0078653

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

COMPLETE COPY OF DATA PACKAGE TO:

Rick Kerkow	L6-06	KW 8/11/08 Initials/Date
Kathy Wendt	H4-21	KW 8/11/08 Initials/Date

COMMENTS:

SDG J00171 **SAF-RC-087**

Rad only X Chem only Rad & Chem

X Complete Partial

AMENDED DATA – CORRECTED SAMPLE NUMBER J16VB0

WASTE SITE: 618-7 Burial Ground Stockpiles & Anomalous Materials

RECEIVED
AUG 25 2008
EDMC

Analytical Data Package Prepared For

Washington Closure Hanford

Analysis Provided By

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

RECEIVED
AUG 2008

SDG Number:J00171_Amended

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

Washington Closure Hanford
2620 Fermi Avenue
Richland, WA 99354

August 11, 2008

Attention: Joan Kessner

SAF Number	:	RC-087
Date SDG Closed	:	May 30, 2008
Number of Samples	:	Twenty (20)
Sample Type	:	Soil
SDG Number	:	J00171
Data Deliverable	:	Quick Turn Metals / Summary

AMENDED CASE NARRATIVE

I. Introduction

Between May 5, 2008 and May 29, 2008 twenty soil samples were received at TestAmerica for ICP metals analysis. Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the Washington Closure Hanford (WCH) specific ID;

WCH ID#	STLR ID#	MATRIX	DATE OF RECEIPT
J16MF7	KMKT7	SOIL	5/05/08
J16MF3	KMKT9	SOIL	5/05/08
J16MF4	KMKVD	SOIL	5/05/08
J16MF5	KMKVE	SOIL	5/05/08
J16MF6	KMKVF	SOIL	5/05/08
J16VB0	KMM10	SOIL	5/06/08
J16VB1	KM28C	SOIL	5/12/08
J16VB2	KM28D	SOIL	5/12/08
J16VB3	KM28F	SOIL	5/12/08
J16VB4	KNGFR	SOIL	5/19/08
J16VB5	KNGFW	SOIL	5/19/08
J16VB6	KNGFX	SOIL	5/19/08
J16VB7	KNGF2	SOIL	5/19/08
J16W50	KNHN0	SOIL	5/20/08
J16VV8	KNX34	SOIL	5/19/08
J16VV9	KNX35	SOIL	5/28/08
J16VW0	KNX36	SOIL	5/28/08
J16VW1	KNX38	SOIL	5/28/08

J16VW2	KNX39	SOIL	5/28/08
J16W51	KN2AC	SOIL	5/29/08

II. Sample Receipt

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

III. Analytical Results/Methodology

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

ICP Metals
ICP Metals by method SW-846 601

IV. Quality Control

SDG J00171 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 May 2008 for samples with the standard metal request list with add ons aluminum, beryllium, copper, iron, zinc and zirconium.

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

Batch 8127606:
Iron and aluminum in the CCV recovered high. Suspect iron and aluminum contamination in the system due to high level iron and aluminum samples. *The client ID has been corrected on the sample spreadsheet.* Except as noted, the LCS, batch blank, sample, sample duplicate, MS, MSD, ICB, ICV and CCB results are within contractual limits.

Batch 8133531:
Iron recovered high in the CCV. Suspect iron contamination in the system due to high level iron samples. Except as noted, the LCS, batch blank, sample, sample duplicate, MS, MSD, ICB, ICV and CCB results are within contractual limits.

Batch 8140371:
The LCS, batch blank, sample, sample duplicate, MS, MSD, ICB, ICV, CCB and CCV results are within contractual limits.

Batch 8141335:
Iron recovered high in the CCV and ICV. Suspect iron contamination in the system due to high level iron samples. There were significant differences in the matrix spike and matrix spike duplicate recovery for zinc. Aluminum also showed large differences in the sample, sample duplicate and the matrix spike. Suspect inhomgeniety in the sample. Except as noted, the LCS, batch blank, sample, sample duplicate, MS, MSD, ICB and CCB results are within contractual limits.

Batch 8149179:
Iron recovered high in the CCV and ICV. Suspect iron contamination in the system due to high level iron samples. There were significant differences in the matrix spike and matrix spike duplicate recovery for lead and copper. There were also significant differences in the sample and sample duplicate for lead and copper. Suspect inhomgeniety in the sample. Except as noted, the LCS, batch blank, sample, sample duplicate, MS, MSD, ICB and CCB results are within contractual limits.

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

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: J00171
SAF Number: RC-087
Batch Number: 8126518

Sample Number	Client ID	Aliquant	Aluminum	Arsenic	Barium	Berylium	Cadmium	Copper	Chromium	Iron	Lead	Selenium	Silver	Zinc
		sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa
J8E050000-518-B		1.000	-0.0141	-0.0055	0.0002	-0.0001	0.0002	0.0003	-0.001	0.003	0.0028	-0.00053	0.0005	0.0105
J8E050000-518-C		1.000	0.9213	0.9268	0.9711	0.9961	0.9072	0.9895	0.9286	1.072	0.9346	0.77313	0.9073	0.9346
LCS Recovery %			92.130%	92.680%	97.110%	99.610%	90.720%	98.950%	92.860%	107.200%	93.460%	77.313%	90.730%	93.460%
		g	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
J8E050192-002	J16MF3	0.4968	60919.8873	<MDL	1916.264	0.694444	8.997585	28.94525	1340.58	69997.987	2.103462	<MDL	<MDL	73.44002
J8E050192-002-X	J16MF3-DUP	0.5021	60037.8411	<MDL	1594.304	0.826529	9.211312	36.58634	1246.764	70573.591	4.252141	<MDL	<MDL	72.02748
J8E050192-003	J16MF4	0.5007	52326.7426	<MDL	1575.794	0.459357	8.108648	13.83064	944.1782	62272.818	2.396645	<MDL	<MDL	60.90473
J8E050192-004	J16MF5	0.5032	61655.4054	<MDL	1636.526	0.685612	8.624801	36.28776	1355.326	67766.296	3.219396	<MDL	<MDL	69.85294
J8E050192-005	J16MF6	0.4998	59573.8295	<MDL	1756.703	0.430172	8.383353	26.65066	1133.453	64865.946	1.330532	<MDL	<MDL	59.06363
J8E050192-001	J16MF7	0.5009	2951.68696	49.62068	300.4592	<MDL	7.187063	35.43621	222.5993	45627.87	15.48213	<MDL	<MDL	22.75903
J8E050192-002-S	J16MF3-MS	0.5095	N/A	76.97743	1808.636	82.71835	80.05888	147.4975	1416.094	N/A	77.16389	62.85967	76.07458	146.7125
% Recovery				76.977	-107.628	82.024	71.061	118.552	75.514		75.060	62.860	76.075	73.272
J8E050192-002-D	J16MF3-MSD	0.5007	N/A	78.56002	1818.454	83.59297	81.36609	115.738	1381.067	N/A	78.37028	63.82165	76.7126	139.5047
% Recovery				78.560	-97.810	82.899	72.369	86.793	40.487		76.267	63.822	76.713	66.065

SDG Number: J00171
SAF Number: RC-087
Batch Number: 8127606

Sample Number	Client ID	Aliquant	Aluminum	Arsenic	Barium	Berylium	Cadmium	Copper	Chromium	Iron	Lead	Selenium	Silver	Zinc
		sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa
J8E060000-606-B		1.000	0.0467	-0.0042	0.0004	0.0003	-0.0002	-0.0001	-0.0005	0.0268	0.0015	-0.00155	-0.0004	-0.0243
J8E060000-606-C		1.000	1.024	1.004	1.066	1.049	0.9832	1.069	0.9657	1.156	0.9954	0.8486	0.9684	0.9459
LCS Recovery %			102.400%	100.400%	106.600%	104.900%	98.320%	106.900%	96.570%	115.600%	99.540%	84.860%	96.840%	94.590%
		g	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
J8E060296-001	J16VB0	0.5542	895885.962	9.256586	5.692891	<MDL	<MDL	40.12089	2.237459	263.17214	<MDL	3.7297	<MDL	7.226633
J8E060296-001-X	J16VB0-DUP	0.5089	836018.864	8.233445	13.08705	0.029475	<MDL	61.00413	2.731381	1003.144	<MDL	3.390646	<MDL	8.852427
J8E060296-001-S	J16VB0-MS	0.5023	N/A	95.65996	79.1957	81.3259	70.23691	135.7754	72.75533	305.09656	74.70635	66.53494	83.695	85.49672
% Recovery				86.403	73.503	81.326	70.237	95.655	70.518	41.924	74.706	62.805	83.695	78.270
J8E060296-001-D	J16VB0-MSD	0.5073	N/A	93.6231	77.63651	79.96255	69.13069	151.2911	72.37335	395.03253	73.32939	65.0207	79.77528	84.7329
% Recovery				84.367	71.944	79.963	69.131	111.170	70.136	131.860	73.329	61.291	79.775	77.506

SDG Number: J00171
SAF Number: RC-087
Batch Number: 8133531

Sample Number	Client ID	Aliquant	Aluminum	Arsenic	Barium	Berylium	Cadmium	Copper	Chromium	Iron	Lead	Selenium	Silver	Zinc
		sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa
J8E120000-531-B		1.000	0.023	-0.004	0.0002	0.0001	0	0.0003	0.0002	0.0535	0.0029	0.005252	0.0001	-0.0071
J8E120000-531-C		1.000	0.9661	0.9118	0.9937	0.9806	0.9063	1.007	0.9166	1.196	0.9261	0.7863	0.9118	0.9084
LCS Recovery %			96.610%	91.180%	99.370%	98.060%	90.630%	100.700%	91.660%	119.600%	92.610%	78.630%	91.180%	90.840%
		g	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
J8E120187-001	J16VB1	0.5154	4676.94994	<MDL	62.30113	0.155219	2.551416	13.20334	6.490105	22865.735	3.744664	<MDL	<MDL	37.26232
J8E120187-001-X	J16VB1-DUP	0.5073	5016.75537	<MDL	66.7948	0.167554	2.749852	14.28149	5.657402	23546.225	3.952296	<MDL	<MDL	39.34555
J8E120187-002	J16VB2	0.515	4607.76699	<MDL	64.04854	0.145631	2.805825	14.98058	4.941748	24679.612	5.485437	<MDL	<MDL	40.1068
J8E120187-003	J16VB3	0.5058	4794.38513	<MDL	75.75129	0.158165	2.935943	2327.995	7.127323	24219.059	89.38316	<MDL	<MDL	739.0273
J8E120187-001-S	J16VB1-MS	0.4987	N/A	92.9216	168.5382	97.31301	90.22458	114.4977	98.74674	N/A	94.10467	76.54401	87.42731	126.6292
% Recovery				92.922	106.237	97.158	87.673	101.294	92.257		90.360	76.544	87.427	89.367
J8E120187-001-D	J16VB1-MSD	0.5111	N/A	90.4911	162.4927	94.26727	87.62473	115.046	91.88026	N/A	92.26179	73.49736	84.41597	128.3506
% Recovery				90.491	100.192	94.112	85.073	101.843	85.390		88.517	73.497	84.416	91.088

SDG Number: J00171
SAF Number: RC-087
Batch Number: 8140371

Sample Number	Client ID	Aliquant	Aluminum	Arsenic	Barium	Berylium	Cadmium	Copper	Chromium	Iron	Lead	Selenium	Silver	Zinc
		sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa
J8E190000-371-B		1.000	-0.0108	-0.0043	-0.0019	-0.0001	0	0.0005	-0.0017	0.0761	0.0031	0.00279	-0.001	0.0028
J8E190000-371-C		1.000	0.9268	0.9432	1.002	1.013	0.9325	1.017	0.9473	1.035	0.9471	0.79999	0.9232	0.9296
LCS Recovery %			92.680%	94.320%	100.200%	101.300%	93.250%	101.700%	94.730%	103.500%	94.710%	79.999%	92.320%	92.960%
		g	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
J8E190148-001	J16VB4	0.5013	59226.0124	<MDL	1806.304	0.458807	11.97885	19.20008	1087.173	89457.411	6.323559	<MDL	<MDL	61.06124
J8E190148-001-X	J16VB4-DUP	0.5019	60749.1532	<MDL	1898.785	0.607691	10.44033	36.04304	1119.745	76479.378	6.674636	<MDL	<MDL	68.25065
J8E190148-002	J16VB5	0.5066	5110.54086	<MDL	61.46861	0.148046	2.664824	10.8863	5.704698	19926.964	4.648638	<MDL	<MDL	35.73826
J8E190148-003	J16VB6	0.5101	5402.86218	<MDL	61.83101	0.166634	2.489708	11.2625	7.184866	18878.651	4.479514	<MDL	<MDL	36.60067
J8E190148-004	J16VB7	0.502	5216.13546	<MDL	64.83068	0.159363	2.569721	10.43825	6.743028	18844.622	4.183267	<MDL	<MDL	34.06375
J8E190148-001-S	J16VB4-MS	0.495	N/A	80.23232	2031.313	84.30303	83.56566	108.4848	1081.818	N/A	79.74747	65.12828	77.88889	134.1414
% Recovery				80.232	225.010	83.844	71.587	89.285	-5.355		73.424	65.128	77.889	73.080
J8E190148-001-D	J16VB4-MSD	0.5048	N/A	79.2393	2018.621	82.52773	83.34984	126.2876	1117.274	N/A	79.16997	62.90313	75.46553	132.9239
% Recovery				79.239	212.318	82.069	71.371	107.088	30.101		72.846	62.903	75.466	71.863

SDG Number: J00171
SAF Number: RC-087
Batch Number: 8141335

Sample Number	Client ID	Aliquant	Aluminum	Arsenic	Barium	Berylium	Cadmium	Copper	Chromium	Iron	Lead	Selenium	Silver	Zinc
		sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa
J8E200000-335-B		1.000	-0.0005	-0.0048	0.0001	0	0	0	0.0004	0.0205	0.0028	0.00177	0.0001	0.0063
J8E200000-335-C		1.000	0.9801	0.9812	1.013	1.036	0.953	1.029	0.9547	1.106	0.9725	0.84075	0.9399	0.9568
LCS Recovery %			98.010%	98.120%	101.300%	103.600%	95.300%	102.900%	95.470%	110.600%	97.250%	84.075%	93.990%	95.680%
		g	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
J8E200177-001	J16W50	0.5013	10908.5353	0.865757	61.88633	1.252801	14.17804	87.5331	19.61703	19138.317	23.03932	<MDL	<MDL	148.7065
J8E200177-001-X	J16W50-DUP	0.5019	5092.40859	<MDL	57.22377	0.13911	5.633943	63.39428	16.52424	18342.607	17.64706	<MDL	<MDL	102.9412
J8E200177-001-S	J16W50-MS	0.495	N/A	95.41893	149.99	98.79445	97.52863	176.7129	106.1885	N/A	133.8156	81.26482	75.869	2319.67
% Recovery				94.553	88.104	97.542	83.351	89.180	86.571		110.776	81.265	75.869	2170.964
J8E200177-001-D	J16W50-MSD	0.5048	N/A	94.85121	150.4503	97.40603	91.78739	174.7259	107.1848	N/A	107.2827	81.12764	75.9397	205.2662
% Recovery				93.985	88.564	96.153	77.609	87.193	87.568		84.243	81.128	75.940	56.560

