76E-01
	EU-154	123.10		40.50	-6.09E-03	2.24E-01	2.24E-01
		723.36		19.70	1.88E-01		9.37E-01
		873.23		11.45	5.70E-01		1.64E+00
		1004.78		17.90	-5.49E-01		1.84E+00
		1274.54		35.50	-1.99E-01		6.54E-01
	EU-155	86.54		34.00	9.76E-02	4.28E-01	4.28E-01
		105.31		20.60	-2.51E-01		4.83E-01
+	PB-212	74.81	*	10.50	7.30E-01	5.50E-01	9.08E-01
		77.11	*	17.70	6.66E-01		5.50E-01
		87.19		6.27	5.29E-01		2.36E+00
+	RA-226d	186.11	*	3.28	4.15E+01	2.77E-01	3.70E+00
		241.92		7.46	2.60E-01		2.02E+00
		295.09	*	19.20	7.18E-01		4.49E-01
		351.87	*	37.10	4.68E-01		3.21E-01
		609.31	*	46.10	5.80E-01		2.77E-01
		1120.27		15.00	8.93E-01		1.70E+00
		1764.49	*	15.90	1.02E+00		9.45E-01
+	TH-232d	238.58	*	43.60	5.25E-01	2.84E-01	2.84E-01
		338.42	*	12.40	5.49E-01		7.25E-01
		583.02	*	30.87	7.78E-01		4.38E-01
		911.16	*	29.00	7.95E-01		6.06E-01
		968.97	*	17.40	8.78E-01		8.41E-01
+	U-235	143.79	*	10.50	2.04E+00	2.29E-01	9.82E-01
		163.38	*	4.70	3.50E+00		1.84E+00
		185.74	*	53.00	2.57E+00		2.29E-01
		205.33	*	4.70	2.08E+00		2.22E+00
+	U-238d	63.29	*	3.80	3.97E+01	2.05E+00	3.65E+00
		92.56	*	5.41	3.65E+01		2.05E+00
	AM-241	59.54		35.70	-1.77E-01	3.32E-01	3.32E-01
	CM-243	99.52		14.40	-5.77E-02	4.27E-01	8.11E-01
		103.73		23.00	-1.44E-01		4.27E-01
		116.93		8.32	-4.24E-01		1.16E+00
		228.19		10.56	-1.94E-01		9.29E-01
		277.60		14.00	3.88E-01		6.92E-01
	CM-245	99.52		21.10	-3.94E-02	2.92E-01	5.53E-01
		103.73		33.60	-9.89E-02		2.92E-01
		116.93		12.20	-2.89E-01		7.89E-01

Analysis Report for RCF19971

J172J3 SAF:RC-087 FF2/618-7 BURIAL GROUND FLOOR

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	174.94	9.50	-7.24E-01		9.34E-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: John Stephens 6-25-08
(print/sign/date)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-087-221	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 - Floor		SAF No. RC-087	Data Turnaround 24 Hours
Ice Chest No.	Field Logbook No. EL-1395-13	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	RCF										
Sample No. / Matrix * / Sample Date / Sample Time												
J172J3 / SOIL / 6-25-08 / 0630	X	19971										G009

CHAIN OF POSSESSION		Sign/Print Names	
Relinquished By/Removed From: B Lawrence	Date/Time: 0645 6-25-08	Received By/Stored In: Bill Hudson	Date/Time: 6/25/08
Relinquished By/Removed From: Bhudson	Date/Time: 6/25/08 0715	Received By/Stored In: K. Ellison	Date/Time: 6-25-08 0715
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 RCF19983

J172J8SAF-RC-087 FF2/618-7 BURIAL GROUND FLOOR

GAMMA SPECTRUM ANALYSIS

for J172L8 2N8

Sample Identification	: RCF19983
Sample Description	: J172J8SAF-RC-087 FF2/618-7 BURIAL GROUND FLOOR
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 6.200E+01 grams
Facility	: Default
Sample Taken On	: 6/26/2008 7:00:00AM
Acquisition Started	: 6/26/2008 9:47:40AM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: REGIE02
Geometry	: 80 Gram Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3641.5 seconds
Dead Time	: 1.14 %
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	: 20323

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.994	1.14E+01	2.51E+00	
PB-212		0.707	9.49E-01	1.71E-01	
RA-226d		0.676	2.22E-01	1.32E-01	
TH-232d		0.433	4.39E-01	2.00E-01	
U-235		0.546	2.41E-01	1.20E-01	
U-238d	@	1.000	3.03E+00	1.24E+00	

Analysis Report for RCF19983

J172J8SAF-RC-087 FF2/618-7 BURIAL GROUND FLOOR

? = 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 : 6/26/2008 10:48:25AM
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	1.14E+01	2.28E+00	2.28E+00
	CO-60	1173.24		99.90	7.14E-02	2.48E-01	2.69E-01
		1332.50		99.98	8.87E-03		2.48E-01
	NB-94	702.63		99.81	-2.50E-02	1.91E-01	1.91E-01
		871.10		99.89	2.61E-02		2.11E-01
	AG-108m	433.94		90.50	-3.69E-02	1.42E-01	1.42E-01
		614.28		89.80	-7.41E-02		2.35E-01
		722.94		90.80	1.25E-01		2.20E-01
	CS-137	661.66		85.21	-1.32E-01	1.98E-01	1.98E-01
	EU-152	40.12		38.40	8.50E-02	2.30E-01	2.30E-01
		45.38		11.10	2.08E-01		8.39E-01
		121.78		28.40	1.01E-01		2.99E-01
		244.69		7.51	-9.74E-01		1.60E+00
		344.29		26.60	-3.44E-02		4.68E-01
		411.12		2.23	-2.06E+00		5.34E+00
		443.89		2.80	2.16E-03		4.91E+00
		778.92		12.98	-4.19E-01		1.28E+00
		867.38		4.21	5.20E+00		5.53E+00

Analysis Report for RCF19983

J172J8SAF-RC-087 FF2/618-7 BURIAL GROUND FLOOR

? = 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 : 6/26/2008 10:48:25AM
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	1.14E+01	2.28E+00	2.28E+00
	CO-60	1173.24		99.90	7.14E-02	2.48E-01	2.69E-01
		1332.50		99.98	8.87E-03		2.48E-01
	NB-94	702.63		99.81	-2.50E-02	1.91E-01	1.91E-01
		871.10		99.89	2.61E-02		2.11E-01
	AG-108m	433.94		90.50	-3.69E-02	1.42E-01	1.42E-01
		614.28		89.80	-7.41E-02		2.35E-01
		722.94		90.80	1.25E-01		2.20E-01
	CS-137	661.66		85.21	-1.32E-01	1.98E-01	1.98E-01
	EU-152	40.12		38.40	8.50E-02	2.30E-01	2.30E-01
		45.38		11.10	2.08E-01		8.39E-01
		121.78		28.40	1.01E-01		2.99E-01
		244.69		7.51	-9.74E-01		1.60E+00
		344.29		26.60	-3.44E-02		4.68E-01
		411.12		2.23	-2.06E+00		5.34E+00
		443.89		2.80	2.16E-03		4.91E+00
		778.92		12.98	-4.19E-01		1.28E+00
		867.38		4.21	5.20E+00		5.53E+00

Analysis Report for RCF19983

J172.8SAF-RC-087 FF2/618-7 BURIAL GROUND FLOOR

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		964.11		14.50	-4.15E-03		1.83E+00
		1085.89		9.94	1.15E+00		2.54E+00
		1089.71		1.71	2.31E-01		1.55E+01
		1112.07		13.60	-1.44E+00		1.67E+00
		1212.93		1.40	-1.64E+00		1.79E+01
		1299.16		1.63	3.48E+00		1.49E+01
		1408.00		20.80	1.14E-01		1.18E+00
	EU-154	123.10		40.50	-2.78E-01	2.02E-01	2.02E-01
		723.36		19.70	6.24E-01		1.01E+00
		873.23		11.45	-6.81E-01		1.81E+00
		1004.78		17.90	-2.20E-01		1.23E+00
		1274.54		35.50	-6.45E-03		6.46E-01
	EU-155	86.54		34.00	-3.23E-01	3.16E-01	3.16E-01
		105.31		20.60	-2.09E-01		4.24E-01
+	PB-212	74.81	*	10.50	9.34E-01	3.31E-01	5.93E-01
		77.11	*	17.70	9.56E-01		3.31E-01
		87.19		6.27	-1.07E+00		1.74E+00
+	RA-226d	186.11	*	3.28	4.11E+00	2.94E-01	2.48E+00
		241.92		7.46	-9.57E-01		2.20E+00
		295.09	*	19.20	2.90E-01		6.07E-01
		351.87	*	37.10	3.30E-01		2.94E-01
		609.31	*	46.10	1.37E-01		2.98E-01
		1120.27		15.00	8.53E-02		1.70E+00
		1764.49		15.90	-2.66E-01		1.72E+00
+	TH-232d	238.58	*	43.60	5.28E-01	2.24E-01	2.24E-01
		338.42		12.40	4.58E-01		1.11E+00
		583.02	*	30.87	3.48E-01		4.45E-01
		911.16		29.00	6.54E-01		9.45E-01
		968.97		17.40	2.10E-01		1.49E+00
+	U-235	143.79		10.50	5.76E-01	1.54E-01	8.91E-01
		163.38		4.70	-1.80E-01		2.06E+00
		185.74	*	53.00	2.54E-01		1.54E-01
		205.33		4.70	1.34E+00		2.46E+00
+	U-238d	63.29	*	3.80	3.03E+00	1.42E+00	1.83E+00
		92.56	*	5.41	3.84E+00		1.42E+00
	AM-241	59.54		35.70	-9.52E-02	3.04E-01	3.04E-01
	CM-243	99.52		14.40	-7.98E-02	3.66E-01	5.91E-01
		103.73		23.00	-4.20E-01		3.66E-01
		116.93		8.32	-2.60E-03		1.08E+00
		228.19		10.56	-1.97E-01		9.90E-01
		277.60		14.00	6.54E-02		8.41E-01
	CM-245	99.52		21.10	-5.44E-02	2.51E-01	4.03E-01
		103.73		33.60	-2.88E-01		2.51E-01
		116.93		12.20	-1.78E-03		7.35E-01
		174.94		9.50	-2.97E-01		1.03E+00

Analysis Report for RCF19983

J172J8SAF-RC-087 FF2/618-7 BURIAL GROUND FLOOR

+ = 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:

John Stephens 6-26-08
(print/sign/date)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-087-223	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 - Floor		SAF No.: RC-087	Data Turnaround: 24 Hours
Ice Chest No.	Field Logbook No.: EL-1395-13	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			RCF								
Sample No. / Matrix * / Sample Date / Sample Time												
1 J172J5 / SOIL / 6-26-08 / 0630	x			19980								G-008b
2 J172J6 / SOIL / 6-26-08 / 0640	x			19981								G-009
3 J172J7 / SOIL / 6-26-08 / 0650	x			19982								G-010
4 J172J8 / SOIL / 6-26-08 / ~~0700~~ 0700	x			19983								G-011
5 J172J9 / SOIL / 6-26-08 / 0710	x			19984								G-012

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Blauren [signature]	6-26-08 0800	Bhudson Bhudson	6/26/08 0850
Bhudson Bhudson	6/26/08 0805	K. Eliason / [signature]	6-26-08 0805

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 RCF19982

J172J7 SAF-RC-087 FF2/618-7 BURIAL GROUND FLOOR

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19982
Sample Description	: J172J7 SAF-RC-087 FF2/618-7 BURIAL GROUND FLOOR
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 8.400E+01 grams
Facility	: Default
Sample Taken On	: 6/26/2008 6:50:00AM
Acquisition Started	: 6/26/2008 8:38:16AM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: BEGE
Geometry	: 80 Gram Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3600.4 seconds
Dead Time	: 0.01 %
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	: 3/27/2008
Efficiency Calibration Used Done On	: 4/1/2008
Efficiency Calibration Description	: 80g Pill box 4-1-2008
Sample Number	: 20319

for J172L7 2N7

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.999	1.05E+01	2.40E+00	
PB-212		0.709	6.20E-01	1.69E-01	
RA-226d		0.690	4.48E-01	1.18E-01	
U-235		1.000	2.95E+00	7.67E-01	
U-238d	@	0.999	3.69E+01	4.26E+00	