SDG Number: J00171
SAF Number: RC-087
Batch Number: 8149179

Sample Number	Client ID	Aliquant	Aluminum	Arsenic	Barium	Berylium	Cadmium	Copper	Chromium	Iron	Lead	Selenium	Silver	Zinc
		sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa
J8E280000-179-B		1.000	0.002	-0.0063	0	0	-0.0002	0	0.0018	0.0203	0.0037	0.00527	-0.0001	0.0312
J8E280000-179-C		1.000	0.9657	0.9349	0.9644	1.017	0.9321	0.9897	0.9453	1.102	0.9522	0.79278	0.9131	0.9433
LCS Recovery %			96.570%	93.490%	96.440%	101.700%	93.210%	98.970%	94.530%	110.200%	95.220%	79.278%	91.310%	94.330%
		g	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
J8E280121-001	J16VV8	0.4989	5456.00321	<MDL	52.98657	0.150331	2.585689	37.13169	10.21247	19553.017	19.81359	<MDL	<MDL	51.13249
J8E280121-001-X	J16VV8-DUP	0.495	7894.94949	<MDL	73.13131	0.181818	3.414141	881.9192	17.07071	23656.566	108.9899	<MDL	<MDL	120.9091
J8E280121-002	J16VV9	0.5068	6926.79558	0.986582	73.08603	0.217048	3.47277	140.884	50.65114	25739.937	25.7498	<MDL	<MDL	111.7798
J8E280121-003	J16VW0	0.4998	6548.61945	0.840336	65.12605	0.190076	2.791116	19.27771	10.90436	20238.095	12.22489	<MDL	<MDL	67.30692
J8E280121-004	J16VW1	0.5047	5371.50783	1.466218	55.53794	0.178324	2.53616	16.63364	8.163265	19288.686	8.163265	<MDL	<MDL	52.83337
J8E280121-005	J16VW2	0.4966	5555.7793	<MDL	60.67257	0.191301	2.547322	9.343536	7.34998	19099.879	4.228756	<MDL	<MDL	36.56867
J8E280121-001-S	J16VV8-MS	0.4952	N/A	93.04321	159.8344	99.75767	91.7912	226.2722	108.643	N/A	121.668	76.99212	87.94426	230.311
% Recovery				93.043	106.848	99.607	89.206	189.141	98.431		101.854	76.992	87.944	179.178
J8E280121-001-D	J16VV8-MSD	0.4926	N/A	97.00568	160.3735	103.3293	94.93504	7839.017	105.9683	N/A	901.7458	81.05562	91.62607	167.8847
% Recovery				97.006	107.387	103.179	92.349	7801.886	95.756		881.932	81.056	91.626	116.752

SDG Number: J00171
SAF Number: RC-087
Batch Number: 8150252

Sample Number	Client ID	Aliquant	Aluminum	Arsenic	Barium	Berylium	Cadmium	Copper	Chromium	Iron	Lead	Selenium	Silver	Zinc
		sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa	mg/sa
J8E290000-252-B		1.000	0.0036	-0.0031	0.0001	0	0.0003	0.0001	-0.0001	0.0386	0.0026	0.0025	0.0006	0.002
J8E290000-252-C		1.000	0.9656	0.9656	0.9957	1.022	0.9467	1.011	0.9404	1.109	0.9598	0.81181	0.9271	0.9508
LCS Recovery %			96.560%	96.560%	99.570%	102.200%	94.670%	101.100%	94.040%	110.900%	95.980%	81.181%	92.710%	95.080%
		g	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
J8E290138-001	J16W51	0.5043	132361.689	1.397977	22.84355	0.267698	0.912155	5.929011	3.489986	6256.1967	<MDL	<MDL	<MDL	56.61313
J8E290138-001-X	J16W51-DUP	0.5078	134403.308	1.102796	20.23434	0.24616	0.807404	5.829067	<MDL	5682.3553	<MDL	<MDL	<MDL	51.13234
J8E290138-001-S	J16W51-MS	0.5036	N/A	95.5421	101.8666	93.59611	82.87331	100.3773	84.05481	N/A	78.54448	79.96525	89.70413	174.0621
% Recovery				95.542	79.023	93.328	81.961	94.448	80.565		78.544	79.965	89.704	141.2828
J8E290138-001-D	J16W51-MSD	0.5029	N/A	94.68085	97.55419	93.10002	82.22311	98.35951	82.09386	N/A	77.48061	78.92026	89.35176	141.4794
% Recovery				94.681	74.711	92.832	81.311	92.431	78.604		77.481	78.920	89.352	84.866

J8E050192 JC0171 Due 05 06 08

TestAmerica Laboratories, Inc.

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-113	Page 1 of 1

Collector: B Lawrence, E. Harries	Company Contact: Joan Kessner	Telephone No.: 509-375-4688	Project Coordinator: KESSNER, JH
Price Code: 2B	Data Turnaround: 24 Hours		
Project Designation: 618-7 Burial Ground - Soil	Sampling Location: 618-7 Burial Ground/Stockpiles		SAF No.: RC-087
Ice Chest No.: 97 ERC-29-079 5/5/08	Field Logbook No.: EL-1395-12	COA: RG61872600	Method of Shipment: Government Vehicle
Shipped To: TestAmerica Incorporated, Richland	Offsite Property No.: NA		Bill of Lading/Air Bill No.: NA

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

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

Sample No.	Matrix *	Sample Date	Sample Time									
~~J16MF5~~	~~SOIL~~											
~~J16MF6~~	~~SOIL~~											
J16MF7	SOIL	5-1-08	1510	X		KMKT7			J16MB7			RED GRANULAR MATERIAL

RK 1/30/08

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: E. Harries / E. Harries	Date/Time: 1545	Received By/Stored In: RB Kerkow / RB Kerkow	Date/Time: 1545 5-1-08
Relinquished By/Removed From: RB Kerkow / RB Kerkow	Date/Time: 1615 5-1-08	Received By/Stored In: REF 1B (1060)	Date/Time: 1615 5-1-08
Relinquished By/Removed From: 1060 / 1B	Date/Time: 5/5/08 0900	Received By/Stored In: M Stankovich	Date/Time: 0900 5/5/08
Relinquished By/Removed From: M Stankovich	Date/Time: 5/5/08	Received By/Stored In: S. Smith	Date/Time: 05/05/08 1330
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

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}

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

Matrix *

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

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

WCH-EE-011

Amended

J8E050192 J00171 Due 05-06-08

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-087-112 | Page 1 of 1

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

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

SAMPLE ANALYSIS

Preservation	None												
Type of Container	P												
No. of Container(s)	1												
Volume	60mL												
	See item (1) in Special Instructions.												PIN# 0229
Sample No.	**Matrix ***	**Sample Date**	**Sample Time**										
J16MF3	SOIL	4/29/08	1440	X			KMKT9				VERMICULITE		DRUM
~~J16MF4~~	~~SOIL~~												

RC 1/29/08

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Lawrence / B Lawrence 4-29-08	1640	RT Coffman / RT Coffman 4/29/08	1640
RT Coffman / RT Coffman 4/29/08	1730	REFER# 1A, 1060 BLDG 4/29/08	1730
1060/1A 5/5/08	0945	MStankovich 5/5/08	0945
MStankovich 5/5/08	1330	S. Smith S. Smith 05/05/08	1330

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}

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

JW

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 Laboratories, Inc.

Amended

J8E050192 J00171 Due 05 06 08

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-112	Page 1 of 1

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

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

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

Sample No.	Matrix *	Sample Date	Sample Time										
~~J16MF3~~	~~SOIL~~						KMKVD						
J16MF4	SOIL	4-30-08	1230										0234

RC 4/30/08

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: B LAWRENCE	4-30-08 1600	Received By/Stored In: RT COFFMAN / RT Coffman	1600 4/30/08
Relinquished By/Removed From: RT COFFMAN / RT Coffman	5/1/08 0700	Received By/Stored In: REFCC #1A, 1060 BLDG	0700 5/1/08
Relinquished By/Removed From: 1060/1A	5/5/08 0910	Received By/Stored In: mstankovich	5/5/08 0910
Relinquished By/Removed From: WCH mstankovich	5/5/08	Received By/Stored In: S. Smith	05/05/08 1330
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

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}

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
SD=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 Laboratories, Inc.

Amended

J8E050192 JC0171 Due 05-06-08

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-113	Page 1 of 1

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

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None										
Type of Container	P										
No. of Container(s)	1										
Volume	60mL										
SAMPLE ANALYSIS	See item (1) in Special Instructions.					TIED TO					PIN#
Sample No.	Matrix *	Sample Date	Sample Time								
J16MF5	SOIL	4/30/08	0850	X	KMKVE			J16MB5		VERMICULITE	DRUM - 0227
J16MF6	SOIL	4/30/08	0950	X	KMKVF			J16MB6		"	" - 0233
~~J16MF7~~	~~SOIL~~										

RC 4/30/08

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time 1600	Received By/Stored In	Date/Time 1600
B Lawrence	4-30-08	RT Coffman / RT Coffman	4/30/08
Relinquished By/Removed From	Date/Time 0700	Received By/Stored In	Date/Time 0700
RT Coffman / RT Coffman	5/1/08	REFER 1A, 1060 BLDG.	5/1/08
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time 0905
1060/1A 5/5/08	0905	MZD mstankovich	5/5/08
Relinquished By/Removed From WCH	Date/Time	Received By/Stored In	Date/Time
MZD mstankovich	5/5/08	A. Smith S. Smith	05/05/08 1330
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

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)

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

LN

Matrix *

S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
Ti=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 Laboratories, Inc.

Amended

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 05/05/08 1330 **GM Screen Result** .01

Client: WCH **SDG #:** J00171 NA[ ] **SAF #:** RC-087 NA [ ]

Work Order Number: J8E050192 **Chain of Custody #** RC-087-113,112

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: 5
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** _____
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: L. Smith **Date:** 05/05/08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on: _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

LS-023, Rev. 7, 1/08

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-129	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** DRUM 08-0276 618-7 Burial Ground/~~Stockpiles~~ 5-2-08		**SAF No.** RC-087
Ice Chest No. ERC-97-079	**Field Logbook No.** EL-1395-12	**COA** RG61872600	**Method of Shipment** GOVERNMENT VEHICLE
Shipped To TestAmerica Incorporated, Richland	**Offsite Property No.** NA		**Bill of Lading/Air Bill No.** NA

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None										
Type of Container	AG										
No. of Container(s)	1										
Volume	60mL										
SAMPLE ANALYSIS	See item (1) in Special Instructions.								TIE TO		PIN#
Sample No.	**Matrix ***	**Sample Date**	**Sample Time**								
J16VB0	SOIL	5-2-08	1350	X					J16V90		08-0276

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Lawrence	5-2-08 1540	R. Fahlberg R. Fahlberg	5-2-08 1540
R. Fahlberg R. Fahlberg	5-2-08 1600	1060 Shipping 1-A	5-2-08 1600
1060/1A	5/6/08 1445	MS Stankovich	5/6/08 1440
WCH MS Stankovich	5/6/08 1525	RRWLANE TAL	5/6/08 1525

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)

J8E060296
J00171
DUE 5/08
KMM10

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

Matrix *

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

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

WCH-EE-011

Radiological Counting Facility

Analysis Report for RCF19594

J16V90 SAF:RC-087 FF2/618-7 Drums (metal shavings) PIN #08-0276

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19594
Sample Description	: J16V90 SAF:RC-087 FF2/618-7 Drums (metal shavings) PIN #08-0276
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 1.000E+01 grams
Facility	: Default
Sample Taken On	: 5/2/2008 1:50:00PM
Acquisition Started	: 5/5/2008 8:35:40AM
Procedure	: 50 gram pill box
Operator	: RCT
Detector Name	: REGIE02
Geometry	: 50 ml Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3634.0 seconds
Dead Time	: 0.94 %
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	: 19040

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.998	1.42E+01	9.71E+00	

Analysis Report for RCF19594

J16V90 SAF:RC-087 FF2/618-7 Drums (metal shavings) PIN #08-0276

? = 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 : 5/5/2008 9:36:22AM
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	1.42E+01	1.44E+01	1.44E+01
	CO-60	1173.24		99.90	-3.08E-01	1.17E+00	1.17E+00
		1332.50		99.98	8.79E-02		1.28E+00
	NB-94	702.63		99.81	2.97E-01	1.03E+00	1.10E+00
		871.10		99.89	-8.83E-01		1.03E+00
	AG-108m	433.94		90.50	-4.20E-02	8.28E-01	8.28E-01
		614.28		89.80	9.10E-01		1.35E+00
		722.94		90.80	-1.39E-01		1.06E+00
	CS-137	661.66		85.21	-3.16E-01	1.10E+00	1.10E+00
	EU-152	40.12		38.40	-9.27E-02	1.44E+00	1.44E+00
		45.38		11.10	1.82E+00		4.31E+00
		121.78		28.40	-9.24E-01		1.48E+00
		244.69		7.51	-3.01E-01		8.70E+00
		344.29		26.60	-4.29E+00		2.74E+00
		411.12		2.23	-5.17E+00		3.36E+01
		443.89		2.80	7.42E+00		2.92E+01
		778.92		12.98	3.25E+00		8.17E+00
		867.38		4.21	-2.30E+00		2.71E+01
		964.11		14.50	-2.47E+00		8.17E+00
		1085.89		9.94	-9.31E-01		1.07E+01

Analysis Report for RCF19594

J16V90 SAF:RC-087 FF2/618-7 Drums (metal shavings) PIN #08-0276

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	1089.71	1.71	9.86E+00		6.37E+01
	1112.07	13.60	-9.97E+00		8.93E+00
	1212.93	1.40	4.51E+01		8.60E+01
	1299.16	1.63	3.34E+01		7.68E+01
	1408.00	20.80	7.04E-02		6.32E+00
EU-154	123.10	40.50	-6.69E-01	1.06E+00	1.06E+00
	723.36	19.70	4.63E-01		5.02E+00
	873.23	11.45	2.70E+00		9.59E+00
	1004.78	17.90	0.00E+00		5.92E+00
	1274.54	35.50	-1.98E-01		3.88E+00
EU-155	86.54	34.00	-8.10E-02	1.30E+00	1.30E+00
	105.31	20.60	-6.53E-02		2.03E+00
PB-212	74.81	10.50	3.97E+00	2.63E+00	4.52E+00
	77.11	17.70	1.03E+00		2.63E+00
	87.19	6.27	-6.66E+00		7.12E+00
RA-226d	186.11	3.28	5.22E+00	2.31E+00	1.75E+01
	241.92	7.46	9.71E+00		9.59E+00
	295.09	19.20	-8.38E-01		4.14E+00
	351.87	37.10	1.73E+00		2.31E+00
	609.31	46.10	3.06E+00		2.88E+00
	1120.27	15.00	1.89E+00		8.47E+00
	1764.49	15.90	-1.32E+00		7.62E+00
TH-232d	238.58	43.60	-6.36E-02	1.54E+00	1.54E+00
	338.42	12.40	3.86E+00		6.48E+00
	583.02	30.87	2.83E+00		3.24E+00
	911.16	29.00	-1.42E-01		3.87E+00
	968.97	17.40	3.16E+00		7.16E+00
U-235	143.79	10.50	1.35E-01	1.08E+00	4.55E+00
	163.38	4.70	3.67E+00		1.17E+01
	185.74	53.00	3.22E-01		1.08E+00
	205.33	4.70	1.08E+01		1.32E+01
U-238d	63.29	3.80	-4.33E+00	8.03E+00	1.06E+01
	92.56	5.41	4.75E-01		8.03E+00
AM-241	59.54	35.70	2.55E-01	1.17E+00	1.17E+00
CM-243	99.52	14.40	-6.53E-01	1.76E+00	2.75E+00
	103.73	23.00	-6.58E-01		1.76E+00
	116.93	8.32	-5.76E-01		5.03E+00
	228.19	10.56	-7.08E-01		5.45E+00
	277.60	14.00	2.23E+00		5.09E+00
CM-245	99.52	21.10	-4.45E-01	1.20E+00	1.88E+00
	103.73	33.60	-4.50E-01		1.20E+00
	116.93	12.20	-3.93E-01		3.43E+00
	174.94	9.50	3.00E-01		5.52E+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