Analysis Report for RCF19982

J172J7 SAF-RC-087 FF2/618-7 BURIAL GROUND FLOOR

? = 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 : 6/26/2008 9:38:45AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
M	4	90.12	Pb-212/214	2.23E-02	26.49
	6	98.45	U-238d	5.56E-02	16.11
	7	112.76	U-238d	3.42E-02	32.88
	12	238.73	Pb-212	3.49E-02	15.78
	16	766.31	U-238d	7.45E-03	36.74
	17	1001.44	U-238d	1.72E-02	14.81

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	1.05E+01	1.90E+00	1.90E+00
	CO-60	1173.24		99.90	-2.20E-02	1.37E-01	1.80E-01
		1332.50		99.98	-2.47E-02		1.37E-01
	NB-94	702.63		99.81	-8.36E-03	1.46E-01	1.47E-01
		871.10		99.89	-1.26E-01		1.46E-01
	AG-108m	433.94		90.50	9.69E-02	1.12E-01	1.12E-01
		614.28		89.80	-5.43E-02		1.48E-01
		722.94		90.80	9.26E-02		1.63E-01
	CS-137	661.66		85.21	1.36E-02	1.56E-01	1.56E-01
	EU-152	40.12		38.40	-7.93E-03	1.49E-01	1.49E-01
		45.38		11.10	-1.38E-01		4.54E-01
		121.78		28.40	3.93E-02		2.01E-01
		244.69		7.51	-3.93E-01		8.50E-01
		344.29		26.60	1.40E-01		3.15E-01
		411.12		2.23	1.75E+00		4.24E+00

Analysis Report for RCF19982

J172J7 SAF-RC-087 FF2/618-7 BURIAL GROUND FLOOR

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		443.89		2.80	9.75E-01		3.37E+00
		778.92		12.98	-1.07E+00		1.14E+00
		867.38		4.21	-3.18E-01		3.73E+00
		964.11		14.50	1.94E-01		1.16E+00
		1085.89		9.94	5.03E-01		1.68E+00
		1089.71		1.71	1.49E+00		1.00E+01
		1112.07		13.60	-6.72E-01		1.24E+00
		1212.93		1.40	1.85E+00		1.47E+01
		1299.16		1.63	3.05E+00		1.37E+01
		1408.00		20.80	-4.71E-02		8.35E-01
	EU-154	123.10		40.50	-4.45E-02	1.51E-01	1.51E-01
		723.36		19.70	1.70E-01		7.28E-01
		873.23		11.45	-1.99E-01		1.35E+00
		1004.78		17.90	-5.24E-02		1.53E+00
		1274.54		35.50	2.56E-01		6.36E-01
	EU-155	86.54		34.00	-4.68E-01	2.28E-01	2.28E-01
		105.31		20.60	3.93E-01		3.03E-01
+	PB-212	74.81	*	10.50	5.80E-01	3.72E-01	6.93E-01
		77.11	*	17.70	6.43E-01		3.72E-01
		87.19		6.27	1.27E-02		1.19E+00
+	RA-226d	186.11	*	3.28	5.36E+01	2.27E-01	2.63E+00
		241.92		7.46	5.16E-01		1.01E+00
		295.09	*	19.20	3.92E-01		3.89E-01
		351.87	*	37.10	5.55E-01		2.27E-01
		609.31	*	46.10	3.86E-01		2.41E-01
		1120.27		15.00	-3.02E-01		1.32E+00
		1764.49		15.90	2.99E-01		1.36E+00
	TH-232d	238.58		43.60	4.31E-01	2.41E-01	2.41E-01
		338.42		12.40	4.63E-01		7.47E-01
		583.02		30.87	2.54E-01		4.78E-01
		911.16		29.00	9.03E-02		6.29E-01
		968.97		17.40	2.68E-01		9.60E-01
+	U-235	143.79	*	10.50	3.04E+00	1.63E-01	6.75E-01
		163.38	*	4.70	2.90E+00		1.58E+00
		185.74	*	53.00	3.32E+00		1.63E-01
		205.33	*	4.70	2.54E+00		1.72E+00
+	U-238d	63.29	*	3.80	3.69E+01	1.66E+00	2.60E+00
		92.56	*	5.41	3.69E+01		1.66E+00
	AM-241	59.54		35.70	-1.96E-02	1.58E-01	1.58E-01
	CM-243	99.52		14.40	-3.07E-02	2.44E-01	5.04E-01
		103.73		23.00	-2.80E-01		2.44E-01
		116.93		8.32	-2.49E-01		6.86E-01
		228.19		10.56	-1.67E-01		5.76E-01
		277.60		14.00	4.26E-01		5.86E-01
	CM-245	99.52		21.10	-2.10E-02	1.67E-01	3.44E-01
		103.73		33.60	-1.91E-01		1.67E-01
		116.93		12.20	-1.70E-01		4.68E-01
		174.94		9.50	2.41E-01		7.23E-01

Analysis Report for RCF19982

J172J7 SAF-RC-087 FF2/618-7 BURIAL GROUND FLOOR

+ = 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:

John Stephens 6-26-08
(print/sign/date)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-087-223	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 - Floor		SAF No. RC-087	Data Turnaround 24 Hours
Ice Chest No.	Field Logbook No. EL-1395-13	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		RCF									

	Sample No.	Matrix *	Sample Date	Sample Time									
1	J172J5	SOIL	6-26-08	0630	x		19980						G-008b
2	J172J6	SOIL	6-26-08	0640	x		19981						G-009
3	J172J7	SOIL	6-26-08	0650	x		19982						G-010
4	J172J8	SOIL	6-26-08	~~0700~~ 0700	x		19983						G-011
5	J172J9	SOIL	6-26-08	0710	x		19984						G-012

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[signature]	6-26-08 0805	Bhudson Bhudson	6/26/08 0850
Bhudson Bhudson	6/26/08 0805	K. Eliason / [signature]	6-26-08 0805

SPECIAL INSTRUCTIONS

None

COPY

Matrix *
S=Soil
SC=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 RCF19981

J172J6 SAF-RC-087 FF2/618-7 BURIAL GROUND FLOOR

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19981
Sample Description	: J172J6 SAF-RC-087 FF2/618-7 BURIAL GROUND FLOOR
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 6.400E+01 grams
Facility	: Default
Sample Taken On	: 6/26/2008 6:40:00AM
Acquisition Started	: 6/26/2008 8:38:10AM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: PGTWHITE
Geometry	: 80 Gram 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	: 2/5/2008
Efficiency Calibration Description	: 80g Pill box 2/5/2008
Sample Number	: 20318

for J172L6 2N6

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.997	1.02E+01	3.12E+00	
PB-212		0.707	8.18E-01	2.03E-01	
RA-226d		0.403	3.09E-01	1.47E-01	
TH-232d		0.432	4.50E-01	1.80E-01	
U-235		0.999	2.15E+00	4.47E-01	
U-238d	@	1.000	3.25E+01	4.33E+00	

Analysis Report for RCF19981

J172J6 SAF-RC-087 FF2/618-7 BURIAL GROUND FLOOR

? = 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 : 6/26/2008 9:38:24AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Rate (CPS)	Peak Rate (%) Uncertainty
5	98.39 U-238d	1.44E-02	59.92
14	1001.23 U-238d	1.88E-02	15.64

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	1.02E+01	2.01E+00	2.01E+00
	CO-60	1173.24		99.90	-9.56E-02	2.01E-01	2.39E-01
		1332.50		99.98	1.14E-01		2.01E-01
	NB-94	702.63		99.81	-1.33E-01	1.56E-01	1.56E-01
		871.10		99.89	-3.34E-02		1.96E-01
	AG-108m	433.94		90.50	-6.00E-02	1.38E-01	1.38E-01
		614.28		89.80	-3.58E-02		1.96E-01
		722.94		90.80	7.17E-02		1.94E-01
	CS-137	661.66		85.21	6.49E-02	1.93E-01	1.93E-01
	EU-152	40.12		38.40	5.02E-02	3.23E-01	3.60E-01
		45.38		11.10	1.28E+00		1.21E+00
		121.78		28.40	-7.55E-02		3.23E-01
		244.69		7.51	2.96E-01		1.39E+00
		344.29		26.60	-1.08E-01		4.11E-01
		411.12		2.23	-3.83E+00		5.43E+00
		443.89		2.80	6.57E-01		4.49E+00
		778.92		12.98	6.74E-01		1.34E+00

Analysis Report for RCF:9981

J172J6 SAF-RC-087 FF2/618-7 BURIAL GROUND FLOOR

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		867.38		4.21	1.13E+00		4.81E+00
		964.11		14.50	6.11E-01		1.60E+00
		1085.89		9.94	3.72E-01		2.39E+00
		1089.71		1.71	6.27E+00		1.35E+01
		1112.07		13.60	-1.43E+00		1.65E+00
		1212.93		1.40	3.81E+00		1.84E+01
		1299.16		1.63	-6.94E+00		1.31E+01
		1408.00		20.80	1.61E-01		8.34E-01
	EU-154	123.10		40.50	4.19E-02	2.24E-01	2.24E-01
		723.36		19.70	3.31E-01		8.93E-01
		873.23		11.45	-2.04E+00		1.62E+00
		1004.78		17.90	2.32E-02		1.74E+00
		1274.54		35.50	-4.79E-01		6.03E-01
	EU-155	86.54		34.00	-7.62E-02	4.23E-01	4.23E-01
		105.31		20.60	-6.49E-02		4.75E-01
+	PB-212	74.81	*	10.50	1.03E+00	5.52E-01	9.05E-01
		77.11	*	17.70	7.30E-01		5.52E-01
		87.19		6.27	1.15E+00		2.31E+00
+	RA-226d	186.11	*	3.28	3.65E+01	2.61E-01	3.23E+00
		241.92		7.46	1.21E+00		1.92E+00
		295.09		19.20	4.17E-01		6.12E-01
		351.87	*	37.10	2.95E-01		2.61E-01
		609.31	*	46.10	3.26E-01		3.49E-01
		1120.27		15.00	3.19E-01		1.65E+00
		1764.49		15.90	1.14E+00		1.74E+00
+	TH-232d	238.58	*	43.60	4.69E-01	2.45E-01	2.45E-01
		338.42		12.40	5.18E-01		9.41E-01
		583.02	*	30.87	4.13E-01		4.72E-01
		911.16		29.00	7.88E-01		8.13E-01
		968.97		17.40	6.83E-01		1.35E+00
+	U-235	143.79	*	10.50	2.10E+00	2.00E-01	9.64E-01
		163.38	*	4.70	1.80E+00		1.96E+00
		185.74	*	53.00	2.26E+00		2.00E-01
		205.33	*	4.70	2.27E+00		2.02E+00
+	U-238d	63.29	*	3.80	3.25E+01	2.50E+00	3.94E+00
		92.56	*	5.41	3.13E+01		2.50E+00
	AM-241	59.54		35.70	5.30E-02	3.35E-01	3.35E-01
	CM-243	99.52		14.40	8.52E-02	4.24E-01	7.82E-01
		103.73		23.00	2.62E-01		4.24E-01
		116.93		8.32	-1.42E+00		1.18E+00
		228.19		10.56	1.82E-01		8.79E-01
		277.60		14.00	2.02E-01		7.58E-01
	CM-245	99.52		21.10	5.81E-02	2.90E-01	5.34E-01
		103.73		33.60	1.79E-01		2.90E-01
		116.93		12.20	-9.68E-01		8.04E-01
		174.94		9.50	5.80E-01		9.45E-01

Analysis Report for RCF19981

J172J6 SAF-RC-087 FF2/618-7 BURIAL GROUND FLOOR

+ = 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:

John Stephens 6-26-08
(print/sign/date)

TESTAMERICA

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-087-223	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 - Floor		SAF No.: RC-087	Data Turnaround: 24 Hours
Ice Chest No.	Field Logbook No.: EL-1395-13	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			RCF								

	Sample No.	Matrix *	Sample Date	Sample Time									
1	J172J5	SOIL	6-26-08	0630	x		19980						G-008b
2	J172J6	SOIL	6-26-08	0640	x		19981						G009
3	J172J7	SOIL	6-26-08	0650	x		19982						G-010
4	J172J8	SOIL	6-26-08	~~0700~~ 0700	x		19983						G-011
7	J172J9	SOIL	6-26-08	0710	x		19984						G-012

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Lawrence [signature]	6-26-08 0800	Bhudson Bhudson	6/26/08 0800
Bhudson Bhudson	6/26/08 0805	K. Eliason / [signature]	6-26-08 0805

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 RCF19980

J172J5 SAF-RC-087 FF2/618-7 BURIAL GROUND FLOOR

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19980
Sample Description	: J172J5 SAF-RC-087 FF2/618-7 BURIAL GROUND FLOOR
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 6.800E+01 grams
Facility	: Default
Sample Taken On	: 6/26/2008 6:30:00AM
Acquisition Started	: 6/26/2008 8:38:02AM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: REGIE02
Geometry	: 80 Gram Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3643.8 seconds
Dead Time	: 1.20 %
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	: 20317

for J172L5 ~~J172W5~~ J172W5

INTERFERENCE CORRECTED REPORT

	Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
	K-40		0.986	1.16E+01	2.47E+00	
X	EU-155		0.376			
	PB-212		0.998	1.08E+00	1.98E-01	
	RA-226d		0.880	5.30E-01	1.54E-01	
	TH-232d		0.988	5.76E-01	1.58E-01	
	U-235		1.000	3.06E+00	4.51E-01	
	U-238d	@	1.000	4.03E+01	3.72E+00	

Analysis Report for RCF19980

J172J5 SAF-RC-087 FF2/618-7 BURIAL GROUND FLOOR

? = 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 : 6/26/2008 9:38:55AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
M	4	84.13	Uranium daughter	5.89E-02	10.00
m	6	89.83	Ac-228	4.00E-02	12.12
m	8	98.32	U-238d	4.61E-02	9.97
	9	112.62	U-238d	2.99E-02	34.04
	21	742.97	U-238d	3.76E-03	58.88
	22	766.38	U-238d	1.69E-02	20.25
	25	1001.24	U-238d	1.55E-02	18.49

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	1.16E+01	2.31E+00	2.31E+00
	CO-60	1173.24		99.90	1.90E-01	2.04E-01	2.85E-01
		1332.50		99.98	-2.83E-02		2.04E-01
	NB-94	702.63		99.81	-3.76E-02	1.91E-01	1.91E-01
		871.10		99.89	3.71E-02		2.24E-01
	AG-108m	433.94		90.50	1.42E-02	1.58E-01	1.58E-01
		614.28		89.80	-7.73E-02		2.75E-01
		722.94		90.80	8.42E-02		2.32E-01
	CS-137	661.66		85.21	-4.60E-02	2.27E-01	2.27E-01
	EU-152	40.12		38.40	-4.74E-02	3.11E-01	3.11E-01
		45.38		11.10	2.10E-01		1.17E+00
		121.78		28.40	7.04E-03		4.01E-01

Analysis Report for RCF19980

J172J5 SAF-RC-087 FF2/618-7 BURIAL GROUND FLOOR

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		244.69		7.51	8.86E-02		1.65E+00
		344.29		26.60	-4.84E-01		5.19E-01
		411.12		2.23	1.22E+00		6.84E+00
		443.89		2.80	-1.79E+00		4.69E+00
		778.92		12.98	-6.03E-01		1.46E+00
		867.38		4.21	7.46E-01		5.33E+00
		964.11		14.50	2.98E-01		1.90E+00
		1085.89		9.94	3.60E-01		2.15E+00
		1089.71		1.71	-1.69E+00		1.20E+01
		1112.07		13.60	-2.58E+00		1.54E+00
		1212.93		1.40	2.24E+00		1.83E+01
		1299.16		1.63	2.24E+00		1.33E+01
		1408.00		20.80	-3.86E-01		9.35E-01
	EU-154	123.10		40.50	-1.23E-01	2.79E-01	2.79E-01
		723.36		19.70	9.11E-01		1.09E+00
		873.23		11.45	-8.40E-01		1.93E+00
		1004.78		17.90	2.20E+00		1.81E+00
		1274.54		35.50	1.47E-02		6.83E-01
	EU-155	86.54	*	34.00	2.65E-01	2.71E-01	2.71E-01
		105.31		20.60	-2.78E-01		6.03E-01
+	PB-212	74.81	*	10.50	1.53E+00	5.23E-01	9.23E-01
		77.11	*	17.70	8.72E-01		5.23E-01
		87.19	*	6.27	1.44E+00		1.47E+00
+	RA-226d	186.11	*	3.28	4.99E+01	2.66E-01	3.55E+00
		241.92	*	7.46	1.09E+00		9.38E-01
		295.09	*	19.20	4.67E-01		4.72E-01
		351.87	*	37.10	6.82E-01		2.66E-01
		609.31	*	46.10	3.41E-01		3.54E-01
		1120.27		15.00	-5.02E-01		1.65E+00
		1764.49	*	15.90	1.02E+00		8.74E-01
+	TH-232d	238.58	*	43.60	6.56E-01	1.84E-01	1.84E-01
		338.42	*	12.40	3.37E-01		6.64E-01
		583.02	*	30.87	6.10E-01		4.29E-01
		911.16	*	29.00	6.66E-01		4.74E-01
		968.97	*	17.40	4.52E-01		7.14E-01
+	U-235	143.79	*	10.50	3.09E+00	2.20E-01	8.58E-01
		163.38	*	4.70	2.47E+00		1.90E+00
		185.74	*	53.00	3.09E+00		2.20E-01
		205.33	*	4.70	4.24E+00		1.97E+00
+	U-238d	63.29	*	3.80	4.03E+01	1.55E+00	3.30E+00
		92.56	*	5.41	4.19E+01		1.55E+00
	AM-241	59.54		35.70	-1.54E+00	6.30E-01	6.30E-01
	CM-243	99.52		14.40	-1.99E-01	5.23E-01	9.60E-01
		103.73		23.00	-3.12E-01		5.23E-01
		116.93		8.32	7.83E-01		1.53E+00
		228.19		10.56	-2.28E-01		1.08E+00
		277.60		14.00	9.35E-02		9.57E-01
	CM-245	99.52		21.10	-1.36E-01	3.58E-01	6.55E-01

Analysis Report for RCF19980

J172J5 SAF-RC-087 FF2/618-7 BURIAL GROUND FLOOR

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	103.73	33.60	-2.14E-01		3.58E-01
	116.93	12.20	5.34E-01		1.04E+00
	174.94	9.50	3.04E-01		1.23E+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: John Stephens 6-26-08
(print/sign/date)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-087-223	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 - Floor		SAF No. RC-087	Data Turnaround 24 Hours
Ice Chest No.	Field Logbook No. EL-1395-13	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		RCF								

	Sample No.	Matrix *	Sample Date	Sample Time									
1	J172J5	SOIL	6-26-08	0630	x		19980						G-008b
2	J172J6	SOIL	6-26-08	0640	x		19981						G-009
3	J172J7	SOIL	6-26-08	0650	x		19982						G-010
4	J172J8	SOIL	6-26-08	~~0700~~ 0700	x		19983						G-011
7	J172J9	SOIL	6-26-08	0710	x		19989						G-012

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Blawren [signature]	6-26-08 0800	Bhudson Bhudson	6/26/08 0800
Bhudson Bhudson	6/26/08 0805	K. Eliason / [signature]	6-26-08 0805

SPECIAL INSTRUCTIONS

None

COPY

Matrix *
S=Soil
Sh=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 RCF19984

J172J9 SAF-RC-087 FF2/618-7 BURIAL GROUND FLOOR

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19984
Sample Description	: J172J9 SAF-RC-087 FF2/618-7 BURIAL GROUND FLOOR
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 7.600E+01 grams
Facility	: Default
Sample Taken On	: 6/26/2008 7:10:00AM
Acquisition Started	: 6/26/2008 9:47:47AM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: PGTWHITE
Geometry	: 80 Gram 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	: 2/5/2008
Efficiency Calibration Description	: 80g Pill box 2/5/2008
Sample Number	: 20324

for J172L9 2N9

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.995	8.62E+00	2.74E+00	
CS-137		0.998	5.50E-01	1.43E-01	
PB-212		0.707	7.00E-01	1.84E-01	
RA-226d		0.674	4.85E-01	1.44E-01	
TH-232d		0.430	3.98E-01	1.58E-01	
U-235		0.999	1.99E+00	4.04E-01	
U-238d	@	1.000	2.95E+01	3.88E+00	

Analysis Report for RCF19984

J172J9 SAF-RC-087 FF2/618-7 BURIAL GROUND FLOOR

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

UNIDENTIFIED PEAKS

Peak Locate Performed on : 6/26/2008 10:47:55AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Rate (CPS)	Peak Rate (%) Uncertainty
5	98.47 U-238d	2.17E-02	43.46
16	766.54 U-238d	1.40E-02	19.65
17	1001.01 U-238d	1.45E-02	20.31

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	8.62E+00	2.16E+00	2.16E+00
	CO-60	1173.24		99.90	8.15E-02	1.84E-01	2.11E-01
		1332.50		99.98	-3.49E-02		1.84E-01
	NB-94	702.63		99.81	1.21E-02	1.65E-01	1.65E-01
		871.10		99.89	9.58E-02		1.90E-01
	AG-108m	433.94		90.50	-1.38E-02	1.20E-01	1.20E-01
		614.28		89.80	1.49E-02		1.91E-01
		722.94		90.80	2.49E-02		1.75E-01
+	CS-137	661.66	*	85.21	5.50E-01	1.62E-01	1.62E-01
	EU-152	40.12		38.40	9.01E-02	2.88E-01	3.11E-01
		45.38		11.10	1.13E+00		1.04E+00
		121.78		28.40	3.28E-02		2.88E-01
		244.69		7.51	1.44E-01		1.16E+00
		344.29		26.60	4.72E-03		4.02E-01
		411.12		2.23	-1.63E+00		4.75E+00
		443.89		2.80	3.20E+00		4.46E+00

Analysis Report for RCF19984

J172J9 SAF-RC-087 FF2/618-7 BURIAL GROUND FLOOR

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		778.92		12.98	3.23E-01		1.33E+00
		867.38		4.21	-2.49E+00		4.31E+00
		964.11		14.50	-2.46E-01		1.36E+00
		1085.89		9.94	-4.50E-01		1.83E+00
		1089.71		1.71	3.34E+00		1.01E+01
		1112.07		13.60	-1.17E+00		1.42E+00
		1212.93		1.40	7.10E+00		1.68E+01
		1299.16		1.63	-5.84E+00		1.10E+01
		1408.00		20.80	-2.94E-01		8.29E-01
	EU-154	123.10		40.50	5.21E-02	2.02E-01	2.02E-01
		723.36		19.70	1.15E-01		8.07E-01
		873.23		11.45	5.61E-01		1.57E+00
		1004.78		17.90	8.90E-02		1.48E+00
		1274.54		35.50	8.72E-02		5.68E-01
	EU-155	86.54		34.00	-1.62E-01	3.84E-01	3.84E-01
		105.31		20.60	-1.63E-01		4.27E-01
+	PB-212	74.81	*	10.50	9.25E-01	5.03E-01	8.59E-01
		77.11	*	17.70	6.18E-01		5.03E-01
		87.19		6.27	-1.65E+00		2.10E+00
+	RA-226d	186.11	*	3.28	3.27E+01	2.38E-01	3.18E+00
		241.92		7.46	6.80E-01		1.72E+00
		295.09	*	19.20	3.80E-01		4.52E-01
		351.87	*	37.10	5.04E-01		2.38E-01
		609.31	*	46.10	5.25E-01		3.28E-01
		1120.27		15.00	-2.65E-04		1.31E+00
		1764.49		15.90	1.28E+00		1.54E+00
+	TH-232d	238.58	*	43.60	4.79E-01	1.96E-01	1.96E-01
		338.42		12.40	-1.20E-01		8.71E-01
		583.02	*	30.87	2.77E-01		3.93E-01
		911.16		29.00	5.41E-01		8.00E-01
		968.97		17.40	5.27E-01		1.18E+00
+	U-235	143.79	*	10.50	2.02E+00	1.97E-01	8.71E-01
		163.38	*	4.70	1.91E+00		1.79E+00
		185.74	*	53.00	2.02E+00		1.97E-01
		205.33	*	4.70	1.94E+00		1.66E+00
+	U-238d	63.29	*	3.80	2.95E+01	2.76E+00	3.49E+00
		92.56	*	5.41	3.04E+01		2.76E+00
	AM-241	59.54		35.70	1.68E-01	3.19E-01	3.19E-01
	CM-243	99.52		14.40	-1.83E-02	3.74E-01	7.16E-01
		103.73		23.00	-1.17E-01		3.74E-01
		116.93		8.32	-2.12E+00		1.09E+00
		228.19		10.56	-7.77E-02		8.07E-01
		277.60		14.00	4.63E-02		6.55E-01
	CM-245	99.52		21.10	-1.25E-02	2.56E-01	4.88E-01
		103.73		33.60	-8.00E-02		2.56E-01
		116.93		12.20	-1.45E+00		7.42E-01
		174.94		9.50	7.39E-02		8.64E-01