Analysis Report for RCF19594

J16V90 SAF:RC-087 FF2/618-7 Drums (metal shavings) PIN #08-0276

Reviewed and Approved: EDWARD S. WALLACE

MAY 06 2008 Edward S Wallace

(print/sign/date)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-087-125	Page 1 of 1
Collector: B Lawrence, E. Harries	Company Contact: Joan Kessner	Telephone No.: 509-375-4688	Project Coordinator: KESSNER, JH	Price Code: 2A
Project Designation: 618-7 Burial Ground - Soil	Sampling Location: 618-7 Burial Ground/~~Stockpiles~~ DRUM 5/2/08		SAF No.: RC-087	Data Turnaround: 24 Hours
Ice Chest No.: ERC-97-079	Field Logbook No.: EL-1395-12	COA: RG61872600	Method of Shipment: GOVERNMENT VEHICLE	
Shipped To: Radiological Counting Facility	Offsite Property No.: 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											PIN#
Sample No.	Matrix *	Sample Date	Sample Time			RCF						
J16V90	SOIL	5-2-08	1350	X		19594						08-0276

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Lawrence [signature]	1540 5-2-08	R Fahlberg R Fahlberg	1540 5-2-08
R Fahlberg R Fahlberg	1600 5-2-08	1060 Shipping 1-A	1600 5-2-08
1060/1A 5/5/08	0800	[signature] MStankovich	0800 5/5/08
[signature] MStankovich	5/5/08 0820	M. K. Rad [signature] RCF	5-5-08/0820

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 RCF19594

J16V90 SAF:RC-087 FF2/618-7 Drums (metal shavings) PIN #08-0276

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19594
Sample Description	: J16V90 SAF:RC-087 FF2/618-7 Drums (metal shavings) PIN #08-0276
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 1.000E+01 grams
Facility	: Default
Sample Taken On	: 5/2/2008 1:50:00PM
Acquisition Started	: 5/5/2008 8:35:40AM
Procedure	: 50 gram pill box
Operator	: RCT
Detector Name	: REGIE02
Geometry	: 50 ml Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3634.0 seconds
Dead Time	: 0.94 %
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	: 19040

COPY

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.998	1.42E+01	9.71E+00	

Radiological Counting Facility

Analysis Report for RCF19571

J16LR1,J16LP8, J16LP9, J16LR0 SAF:RC-001 300PS/306W IH SAMPLES

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19571
Sample Description	: J16LR1,J16LP8, J16LP9, J16LR0 SAF:RC-001 300PS/306W IH SAMPLES
Sample Type	: Non Standard Geo
Unit	:
Sample Point	
Sample Size	: 1.000E+00 units
Facility	: Default
Sample Taken On	: 4/29/2008 12:00:00PM
Acquisition Started	: 4/29/2008 2:55:35PM
Procedure	: Non Standard Geometry
Operator	: RCT
Detector Name	: PGTWHITE
Geometry	: Non Standard Geo
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	: Non-Standard Geo (1234-95-2) 2/4/2008
Sample Number	: 18949

Qualitative Only

Non-Standard Geometry

Calibrations for determining sample activity are geometry-specific. This sample does not conform to one of the currently calibrated geometries. Reported activities may differ from the acutal sample activity for this reason.

COPY

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/units)	Wt mean Activity Uncertainty	Comments
K-40	0.988	1.09E+02	1.18E+02	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 5608 1525 GM Screen Result 0.1 K

Client: WCH SDG #: J00171 NA[ ] SAF #: RC-087 NA [ ]

Work Order Number: J8E060296 Chain of Custody # RC-087-129

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: RJP Date: 5608

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-087-130	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/Stockpiles		SAF No.: RC-087	Data Turnaround: 24 Hours
Ice Chest No.	Field Logbook No.: EL-1395-12	COA: RG61872600	Method of Shipment: GOVERNMENT VEHICLE	
Shipped To: TestAmerica Incorporated, Richland	Offsite Property No.: NA		Bill of Lading/Air Bill No.: NA	

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

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

Sample No.	Matrix *	Sample Date	Sample Time									
J16VB1 KM28C	SOIL	5/8/08	1450	X						J16V93		A007	1
J16VB2 KM28D	SOIL	5/8/08	1500	X						J16V94		A008	2
J16VB3 KM28F	SOIL	5/8/08	1510	X						J16V95		A009	3
~~J16VB4~~	~~SOIL~~												
~~J16VB5~~	~~SOIL~~												

NL NL 5/8/08

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: E Harries / E. Harries	Date/Time: 1530 5/8/08	Received By/Stored In: RB Kerikow / RB Kerik	Date/Time: 1530 5/8/08
Relinquished By/Removed From: RB Kerikow / RB Kerik	Date/Time: 1600 5/8/08	Received By/Stored In: REF 1B, (1060)	Date/Time: 1600 5/8/08
Relinquished By/Removed From: 1060/1B	Date/Time: 1400 MAY 12 2008	Received By/Stored In: M/D M Stankovich WCH	Date/Time: 1400 MAY 12 2008
Relinquished By/Removed From: M/D M Stankovich WCH	Date/Time: 1455 MAY 12 2008	Received By/Stored In: [illegible] LANE TAL	Date/Time: 1455 51208
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

None

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

J8E120187
J00171
DUE 5 13 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 RCF19619

J16V93, SAF-RC-087 FF2/618-7 BG& STOCKPILES

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19619
Sample Description	: J16V93, SAF-RC-087 FF2/618-7 BG& STOCKPILES
Sample Type	: 50 gram pill box
Unit	:
Sample Point	

J16VB1

Sample Size	: 4.400E+01 grams
Facility	: Default
Sample Taken On	: 5/8/2008 2:50:00PM
Acquisition Started	: 5/8/2008 4:06:04PM
Procedure	: 50 gram pill box
Operator	: RCT
Detector Name	: REGIE02
Geometry	: 50 ml Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3653.9 seconds
Dead Time	: 1.47 %
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	: 19164

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.996	1.29E+01	3.24E+00	
PB-212	0.710	6.10E-01	1.66E-01	
RA-226d	0.618	4.10E-01	1.86E-01	

Analysis Report for RCF19619

J16V93, SAF-RC-087 FF2/618-7 BG& STOCKPILES

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

UNIDENTIFIED PEAKS

Peak Locate Performed on : 5/8/2008 5:07:09PM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Rate (CPS)	Peak Rate (%) Uncertainty
1	63.29 Th-234	1.85E-02	31.71
4	238.68 Pb-212	1.17E-02	36.56
6	338.66 Ac-228	1.32E-02	30.46
8	399.43 Ac-228	3.18E-03	50.89

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	1.29E+01	3.33E+00	3.33E+00
	CO-60	1173.24		99.90	-1.38E-01	2.91E-01	3.23E-01
		1332.50		99.98	-3.05E-02		2.91E-01
	NB-94	702.63		99.81	-3.96E-02	2.57E-01	2.57E-01
		871.10		99.89	1.96E-01		3.07E-01
	AG-108m	433.94		90.50	-1.02E-01	1.90E-01	1.90E-01
		614.28		89.80	9.60E-02		3.77E-01
		722.94		90.80	-8.14E-03		2.66E-01
	CS-137	661.66		85.21	3.84E-02	3.03E-01	3.03E-01
	EU-152	40.12		38.40	-3.83E-02	3.60E-01	3.60E-01
		45.38		11.10	1.27E-01		1.08E+00
		121.78		28.40	3.53E-03		3.71E-01
		244.69		7.51	-1.02E+00		2.16E+00
		344.29		26.60	1.96E-02		7.30E-01
		411.12		2.23	-3.32E+00		9.15E+00
		443.89		2.80	6.07E+00		7.35E+00

Analysis Report for RCF19619

J16V93, SAF-RC-087 FF2/618-7 BG& STOCKPILES

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		778.92		12.98	9.62E-02		1.93E+00
		867.38		4.21	5.61E-01		7.12E+00
		964.11		14.50	1.24E+00		2.40E+00
		1085.89		9.94	-3.97E-01		3.07E+00
		1089.71		1.71	5.76E+00		1.87E+01
		1112.07		13.60	-4.52E+00		2.07E+00
		1212.93		1.40	-2.85E+00		2.34E+01
		1299.16		1.63	-2.31E+00		1.87E+01
		1408.00		20.80	-1.41E+00		1.27E+00
	EU-154	123.10		40.50	2.43E-02	2.58E-01	2.58E-01
		723.36		19.70	1.54E-01		1.26E+00
		873.23		11.45	8.43E-01		2.71E+00
		1004.78		17.90	1.06E+00		1.68E+00
		1274.54		35.50	-5.14E-01		9.34E-01
	EU-155	86.54		34.00	1.71E-01	3.55E-01	3.55E-01
		105.31		20.60	-2.90E-01		5.25E-01
+	PB-212	74.81	*	10.50	7.40E-01	3.94E-01	6.98E-01
		77.11	*	17.70	5.68E-01		3.94E-01
		87.19		6.27	-1.77E+00		1.95E+00
+	RA-226d	186.11		3.28	3.74E+00	4.64E-01	4.65E+00
		241.92		7.46	-9.26E-01		2.64E+00
		295.09	*	19.20	5.27E-01		6.26E-01
		351.87	*	37.10	4.92E-01		4.64E-01
		609.31	*	46.10	2.69E-01		4.77E-01
		1120.27		15.00	1.32E+00		2.19E+00
		1764.49		15.90	-2.92E-01		2.20E+00
	TH-232d	238.58		43.60	5.92E-01	4.57E-01	4.57E-01
		338.42		12.40	1.18E+00		1.73E+00
		583.02		30.87	6.94E-01		8.94E-01
		911.16		29.00	4.91E-01		1.21E+00
		968.97		17.40	8.53E-02		2.01E+00
	U-235	143.79		10.50	5.97E-01	2.87E-01	1.19E+00
		163.38		4.70	3.82E-01		2.67E+00
		185.74		53.00	2.31E-01		2.87E-01
		205.33		4.70	1.76E+00		3.15E+00
	U-238d	63.29		3.80	1.54E+00	2.26E+00	3.14E+00
		92.56		5.41	1.57E+00		2.26E+00
	AM-241	59.54		35.70	5.03E-03	3.17E-01	3.17E-01
	CM-243	99.52		14.40	-5.53E-01	4.69E-01	7.29E-01
		103.73		23.00	-1.75E-01		4.69E-01
		116.93		8.32	-9.25E-01		1.21E+00
		228.19		10.56	-2.93E-01		1.34E+00
		277.60		14.00	-3.88E-01		1.23E+00
	CM-245	99.52		21.10	-3.77E-01	3.21E-01	4.97E-01
		103.73		33.60	-1.19E-01		3.21E-01
		116.93		12.20	-6.31E-01		8.22E-01
		174.94		9.50	-2.68E-02		1.36E+00

Analysis Report for RCF19619

J16V93, SAF-RC-087 FF2/618-7 BG& STOCKPILES

+ = 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

MAY 12 2008 Edward S Wallace

(print/sign/date)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-087-127	Page 1 of 1
Collector: B Lawrence, E. Harries	Company Contact: Joan Kessner	Telephone No.: 509-375-4688	Project Coordinator: KESSNER, JH	Price Code: 2A
Project Designation: 618-7 Burial Ground - Soil	Sampling Location: 618-7 Burial Ground/Stockpiles		SAF No.: RC-087	Data Turnaround: 24 Hours
Ice Chest No.: DELTA -1	Field Logbook No.: EL-1395-12	COA: RG61872600	Method of Shipment: GOVERNMENT VEHICLE	
Shipped To: Radiological Counting Facility	Offsite Property No.: NA		Bill of Lading/Air Bill No.: NA	

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None											
Type of Container	Snap Vial											
No. of Container(s)	1											
Volume	80g											
SAMPLE ANALYSIS	RCF GEA Shipping Screen											
Sample No.	Matrix *	Sample Date	Sample Time		RCF							
J16V93	SOIL	5/8/08	1450	X	19619						A007	1
J16V94	SOIL	5/8/08	1500	X	19620						A008	2
J16V95	SOIL	5/8/08	1510	X	19621						A009	3
~~J16V96~~	~~SOIL~~											
~~J16V97~~	~~SOIL~~											

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
E. Harries / E. Harries	1530 5/8/08	RB KERKOW / RB Kerk	1530 5/8/08
RB KERKOW / RB Kerk	1550 5/8/08	R Zimmerman	1550 5/8/08

SPECIAL INSTRUCTIONS

None

COPY

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

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

WCH-EE-011

RCF 19619

Radiological Counting Facility

Analysis Report for RCF19620

J16V94, SAF-RC-087 FF2/618-7 BG& STOCKPILES

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19620
Sample Description	: J16V94, SAF-RC-087 FF2/618-7 BG& STOCKPILES
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 5.700E+01 grams
Facility	: Default
Sample Taken On	: 5/8/2008 3:00:00PM
Acquisition Started	: 5/12/2008 6:26:26AM
Procedure	: 50 gram pill box
Operator	: RCT
Detector Name	: REGIE02
Geometry	: 50 ml Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3647.2 seconds
Dead Time	: 1.29 %
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	: 19169

J16UB2

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.999	1.30E+01	2.72E+00	
PB-212	0.708	6.90E-01	1.37E-01	
RA-226d	0.618	4.33E-01	1.55E-01	
TH-232d	0.430	5.63E-01	1.57E-01	
U-238d	0.342	1.83E+00	1.12E+00	