Analysis Report for RCF19984

J172J9 SAF-RC-087 FF2/618-7 BURIAL GROUND FLOOR

+ = 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:

John Stephens 6-26-08
(print/sign/date)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-087-223	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 - Floor		SAF No.: RC-087	Data Turnaround: 24 Hours
Ice Chest No.	Field Logbook No.: EL-1395-13	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		RCF								

	Sample No.	Matrix *	Sample Date	Sample Time									
1	J172J5	SOIL	6-26-08	0630	x		19980						G008b
2	J172J6	SOIL	6-26-08	0640	x		19981						G009
3	J172J7	SOIL	6-26-08	0650	x		19982						G-010
4	J172J8	SOIL	6-26-08	~~0700~~ 0700	x		19983						G011
5	J172J9	SOIL	6-26-08	0710	x		19984						G-012

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[signature]	6-26-08 0800	Bhudson Bhudson	6/26/08 0850
Bhudson Bhudson	6/26/08 0805	K. Eliason / [signature]	6-26-08 0805

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: 6 30 08 1345 GM Screen Result 0.1K

Client: WCH SDG #: J00184 NA[ ] SAF #: RC-087 NA [ ]

Work Order Number: J8F300194 Chain of Custody # _____

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: 6
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: 6 30 08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

TESTAMERICA

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Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-229	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 - Floor		**SAF No.** RC-087
Ice Chest No. CH2MHILL -007	**Field Logbook No.** EL-1395-13	**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.			RCF								
Sample No.	**Matrix ***	**Sample Date**	**Sample Time**									
J172M0 KQOR0	SOIL	6-27-08	0700	X		20018					H-010	~~G012~~
J172M1 KQOR2	SOIL	6-27-08	0710	X		20019					H-011	G013
J172M2 KQOR6	SOIL	6-27-08	0720	X		20020					H-100	~~G014~~

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Lawrence	0740 6-27-08	RBKERKOW / RBKerk	0740 6-27-08
RKERKOW / RKerk	0800 6-27-08	REF 1B (1060)	0800 6-27-08
1060 #18	7-2-08 0820	T.R. Edmundson / T.R. Edmundson	7-2-08 0820
T.R. Edmundson / T.R. Edmundson WCH	7-2-08 0845	RJL / JLANE TAL	0845 7208

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)

J8G020136
J00184
DUE 7 3 08

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 RCF20018

J172K0 SAF:RC-087 FF2/618-7 Burial Ground Soil Sample

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF20018
Sample Description	: J172K0 SAF:RC-087 FF2/618-7 Burial Ground Soil Sample
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 6.600E+01 grams
Facility	: Default
Sample Taken On	: 6/27/2008 7:00:00AM
Acquisition Started	: 7/1/2008 6:34:40AM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: PGTWHITE
Geometry	: 80 Gram 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	: 2/5/2008
Efficiency Calibration Description	: 80g Pill box 2/5/2008
Sample Number	: 20432

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		1.000	1.10E+01	3.30E+00	
PB-212		0.707	7.13E-01	1.97E-01	
RA-226d		0.403	3.68E-01	1.62E-01	
TH-232d		0.346	4.45E-01	1.94E-01	
U-235		0.999	2.57E+00	4.73E-01	
U-238d	@	1.000	3.06E+01	4.04E+00	

Analysis Report for RCF20018

J172K0 SAF:RC-087 FF2/618-7 Burial Ground 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 : 7/1/2008 7:34:47AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
	4	84.12	Th-231	3.57E-02	30.80
M	5	89.90	NP	1.32E-02	29.72
	7	98.32	Pa-234	3.16E-02	28.64
	15	766.72	No Peak	1.07E-02	24.47
	17	1001.34	Pa-234m	1.69E-02	17.16

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	1.10E+01	2.11E+00	2.11E+00
	CO-60	1173.24		99.90	-3.55E-02	2.04E-01	2.29E-01
		1332.50		99.98	2.47E-02		2.04E-01
	NB-94	702.63		99.81	1.08E-01	1.65E-01	1.67E-01
		871.10		99.89	4.89E-02		1.65E-01
	AG-108m	433.94		90.50	3.72E-02	1.49E-01	1.49E-01
		614.28		89.80	5.48E-02		1.98E-01
		722.94		90.80	-1.68E-01		1.83E-01
	CS-137	661.66		85.21	3.40E-02	1.87E-01	1.87E-01
	EU-152	40.12		38.40	6.54E-02	3.39E-01	3.39E-01
		45.38		11.10	7.72E-01		1.10E+00
		121.78		28.40	9.07E-02		3.41E-01
		244.69		7.51	-1.26E-01		1.37E+00
		344.29		26.60	-4.23E-02		4.28E-01

Analysis Report for RCF20018

J172K0 SAF:RC-087 FF2/618-7 Burial Ground Soil Sample

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		411.12		2.23	0.00E+00		5.36E+00
		443.89		2.80	2.68E-01		4.51E+00
		778.92		12.98	1.86E-01		1.38E+00
		867.38		4.21	-3.60E+00		3.84E+00
		964.11		14.50	7.34E-01		1.54E+00
		1085.89		9.94	-8.28E-01		1.68E+00
		1089.71		1.71	-3.00E+00		1.08E+01
		1112.07		13.60	-8.87E-01		1.60E+00
		1212.93		1.40	-6.17E-01		1.59E+01
		1299.16		1.63	-6.12E+00		1.36E+01
		1408.00		20.80	2.52E-01		9.32E-01
	EU-154	123.10		40.50	4.09E-02	2.40E-01	2.40E-01
		723.36		19.70	-7.74E-01		8.44E-01
		873.23		11.45	5.33E-01		1.44E+00
		1004.78		17.90	-3.99E-02		1.65E+00
		1274.54		35.50	-2.27E-02		6.16E-01
	EU-155	86.54		34.00	1.32E-02	4.18E-01	4.18E-01
		105.31		20.60	-2.71E-01		4.91E-01
+	PB-212	74.81	*	10.50	7.72E-01	4.88E-01	9.42E-01
		77.11	*	17.70	6.88E-01		4.88E-01
		87.19		6.27	7.17E-02		2.26E+00
+	RA-226d	186.11	*	3.28	3.83E+01	2.87E-01	3.52E+00
		241.92		7.46	2.89E-01		1.86E+00
		295.09		19.20	4.20E-01		6.01E-01
		351.87	*	37.10	4.26E-01		2.87E-01
		609.31	*	46.10	3.14E-01		3.51E-01
		1120.27		15.00	1.22E-01		1.70E+00
		1764.49		15.90	4.44E-01		1.39E+00
+	TH-232d	238.58	*	43.60	4.01E-01	2.80E-01	2.80E-01
		338.42		12.40	1.61E-01		1.01E+00
		583.02		30.87	7.42E-01		6.25E-01
		911.16	*	29.00	5.94E-01		6.08E-01
		968.97		17.40	6.21E-01		1.24E+00
+	U-235	143.79	*	10.50	2.54E+00	2.18E-01	8.99E-01
		163.38	*	4.70	3.26E+00		2.02E+00
		185.74	*	53.00	2.37E+00		2.18E-01
		205.33	*	4.70	3.08E+00		1.64E+00
+	U-238d	63.29	*	3.80	3.06E+01	2.09E+00	3.56E+00
		92.56	*	5.41	2.87E+01		2.09E+00
	AM-241	59.54		35.70	-1.90E-01	3.10E-01	3.10E-01
	CM-243	99.52		14.40	-1.02E-01	4.22E-01	8.04E-01
		103.73		23.00	1.19E-02		4.22E-01
		116.93		8.32	-2.68E+00		1.14E+00
		228.19		10.56	9.99E-02		8.33E-01
		277.60		14.00	2.37E-03		6.78E-01
	CM-245	99.52		21.10	-6.98E-02	2.89E-01	5.48E-01
		103.73		33.60	8.17E-03		2.89E-01
		116.93		12.20	-1.82E+00		7.74E-01

Analysis Report for RCF20018

J172K0 SAF:RC-087 FF2/618-7 Burial Ground Soil Sample

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	174.94	9.50	-2.33E-01		9.62E-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

JUL 01 2008 Edward S Wallace (print/sign/date)

Radiological Counting Facility

Analysis Report for RCF20019

J172K1 SAF:RC-087 FF2/618-7 Burial Ground Soil Sample

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF20019
Sample Description	: J172K1 SAF:RC-087 FF2/618-7 Burial Ground Soil Sample
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 7.300E+01 grams
Facility	: Default
Sample Taken On	: 6/27/2008 7:10:00AM
Acquisition Started	: 7/1/2008 6:58:21AM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: BEGE
Geometry	: 80 Gram Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3600.3 seconds
Dead Time	: 0.01 %
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	: 3/27/2008
Efficiency Calibration Used Done On	: 4/1/2008
Efficiency Calibration Description	: 80g Pill box 4-1-2008
Sample Number	: 20434

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.998	9.41E+00	2.35E+00	
PB-212		0.709	6.77E-01	1.73E-01	
RA-226d		0.690	3.60E-01	1.18E-01	
TH-232d		0.612	6.27E-01	1.63E-01	
U-235		0.795	1.37E+00	4.78E-01	
U-238d	@	0.999	1.46E+01	2.23E+00	

Analysis Report for RCF20019

J172K1 SAF:RC-087 FF2/618-7 Burial Ground 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 : 7/1/2008 7:58:28AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Rate (CPS)	Peak Rate (%) Uncertainty
13	1001.24 Pa-234m	7.79E-03	23.27

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	9.41E+00	1.78E+00	1.78E+00
	CO-60	1173.24		99.90	8.15E-02	2.17E-01	2.28E-01
		1332.50		99.98	2.17E-02		2.17E-01
	NB-94	702.63		99.81	-4.17E-02	1.57E-01	1.57E-01
		871.10		99.89	-7.47E-02		1.70E-01
	AG-108m	433.94		90.50	8.67E-02	1.19E-01	1.19E-01
		614.28		89.80	2.21E-02		1.66E-01
		722.94		90.80	-5.30E-02		1.19E-01
	CS-137	661.66		85.21	-7.37E-03	1.36E-01	1.36E-01
	EU-152	40.12		38.40	4.28E-02	1.35E-01	1.35E-01
		45.38		11.10	-4.93E-02		3.85E-01
		121.78		28.40	7.97E-02		1.76E-01
		244.69		7.51	-7.17E-01		8.31E-01
		344.29		26.60	2.86E-03		3.25E-01
		411.12		2.23	2.16E+00		4.67E+00
		443.89		2.80	-2.90E+00		2.98E+00
		778.92		12.98	-3.17E-01		1.07E+00