Analysis Report for RCF19620

J16V94, SAF-RC-087 FF2/618-7 BG& STOCKPILES

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

UNIDENTIFIED PEAKS

Peak Locate Performed on : 5/12/2008 7:27:16AM
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	1.30E+01	2.48E+00	2.48E+00
	CO-60	1173.24		99.90	1.86E-01	2.46E-01	2.46E-01
		1332.50		99.98	-6.70E-02		2.62E-01
	NB-94	702.63		99.81	1.13E-01	1.92E-01	1.92E-01
		871.10		99.89	1.46E-02		2.09E-01
	AG-108m	433.94		90.50	-1.10E-01	1.62E-01	1.62E-01
		614.28		89.80	-5.43E-02		2.79E-01
		722.94		90.80	3.01E-02		2.17E-01
	CS-137	661.66		85.21	1.24E-01	2.40E-01	2.40E-01
	EU-152	40.12		38.40	-2.24E-01	2.77E-01	2.77E-01
		45.38		11.10	8.29E-01		9.16E-01
		121.78		28.40	-4.86E-02		3.05E-01
		244.69		7.51	-2.08E+00		1.69E+00
		344.29		26.60	8.04E-02		5.87E-01
		411.12		2.23	3.66E-01		6.95E+00
		443.89		2.80	1.53E+00		5.75E+00
		778.92		12.98	-7.68E-01		1.37E+00
		867.38		4.21	8.89E-01		5.01E+00
		964.11		14.50	8.78E-01		1.92E+00
		1085.89		9.94	-6.55E-01		2.48E+00

Analysis Report for RCF19620

J16V94, SAF-RC-087 FF2/618-7 BG& STOCKPILES

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		1089.71		1.71	8.80E-01		1.43E+01
		1112.07		13.60	-1.14E+00		1.85E+00
		1212.93		1.40	1.41E+01		2.14E+01
		1299.16		1.63	-1.38E+00		1.45E+01
		1408.00		20.80	-3.06E-01		1.05E+00
	EU-154	123.10		40.50	-1.34E-01	2.17E-01	2.17E-01
		723.36		19.70	5.40E-01		1.01E+00
		873.23		11.45	-1.22E+00		1.81E+00
		1004.78		17.90	1.77E-01		1.30E+00
		1274.54		35.50	1.10E-01		7.08E-01
	EU-155	86.54		34.00	5.17E-02	2.86E-01	2.86E-01
		105.31		20.60	-3.03E-01		4.36E-01
+	PB-212	74.81	*	10.50	8.38E-01	2.79E-01	5.02E-01
		77.11	*	17.70	6.39E-01		2.79E-01
		87.19		6.27	5.83E-01		1.55E+00
+	RA-226d	186.11		3.28	1.67E+00	2.88E-01	3.44E+00
		241.92		7.46	-4.47E-01		2.26E+00
		295.09	*	19.20	3.88E-01		6.51E-01
		351.87	*	37.10	3.77E-01		4.34E-01
		609.31	*	46.10	4.79E-01		2.88E-01
		1120.27		15.00	3.14E-01		1.98E+00
		1764.49		15.90	-3.20E-01		1.80E+00
-	TH-232d	238.58	*	43.60	4.95E-01	2.78E-01	2.78E-01
		338.42		12.40	8.57E-01		1.28E+00
		583.02	*	30.87	7.14E-01		3.52E-01
		911.16		29.00	7.54E-01		9.26E-01
		968.97		17.40	-2.44E-01		1.61E+00
	U-235	143.79		10.50	1.37E-01	2.12E-01	9.66E-01
		163.38		4.70	-6.24E-02		2.35E+00
		185.74		53.00	1.03E-01		2.12E-01
		205.33		4.70	-3.77E-01		2.50E+00
+	U-238d	63.29		3.80	1.67E+00	1.78E+00	2.41E+00
		92.56	*	5.41	1.83E+00		1.78E+00
	AM-241	59.54		35.70	-1.52E-01	2.45E-01	2.45E-01
	CM-243	99.52		14.40	-1.13E-01	3.95E-01	6.16E-01
		103.73		23.00	8.87E-02		3.95E-01
		116.93		8.32	-4.28E-01		1.06E+00
		228.19		10.56	2.06E-01		1.14E+00
		277.60		14.00	-9.12E-01		9.00E-01
	CM-245	99.52		21.10	-7.73E-02	2.70E-01	4.20E-01
		103.73		33.60	6.07E-02		2.70E-01
		116.93		12.20	-2.92E-01		7.24E-01
		174.94		9.50	4.42E-01		1.13E+00

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

Analysis Report for RCF19620

J16V94, SAF-RC-087 FF2/618-7 BG& STOCKPILES

Reviewed and Approved: EDWARD S. WALLACE

MAY 12 2008 Edward S Wallace

(print/sign/date)

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-087-127 | Page 1 of 1

Washington Closure Hanford

Collector: B Lawrence, E. Harries	Company Contact: Joan Kessner	Telephone No.: 509-375-4688	Project Coordinator: KESSNER, JH
Price Code: 2A	Data Turnaround: 24 Hours		
Project Designation: 618-7 Burial Ground - Soil	Sampling Location: 618-7 Burial Ground/Stockpiles		SAF No.: RC-087
Ice Chest No.: DELTA -1	Field Logbook No.: EL-1395-12	COA: RG61872600	Method of Shipment: GOVERNMENT VEHICLE
Shipped To: Radiological Counting Facility	Offsite Property No.: NA		Bill of Lading/Air Bill No.: NA

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

SAMPLE ANALYSIS

Preservation	None												
Type of Container	Snap Vial												
No. of Container(s)	1												
Volume	80g												
	RCF GEA Shipping Screen												
					RCF								
Sample No.	Matrix *	Sample Date	Sample Time										
J16V93	SOIL	5/8/08	1450	X	19619							A007	1
J16V94	SOIL	5/8/08	1500	X	19620							A008	2
J16V95	SOIL	5/8/08	1510	X	19621							A009	3
~~J16V96~~	~~SOIL~~												
~~J16V97~~	~~SOIL~~												

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
C. Harris / E. Harris	1530 5/8/08	RB KERKOW / RB Kerkow	1530 5/8/08
RB KERKOW / RB Kerkow	1550 5/8/08	R Zimmerman	1550 5/8/08

SPECIAL INSTRUCTIONS

None

COPY

Matrix *

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

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

WCHLEF011

RCF 19620

Radiological Counting Facility

Analysis Report for RCF19621

J16V95, SAF-RC-087 FF2/618-7 BG& STOCKPILES

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19621
Sample Description	: J16V95, SAF-RC-087 FF2/618-7 BG& STOCKPILES
Sample Type	: 50 gram pill box
Unit	:
Sample Point	

J16VB3

Sample Size	: 5.300E+01 grams
Facility	: Default
Sample Taken On	: 5/8/2008 3:10:00PM
Acquisition Started	: 5/12/2008 6:26:33AM
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	: 19170

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.996	1.43E+01	3.60E+00	
PB-212	0.708	6.53E-01	2.01E-01	
RA-226d	0.350	5.26E-01	2.19E-01	

Analysis Report for RCF19621

J16V95, SAF-RC-087 FF2/618-7 BG& STOCKPILES

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

UNIDENTIFIED PEAKS

Peak Locate Performed on : 5/12/2008 7:26:41AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

Peak No.	Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
1	63.28	Th234	1.19E-02	41.47
4	238.69	Pb-212	1.58E-02	34.30

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	1.43E+01	4.06E+00	4.06E+00
	CO-60	1173.24		99.90	-7.35E-02	3.38E-01	3.46E-01
		1332.50		99.98	5.93E-02		3.38E-01
	NB-94	702.63		99.81	1.17E-02	2.47E-01	2.47E-01
		871.10		99.89	5.59E-02		2.85E-01
	AG-108m	433.94		90.50	-2.16E-02	2.14E-01	2.14E-01
		614.28		89.80	-1.85E-01		3.03E-01
		722.94		90.80	4.35E-02		2.73E-01
	CS-137	661.66		85.21	1.58E-01	2.87E-01	2.87E-01
	EU-152	40.12		38.40	-4.42E-02	3.01E-01	3.01E-01
		45.38		11.10	1.03E+00		1.05E+00
		121.78		28.40	1.27E-01		3.37E-01
		244.69		7.51	1.20E+00		2.24E+00
		344.29		26.60	-1.80E-01		6.66E-01
		411.12		2.23	1.95E+00		7.52E+00
		443.89		2.80	-2.22E+00		6.80E+00
		778.92		12.98	4.20E-02		1.69E+00
		867.38		4.21	-4.22E+00		6.75E+00

Analysis Report for RCF19621

J16V95, SAF-RC-087 FF2/618-7 BG& STOCKPILES

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		964.11		14.50	3.39E-01		2.21E+00
		1085.89		9.94	-2.61E+00		2.60E+00
		1089.71		1.71	-1.33E+01		1.58E+01
		1112.07		13.60	-6.47E-01		2.48E+00
		1212.93		1.40	-1.39E+01		2.21E+01
		1299.16		1.63	-5.62E+00		1.75E+01
		1408.00		20.80	-5.29E-01		1.54E+00
	EU-154	123.10		40.50	9.80E-02	2.34E-01	2.34E-01
		723.36		19.70	2.01E-01		1.26E+00
		873.23		11.45	-6.49E-01		2.38E+00
		1004.78		17.90	-2.22E-01		1.78E+00
		1274.54		35.50	-4.94E-01		8.62E-01
	EU-155	86.54		34.00	1.94E-02	3.51E-01	3.51E-01
		105.31		20.60	4.17E-02		4.50E-01
+	PB-212	74.81	*	10.50	5.36E-01	4.88E-01	8.36E-01
		77.11	*	17.70	7.14E-01		4.88E-01
		87.19		6.27	1.85E+00		1.96E+00
+	RA-226d	186.11		3.28	5.06E+00	4.62E-01	4.85E+00
		241.92		7.46	1.18E-01		3.04E+00
		295.09		19.20	-1.97E-01		8.99E-01
		351.87	*	37.10	5.35E-01		4.75E-01
		609.31	*	46.10	5.18E-01		4.62E-01
		1120.27		15.00	1.35E+00		2.55E+00
		1764.49		15.90	1.44E+00		2.52E+00
	TH-232d	238.58		43.60	8.64E-01	5.26E-01	5.26E-01
		338.42		12.40	8.56E-01		1.68E+00
		583.02		30.87	8.05E-01		9.58E-01
		911.16		29.00	1.05E+00		1.18E+00
		968.97		17.40	1.35E+00		1.94E+00
	U-235	143.79		10.50	-1.50E-01	3.00E-01	1.02E+00
		163.38		4.70	4.57E-01		2.37E+00
		185.74		53.00	3.13E-01		3.00E-01
		205.33		4.70	-9.86E-02		3.05E+00
	U-238d	63.29		3.80	-8.85E-02	2.44E+00	2.97E+00
		92.56		5.41	4.77E+00		2.44E+00
	AM-241	59.54		35.70	-2.86E-02	2.64E-01	2.64E-01
	CM-243	99.52		14.40	-9.76E-02	4.01E-01	6.37E-01
		103.73		23.00	-8.29E-02		4.01E-01
		116.93		8.32	-5.17E-02		1.17E+00
		228.19		10.56	-7.08E-01		1.32E+00
		277.60		14.00	5.77E-01		1.18E+00
	CM-245	99.52		21.10	-6.66E-02	2.75E-01	4.34E-01
		103.73		33.60	-5.67E-02		2.75E-01
		116.93		12.20	-3.52E-02		7.99E-01
		174.94		9.50	-9.26E-02		1.29E+00

Analysis Report for RCF19621

J16V95, SAF-RC-087 FF2/618-7 BG& STOCKPILES

+ = 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

MAY 12 2008 Edward S Wallace
(print/sign/date)

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-087-127 | Page 1 of 1

Washington Closure Hanford

Collector: B Lawrence, E. Harries	Company Contact: Joan Kessner	Telephone No.: 509-375-4688	Project Coordinator: KESSNER, JH
Project Designation: 618-7 Burial Ground - Soil	Sampling Location: 618-7 Burial Ground/Stockpiles		SAF No.: RC-087
Ice Chest No.: Delta -1	Field Logbook No.: EL-1395-12	COA: RG61872600	Method of Shipment: Government Vehicle
Shipped To: Radiological Counting Facility	Offsite Property No.: NA		Bill of Lading/Air Bill No.: NA

Price Code: 2A

Data Turnaround: 24 Hours

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None
Type of Container	Snap Vial
No. of Container(s)	1
Volume	80g

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	RCF GEA Shipping Screen	RCF								
J16V93	SOIL	5/8/08	1450	X	19619							A007	1
J16V94	SOIL	5/8/08	1500	X	19620							A008	2
J16V95	SOIL	5/8/08	1510	X	19621							A009	3
~~J16V96~~	~~SOIL~~												
~~J16V97~~	~~SOIL~~												

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
E. Harris / E. Harris	1530 5/8/08	RB Kerkow / RB Kerkow	1530 5/8/08
RB Kerkow / RB Kerkow	1550 5/8/08	R Zimmerman	1550 5/8/08

SPECIAL INSTRUCTIONS

None

COPY

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

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

RCF 19621

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 51208 1455 GM Screen Result 0.2K

Client: WCH SDG #: J00171 NA[ ] SAF #: RC-087 NA [ ]

Work Order Number: J8E120187 Chain of Custody # RC-087-130

Shipping Container ID: _____ Air Bill # _____

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

Sample Custodian: [signature] Date: 51208

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-087-131	Page 1 of 1
Collector: B Lawrence, E. Harries	Company Contact: Joan Kessner	Telephone No.: 509-375-4688	Project Coordinator: KESSNER, JH	Price Code: 2B; Data Turnaround: 24 Hours
Project Designation: 618-7 Burial Ground - Soil	Sampling Location: 618-7 Burial Ground/Stockpiles		SAF No.: RC-087	
Ice Chest No.: ERC-97-079	Field Logbook No.: EL-1395-12	COA: RG61872600	Method of Shipment: Gov't 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 RTC 5/13/08										
Type of Container	~~2~~ 6										
No. of Container(s)	1										
Volume	60mL										
SAMPLE ANALYSIS	See item (1) in Special Instructions.										

Sample No.	Matrix *	Sample Date	Sample Time										DRUM
J16VB4 KNGFR	SOIL	5/13/08	0930	X							VERMICULITE		0237

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Lawrence [signature]	1200 5-13-08	RT Coffman/RT Coffman	1200 5/13/08
RT Coffman/RT Coffman	1535 5/13/08	REFER #1A, 1060 BLDG	1535 5/13/08
1060/1A 0900	MAY 19 2008	[signature] MStankovich	0900 MAY 19 2008
[signature] MStankovich WCH	1035 MAY 19 2008	[signature] LS LANE TAL	1035 51908

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}

J8E190148
J00171
DUE 5 20 08

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			RC-087-132	Page 1 of 1
Collector: B Lawrence, E. Harries	Company Contact: Joan Kessner	Telephone No.: 509-375-4688	Project Coordinator: KESSNER, JH	Price Code: 2B	Data Turnaround: 24 Hours
Project Designation: 618-7 Burial Ground - Soil	Sampling Location: 618-7 Burial Ground/Stockpiles		SAF No.: RC-087		
Ice Chest No.: ERC-97-079	Field Logbook No.: EL-1395-12	COA: RG61872600	Method of Shipment: GOVERNMENT VEHICLE		
Shipped To: TestAmerica Incorporated, Richland	Offsite Property No.: NA		Bill of Lading/Air Bill No.: NA		

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None RTC 5/15/08										
Type of Container	~~2G~~										
No. of Container(s)	1										
Volume	60mL										
SAMPLE ANALYSIS	See item (1) in Special Instructions.										