Analysis Report for RCF20019

J172K1 SAF:RC-087 FF2/618-7 Burial Ground Soil Sample

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		867.38		4.21	7.07E-01		4.24E+00
		964.11		14.50	9.04E-02		1.48E+00
		1085.89		9.94	3.48E-01		1.69E+00
		1089.71		1.71	-7.53E-02		9.37E+00
		1112.07		13.60	-1.52E+00		1.37E+00
		1212.93		1.40	-6.67E+00		1.77E+01
		1299.16		1.63	3.52E+00		1.29E+01
		1408.00		20.80	8.10E-01		1.17E+00
	EU-154	123.10		40.50	-4.33E-02	1.24E-01	1.24E-01
		723.36		19.70	4.65E-02		5.76E-01
		873.23		11.45	5.52E-01		1.55E+00
		1004.78		17.90	-6.86E-01		1.29E+00
		1274.54		35.50	-3.86E-01		6.34E-01
	EU-155	86.54		34.00	-1.53E-01	1.85E-01	1.85E-01
		105.31		20.60	8.69E-02		2.39E-01
+	PB-212	74.81	*	10.50	7.11E-01	3.02E-01	5.66E-01
		77.11	*	17.70	6.60E-01		3.02E-01
		87.19		6.27	6.39E-02		9.87E-01
+	RA-226d	186.11	*	3.28	2.16E+01	2.08E-01	2.84E+00
		241.92		7.46	5.11E-01		1.12E+00
		295.09	*	19.20	2.69E-01		4.96E-01
		351.87	*	37.10	4.30E-01		2.08E-01
		609.31	*	46.10	3.12E-01		2.73E-01
		1120.27		15.00	4.39E-01		1.43E+00
		1764.49		15.90	3.84E-02		1.35E+00
+	TH-232d	238.58	*	43.60	6.86E-01	2.03E-01	2.03E-01
		338.42	*	12.40	5.49E-01		5.82E-01
		583.02	*	30.87	6.02E-01		3.12E-01
		911.16		29.00	4.29E-01		7.16E-01
		968.97		17.40	4.84E-01		1.34E+00
+	U-235	143.79	*	10.50	1.50E+00	1.76E-01	5.84E-01
		163.38		4.70	2.10E+00		1.68E+00
		185.74	*	53.00	1.34E+00		1.76E-01
		205.33		4.70	2.61E-01		1.58E+00
+	U-238d	63.29	*	3.80	1.46E+01	2.14E+00	2.19E+00
		92.56	*	5.41	1.52E+01		2.14E+00
	AM-241	59.54		35.70	3.30E-02	1.20E-01	1.20E-01
	CM-243	99.52		14.40	3.43E-01	1.96E-01	3.97E-01
		103.73		23.00	-9.34E-02		1.96E-01
		116.93		8.32	1.03E-01		6.02E-01
		228.19		10.56	1.86E-01		6.33E-01
		277.60		14.00	-1.06E-01		5.56E-01
	CM-245	99.52		21.10	2.34E-01	1.34E-01	2.71E-01
		103.73		33.60	-6.39E-02		1.34E-01
		116.93		12.20	7.03E-02		4.11E-01
		174.94		9.50	8.03E-03		7.00E-01

Analysis Report for RCF20019

J172K1 SAF:RC-087 FF2/618-7 Burial Ground 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

JUL 01 2008 Edward S Wallace
(print/sign/date)

Radiological Counting Facility

Analysis Report for RCF20020

J172K2 SAF:RC-087 FF2/618-7 Burial Ground Soil Sample

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF20020
Sample Description	: J172K2 SAF:RC-087 FF2/618-7 Burial Ground Soil Sample
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 7.300E+01 grams
Facility	: Default
Sample Taken On	: 6/27/2008 7:20:00AM
Acquisition Started	: 7/1/2008 7:45:00AM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: REGIE02
Geometry	: 80 Gram Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3662.5 seconds
Dead Time	: 1.71 %
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	: 20435

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.947	9.96E+00	2.20E+00	
PB-212		0.707	6.73E-01	1.44E-01	
RA-226d		0.669	3.44E-01	1.20E-01	
TH-232d		0.852	4.68E-01	1.50E-01	
U-235		0.795	4.52E-01	1.44E-01	
U-238d	@	1.000	5.20E+00	1.57E+00	

Analysis Report for RCF20020

J172K2 SAF:RC-087 FF2/618-7 Burial Ground 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
c = identified by daughter product energy lines assumed to be in secular equilibrium
Errors quoted at 2.000 sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 7/1/2008 8:46:05AM
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
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	9.96E+00	2.07E+00	2.07E+00
	CO-60	1173.24		99.90	4.32E-02	1.82E-01	2.06E-01
		1332.50		99.98	-2.25E-03		1.82E-01
	NB-94	702.63		99.81	5.66E-02	1.76E-01	1.76E-01
		871.10		99.89	4.44E-02		1.87E-01
	AG-108m	433.94		90.50	3.17E-02	1.28E-01	1.28E-01
		614.28		89.80	5.61E-02		2.26E-01
		722.94		90.80	5.31E-02		1.84E-01
	CS-137	661.66		85.21	5.06E-02	1.65E-01	1.65E-01
	EU-152	40.12		38.40	-6.63E-02	2.01E-01	2.01E-01
		45.38		11.10	-5.96E-02		7.04E-01
		121.78		28.40	5.50E-02		2.70E-01
		244.69		7.51	-1.22E+00		1.32E+00
		344.29		26.60	-6.78E-02		4.31E-01
		411.12		2.23	3.56E+00		5.15E+00
		443.89		2.80	-2.57E-01		4.32E+00
		778.92		12.98	-3.18E-01		1.06E+00
		867.38		4.21	8.63E-01		4.74E+00

Analysis Report for RCF20020

J172K2 SAF:RC-087 FF2/618-7 Burial Ground Soil Sample

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		964.11		14.50	9.27E-01		1.58E+00
		1085.89		9.94	-1.02E+00		2.01E+00
		1089.71		1.71	-4.51E+00		1.14E+01
		1112.07		13.60	-2.36E+00		1.46E+00
		1212.93		1.40	1.01E+00		1.74E+01
		1299.16		1.63	-5.22E+00		1.33E+01
		1408.00		20.80	1.09E-02		9.18E-01
	EU-154	123.10		40.50	3.68E-02	1.88E-01	1.88E-01
		723.36		19.70	4.79E-01		8.57E-01
		873.23		11.45	-4.03E-01		1.60E+00
		1004.78		17.90	4.40E-01		1.22E+00
		1274.54		35.50	1.70E-01		5.90E-01
	EU-155	86.54		34.00	-2.22E-02	2.99E-01	2.99E-01
		105.31		20.60	1.62E-01		3.77E-01
+	PB-212	74.81	*	10.50	6.82E-01	3.11E-01	6.02E-01
		77.11	*	17.70	6.69E-01		3.11E-01
		87.19		6.27	2.96E-01		1.64E+00
+	RA-226d	186.11	*	3.28	6.99E+00	2.30E-01	2.56E+00
		241.92		7.46	-9.29E-01		1.90E+00
		295.09	*	19.20	3.83E-01		4.43E-01
		351.87	*	37.10	2.69E-01		2.77E-01
		609.31	*	46.10	3.92E-01		2.30E-01
		1120.27		15.00	-4.15E-02		1.46E+00
		1764.49		15.90	1.99E-02		1.36E+00
+	TH-232d	238.58	*	43.60	5.45E-01	2.40E-01	2.40E-01
		338.42	*	12.40	3.27E-01		6.61E-01
		583.02	*	30.87	4.89E-01		3.76E-01
		911.16	*	29.00	4.31E-01		4.26E-01
		968.97		17.40	3.95E-01		1.23E+00
+	U-235	143.79	*	10.50	7.95E-01	1.58E-01	6.78E-01
		163.38		4.70	-3.67E-01		1.97E+00
		185.74	*	53.00	4.33E-01		1.58E-01
		205.33		4.70	8.63E-01		2.10E+00
+	U-238d	63.29	*	3.80	5.20E+00	2.28E+00	2.28E+00
		92.56	*	5.41	4.74E+00		2.58E+00
	AM-241	59.54		35.70	8.70E-03	2.95E-01	2.95E-01
	CM-243	99.52		14.40	-2.42E-01	3.28E-01	5.55E-01
		103.73		23.00	-4.56E-01		3.28E-01
		116.93		8.32	2.48E-01		9.24E-01
		228.19		10.56	-1.66E-01		9.12E-01
		277.60		14.00	-5.81E-01		7.29E-01
	CM-245	99.52		21.10	-1.65E-01	2.24E-01	3.79E-01
		103.73		33.60	-3.12E-01		2.24E-01
		116.93		12.20	1.69E-01		6.30E-01
		174.94		9.50	-9.79E-01		9.02E-01

Analysis Report for RCF20020

J172K2 SAF:RC-087 FF2/618-7 Burial Ground 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**

JUL 01 2008 (print/sign/date) Edward S Wallace

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 7208 0845 GM Screen Result 0.1K

Client: WCH SDG #: J00184 NA[ ] SAF #: RC-087 NA [ ]

Work Order Number: J8G020136 Chain of Custody # RC-087-229

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: _____ Date: 7208

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

TESTAMERICA

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-240	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 - Floor		**SAF No.** RC-087
Ice Chest No. ERC-97-079	**Field Logbook No.** EL-1395-13	**COA** RG61872600	**Method of Shipment** Government Vehicle
Shipped To TestAmerica Incorporated, Richland	**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	aG
No. of Container(s)	1
Volume	60mL

SAMPLE ANALYSIS — See item (1) in Special Instructions.

Sample No.	Matrix *	Sample Date	Sample Time							RCF#		
J172M5 KQ5AH	SOIL	7-2-08	0615	X						J172K5		I-010
J172M8 KQ5AQ	SOIL	↓	0625	X						J172K8		J-010
J172M9 KQ5AX	SOIL	↓	0635	X						J172K9		I-011
J172X0 KQ5A1	SOIL	7-2-08	0645	X						J172V0		J-011

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Blawrena [signature]	0700 7-2-08	JRDeBvigne JRD[signature]	0700 7-2-08
JRDeBvigne JRD[signature]	0715 7-2-08	1060 IB	0715 7-2-08
1060/IB	0900 JUL 07 2008	[signature] MStankovich	0900 JUL 07 2008
[signature] MStankovich	0905 JUL 07 2008	[signature] JLANE TAL	0905 7708

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)

J8G070118
J00184
DUE 7808

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 RCF20047

J172V0 SAF:RC-087 FF2/618-7 Soil Sample

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF20047
Sample Description	: J172V0 SAF:RC-087 FF2/618-7 Soil Sample
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 6.400E+01 grams
Facility	: Default
Sample Taken On	: 7/2/2008 6:45:00AM
Acquisition Started	: 7/2/2008 11:34:40AM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: BEGE
Geometry	: 80 Gram Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3600.3 seconds
Dead Time	: 0.01 %
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	: 3/27/2008
Efficiency Calibration Used Done On	: 4/1/2008
Efficiency Calibration Description	: 80g Pill box 4-1-2008
Sample Number	: 20508

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.997	9.34E+00	2.42E+00	
PB-212		0.710	7.29E-01	1.49E-01	
U-235		0.902	1.28E+00	4.03E-01	
U-238d	@	0.999	1.76E+01	2.43E+00	

Radiological Counting Facility

Analysis Report for RCF20046

J172K9 SAF:RC-087 FF2/618-7 Soil Sample

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF20046
Sample Description	: J172K9 SAF:RC-087 FF2/618-7 Soil Sample
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 7.800E+01 grams
Facility	: Default
Sample Taken On	: 7/2/2008 6:35:00AM
Acquisition Started	: 7/2/2008 11:34:35AM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: PGTWHITE
Geometry	: 80 Gram 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	: 2/5/2008
Efficiency Calibration Description	: 80g Pill box 2/5/2008
Sample Number	: 20507

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.996	8.21E+00	2.63E+00	
PB-212		0.707	6.35E-01	1.77E-01	
RA-226d		0.403	2.38E-01	1.15E-01	
TH-232d		0.433	2.12E-01	1.36E-01	
U-235		1.000	1.77E+00	3.62E-01	
U-238d	@	1.000	2.06E+01	3.11E+00	

Radiological Counting Facility

Analysis Report for RCF20045

J172K8 SAF:RC-087 FF2/618-7 Soil Sample

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF20045
Sample Description	: J172K8 SAF:RC-087 FF2/618-7 Soil Sample
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 6.400E+01 grams
Facility	: Default
Sample Taken On	: 7/2/2008 6:25:00AM
Acquisition Started	: 7/2/2008 11:34:28AM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: REGIE02
Geometry	: 80 Gram Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3772.7 seconds
Dead Time	: 4.58 %
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	: 80g Pill Box 71385A-238 1/10/2008
Sample Number	: 20506

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.980	1.52E+01	2.98E+00	
TH-232d		0.345	5.81E-01	3.37E-01	
U-235		1.000	8.33E+00	1.09E+00	
U-238d	@	1.000	6.25E+02	3.75E+01	

Radiological Counting Facility

Analysis Report for RCF20044

J172K5 SAF:RC-087 FF2/618-7 Soil Sample

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF20044
Sample Description	: J172K5 SAF:RC-087 FF2/618-7 Soil Sample
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 6.200E+01 grams
Facility	: Default
Sample Taken On	: 7/2/2008 6:15:00AM
Acquisition Started	: 7/2/2008 10:24:58AM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: BEGE
Geometry	: 80 Gram Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3601.1 seconds
Dead Time	: 0.03 %
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	: 3/27/2008
Efficiency Calibration Used Done On	: 4/1/2008
Efficiency Calibration Description	: 80g Pill box 4-1-2008
Sample Number	: 20499

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.995	8.74E+00	2.47E+00	
U-235		1.000	6.08E+00	1.55E+00	
U-238d	@	0.999	3.47E+02	3.46E+01	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 7708 0905 GM Screen Result 0.1K

Client: WCH SDG #: J00184 NA[ ] SAF #: RC-087 NA [ ]

Work Order Number: J8G070118 Chain of Custody # RC-087-240

Shipping Container ID: N/A Air Bill # N/A

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: 4
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: 7708

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

TESTAMERICA

66

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-238	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 - Floor	SAF No.: RC-087	
Ice Chest No.: ERC-97-079	Field Logbook No.: EL-1395-13; 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							RLF #	
J172M3 KQ5PN	SOIL	7-1-08	0630	X							
J172M4 KQ5PP	SOIL	7-1-08	0640	X						J172K3	I-008
~~J172M5~~	~~SOIL~~	JRD 7-1-08								J172K4	I-009

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Lawrence	0700 7-1-08	JRD	0700 7-1-08
JRD	0740 7-1-08	1060 1A	0740 7-1-08
1060/1A	1430 JUL 07 2008	MSTANBOUCH	1430 JUL 07 2008
MSTANBOUCH	1505 JUL 07 2008	WLANE TAL	1505 7708

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)

J8G070150
J00184
DUE 7808

JEB

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 RCF20025

J172K3 SAF:RC-087 FF2/618-7 Soil Sample

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF20025
Sample Description	: J172K3 SAF:RC-087 FF2/618-7 Soil Sample
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 5.200E+01 grams
Facility	: Default
Sample Taken On	: 7/1/2008 6:30:00AM
Acquisition Started	: 7/1/2008 9:24:55AM
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	: 20439

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.991	1.59E+01	3.65E+00	
TH-232d		0.568	8.20E-01	2.18E-01	
U-235		0.999	3.13E+00	3.23E-01	
U-238d	@	1.000	3.88E+01	4.57E+00	

Analysis Report for RCF20025

J172K3 SAF:RC-087 FF2/618-7 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
c = identified by daughter product energy lines assumed to be in secular equilibrium
Errors quoted at 2.000 sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 7/1/2008 10:25:00AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Rate (CPS)	Peak Rate (%) Uncertainty
3	98.54	1.73E-02	36.75
9	352.16	1.23E-02	34.63
12	1000.97	9.60E-03	26.81

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	1.59E+01	3.80E+00	3.80E+00
	CO-60	1173.24		99.90	-2.01E-01	2.95E-01	2.95E-01
		1332.50		99.98	-9.93E-03		2.97E-01
	NB-94	702.63		99.81	1.05E-01	2.77E-01	2.87E-01
		871.10		99.89	1.57E-01		2.77E-01
	AG-108m	433.94		90.50	-1.01E-01	2.24E-01	2.24E-01
		614.28		89.80	-1.86E-01		3.22E-01
		722.94		90.80	2.66E-02		3.26E-01
	CS-137	661.66		85.21	4.07E-02	3.23E-01	3.23E-01
	EU-152	40.12		38.40	1.59E-01	4.43E-01	4.49E-01
		45.38		11.10	1.06E+00		1.46E+00
		121.78		28.40	-1.26E-02		4.43E-01
		244.69		7.51	-3.37E-01		2.29E+00
		344.29		26.60	-8.35E-01		6.97E-01
		411.12		2.23	-2.87E+00		9.42E+00
		443.89		2.80	-1.31E+00		7.92E+00
		778.92		12.98	-1.56E-03		2.27E+00

Analysis Report for RCF20025

J172K3 SAF:RC-087 FF2/618-7 Soil Sample

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		867.38		4.21	-1.07E+01		6.14E+00
		964.11		14.50	-5.08E-01		2.50E+00
		1085.89		9.94	-1.92E+00		2.76E+00
		1089.71		1.71	-4.20E+00		1.70E+01
		1112.07		13.60	-5.67E-01		2.25E+00
		1212.93		1.40	2.02E+01		2.76E+01
		1299.16		1.63	1.41E+01		2.24E+01
		1408.00		20.80	-9.36E-02		1.57E+00
	EU-154	123.10		40.50	2.26E-01	3.15E-01	3.15E-01
		723.36		19.70	1.23E-01		1.50E+00
		873.23		11.45	-1.01E+00		2.37E+00
		1004.78		17.90	-2.24E-01		2.47E+00
		1274.54		35.50	1.09E-01		9.30E-01
	EU-155	86.54		34.00	1.60E-01	5.78E-01	5.78E-01
		105.31		20.60	-1.80E-01		6.49E-01
	PB-212	74.81		10.50	-1.41E+00	1.15E+00	1.61E+00
		77.11		17.70	1.78E+00		1.15E+00
		87.19		6.27	1.07E+00		3.11E+00
	RA-226d	186.11		3.28	5.26E+01	6.51E-01	1.07E+01
		241.92		7.46	5.41E-01		3.29E+00
		295.09		19.20	9.45E-01		1.06E+00
		351.87		37.10	8.91E-01		6.51E-01
		609.31		46.10	5.69E-01		7.00E-01
		1120.27		15.00	1.29E+00		2.28E+00
		1764.49		15.90	9.35E-01		2.28E+00
+	TH-232d	238.58	*	43.60	7.96E-01	4.09E-01	4.09E-01
		338.42		12.40	1.72E+00		1.72E+00
		583.02	*	30.87	8.66E-01		5.06E-01
		911.16		29.00	5.79E-01		1.32E+00
		968.97	*	17.40	8.11E-01		1.14E+00
+	U-235	143.79	*	10.50	3.24E+00	3.43E-01	1.15E+00
		163.38	*	4.70	2.99E+00		3.26E+00
		185.74	*	53.00	3.21E+00		3.43E-01
		205.33	*	4.70	1.35E+00		2.54E+00
+	U-238d	63.29	*	3.80	3.88E+01	3.40E+00	5.01E+00
		92.56	*	5.41	3.77E+01		3.40E+00
	AM-241	59.54		35.70	2.77E-01	4.39E-01	4.39E-01
	CM-243	99.52		14.40	1.87E-01	5.87E-01	9.98E-01
		103.73		23.00	3.20E-01		5.87E-01
		116.93		8.32	-2.79E+00		1.60E+00
		228.19		10.56	6.81E-01		1.51E+00
		277.60		14.00	1.44E-01		1.12E+00
	CM-245	99.52		21.10	1.27E-01	4.02E-01	6.81E-01
		103.73		33.60	2.19E-01		4.02E-01
		116.93		12.20	-1.90E+00		1.09E+00
		174.94		9.50	-7.73E-01		1.56E+00

Analysis Report for RCF20025

J172K3 SAF:RC-087 FF2/618-7 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

JUL 01 2008 Edward S Wallace

(print/sign/date)

TESTAMERICA

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-087-235	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 - Floor		SAF No.: RC-087	Data Turnaround: 24 Hours
Ice Chest No.	Field Logbook No.: EL-1395-13	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											
Sample No.	Matrix *	Sample Date	Sample Time								TIE TO	
J172K3	SOIL	7-1-08	0630	X		20025					J172M3	I-008
J172K4	SOIL	7-1-08	0640	X		20026					J172M4	I-009
~~J172K5~~	~~SOIL~~	JRD 7-1-08										

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Lawrence [signature]	0700 7-1-08	JRDeBrigne JRD [signature]	0700 7-1-08
JRDeBrigne JRDeBrigne	0725 7-1-08	D.Miller / [signature] RCF	0725 7-1-08

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, V=Vegetation, X=Other

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

WCH-EE-011

RCF 20025

Radiological Counting Facility

Analysis Report for RCF20026

J172K4 SAF:RC-087 FF2/618-7 Soil Sample

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF20026
Sample Description	: J172K4 SAF:RC-087 FF2/618-7 Soil Sample
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 5.500E+01 grams
Facility	: Default
Sample Taken On	: 7/1/2008 6:40:00AM
Acquisition Started	: 7/1/2008 10:27:45AM
Procedure	: 50 gram pill box
Operator	: RCT
Detector Name	: REGIE02
Geometry	: 50 ml Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3653.3 seconds
Dead Time	: 1.46 %
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	: 20446

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt-mean Activity (pCi/grams)	Wt-mean Activity Uncertainty	Comments
K-40		0.953	1.46E+01	2.92E+00	
EU-155		0.378	1.06E-01	1.04E-01	
PB-212		1.000	7.98E-01	1.82E-01	
RA-226d		0.670	5.48E-01	1.52E-01	
TH-232d		0.427	5.58E-01	1.56E-01	
U-235		1.000	2.16E+00	2.18E-01	
U-238d	@	1.000	3.21E+01	3.30E+00	

Analysis Report for RCF20026

J172K4 SAF:RC-087 FF2/618-7 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 : 7/1/2008 11:28:41AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)	Peak Rate (CPS)	Peak Rate (%) Uncertainty
	1	53.32	2.88E-02	29.83
m	5	84.15	3.79E-02	11.95
m	7	89.85	2.82E-02	13.97
m	9	98.55	2.44E-02	14.54
	10	112.77	2.27E-02	35.07
	20	766.48	4.97E-03	42.06
	21	1001.24	1.18E-02	19.35

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	1.46E+01	2.58E+00	2.58E+00
	CO-60	1173.24		99.90	1.47E-01	2.56E-01	2.82E-01
		1332.50		99.98	1.00E-01		2.56E-01
	NB-94	702.63		99.81	-3.12E-02	2.38E-01	2.38E-01
		871.10		99.89	6.70E-02		2.72E-01
	AG-108m	433.94		90.50	-5.51E-02	1.79E-01	1.79E-01
		614.28		89.80	-2.14E-02		3.26E-01
		722.94		90.80	-6.83E-03		2.73E-01
	CS-137	661.66		85.21	1.05E-01	2.52E-01	2.52E-01
	EU-152	40.12		38.40	-7.04E-02	4.08E-01	4.08E-01
		45.38		11.10	4.53E-01		1.29E+00
		121.78		28.40	-3.34E-02		4.25E-01

Analysis Report for RCF20026

J172K4 SAF:RC-087 FF2/618-7 Soil Sample

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		244.69		7.51	-3.28E+00		1.97E+00
		344.29		26.60	-4.71E-01		6.78E-01
		411.12		2.23	1.67E+00		8.46E+00
		443.89		2.80	1.05E+00		7.09E+00
		778.92		12.98	-9.08E-01		1.62E+00
		867.38		4.21	-2.48E+00		6.26E+00
		964.11		14.50	9.39E-01		2.06E+00
		1085.89		9.94	-1.42E-01		2.68E+00
		1089.71		1.71	-4.19E+00		1.56E+01
		1112.07		13.60	-2.64E+00		1.92E+00
		1212.93		1.40	5.60E+00		2.08E+01
		1299.16		1.63	-1.06E+00		1.47E+01
		1408.00		20.80	-3.04E-01		1.24E+00
	EU-154	123.10		40.50	-3.15E-02	3.00E-01	3.00E-01
		723.36		19.70	5.76E-01		1.29E+00
		873.23		11.45	-2.51E-01		2.32E+00
		1004.78		17.90	1.69E+00		1.85E+00
		1274.54		35.50	1.82E-01		8.47E-01
+	EU-155	86.54	*	34.00	2.53E-01	2.59E-01	2.59E-01
		105.31		20.60	-2.87E-01		5.90E-01
+	PB-212	74.81	*	10.50	9.53E-01	5.22E-01	8.70E-01
		77.11	*	17.70	7.47E-01		5.22E-01
		87.19	*	6.27	1.37E+00		1.41E+00
+	RA-226d	186.11	*	3.28	3.63E+01	2.99E-01	4.08E+00
		241.92		7.46	-1.25E+00		2.51E+00
		295.09	*	19.20	4.02E-01		5.78E-01
		351.87	*	37.10	5.30E-01		2.99E-01
		609.31	*	46.10	6.50E-01		3.66E-01
		1120.27		15.00	4.15E-01		1.75E+00
		1764.49		15.90	1.26E+00		2.10E+00
+	TH-232d	238.58	*	43.60	5.11E-01	2.35E-01	2.35E-01
		338.42		12.40	5.31E-01		1.47E+00
		583.02	*	30.87	8.31E-01		5.88E-01
		911.16		29.00	1.04E+00		1.04E+00
		968.97		17.40	8.09E-01		1.69E+00
+	U-235	143.79	*	10.50	2.18E+00	2.52E-01	9.21E-01
		163.38	*	4.70	1.44E+00		1.84E+00
		185.74	*	53.00	2.25E+00		2.52E-01
		205.33	*	4.70	1.33E+00		2.24E+00
+	U-238d	63.29	*	3.80	3.21E+01	1.53E+00	3.70E+00
		92.56	*	5.41	3.16E+01		1.53E+00
	AM-241	59.54		35.70	-6.18E-02	5.79E-01	5.79E-01
	CM-243	99.52		14.40	-2.85E-01	5.24E-01	9.39E-01
		103.73		23.00	-4.33E-01		5.24E-01
		116.93		8.32	1.61E-01		1.57E+00
		228.19		10.56	5.44E-01		1.35E+00
		277.60		14.00	3.06E-01		1.03E+00
	CM-245	99.52		21.10	-1.95E-01	3.59E-01	6.41E-01