Sample No.	Matrix *	Sample Date	Sample Time									
J16VB5 KNGFW	SOIL	5-15-08	0815	X				TIED TO J16V97			A-010	1
J16VB6 KNGFX	SOIL	5-15-08	0820	X				" " J16V98			A-011	2
J16VB7 KNGF2	SOIL	5-15-08	0825	X				" " J16V99			A-012	3

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
E. Harries / E. Harries	0905 5/15/08	RTCoffman / RTCoffman	0905 5/15/08
RTCoffman / RT Coffman	0930 5/15/08	REFER #1A, 1060 BLDG	0930 5/15/08
1060/1A 0900	MAY 19 2008	0900 mstankovich	MAY 19 2008
mstankovich WCH	1035 MAY 19 2008	RLVLANE TAL 51908	1035

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}

J8E190148
J00171
DUE 52008

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

Matrix *

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

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

WCH-EE-011

Radiological Counting Facility

Analysis Report for RCF19629-1

J16V96 SAF-RC-087 618-7 BG/STOCKPILE

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19629-1
Sample Description	[redacted]SAF-RC-087 618-7 BG/STOCKPILE
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 7.000E+00 grams
Facility	: Default
Sample Taken On	: 5/13/2008 9:30:00PM
Acquisition Started	: 5/14/2008 3:35:07PM
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	: 19239

J16V84

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.986	6.26E+01	2.13E+01	
TH-232d		0.341	2.73E+00	1.87E+00	
U-235		0.999	4.63E+01	3.44E+00	
U-238d	@	1.000	7.44E+02	5.97E+01	

Analysis Report for RCF19629-1

J16V96 SAF-RC-087 618-7 BG/STOCKPILE

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

UNIDENTIFIED PEAKS

Peak Locate Performed on : 5/14/2008 4:35:16PM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

Peak No.	Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
2	84.14	Th-231	5.00E-02	24.19
4	98.43	Th-234	2.92E-02	41.56
11	1001.29	Th-234m	2.63E-02	13.12

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	6.26E+01	2.59E+01	2.59E+01
	CO-60	1173.24		99.90	-1.73E+00	2.36E+00	2.36E+00
		1332.50		99.98	1.90E+00		2.73E+00
	NB-94	702.63		99.81	-6.06E-02	1.98E+00	2.16E+00
		871.10		99.89	3.79E-01		1.98E+00
	AG-108m	433.94		90.50	-6.83E-01	1.86E+00	1.86E+00
		614.28		89.80	3.67E-01		2.48E+00
		722.94		90.80	-2.53E-01		2.27E+00
	CS-137	661.66		85.21	4.07E-01	2.36E+00	2.36E+00
	EU-152	40.12		38.40	2.06E+00	3.90E+00	4.67E+00
		45.38		11.10	3.45E+00		1.34E+01
		121.78		28.40	1.11E+00		3.90E+00
		244.69		7.51	-4.06E-01		1.86E+01
		344.29		26.60	-1.80E+00		6.02E+00
		411.12		2.23	5.36E+01		7.47E+01
		443.89		2.80	-3.03E+01		6.07E+01
		778.92		12.98	-5.07E+00		1.56E+01

Analysis Report for RCF19629-1

J16V96 SAF-RC-087 618-7 BG/STOCKPILE

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		867.38		4.21	-2.72E+01		4.50E+01
		964.11		14.50	2.62E+00		1.71E+01
		1085.89		9.94	8.89E+00		2.41E+01
		1089.71		1.71	5.51E+01		1.43E+02
		1112.07		13.60	4.90E-01		1.44E+01
		1212.93		1.40	8.18E+01		1.92E+02
		1299.16		1.63	5.33E+01		1.32E+02
		1408.00		20.80	2.04E-01		1.00E+01
	EU-154	123.10		40.50	2.50E+00	2.80E+00	2.80E+00
		723.36		19.70	-1.17E+00		1.05E+01
		873.23		11.45	-8.81E+00		1.66E+01
		1004.78		17.90	9.59E-01		2.39E+01
		1274.54		35.50	7.59E-01		6.11E+00
	EU-155	86.54		34.00	-4.94E+00	5.21E+00	5.21E+00
		105.31		20.60	-9.58E+00		5.84E+00
	PB-212	74.81		10.50	-1.90E+00	9.25E+00	1.35E+01
		77.11		17.70	2.39E+00		9.25E+00
		87.19		6.27	-2.40E+01		2.82E+01
	RA-226d	186.11		3.28	7.55E+02	4.49E+00	1.05E+02
		241.92		7.46	-2.68E+00		2.39E+01
		295.09		19.20	5.64E+00		7.51E+00
		351.87		37.10	1.27E+00		4.49E+00
		609.31		46.10	2.30E+00		4.75E+00
		1120.27		15.00	2.46E+00		1.65E+01
		1764.49		15.90	8.40E+00		1.82E+01
+	TH-232d	238.58	*	43.60	2.65E+00	3.77E+00	3.77E+00
		338.42		12.40	1.33E+01		1.33E+01
		583.02		30.87	6.15E+00		7.04E+00
		911.16	*	29.00	2.86E+00		5.05E+00
		968.97		17.40	2.21E+00		1.59E+01
+	U-235	143.79	*	10.50	4.38E+01	2.67E+00	1.09E+01
		163.38	*	4.70	5.66E+01		2.95E+01
		185.74	*	53.00	4.63E+01		2.67E+00
		205.33	*	4.70	4.75E+01		2.50E-01
+	U-238d	63.29	*	3.80	7.44E+02	3.98E+01	4.43E+01
		92.56	*	5.41	7.22E+02		3.98E+01
	AM-241	59.54		35.70	-3.37E-01	3.96E+00	3.96E+00
	CM-243	99.52		14.40	-1.58E+00	5.29E+00	1.13E+01
		103.73		23.00	5.67E-01		5.29E+00
		116.93		8.32	-2.85E+01		1.45E+01
		228.19		10.56	8.56E+00		1.33E+01
		277.60		14.00	5.04E+00		1.03E+01
	CM-245	99.52		21.10	-1.08E+00	3.62E+00	7.71E+00
		103.73		33.60	3.88E-01		3.62E+00
		116.93		12.20	-1.95E+01		9.88E+00
		174.94		9.50	-4.74E-01		1.34E+01

Analysis Report for RCF19629-1

J16V96 SAF-RC-087 618-7 BG/STOCKPILE

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

Reviewed and Approved: EDWARD S. WALLACE

MAY 15 2008 (print/sign/date)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-128	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/Stockpiles		SAF No.: RC-087
Ice Chest No.: ERC-97-077	Field Logbook No.: EL-1395-12	COA: RG61872600	Method of Shipment: GOV'T 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										DRUM
Sample No.	Matrix *	Sample Date	Sample Time								
J16V96	SOIL	5/13/08	930	X		196029			VERMICULITE		0237

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: B Lawrence	Date/Time: 1200 5-13-08	Received By/Stored In: RT Coffman / RT Coffman	Date/Time: 1200 5/13/08
Relinquished By/Removed From: RT Coffman / RT Coffman 5/13/08	Date/Time: 1535	Received By/Stored In: Refer # 1A, 1060 Bldg, 5/13/08	Date/Time: 1535
Relinquished By/Removed From: 1060/1A 0830	Date/Time: MAY 14 2008	Received By/Stored In: 0830 MSTankovich	Date/Time: MAY 14 2008
Relinquished By/Removed From: 0845 MSTankovich	Date/Time: MAY 14 2008	Received By/Stored In: RCF D. Miller / Dmiller	Date/Time: 0845 5/14/08
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

None

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 RCF19688

J16V97 FF2 618-7 BG/STOCKPILES A-010

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19688
Sample Description	[redacted]F2 618-7 BG/STOCKPILES A-010
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 4.300E+01 grams
Facility	: Default
Sample Taken On	: 5/15/2008 8:15:00AM
Acquisition Started	: 5/15/2008 12:14:46PM
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	: 19276

J16U B5

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.998	2.24E+01	4.48E+00	
U-238d	@	1.000	1.97E+00	2.20E+00	

Analysis Report for RCF19688

J16V97 FF2 618-7 BG/STOCKPILES A-010

? = 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 : 5/15/2008 1:14:51PM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Rate (CPS)	Peak Rate (%) Uncertainty
2	77.21 Pb-212	2.11E-02	34.68
4	238.64 Pb-212	2.23E-02	25.73
5	968.89 Ac-228	2.99E-03	61.34

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

NP = No Peak
UK = Unknown

NUCLIDE MDA REPORT

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

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	K-40	1460.83	*	10.67	2.24E+01	3.99E+00	3.99E+00
	CO-60	1173.24		99.90	5.81E-02	4.08E-01	4.08E-01
		1332.50		99.98	2.72E-01		4.23E-01
	NB-94	702.63		99.81	2.13E-01	2.81E-01	3.22E-01
		871.10		99.89	5.76E-02		2.81E-01
	AG-108m	433.94		90.50	1.02E-01	2.49E-01	2.49E-01
		614.28		89.80	-1.38E-01		3.53E-01
		722.94		90.80	2.27E-02		3.29E-01
	CS-137	661.66		85.21	1.84E-01	3.41E-01	3.41E-01
	EU-152	40.12		38.40	-8.60E-02	3.77E-01	3.77E-01
		45.38		11.10	9.05E-01		1.24E+00
		121.78		28.40	7.35E-02		3.94E-01
		244.69		7.51	-2.66E+00		2.52E+00
		344.29		26.60	-1.18E+00		6.88E-01
		411.12		2.23	2.06E+00		1.06E+01
		443.89		2.80	2.57E+00		8.13E+00
		778.92		12.98	1.53E-01		2.44E+00

Analysis Report for RCF19688

J16V97 FF2 618-7 BG/STOCKPILES A-010

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		867.38		4.21	-4.11E+00		6.40E+00
		964.11		14.50	-7.88E-01		3.02E+00
		1085.89		9.94	-2.52E+00		3.98E+00
		1089.71		1.71	5.48E+00		2.44E+01
		1112.07		13.60	-1.53E+00		2.81E+00
		1212.93		1.40	-2.62E+00		3.17E+01
		1299.16		1.63	5.12E-01		2.35E+01
		1408.00		20.80	8.18E-02		1.98E+00
	EU-154	123.10		40.50	1.46E-01	2.86E-01	2.86E-01
		723.36		19.70	1.05E-01		1.52E+00
		873.23		11.45	5.32E-01		2.59E+00
		1004.78		17.90	8.38E-01		2.03E+00
		1274.54		35.50	-2.82E-01		1.18E+00
	EU-155	86.54		34.00	9.45E-02	3.86E-01	3.86E-01
		105.31		20.60	4.94E-01		5.54E-01
	PB-212	74.81		10.50	-2.53E-02	1.04E+00	1.45E+00
		77.11		17.70	1.62E+00		1.04E+00
		87.19		6.27	4.45E-01		2.14E+00
	RA-226d	186.11		3.28	6.38E+00	7.33E-01	5.76E+00
		241.92		7.46	-8.98E-01		3.55E+00
		295.09		19.20	6.12E-02		1.11E+00
		351.87		37.10	9.79E-01		7.33E-01
		609.31		46.10	9.92E-01		8.42E-01
		1120.27		15.00	1.87E+00		2.99E+00
		1764.49		15.90	1.81E+00		2.60E+00
	TH-232d	238.58		43.60	8.11E-01	6.21E-01	6.21E-01
		338.42		12.40	1.31E+00		1.95E+00
		583.02		30.87	5.21E-01		1.05E+00
		911.16		29.00	5.30E-01		1.33E+00
		968.97		17.40	1.75E+00		2.59E+00
	U-235	143.79		10.50	-5.69E-01	3.56E-01	1.18E+00
		163.38		4.70	-8.94E-01		3.17E+00
		185.74		53.00	3.94E-01		3.56E-01
		205.33		4.70	3.24E-01		3.48E+00
+	U-238d	63.29	*	3.80	1.97E+00	2.66E+00	3.59E+00
		92.56	*	5.41	3.46E+00		2.66E+00
	AM-241	59.54		35.70	3.14E-02	2.99E-01	2.99E-01
	CM-243	99.52		14.40	-2.58E-01	4.80E-01	7.87E-01
		103.73		23.00	-8.09E-02		4.80E-01
		116.93		8.32	-4.52E-01		1.35E+00
		228.19		10.56	1.58E-01		1.64E+00
		277.60		14.00	-2.23E-01		1.29E+00
	CM-245	99.52		21.10	-1.76E-01	3.28E-01	5.37E-01
		103.73		33.60	-5.54E-02		3.28E-01
		116.93		12.20	-3.08E-01		9.20E-01
		174.94		9.50	4.84E-01		1.64E+00

Analysis Report for RCF19688

J16V97 FF2 618-7 BG/STOCKPILES A-010

+ = 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

MAY 15 2008

(print/sign/date)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-087-133	Page 1 of 1
Collector B Lawrence, E. Harries	Company Contact Joan Kessner	Telephone No. 509-375-4688	Project Coordinator KESSNER, JH	Price Code 2A
Project Designation 618-7 Burial Ground - Soil	Sampling Location 618-7 Burial Ground/Stockpiles		SAF No. RC-087	Data Turnaround 24 Hours
Ice Chest No.	Field Logbook No. EL-1395-12	COA RG61872600	Method of Shipment GOVERNMENT VEHICLE	
Shipped To Radiological Counting Facility	Offsite Property No. NA		Bill of Lading/Air Bill No. NA	

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

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

Sample No.	Matrix *	Sample Date	Sample Time									
J16V97	SOIL	5-15-08	0815	X	19688						A-010	1
J16V98	SOIL	5-15-08	0820	X	19689						A-011	2
J16V99	SOIL	5-15-08	0825	X	19690						A-012	3

CHAIN OF POSSESSION		Sign/Print Names	
Relinquished By/Removed From E. Harries / E. Harries	Date/Time 0905 5/15/08	Received By/Stored In RT Coffman / RT Coffman	Date/Time 0905 5/15/08
Relinquished By/Removed From RT Coffman / RT Coffman	Date/Time 0930 5/15/08	Received By/Stored In MZK MStankovich	Date/Time 0930 MAY 15 2008
Relinquished By/Removed From MZK MStankovich	Date/Time 1015 MAY 15 2008	Received By/Stored In KCF K. Ellison 5-15-08	Date/Time 1015
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

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

Matrix *

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

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

WCH-EE-011

RCF 19688

Radiological Counting Facility

Analysis Report for RCF19689

J16V98FF2 618-7 BG/STOCKPILES A-011

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19689
Sample Description	[redacted]F2 618-7 BG/STOCKPILES A-011
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 4.100E+01 grams
Facility	: Default
Sample Taken On	: 5/15/2008 8:20:00AM
Acquisition Started	: 5/15/2008 12:28:10PM
Procedure	: 50 gram pill box
Operator	: RCT
Detector Name	: REGIE02
Geometry	: 50 ml Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3651.6 seconds
Dead Time	: 1.41 %
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	: 19280

J16VB6

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.994	1.11E+01	3.12E+00	
PB-212	0.709	6.67E-01	1.84E-01	
RA-226d	0.346	3.02E-01	1.73E-01	
TH-232d	0.596	5.48E-01	1.93E-01	

Analysis Report for RCF19689

J16V98FF2 618-7 BG/STOCKPILES A-011

? = 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 : 5/15/2008 1:29:08PM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Rate (CPS)	Peak Rate (%) Uncertainty
6	510.69 Annihilation photons single/escape	7.54E-03	50.68

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	1.11E+01	3.31E+00	3.31E+00
	CO-60	1173.24		99.90	9.05E-02	3.30E-01	3.30E-01
		1332.50		99.98	2.61E-01		3.77E-01
	NB-94	702.63		99.81	-1.97E-02	2.67E-01	2.67E-01
		871.10		99.89	4.93E-02		3.02E-01
	AG-108m	433.94		90.50	-2.07E-01	1.89E-01	1.89E-01
		614.28		89.80	6.27E-02		3.11E-01
		722.94		90.80	1.73E-01		3.45E-01
	CS-137	661.66		85.21	2.33E-01	3.25E-01	3.25E-01
	EU-152	40.12		38.40	2.44E-01	4.00E-01	4.01E-01
		45.38		11.10	1.96E-01		1.22E+00
		121.78		28.40	4.68E-02		4.00E-01
		244.69		7.51	1.11E+00		2.31E+00
		344.29		26.60	-5.58E-01		7.13E-01
		411.12		2.23	7.27E-01		9.55E+00
		443.89		2.80	3.13E+00		8.32E+00
		778.92		12.98	1.46E+00		2.15E+00
		867.38		4.21	-8.77E-01		8.18E+00
		964.11		14.50	5.36E-01		2.42E+00

Analysis Report for RCF19689

J16V98FF2 618-7 BG/STOCKPILES A-011

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		1085.89		9.94	-2.37E-01		3.19E+00
		1089.71		1.71	5.71E+00		1.95E+01
		1112.07		13.60	-1.69E+00		2.68E+00
		1212.93		1.40	-1.87E-02		2.43E+01
		1299.16		1.63	1.88E+01		2.10E+01
		1408.00		20.80	-8.57E-01		1.50E+00
	EU-154	123.10		40.50	1.05E-02	2.82E-01	2.82E-01
		723.36		19.70	5.70E-01		1.57E+00
		873.23		11.45	8.02E-01		2.64E+00
		1004.78		17.90	3.13E-01		1.93E+00
		1274.54		35.50	5.59E-01		1.09E+00
	EU-155	86.54		34.00	3.12E-01	4.01E-01	4.01E-01
		105.31		20.60	1.36E-01		5.59E-01
+	PB-212	74.81	*	10.50	7.13E-01	4.48E-01	7.90E-01
		77.11	*	17.70	6.49E-01		4.48E-01
		87.19		6.27	-2.75E+00		2.15E+00
+	RA-226d	186.11		3.28	2.71E+00	3.42E-01	4.68E+00
		241.92		7.46	9.27E-01		3.08E+00
		295.09		19.20	2.16E-01		1.04E+00
		351.87	*	37.10	3.80E-01		3.42E-01
		609.31	*	46.10	2.02E-01		4.32E-01
		1120.27		15.00	-5.31E-01		2.38E+00
		1764.49		15.90	2.11E+00		2.63E+00
+	TH-232d	238.58	*	43.60	5.26E-01	3.52E-01	3.52E-01
		338.42	*	12.40	8.62E-01		1.06E+00
		583.02	*	30.87	5.04E-01		6.01E-01
		911.16		29.00	1.83E-01		1.26E+00
		968.97		17.40	5.37E-01		2.05E+00
	U-235	143.79		10.50	1.14E-01	2.89E-01	1.32E+00
		163.38		4.70	7.79E-01		3.01E+00
		185.74		53.00	1.68E-01		2.89E-01
		205.33		4.70	-1.31E-01		3.34E+00
	U-238d	63.29		3.80	1.04E+00	2.40E+00	3.05E+00
		92.56		5.41	1.51E-01		2.40E+00
	AM-241	59.54		35.70	1.28E-01	3.20E-01	3.20E-01
	CM-243	99.52		14.40	-1.29E+00	4.79E-01	7.11E-01
		103.73		23.00	-1.25E-01		4.79E-01
		116.93		8.32	1.15E-01		1.43E+00
		228.19		10.56	1.88E-01		1.59E+00
		277.60		14.00	1.09E+00		1.32E+00
	CM-245	99.52		21.10	-8.79E-01	3.28E-01	4.85E-01
		103.73		33.60	-8.57E-02		3.28E-01
		116.93		12.20	7.81E-02		9.77E-01
		174.94		9.50	-4.70E-02		1.51E+00

Analysis Report for RCF19689

J16V98FF2 618-7 BG/STOCKPILES A-011

+ = 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

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-087-133	Page 1 of 1
Collector: B Lawrence, E. Harries	Company Contact: Joan Kessner	Telephone No.: 509-375-4688	Project Coordinator: KESSNER, JH	Price Code: 2A
Project Designation: 618-7 Burial Ground - Soil	Sampling Location: 618-7 Burial Ground/Stockpiles		SAF No.: RC-087	Data Turnaround: 24 Hours
Ice Chest No.	Field Logbook No.: EL-1395-12	COA: RG61872600	Method of Shipment: GOVERNMENT VEHICLE	
Shipped To: Radiological Counting Facility	Offsite Property No.: NA		Bill of Lading/Air Bill No.: NA	

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None											
Type of Container	Snap Vial											
No. of Container(s)	1											
Volume	80g											
SAMPLE ANALYSIS	RCF GEA Shipping Screen											
Sample No. / Matrix * / Sample Date / Sample Time												
J16V97 / SOIL / 5-15-08 / 0815	X	19688									A-010	1
J16V98 / SOIL / 5-15-08 / 0820	X	19689									A-011	2
J16V99 / SOIL / 5-15-08 / 0825	X	19690									A-012	3

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
E. Harries / E. Harries	0905 5/15/08	RT Coffman / RT Coffman	0905 5/15/08
RT Coffman / RT Coffman	0930 5/15/08	MJ Mstankoach	0930 MAY 15 2008
MJ Mstankoach	1015 MAY 15 2008	K. Ellison 5-15-08	KCF 1015

SPECIAL INSTRUCTIONS

None

COPY

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

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

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

WCH-EE-011

RCF 19689

Radiological Counting Facility

Analysis Report for RCF19690

J16V99 FF2 618-7 BG/STOCKPILES A-012

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19690
Sample Description	: J[redacted]2 618-7 BG/STOCKPILES A-012
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 4.500E+01 grams
Facility	: Default
Sample Taken On	: 5/15/2008 8:25:00AM
Acquisition Started	: 5/15/2008 1:10:48PM
Procedure	: 50 gram pill box
Operator	: RCT
Detector Name	: BEGE
Geometry	: 50 ml Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3600.2 seconds
Dead Time	: 0.00 %
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	: 3/31/2008
Efficiency Calibration Description	: 50 ml Pill Box 3-31-2008
Sample Number	: 19282

J16UB7

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	1.000	1.65E+01	3.51E+00	
TH-232d	0.689	5.44E-01	1.48E-01	
U-238d	0.349	9.52E-01	6.67E-01	

Analysis Report for RCF19690

J16V99 FF2 618-7 BG/STOCKPILES A-012

? = 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 : 5/15/2008 2:10:55PM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Rate (CPS)	Peak Rate (%) Uncertainty
1	77.26 Pb212	2.20E-02	27.06
4	295.38 Pb214	7.02E-03	47.43

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	1.65E+01	2.07E+00	2.07E+00
	CO-60	1173.24		99.90	1.55E-01	3.55E-01	3.55E-01
		1332.50		99.98	1.71E-01		3.83E-01
	NB-94	702.63		99.81	1.96E-02	2.09E-01	2.09E-01
		871.10		99.89	1.52E-02		2.29E-01
	AG-108m	433.94		90.50	8.02E-03	1.32E-01	1.32E-01
		614.28		89.80	-1.16E-01		2.40E-01
		722.94		90.80	-1.53E-02		2.08E-01
	CS-137	661.66		85.21	-8.97E-02	1.91E-01	1.91E-01
	EU-152	40.12		38.40	2.23E-02	1.19E-01	1.19E-01
		45.38		11.10	0.00E+00		3.50E-01
		121.78		28.40	-5.32E-02		1.25E-01
		244.69		7.51	-9.99E-01		1.06E+00
		344.29		26.60	9.08E-02		3.82E-01
		411.12		2.23	-8.30E-01		5.76E+00
		443.89		2.80	-6.12E-02		4.16E+00
		778.92		12.98	-3.80E-01		1.78E+00
		867.38		4.21	-1.77E+00		5.40E+00

Analysis Report for RCF19690

J16V99 FF2 618-7 BG/STOCKPILES A-012

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		964.11		14.50	1.29E+00		2.17E+00
		1085.89		9.94	-3.85E-01		2.81E+00
		1089.71		1.71	-2.76E+00		1.60E+01
		1112.07		13.60	7.23E-01		2.27E+00
		1212.93		1.40	4.10E+00		2.58E+01
		1299.16		1.63	2.50E+00		1.34E+01
		1408.00		20.80	-3.46E-01		8.76E-01
	EU-154	123.10		40.50	-2.76E-03	9.18E-02	9.18E-02
		723.36		19.70	-3.52E-01		9.37E-01
		873.23		11.45	3.33E-01		2.18E+00
		1004.78		17.90	1.30E+00		1.64E+00
		1274.54		35.50	-6.43E-02		8.35E-01
	EU-155	86.54		34.00	3.65E-02	1.68E-01	1.68E-01
		105.31		20.60	-2.81E-02		2.04E-01
	PB-212	74.81		10.50	6.86E-01	4.19E-01	5.99E-01
		77.11		17.70	6.83E-01		4.19E-01
		87.19		6.27	7.40E-01		8.97E-01
	RA-226d	186.11		3.28	1.61E+00	4.02E-01	2.33E+00
		241.92		7.46	4.75E-01		1.35E+00
		295.09		19.20	4.28E-01		6.92E-01
		351.87		37.10	3.46E-01		4.02E-01
		609.31		46.10	7.83E-01		5.70E-01
		1120.27		15.00	1.04E+00		2.37E+00
		1764.49		15.90	3.66E-01		2.52E+00
+	TH-232d	238.58	*	43.60	4.50E-01	2.66E-01	2.66E-01
		338.42		12.40	1.41E+00		1.07E+00
		583.02	*	30.87	7.15E-01		3.38E-01
		911.16	*	29.00	7.08E-01		5.91E-01
		968.97		17.40	1.24E+00		1.90E+00
	U-235	143.79		10.50	2.03E-03	1.48E-01	5.57E-01
		163.38		4.70	-4.65E-01		1.16E+00
		185.74		53.00	1.31E-01		1.48E-01
		205.33		4.70	2.22E-01		1.45E+00
+	U-238d	63.29		3.80	-7.56E-03	9.18E-01	9.18E-01
		92.56	*	5.41	9.52E-01		1.05E+00
	AM-241	59.54		35.70	-4.38E-02	7.92E-02	7.92E-02
	CM-243	99.52		14.40	-1.16E-02	1.93E-01	3.07E-01
		103.73		23.00	-5.10E-03		1.93E-01
		116.93		8.32	1.55E-01		5.45E-01
		228.19		10.56	3.56E-01		7.01E-01
		277.60		14.00	2.59E-01		8.19E-01
	CM-245	99.52		21.10	-7.90E-03	1.32E-01	2.09E-01
		103.73		33.60	-3.49E-03		1.32E-01
		116.93		12.20	1.06E-01		3.72E-01
		174.94		9.50	-3.81E-02		7.03E-01

Analysis Report for RCF19690

J16V99 FF2 618-7 BG/STOCKPILES A-012

+ = 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

MAY 15 2008 Edward S Wallace

(print/sign/date)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-087-133	Page 1 of 1
Collector: B Lawrence, E. Harries	Company Contact: Joan Kessner	Telephone No.: 509-375-4688	Project Coordinator: KESSNER, JH	Price Code: 2A
Project Designation: 618-7 Burial Ground - Soil	Sampling Location: 618-7 Burial Ground/Stockpiles		SAF No.: RC-087	Data Turnaround: 24 Hours
Ice Chest No.	Field Logbook No.: EL-1395-12	COA: RG61872600	Method of Shipment: GOVERNMENT VEHICLE	
Shipped To: Radiological Counting Facility	Offsite Property No.: NA		Bill of Lading/Air Bill No.: NA	

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None
Type of Container	Snap Vial
No. of Container(s)	1
Volume	80g

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	RCF GEA Shipping Screen									
J16V97	SOIL	5-15-08	0815	X	19688							A-010	1
J16V98	SOIL	5-15-08	0820	X	19689							A-011	2
J16V99	SOIL	5-15-08	0825	X	19690							A-012	3

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
E. Harries / E. Harries	0905 5/15/08	RT Coffman / RT Coffman	0905 5/15/08
RT Coffman / RT Coffman	0930 5/15/08	MSTankovich	0930 MAY 15 2008
MSTankovich	1015 MAY 15 2008	K. Eliason 5-15-08	RCF 1015

SPECIAL INSTRUCTIONS

None

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

Matrix *

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

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

WCH-EE-011

RCF 19690

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 51908 1035 GM Screen Result 0.2K

Client: WCH SDG #: J00171 NA[ ] SAF #: RC-087 NA [ ]

Work Order Number: J8E150148 Chain of Custody # RC-087-131,-132

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: 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: 51908

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-087-170	Page 1 of 1
Collector B Lawrence, E. Harries /R. KERKOW	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/anomalous materials		SAF No. RC-087	Data Turnaround 24 Hours
Ice Chest No. ERC-03-200	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.	

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None											
Type of Container	~~20~~ P DL 5-19-08											
No. of Container(s)	1											
Volume	~~60mL~~ 125mL DL 5-19-08											
SAMPLE ANALYSIS	See item (1) in Special Instructions.											

Sample No.	Matrix *	Sample Date	Sample Time									
J16W50	SOIL	5-19-08	0820	X								

CHAIN OF POSSESSION		Sign/Print Names	
~~Relinquished By~~/Removed From RCF SAF RC-087-165 RB KERKOW/RB KERK	Date/Time 5-20-08 0900	Received By/Stored In RBKERKOW/RB KERK	Date/Time 0900 5-20-08
Relinquished By/Removed From RBKERKOW/RB KERK	Date/Time 0910 5-20-08	Received By/Stored In RJK LJ LANE TAL	Date/Time 0910 5 20 08
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

None

(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)

J8E200177
J00171
DUE 52108
KNHNO

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 RCF19694

J16W45 SAF:RC-087 FF2/618-7 Burial Ground anomalous material

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19694
Sample Description	: J16W45 SAF:RC-087 FF2/618-7 Burial Ground anomalous material
Sample Type	: Non Standard Geo
Unit	:
Sample Point	
Sample Size	: 1.370E+02 grams
Facility	: Default
Sample Taken On	: 5/19/2008 8:20:00AM
Acquisition Started	: 5/19/2008 10:09:34AM
Procedure	: Non Standard Geometry
Operator	: KSE
Detector Name	: BEGE
Geometry	: Non Standard Geo
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	: 4/2/2008
Efficiency Calibration Description	: NonStandard Geo 4-02-2008
Sample Number	: 19338

Qualitative Only

Non-Standard Geometry

Calibrations for determining sample activity are geometry-specific. This sample does not conform to one of the currently calibrated geometries. Reported activities may differ from the acutal sample activity for this reason.