Analysis Report for RCF20026

J172K4 SAF:RC-087 FF2/618-7 Soil Sample

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	103.73	33.60	-2.97E-01		3.59E-01
	116.93	12.20	1.10E-01		1.07E+00
	174.94	9.50	-3.71E-01		1.32E+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:

(print/sign/date)

TESTAMERICA

76

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-087-235	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 - Floor		SAF No.: RC-087	Data Turnaround: 24 Hours
Ice Chest No.	Field Logbook No.: EL-1395-13	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											
Sample No.	Matrix *	Sample Date	Sample Time								TIE TO	
J172K3	SOIL	7-1-08	0630	X		20025						
J172K4	SOIL	7-1-08	0640	X		20026					J172K3	I-008
~~J172K5~~	SOIL	JRD 7-1-08									J172K4	I-009

CHAIN OF POSSESSION

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Lawrence	7-1-08 0700	JRDeBrigne	7-1-08 0700
JRDeBrigne	7-1-08 0725	D. Miller	7-1-08 0725

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 20026

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 7708 1505 GM Screen Result 0.1K

Client: WCH SDG #: J00184 NA[ ] SAF #: RC-087 NA [ ]

Work Order Number: J8G070150 Chain of Custody # RC-087-238

Shipping Container ID: N/A Air Bill # N/A

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 [✓] pH<2 [ ] pH>2 [ ] pH>9 [ ] Amount HNO_3 Added _____ SO12
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: _____ Date: 7708

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

TESTAMERICA

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Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-239	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 - Floor		**SAF No.** RC-087
Ice Chest No. EL-97-079	**Field Logbook No.** EL-1395-13	**COA** RG61872600	**Method of Shipment** Government Vehicle
Shipped To TestAmerica Incorporated, Richland	**Offsite Property No.** NA		**Bill of Lading/Air Bill No.** NA

Price Code 2B

Data Turnaround 24 Hours

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.										
									RCF #		
Sample No.	**Matrix ***	**Sample Date**	**Sample Time**								
J172M6 KQ8M2	SOIL	7-1-08	1215	X						J172K6	J-008
J172M7 KQ8M7	SOIL	7-1-08	1225	X						J172K7	J-009

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Lawrence	1245 7-1-08	JRDeBuique	1245 7-1-08
JRDeBuique	1300 7-1-08	1060 Battelle/1A	1300 7-1-08
1060 Battelle 1A	0930 7-9-08	J. E. Bernhard	0930 7-9-08
J. E. Bernhard	7-9-08 0945	LJLANE TAL	0945 7908

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)

J8G090168
J00184
DUE 71008

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 RCF20042

J172K6 SAF:RC-087 FF2/618-7 Soil Sample

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF20042
Sample Description	: J172K6 SAF:RC-087 FF2/618-7 Soil Sample
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 6.200E+01 grams
Facility	: Default
Sample Taken On	: 7/1/2008 12:15:00PM
Acquisition Started	: 7/2/2008 10:24:45AM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: REGIE02
Geometry	: 80 Gram Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3780.8 seconds
Dead Time	: 4.78 %
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	: 20497

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.988	1.44E+01	2.81E+00	
PB-212		0.706	1.35E+00	2.81E-01	
RA-226d		0.406	3.84E-01	1.74E-01	
TH-232d		0.848	5.39E-01	1.84E-01	
U-235		1.000	4.10E+00	6.13E-01	
U-238d	@	1.000	6.08E+01	5.28E+00	

Analysis Report for RCF20042

J172K6 SAF:RC-087 FF2/618-7 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 : 7/2/2008 11:27:50AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
M	2	72.78	Th-231	8.02E-02	8.93
M	5	84.35	Th-228	1.03E-01	7.50
m	6	89.87	Bi-214	4.81E-02	13.16
m	8	98.40	Ac-228	1.10E-01	6.63
	9	112.73	No Peak	7.68E-02	16.14
	19	766.60	No Peak	1.81E-02	17.35
	21	1001.38	Pa-234m	3.11E-02	11.64

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	2.39E+00	2.39E+00
	CO-60	~~1173.24~~		~~99.90~~	~~1.03E-01~~	~~2.56E-01~~	~~2.76E-01~~
		1332.50		99.98	1.49E-01		2.56E-01
	NB-94	702.63		99.81	2.90E-02	2.29E-01	2.29E-01
		871.10		99.89	8.46E-02		2.30E-01
	AG-108m	433.94		90.50	-4.60E-02	1.75E-01	1.75E-01
		614.28		89.80	-6.67E-02		2.76E-01
		722.94		90.80	-1.45E-02		2.46E-01
	CS-137	661.66		85.21	-8.44E-02	2.36E-01	2.36E-01
	EU-152	40.12		38.40	-9.38E-02	4.13E-01	4.13E-01
		45.38		11.10	-8.20E-01		1.52E+00
		121.78		28.40	1.54E-01		5.21E-01

Analysis Report for RCF20042

J172K6 SAF:RC-087 FF2/618-7 Soil Sample

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		244.69		7.51	7.48E-02		1.99E+00
		344.29		26.60	-3.86E-01		6.10E-01
		411.12		2.23	-4.94E+00		6.99E+00
		443.89		2.80	4.59E+00		6.25E+00
		778.92		12.98	-8.98E-01		1.69E+00
		867.38		4.21	3.84E-01		5.48E+00
		964.11		14.50	5.02E-01		1.82E+00
		1085.89		9.94	9.27E-01		2.66E+00
		1089.71		1.71	1.43E+00		1.45E+01
		1112.07		13.60	-8.55E-01		1.97E+00
		1212.93		1.40	-4.69E+00		2.05E+01
		1299.16		1.63	-5.83E+00		1.25E+01
		1408.00		20.80	2.85E-01		1.18E+00
	EU-154	123.10		40.50	1.70E-01	3.66E-01	3.66E-01
		723.36		19.70	1.93E-01		1.15E+00
		873.23		11.45	-1.65E+00		2.01E+00
		1004.78		17.90	-1.85E-02		2.42E+00
		1274.54		35.50	-4.96E-01		6.58E-01
	EU-155	86.54		34.00	-1.00E+01	7.52E-01	7.52E-01
		105.31		20.60	-1.87E-01		8.08E-01
+	PB-212	74.81	*	10.50	6.27E+00	7.64E-01	1.31E+00
		77.11	*	17.70	7.87E-01		7.64E-01
		87.19		6.27	-1.61E+02		4.21E+00
+	RA-226d	186.11	*	3.28	7.23E+01	3.18E-01	4.26E+00
		241.92		7.46	-3.72E-01		2.46E+00
		295.09		19.20	5.56E-01		8.42E-01
		351.87	*	37.10	4.12E-01		3.18E-01
		609.31	*	46.10	3.59E-01		3.67E-01
		1120.27		15.00	1.37E+00		2.06E+00
		1764.49		15.90	8.61E-01		1.60E+00
+	TH-232d	238.58	*	43.60	5.33E-01	3.26E-01	3.26E-01
		338.42	*	12.40	5.40E-01		8.46E-01
		583.02	*	30.87	6.82E-01		4.50E-01
		911.16	*	29.00	3.31E-01		6.40E-01
		968.97		17.40	1.97E-01		1.46E+00
+	U-235	143.79	*	10.50	3.57E+00	2.63E-01	1.21E+00
		163.38	*	4.70	5.82E+00		2.87E+00
		185.74	*	53.00	4.48E+00		2.63E-01
		205.33	*	4.70	3.94E+00		2.54E+00
+	U-238d	63.29	*	3.80	6.08E+01	2.30E+00	4.77E+00
		92.56	*	5.41	6.84E+01		2.30E+00
	AM-241	59.54		35.70	3.09E-02	8.53E-01	8.53E-01
	CM-243	99.52		14.40	1.34E-01	7.10E-01	1.43E+00
		103.73		23.00	-4.93E-01		7.10E-01
		116.93		8.32	-1.30E+00		2.05E+00
		228.19		10.56	-6.98E-02		1.42E+00
		277.60		14.00	-3.52E-01		1.05E+00
	CM-245	99.52		21.10	9.12E-02	4.86E-01	9.75E-01

Analysis Report for RCF20042

J172K6 SAF:RC-087 FF2/618-7 Soil Sample

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	103.73	33.60	-3.37E-01		4.86E-01
	116.93	12.20	-8.86E-01		1.40E+00
	174.94	9.50	-6.34E-02		1.64E+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:

(print/sign/date)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-087-236	Page 1 of 1
Collector: B Lawrence, E. Harries	Company Contact: Joan Kessner	Telephone No.: 509-375-4688	Project Coordinator: KESSNER, JH	Price Code: 3A
Project Designation: 618-7 Burial Ground - Soil	Sampling Location: 618-7 Burial Ground - Floor		SAF No.: RC-087	Data Turnaround: 24 Hours
Ice Chest No.: AFS-06-005	Field Logbook No.: EL-1395-13	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											

Sample No.	Matrix *	Sample Date	Sample Time										
J172K6	SOIL	7-1-08	1215	x			20042						J-008
J172K7	SOIL	7-1-08	1225	x			20043						J-009

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Blawrence [signature]	7-1-08 1245	[signature]	7-1-08 1245
[signature]	7-1-08 1300	1060 A1	7-1-08 1300
1060 A1A	7-2-08 0900	F.R. Edmundson [signature]	7-2-08 0800
F.R. Edmundson [signature]	7-2-08 0900	D. Miller [signature]	7-2-08 0900

SPECIAL INSTRUCTIONS

None

COPY

Matrix *: S=Soil, SE=Sediment, SO=Solid, St=Sludge, W=Water, O=Oil, A=Air, DS=Drum Solids, DL=Drum Liquid, 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 20042

Radiological Counting Facility

Analysis Report for RCF20043

J172K7 SAF:RC-087 FF2/618-7 Soil Sample

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF20043
Sample Description	: J172K7 SAF:RC-087 FF2/618-7 Soil Sample
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 6.200E+01 grams
Facility	: Default
Sample Taken On	: 7/1/2008 12:25:00PM
Acquisition Started	: 7/2/2008 10:24:51AM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: PGTWHITE
Geometry	:
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	: 2/5/2008
Efficiency Calibration Description	: 80g Pill box 2/5/2008
Sample Number	: 20498

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		1.000	1.17E+01	3.55E+00	
RA-226d		0.672	3.49E-01	1.28E-01	
TH-232d		0.431	5.21E-01	2.09E-01	
U-235		0.999	2.77E+00	5.27E-01	
U-238d	@	0.999	4.74E+01	5.63E+00	

Analysis Report for RCF20043

J172K7 SAF:RC-087 FF2/618-7 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 : 7/2/2008 11:24:59AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
	1	53.12	No Peak	1.42E-02	61.46
M	3	72.65	Th-231	1.68E-02	24.63
m	4	77.05	Pb-212	3.07E-02	17.03
M	5	89.94	Bi-214	1.88E-02	23.49
	7	98.35	Th-234	2.58E-02	33.70
	8	112.86	No Peak	1.92E-02	46.89
	18	1001.26	Pa-234M	1.84E-02	15.12