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.991	8.12E+00	1.43E+00	
PB-212		0.710	3.79E-01	7.33E-02	
RA-226d		0.687	3.19E-01	6.49E-02	
TH-232d		0.687	3.26E-01	5.80E-02	
U-235		0.543	4.17E-01	5.77E-02	
U-238d	@	0.999	3.05E+00	6.61E-01	

Analysis Report for RCF19694

J16W45 SAF:RC-087 FF2/618-7 Burial Ground anomalous material

? = 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 : 5/19/2008 11:09:41AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Rate (CPS)	Peak Rate (%) Uncertainty
5	98.47 Pa-234	1.86E-02	37.39

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	8.12E+00	9.45E-01	9.45E-01
	CO-60	1173.24		99.90	-1.84E-01	1.03E-01	1.03E-01
		1332.50		99.98	-5.09E-02		1.18E-01
	NB-94	702.63		99.81	-2.80E-02	6.86E-02	6.86E-02
		871.10		99.89	-3.40E-04		7.43E-02
	AG-108m	433.94		90.50	3.01E-02	5.86E-02	5.86E-02
		614.28		89.80	-5.25E-03		9.15E-02
		722.94		90.80	-4.50E-03		8.86E-02
	CS-137	661.66		85.21	1.85E-02	8.33E-02	8.33E-02
	EU-152	40.12		38.40	-7.32E-03	5.24E-02	5.24E-02
		45.38		11.10	4.22E-02		1.53E-01
		121.78		28.40	3.09E-02		8.45E-02
		244.69		7.51	-1.75E-01		4.52E-01
		344.29		26.60	4.53E-02		1.70E-01
		411.12		2.23	-7.11E-01		2.28E+00
		443.89		2.80	3.02E-01		1.66E+00
		778.92		12.98	-3.72E-01		6.11E-01

Analysis Report for RCF19694

J16W45 SAF:RC-087 FF2/618-7 Burial Ground anomalous material

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		867.38		4.21	-1.43E+00		1.63E+00
		964.11		14.50	1.89E-01		8.18E-01
		1085.89		9.94	2.29E-01		1.13E+00
		1089.71		1.71	-2.41E+00		5.92E+00
		1112.07		13.60	-8.90E-01		7.77E-01
		1212.93		1.40	-8.91E-01		9.49E+00
		1299.16		1.63	4.92E+00		8.12E+00
		1408.00		20.80	4.21E-01		5.61E-01
	EU-154	123.10		40.50	-9.78E-03	5.64E-02	5.64E-02
		723.36		19.70	1.63E-01		4.34E-01
		873.23		11.45	-9.26E-02		7.08E-01
		1004.78		17.90	-1.84E-01		6.21E-01
		1274.54		35.50	-6.17E-02		2.95E-01
	EU-155	86.54		34.00	-1.08E-01	8.76E-02	8.76E-02
		105.31		20.60	3.05E-02		1.10E-01
+	PB-212	74.81	*	10.50	3.92E-01	1.38E-01	2.05E-01
		77.11	*	17.70	3.69E-01		1.38E-01
		87.19		6.27	3.03E-01		4.78E-01
+	RA-226d	186.11	*	3.28	7.06E+00	1.30E-01	9.46E-01
		241.92		7.46	3.90E-01		5.27E-01
		295.09	*	19.20	4.18E-01		2.12E-01
		351.87	*	37.10	3.29E-01		1.38E-01
		609.31	*	46.10	2.65E-01		1.30E-01
		1120.27		15.00	4.61E-01		8.58E-01
		1764.49		15.90	2.24E-01		7.75E-01
+	TH-232d	238.58	*	43.60	3.01E-01	9.27E-02	9.27E-02
		338.42		12.40	2.51E-01		4.21E-01
		583.02	*	30.87	3.59E-01		1.33E-01
		911.16	*	29.00	4.11E-01		2.09E-01
		968.97		17.40	1.51E-01		6.39E-01
+	U-235	143.79		10.50	2.43E-01	5.85E-02	3.12E-01
		163.38		4.70	3.70E-01		6.51E-01
		185.74	*	53.00	4.37E-01		5.85E-02
		205.33		4.70	-3.57E-01		6.28E-01
+	U-238d	63.29	*	3.80	3.05E+00	7.62E-01	9.27E-01
		92.56	*	5.41	3.68E+00		7.62E-01
	AM-241	59.54		35.70	4.71E-05	5.12E-02	5.12E-02
	CM-243	99.52		14.40	-2.73E-02	9.79E-02	1.93E-01
		103.73		23.00	-5.25E-03		9.79E-02
		116.93		8.32	-8.68E-03		2.70E-01
		228.19		10.56	-2.28E-01		2.91E-01
		277.60		14.00	1.73E-01		2.81E-01
	CM-245	99.52		21.10	-1.87E-02	6.70E-02	1.32E-01
		103.73		33.60	-3.59E-03		6.70E-02
		116.93		12.20	-5.92E-03		1.84E-01
		174.94		9.50	-4.77E-02		3.10E-01

Analysis Report for RCF19694

J16W45 SAF:RC-087 FF2/618-7 Burial Ground anomalous material

+ = 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** Edward S Wallace

MAY 19 2008 (print/sign/date)

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-165	Page 1 of 1
Collector: B Lawrence, E. Harries	Company Contact: Joan Kessner; Telephone No.: 509-375-4688	Project Coordinator: KESSNER, JH	Price Code: 2A; Data Turnaround: 24 Hours
Project Designation: 618-7 Burial Ground - Soil	Sampling Location: 618-7 Burial Ground/anomalous materials	SAF No.: RC-087	
Ice Chest No.: DELTA-1	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			RCF						
J16W45	SOIL	5-19-08	0820	K		19644						BROKEN BOTTLE

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS
Relinquished By/Removed From: E. Harries / E. Harries; Date/Time: 0900 5/19/08	Received By/Stored In: RB KERKOW / RB Kerkow; Date/Time: 0900 5-19-08	None
Relinquished By/Removed From: RB KERKOW / RB Kerkow; Date/Time: 0940 5-19-08	Received By/Stored In: RCF Mike Cole / Mike Cole; Date/Time: 5-19-08 0940	
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	

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: 5 20 08 0910 GM Screen Result 0.2K

Client: WCH SDG #: J00171 NA[ ] SAF #: RC-087 NA [ ]

Work Order Number: J8E200177 Chain of Custody # RC-087-170

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: RJ Date: 5 20 08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-146	Page 1 of 1
Collector: B Lawrence, E. Harries	Company Contact: Joan Kessner; Telephone No.: 509-375-4688	Project Coordinator: KESSNER, JH	Price Code: 2B; Data Turnaround: 24 Hours
Project Designation: 618-7 Burial Ground - Soil	Sampling Location: 618-7 Burial Ground/Stockpiles	SAF No.: RC-087	
Ice Chest No.	Field Logbook No.: EL-1395-13; 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									
J16VV8 KNX34	SOIL	5-23-08	0745	X								B-011
J16VV9 KNX35	SOIL	5-23-08	0750	X								B-012
J16VW0 KNX36	SOIL	5-23-08	0755	X								B-013
J16VW1 KNX38	SOIL	5-23-08	0800	X								B-014
J16VW2 KNX39	SOIL	5-23-08	0805	X								B-015

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Lawrence	0900 5-23-08	RB KERKOW/RB Kerk	0900 5-23-08
RB KERKOW/RB Kerk	0930 5-23-08	REF 1B, 1060	0930 5-23-08
Ref 1B, 1060	5-28-08 0745	JRDeBrigne JRDeBrig	0745 5-28-08
JRDeBrigne JRDeBrig	0800 5-28-08	RP WLANE T&L	0800 52808

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}

J8E280121
J00171
DUE 52908

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 RCF19719

J16VR2 SAF-RC-087 FF2 B-015

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19719
Sample Description	: J16VR2 SAF-RC-087 FF2 B-015
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 5.700E+01 grams
Facility	: Default
Sample Taken On	: 5/23/2008 8:05:00AM
Acquisition Started	: 5/27/2008 10:25:51AM
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	: 19451

J16VW2

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40	0.994	2.14E+01	3.80E+00	
PB-212	0.707	1.02E+00	1.96E-01	
RA-226d	0.618	5.61E-01	1.96E-01	
TH-232d	0.849	8.39E-01	1.91E-01	

Analysis Report for RCF19719

J16VR2 SAF-RC-087 FF2 B-015

? = 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 : 5/27/2008 11:25:58AM
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	2.14E+01	3.26E+00	3.26E+00
	CO-60	1173.24		99.90	-1.46E-02	2.97E-01	3.42E-01
		1332.50		99.98	3.93E-02		2.97E-01
	NB-94	702.63		99.81	1.08E-01	2.56E-01	2.63E-01
		871.10		99.89	-8.76E-02		2.56E-01
	AG-108m	433.94		90.50	1.50E-01	1.95E-01	1.95E-01
		614.28		89.80	6.90E-02		2.85E-01
		722.94		90.80	3.60E-02		2.56E-01
	CS-137	661.66		85.21	6.61E-02	2.47E-01	2.47E-01
	EU-152	40.12		38.40	8.58E-03	3.18E-01	3.20E-01
		45.38		11.10	5.66E-01		1.06E+00
		121.78		28.40	2.89E-01		3.18E-01
		244.69		7.51	1.16E+00		2.05E+00
		344.29		26.60	-5.67E-01		6.09E-01
		411.12		2.23	4.47E+00		8.12E+00
		443.89		2.80	1.95E+00		6.28E+00
		778.92		12.98	7.43E-01		1.74E+00
		867.38		4.21	4.59E-01		6.48E+00
		964.11		14.50	9.62E-01		2.32E+00
		1085.89		9.94	-1.47E+00		3.27E+00

Analysis Report for RCF19719

J16VR2 SAF-RC-087 FF2 B-015

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		1089.71		1.71	1.67E+01		1.97E+01
		1112.07		13.60	-6.86E-02		2.33E+00
		1212.93		1.40	-5.15E+00		2.46E+01
		1299.16		1.63	7.02E+00		2.07E+01
		1408.00		20.80	8.87E-02		1.47E+00
	EU-154	123.10		40.50	-4.06E-02	2.24E-01	2.24E-01
		723.36		19.70	1.66E-01		1.18E+00
		873.23		11.45	-4.76E-03		2.30E+00
		1004.78		17.90	3.30E-01		1.73E+00
		1274.54		35.50	2.60E-01		9.75E-01
	EU-155	86.54		34.00	2.29E-01	3.28E-01	3.28E-01
		105.31		20.60	2.40E-01		4.50E-01
+	PB-212	74.81	*	10.50	1.10E+00	4.54E-01	8.28E-01
		77.11	*	17.70	9.91E-01		4.54E-01
		87.19		6.27	1.90E+00		1.79E+00
+	RA-226d	186.11		3.28	-9.81E-01	4.20E-01	4.00E+00
		241.92		7.46	2.88E-01		2.92E+00
		295.09	*	19.20	4.88E-01		7.53E-01
		351.87	*	37.10	4.80E-01		4.86E-01
		609.31	*	46.10	6.65E-01		4.20E-01
		1120.27		15.00	8.06E-01		2.28E+00
		1764.49		15.90	1.88E+00		2.44E+00
+	TH-232d	238.58	*	43.60	7.31E-01	3.50E-01	3.50E-01
		338.42	*	12.40	1.12E+00		1.13E+00
		583.02	*	30.87	1.03E+00		6.10E-01
		911.16	*	29.00	8.97E-01		6.95E-01
		968.97		17.40	4.50E-01		2.00E+00
	U-235	143.79		10.50	-1.22E-01	2.47E-01	9.30E-01
		163.38		4.70	2.67E-01		2.58E+00
		185.74		53.00	-6.07E-02		2.47E-01
		205.33		4.70	-2.99E+00		2.61E+00
	U-238d	63.29		3.80	2.61E+00	2.25E+00	2.72E+00
		92.56		5.41	3.40E+00		2.25E+00
	AM-241	59.54		35.70	-1.06E-01	2.25E-01	2.25E-01
	CM-243	99.52		14.40	-1.30E-01	3.80E-01	5.90E-01
		103.73		23.00	-2.35E-01		3.80E-01
		116.93		8.32	-1.10E-02		9.93E-01
		228.19		10.56	-1.98E-01		1.29E+00
		277.60		14.00	8.40E-01		1.13E+00
	CM-245	99.52		21.10	-8.88E-02	2.60E-01	4.02E-01
		103.73		33.60	-1.61E-01		2.60E-01
		116.93		12.20	-7.47E-03		6.77E-01
		174.94		9.50	1.07E+00		1.37E+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

Analysis Report for RCF19719

J16VR2 SAF-RC-087 FF2 B-015

Reviewed and Approved: EDWARD S. WALLACE

MAY 27 2008 Edward S Wallace

(print/sign/date)

Radiological Counting Facility

Analysis Report for RCF19718

J16VR1 SAF-RC-087 FF2 B-014

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19718
Sample Description	: J16VR1 SAF-RC-087 FF2 B-014
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 5.900E+01 grams
Facility	: Default
Sample Taken On	: 5/23/2008 8:00:00AM
Acquisition Started	: 5/27/2008 10:25:41AM
Procedure	: 50 gram pill box
Operator	: RCT
Detector Name	: REGIE02
Geometry	: 50 ml Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3665.6 seconds
Dead Time	: 1.79 %
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	: 19450

J16 VW1

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.996	1.39E+01	2.86E+00	
PB-212		0.710	7.70E-01	1.52E-01	
RA-226d		0.515	4.89E-01	1.57E-01	
TH-232d		0.681	7.17E-01	1.20E-01	
U-235		0.795	3.53E-01	1.44E-01	
U-238d	@	0.999	5.57E+00	1.52E+00	

Analysis Report for RCF19718

J16VR1 SAF-RC-087 FF2 B-014

? = 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 : 5/27/2008 11:26:50AM
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	1.39E+01	2.77E+00	2.77E+00
	CO-60	1173.24		99.90	8.20E-02	2.23E-01	2.90E-01
		1332.50		99.98	-2.90E-01		2.23E-01
	NB-94	702.63		99.81	9.84E-03	2.02E-01	2.11E-01
		871.10		99.89	-1.40E-02		2.02E-01
	AG-108m	433.94		90.50	-4.02E-03	1.69E-01	1.69E-01
		614.28		89.80	-1.03E-02		2.79E-01
		722.94		90.80	3.09E-02		2.18E-01
	CS-137	661.66		85.21	-3.09E-03	2.28E-01	2.28E-01
	EU-152	40.12		38.40	-5.58E-02	3.00E-01	3.00E-01
		45.38		11.10	-1.58E-01		1.01E+00
		121.78		28.40	-2.13E-01		3.12E-01
		244.69		7.51	1.10E-01		1.66E+00
		344.29		26.60	-2.78E-01		5.42E-01
		411.12		2.23	1.23E+00		6.90E+00
		443.89		2.80	3.96E+00		5.62E+00
		778.92		12.98	-3.95E-01		1.35E+00
		867.38		4.21	2.54E+00		5.25E+00