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	1.17E+01	2.50E+00	2.50E+00
	CO-60	1173.24		99.90	-5.27E-02	2.12E-01	2.37E-01
		1332.50		99.98	-5.39E-02		2.12E-01
	NB-94	702.63		99.81	2.64E-02	1.83E-01	1.98E-01
		871.10		99.89	-1.57E-01		1.83E-01
	AG-108m	433.94		90.50	6.56E-02	1.63E-01	1.63E-01
		614.28		89.80	-3.45E-01		2.19E-01
		722.94		90.80	6.97E-02		2.19E-01
	CS-137	661.66		85.21	1.30E-01	2.13E-01	2.13E-01
	EU-152	40.12		38.40	-1.96E-01	3.71E-01	3.71E-01
		45.38		11.10	1.47E+00		1.31E+00
		121.78		28.40	3.76E-01		3.77E-01
		244.69		7.51	-1.17E+00		1.39E+00
		344.29		26.60	-1.85E-01		4.44E-01

Analysis Report for RCF20043

J172K7 SAF:RC-087 FF2/618-7 Soil Sample

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		411.12		2.23	-2.94E+00		5.21E+00
		443.89		2.80	-1.19E+00		4.75E+00
		778.92		12.98	-9.67E-01		1.39E+00
		867.38		4.21	-4.75E+00		4.58E+00
		964.11		14.50	5.19E-01		1.66E+00
		1085.89		9.94	-4.09E-01		2.16E+00
		1089.71		1.71	-2.30E-01		1.29E+01
		1112.07		13.60	-7.64E-01		1.57E+00
		1212.93		1.40	-7.44E+00		1.67E+01
		1299.16		1.63	8.12E-01		1.35E+01
		1408.00		20.80	-1.26E-01		1.04E+00
	EU-154	123.10		40.50	2.13E-01	2.57E-01	2.57E-01
		723.36		19.70	3.21E-01		1.01E+00
		873.23		11.45	9.39E-01		1.70E+00
		1004.78		17.90	-7.71E-01		1.82E+00
		1274.54		35.50	1.44E-01		6.86E-01
	EU-155	86.54		34.00	3.05E-01	4.76E-01	4.76E-01
		105.31		20.60	-3.34E-01		4.99E-01
	PB-212	74.81		10.50	6.17E-02	9.31E-01	1.38E+00
		77.11		17.70	-1.27E-01		9.31E-01
		87.19		6.27	-2.17E-02		2.60E+00
+	RA-226d	186.11	*	3.28	4.19E+01	2.50E-01	4.04E+00
		241.92		7.46	2.57E-01		2.09E+00
		295.09	*	19.20	2.27E-01		4.25E-01
		351.87	*	37.10	4.58E-01		2.98E-01
		609.31	*	46.10	3.45E-01		2.50E-01
		1120.27		15.00	-2.19E-01		1.74E+00
		1764.49		15.90	1.28E+00		1.65E+00
+	TH-232d	238.58	*	43.60	5.73E-01	3.21E-01	3.21E-01
		338.42		12.40	7.05E-01		1.10E+00
		583.02	*	30.87	4.53E-01		4.85E-01
		911.16		29.00	7.87E-01		8.07E-01
		968.97		17.40	1.40E+00		1.42E+00
+	U-235	143.79	*	10.50	2.95E+00	2.50E-01	9.41E-01
		163.38	*	4.70	2.52E+00		2.62E+00
		185.74	*	53.00	2.59E+00		2.50E-01
		205.33	*	4.70	3.44E+00		2.19E+00
+	U-238d	63.29	*	3.80	4.74E+01	2.32E+00	4.15E+00
		92.56	*	5.41	4.10E+01		2.32E+00
	AM-241	59.54		35.70	7.24E-02	3.82E-01	3.82E-01
	CM-243	99.52		14.40	-1.31E-01	4.28E-01	8.01E-01
		103.73		23.00	9.15E-03		4.28E-01
		116.93		8.32	-8.37E-02		1.30E+00
		228.19		10.56	3.75E-01		9.07E-01
		277.60		14.00	4.45E-01		8.36E-01
	CM-245	99.52		21.10	-8.92E-02	2.93E-01	5.46E-01
		103.73		33.60	6.27E-03		2.93E-01
		116.93		12.20	-5.70E-02		8.86E-01

Analysis Report for RCF20043

J172K7 SAF:RC-087 FF2/618-7 Soil Sample

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	174.94	9.50	6.33E-02		1.04E+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:

(print/sign/date)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 7908 0945 GM Screen Result 0.1K

Client: WCH SDG #: J00184 NA[ ] SAF #: RC-087 NA [ ]

Work Order Number: J8G090168 Chain of Custody # RC-087-239

Shipping Container ID: N/A Air Bill # N/A

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: 7908

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

TESTAMERICA

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Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-087-207	Page 1 of 1
Collector: B Lawrence, E. Harries	Company Contact: Joan Kessner	Telephone No.: 509-375-4688	Project Coordinator: KESSNER, JH	Price Code
Project Designation: 618-7 Burial Ground - Soil	Sampling Location: 618-7 Burial Ground Anomalous Waste		SAF No.: RC-087	Data Turnaround: 24 Hours
Ice Chest No.	Field Logbook No.: EL-1395-13	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
JRD 7-9-08

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.

Sample No.	Matrix *	Sample Date	Sample Time										
J172B0 KQ87E	SOIL	7-9-08	1145	X									1
J172B1 KQ87P	SOIL	7-9-08	1148	X									2
~~J172B2~~	~~SOIL~~	JRD 7-9-08											

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Lawrence	1200 7-9-08	JRDeBrigne JRDeBrig	1200 7-9-08
JRDeBrigne JRDeBrig	1220 7-9-08	LJLANE TAL	1220 7908

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}

J8G090248
J00184
DUE 71008

Samples taken from Non-RAD Area

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 7908 1220 GM Screen Result 0.1K

Client: WCH SDG #: J00184 NA[ ] SAF #: RC-087 NA [ ]

Work Order Number: J8G090248 Chain of Custody # RC-087-207

Shipping Container ID: N/A Air Bill # N/A

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: 7908

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

TESTAMERICA

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-087-208	Page 1 of 1
Collector: B Lawrence, E. Harries	Company Contact: Joan Kessner	Telephone No.: 509-375-4688	Project Coordinator: KESSNER, JH	Price Code / Data Turnaround: 24 Hours
Project Designation: 618-7 Burial Ground - Soil	Sampling Location: 618-7 Burial Ground Anomalous Waste		SAF No.: RC-087	
Ice Chest No.: ERC-97-079	Field Logbook No.: EL-1395-13	COA: RG61872600	Method of Shipment: Governmnet Vehicle	
Shipped To: TestAmerica Incorporated, Richland	Offsite Property No.: NA	see RSR	Bill of Lading/Air Bill No.: NA	see RSR

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.							RCF #		B-12 #

Sample No.	Matrix *	Sample Date	Sample Time									
J172B3 KRJ8R	SOIL	7-9-08	0855	X							J17290	2599 buck

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Blawrena [signature]	1015 7-9-08	JRDeBrigue [signature]	1019 7-9-08
JRDeBrigue [signature]	1025 7-9-08	[signature] MStankovich	1025 7/9/08
[signature] MStankovich	1330 JUL 15 2008	[signature] LULANE TAL	1330 71508

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)

J8G150292
J00184
DUE 71608

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 RCF20093

J17290 SAF:RC-087 FF2/SOIL SAMPLE

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF20093
Sample Description	: J17290 SAF:RC-087 FF2/SOIL SAMPLE
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 5.700E+01 grams
Facility	: Default
Sample Taken On	: 7/9/2008 8:55:00AM
Acquisition Started	: 7/9/2008 2:17:00PM
Procedure	: 50 gram pill box
Operator	: RKZ
Detector Name	: PGTWHITE
Geometry	: 50 ml Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3622.5 seconds
Dead Time	: 0.62 %
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	: 20643

J17283

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
EU-155		0.997	3.00E+01	1.84E+00	
U-235		0.999	9.81E+02	3.04E+01	
U-238d	@	1.000	1.37E+04	7.97E+02	

RADIOACTIVE SHIPMENT RECORD

3. Page / of

4. Ship ☒ Prepaid ☐ Collect

Via

1. SHIP FROM U.S. DEPT. OF ENERGY C/O

Company

Address

City, State, Zip

Contact

Phone

2. SHIP TO ☐ U.S. DEPT. OF ENERGY C/0

Company

Address

City, State, Zip

Attention

Phone

5. SHIPMENT AUTHORIZATION NUMBER

6. EMERGENCY RESPONSE

Telephone

Emergency Response Guide(s)

7. Shipment DE-CI:

HM 8. Proper Shipping Name: _____ Radioactive Material,

		PRIMARY HAZARD	SUBSIDIARY HAZARD	UN ID
	excepted package - empty packaging	7		UN2908
	excepted package - limited quantity of material	7		UN2910
	low specific activity (LSA-I)	7		UN2912
	low specific activity (LSA-II)	7		UN3321
	surface contaminated objects (SCO-I)	7		UN2913
	surface contaminated objects (SCO-II)	7		UN2913
	transported under special arrangement	7		UN2919
	transported under special arrangement, fissile	7		UN3331
	Type A Package	7		UN2915
	Type A Package, special form	7		UN3332
	Type B(U) Package, fissile	7		UN3328
	Type B(U) Package	7		UN2916

9. No. Pkg.	Model Package	COC/Spec	Serial No.	Seal No.	Isotopes	C.S.I.	T.I.	Bq/Package	Gr. Wt. Kg.

10. Identify for Normal Form Only

Physical Form
☐ Liquid ☒ Solid ☐ Gas

Chemical Form
☐ Elemental ☐ Metal
☐ Nitrate ☐ Oxide
☐ Mixture ☐ Other

11.
☐ Highway Route Controlled Quantity
☐ Exclusive Use Shipment with instructions
☐ Placards Applied _____
☒ Fissile Excepted, Grams _____
☐ UN ID Marking _____

12. LABELS APPLIED
☐ Empty ☐ Radioactive Yellow - II ☐ Fissile
☐ Radioactive White - I ☐ Radioactive Yellow - III

13. ADDITIONAL LABELS / MARKINGS

14. This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Certifier's Signature | On behalf of DOE-RL | Date | Organization | Complete Cost Code (Inc. End Function)

15. Surface Dose Rate of Package
☐ <0.005 or _____ mSv/hr
<0.5 or _____ mrem/hr (N+ß γ)

Dose Rate @ 1 Meter from Surface of Package
☐ <0.005 or _____ mSv/hr
<0.5 or _____ mrem/hr (N+ß γ)

Smears of Outer Container
☐ <4.0 Bq (220 dpm) ß γ /cm ^{2}
☐ <0.4 Bq (22 dpm) α /cm ^{2}
☐ <Tbl. 2-2 HSRCM Onsite Limits

TRUCK LOAD OR EXCLUSIVE USE
Surface ☐ <2 mSv/hr (200 mrem/hr)
@ 2 meters ☐ <0.1 mSv/hr (10 mrem/hr)
@ Cab or sleeper ☐ <0.02 mSv/hr (2 mrem/hr) (Using N+ß γ)

Additional Data and Instructions (inc. Readings on Internal Packaging)

Signature - Radiation Monitoring | Bldg. | Survey No. | Date

16. TRANSPORTER

Vehicle Number | DRIVER SIGNATURE

17. RECEIVER

RECEIVER SIGNATURE | Date

18. OFFSITE AUTHORIZATION

Shipment has been inspected and verified to be in compliance with DOT regulations.

Authorized Signature | Printed Name | Date

19. AUTHORIZATION FOR SHIPMENT

AIR TRANSPORT CERTIFICATION
☐ N/A

CARGO AIRCRAFT
☐ Cargo Aircraft Only Labels Applied

PASSENGER AIRCRAFT
☐ Ltd Qty ☐ Research/Medical Diagnosis
☐ <3 T.I. ☐ Human Medical Research

Pkg. Dimensions (cm)

20. OFFSITE AUTHORIZATION

Tracking No.	Date Shipped	Routing	ETA
Surveyed By	Date	Approved for Shipment Offsite	Date

NOTE: For "Via" block, choices are "Motor," "Rail," "Air Psgr.," "Air Cargo," "UPS," or "Site Carrier."

A-6003-214 (01/05)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 71508 1330 GM Screen Result 0.1K

Client: WCH SDG #: J00184 NA[ ] SAF #: RC-087 NA [ ]

Work Order Number: J8G150292 Chain of Custody # RC-087-292

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: 1
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: 71508

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____