Analysis Report for RCF19718

J16VR1 SAF-RC-087 FF2 B-014

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		964.11		14.50	7.85E-01		1.85E+00
		1085.89		9.94	2.21E+00		2.46E+00
		1089.71		1.71	1.76E+00		1.32E+01
		1112.07		13.60	-1.47E+00		1.76E+00
		1212.93		1.40	-1.27E+00		2.20E+01
		1299.16		1.63	8.53E+00		1.46E+01
		1408.00		20.80	5.79E-01		1.23E+00
	EU-154	123.10		40.50	-1.23E-01	2.24E-01	2.24E-01
		723.36		19.70	-2.93E-01		9.78E-01
		873.23		11.45	-1.46E-02		1.79E+00
		1004.78		17.90	-5.54E-01		1.39E+00
		1274.54		35.50	5.64E-01		7.90E-01
	EU-155	86.54		34.00	1.19E-01	3.38E-01	3.38E-01
		105.31		20.60	1.12E-01		4.60E-01
+	PB-212	74.81	*	10.50	7.84E-01	3.16E-01	6.24E-01
		77.11	*	17.70	7.64E-01		3.16E-01
		87.19		6.27	6.69E-01		1.90E+00
+	RA-226d	186.11	*	3.28	5.95E+00	3.58E-01	3.67E+00
		241.92	*	7.46	1.16E+00		9.79E-01
		295.09		19.20	-3.08E-01		6.91E-01
		351.87	*	37.10	4.00E-01		3.58E-01
		609.31	*	46.10	3.87E-01		3.66E-01
		1120.27		15.00	-3.43E-01		1.74E+00
		1764.49		15.90	1.42E+00		1.96E+00
+	TH-232d	238.58	*	43.60	7.66E-01	1.85E-01	1.85E-01
		338.42		12.40	3.57E-01		1.25E+00
		583.02	*	30.87	6.86E-01		5.05E-01
		911.16	*	29.00	4.70E-01		4.76E-01
		968.97		17.40	1.28E+00		1.60E+00
+	U-235	143.79	*	10.50	5.13E-01	2.27E-01	8.01E-01
		163.38		4.70	1.02E+00		2.19E+00
		185.74	*	53.00	3.68E-01		2.27E-01
		205.33		4.70	5.45E-01		2.45E+00
+	U-238d	63.29	*	3.80	5.57E+00	2.14E+00	2.14E+00
		92.56	*	5.41	7.92E+00		2.82E+00
	AM-241	59.54		35.70	-3.59E-01	3.39E-01	3.39E-01
	CM-243	99.52		14.40	-1.26E-01	4.02E-01	6.45E-01
		103.73		23.00	-3.24E-01		4.02E-01
		116.93		8.32	4.50E-01		1.15E+00
		228.19		10.56	5.26E-01		1.17E+00
		277.60		14.00	-2.26E-01		8.83E-01
	CM-245	99.52		21.10	-8.62E-02	2.75E-01	4.40E-01
		103.73		33.60	-2.21E-01		2.75E-01
		116.93		12.20	3.07E-01		7.83E-01
		174.94		9.50	1.80E-01		1.10E+00

Analysis Report for RCF19718

J16VR1 SAF-RC-087 FF2 B-014

+ = 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

MAY 27 2008 (print/sign/date)

Radiological Counting Facility

Analysis Report for RCF19717

J16VR0 SAF-RC-087 FF2 B-0123

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19717
Sample Description	: J16VR0 SAF-RC-087 FF2 B-0123
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 6.800E+01 grams
Facility	: Default
Sample Taken On	: 5/23/2008 7:55:00AM
Acquisition Started	: 5/27/2008 8:57:14AM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: BEGE
Geometry	: 80 Gram Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3600.2 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	: 19449

J16 VW0

INTERFERENCE CORRECTED REPORT

	Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
	K-40		0.997	1.08E+01	2.56E+00	
X	EU-155		0.379			
	PB-212		0.999	1.48E+00	1.68E-01	
	TH-232d		0.858	1.14E+00	2.06E-01	
	U-235		0.547	4.59E-01	2.16E-01	
	U-238d	@	0.998	5.70E+00	1.30E+00	

Analysis Report for RCF19717

J16VR0 SAF-RC-087 FF2 B-0123

? = 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 : 5/27/2008 9:57:24AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
m	5	89.90	Ac-228	2.54E-02	12.60
	9	295.06	Pb-214	8.89E-03	48.68
	11	351.92	Pb-214	1.51E-02	28.85
	12	510.76		6.00E-03	56.65

Annihilation Photon or Single Escape Peak

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	1.08E+01	1.73E+00	1.73E+00
	CO-60	1173.24		99.90	-1.00E-01	2.04E-01	2.04E-01
		1332.50		99.98	-4.83E-02		2.07E-01
	NB-94	702.63		99.81	6.68E-02	1.63E-01	1.70E-01
		871.10		99.89	2.79E-02		1.63E-01
	AG-108m	433.94		90.50	2.64E-02	1.18E-01	1.18E-01
		614.28		89.80	-1.33E-01		1.75E-01
		722.94		90.80	5.60E-02		1.97E-01
	CS-137	661.66		85.21	9.36E-02	1.62E-01	1.62E-01
	EU-152	40.12		38.40	6.44E-02	1.34E-01	1.34E-01
		45.38		11.10	6.35E-02		3.87E-01
		121.78		28.40	-5.82E-02		1.57E-01
		244.69		7.51	-1.54E+00		9.75E-01
		344.29		26.60	-1.31E-01		3.02E-01
		411.12		2.23	2.91E+00		5.17E+00

Analysis Report for RCF19717

J16VR0 SAF-RC-087 FF2 B-0123

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		443.89		2.80	-3.05E+00		3.15E+00
		778.92		12.98	-5.02E-01		1.06E+00
		867.38		4.21	-6.29E+00		3.46E+00
		964.11		14.50	1.26E+00		1.74E+00
		1085.89		9.94	-1.91E+00		2.04E+00
		1089.71		1.71	-3.42E+00		1.17E+01
		1112.07		13.60	-6.32E-01		1.30E+00
		1212.93		1.40	5.06E+00		1.87E+01
		1299.16		1.63	-1.09E+01		1.23E+01
		1408.00		20.80	7.76E-02		1.14E+00
	EU-154	123.10		40.50	-9.60E-03	1.29E-01	1.29E-01
		723.36		19.70	4.14E-01		9.10E-01
		873.23		11.45	-2.19E-01		1.50E+00
		1004.78		17.90	3.05E-01		1.11E+00
		1274.54		35.50	-8.64E-02		6.66E-01
	EU-155	86.54	*	34.00	2.57E-01	1.18E-01	1.18E-01
		105.31		20.60	1.03E-01		2.27E-01
+	PB-212	74.81	*	10.50	1.49E+00	2.44E-01	4.53E-01
		77.11	*	17.70	1.51E+00		2.44E-01
		87.19	*	6.27	1.39E+00		6.37E-01
	RA-226d	186.11		3.28	-3.35E-01	3.70E-01	3.42E-00
		241.92		7.46	1.38E+00		1.37E-00
		295.09		19.20	7.11E-01		5.84E-01
		351.87		37.10	5.39E-01		3.71E-01
		609.31		46.10	2.06E-01		3.70E-01
		1120.27		15.00	1.71E-01		1.56E+00
		1764.49		15.90	5.58E-01		1.81E+00
+	TH-232d	238.58	*	43.60	1.17E+00	2.56E-01	2.56E-01
		338.42	*	12.40	1.53E+00		7.13E-01
		583.02	*	30.87	9.67E-01		3.50E-01
		911.16	*	29.00	1.24E+00		6.11E-01
		968.97		17.40	1.05E+00		1.48E+00
+	U-235	143.79		10.50	4.05E-01	1.46E-01	6.66E-01
		163.38		4.70	2.77E-01		1.53E+00
		185.74	*	53.00	4.59E-01		1.46E-01
		205.33		4.70	1.09E+00		1.48E+00
+	U-238d	63.29	*	3.80	5.70E+00	1.04E+00	1.58E+00
		92.56	*	5.41	5.40E+00		1.04E+00
	AM-241	59.54		35.70	-6.21E-02	9.35E-02	9.35E-02
	CM-243	99.52		14.40	1.29E-01	1.79E-01	3.14E-01
		103.73		23.00	-1.33E-01		1.79E-01
		116.93		8.32	2.93E-03		5.37E-01
		228.19		10.56	-7.14E-01		6.05E-01
		277.60		14.00	3.45E-01		6.33E-01
	CM-245	99.52		21.10	8.77E-02	1.22E-01	2.14E-01
		103.73		33.60	-9.11E-02		1.22E-01
		116.93		12.20	2.00E-03		3.66E-01
		174.94		9.50	4.08E-01		6.75E-01

Analysis Report for RCF19717

J16VR0 SAF-RC-087 FF2 B-0123

+ = 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

MAY 27 2008 Edward S Wallace

(print/sign/date)

Radiological Counting Facility

Analysis Report for RCF19716

J16VP9 SAF-RC-087 FF2 B-012

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19716
Sample Description	: J16VP9 SAF-RC-087 FF2 B-012
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 5.800E+01 grams
Facility	: Default
Sample Taken On	: 5/23/2008 7:50:00AM
Acquisition Started	: 5/27/2008 8:57:06AM
Procedure	: 50 gram pill box
Operator	: RCT
Detector Name	: PGTWHITE
Geometry	: 50 ml Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3600.7 seconds
Dead Time	: 0.02 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 80 - 4096
Peak Area Range (in channels)	: 80 - 4096
Identification Energy Tolerance	: 1.300 keV
Energy Calibration Used Done On	: 1/31/2008
Efficiency Calibration Used Done On	: 2/4/2008
Efficiency Calibration Description	: 50ml Pill Box (1234-95-2) 2/4/2008
Sample Number	: 19448

J16VV9

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		1.000	1.70E+01	3.39E+00	
RA-226d		0.670	6.15E-01	2.01E-01	
TH-232d		0.849	7.60E-01	1.89E-01	
U-235		1.000	4.11E+00	3.62E-01	
U-238d	@	1.000	5.40E+01	5.23E+00	

Analysis Report for RCF19716

J16VP9 SAF-RC-087 FF2 B-012

? = 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 : 5/27/2008 9:57:13AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
m	2	77.15	Pb-212	2.37E-02	24.06
	4	98.39	Pa-234	2.24E-02	41.61
	5	112.87	Th-227	3.03E-02	27.99
	17	1001.02	Pa-234m	1.28E-02	21.98

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

NP = No Peak
UK = Unknown

NUCLIDE MDA REPORT

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

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	K-40	1460.83	*	10.67	1.70E+01	3.06E+00	3.06E+00
	CO-60	1173.24		99.90	-1.75E-01	3.25E-01	3.32E-01
		1332.50		99.98	1.48E-01		3.25E-01
	NB-94	702.63		99.81	1.04E-01	2.55E-01	2.78E-01
		871.10		99.89	5.35E-03		2.55E-01
	AG-108m	433.94		90.50	-1.54E-01	2.26E-01	2.26E-01
		614.28		89.80	2.40E-02		3.16E-01
		722.94		90.80	5.48E-02		2.90E-01
	CS-137	661.66		85.21	9.87E-02	2.55E-01	2.55E-01
	EU-152	40.12		38.40	1.34E-01	4.55E-01	4.84E-01
		45.38		11.10	7.00E-01		1.48E+00
		121.78		28.40	-2.13E-01		4.55E-01
		244.69		7.51	1.76E+00		2.29E+00
		344.29		26.60	-2.23E-01		6.48E-01
		411.12		2.23	7.14E+00		8.58E+00
		443.89		2.80	2.25E+00		7.14E+00

Analysis Report for RCF19716

J16VP9 SAF-RC-087 FF2 B-012

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		778.92		12.98	1.22E+00		1.91E+00
		867.38		4.21	-3.68E+00		6.37E+00
		964.11		14.50	4.81E-01		1.97E+00
		1085.89		9.94	5.03E-02		2.83E+00
		1089.71		1.71	5.12E-02		1.65E+01
		1112.07		13.60	-2.27E-01		2.24E+00
		1212.93		1.40	-3.13E+00		2.19E+01
		1299.16		1.63	3.64E+00		1.98E+01
		1408.00		20.80	6.32E-01		1.59E+00
	EU-154	123.10		40.50	-9.28E-02	3.20E-01	3.20E-01
		723.36		19.70	2.53E-01		1.34E+00
		873.23		11.45	-1.12E-01		2.18E+00
		1004.78		17.90	-2.03E-01		2.40E+00
		1274.54		35.50	2.00E-01		8.78E-01
	EU-155	86.54		34.00	-2.31E-01	5.76E-01	5.76E-01
		105.31		20.60	-8.47E-01		6.45E-01
	PB-212	74.81		10.50	-2.10E+00	1.20E+00	1.62E+00
		77.11		17.70	1.37E-01		1.20E+00
		87.19		6.27	-2.02E+00		3.12E+00
+	RA-226d	186.11	*	3.28	6.73E+01	4.56E-01	5.17E+00
		241.92		7.46	1.61E-01		3.13E+00
		295.09	*	19.20	8.92E-01		7.53E-01
		351.87	*	37.10	6.17E-01		4.56E-01
		609.31	*	46.10	4.98E-01		4.87E-01
		1120.27		15.00	3.18E-01		2.07E+00
		1764.49		15.90	1.32E+00		2.30E+00
+	TH-232d	238.58	*	43.60	8.59E-01	3.77E-01	3.77E-01
		338.42	*	12.40	8.12E-01		1.01E+00
		583.02	*	30.87	5.11E-01		5.34E-01
		911.16	*	29.00	9.03E-01		7.61E-01
		968.97		17.40	1.12E+00		1.72E+00
+	U-235	143.79	*	10.50	3.60E+00	3.20E-01	1.53E+00
		163.38	*	4.70	4.83E+00		3.00E+00
		185.74	*	53.00	4.17E+00		3.20E-01
		205.33	*	4.70	5.11E+00		3.89E+00
+	U-238d	63.29	*	3.80	5.40E+01	4.06E+00	5.00E+00
		92.56	*	5.41	5.51E+01		4.06E+00
	AM-241	59.54		35.70	-1.27E-02	4.58E-01	4.58E-01
	CM-243	99.52		14.40	3.39E-02	5.58E-01	1.09E+00
		103.73		23.00	1.17E-01		5.58E-01
		116.93		8.32	2.74E-01		1.63E+00
		228.19		10.56	1.06E+00		1.39E+00
		277.60		14.00	3.30E-01		1.14E+00
	CM-245	99.52		21.10	2.31E-02	3.82E-01	7.46E-01
		103.73		33.60	8.01E-02		3.82E-01
		116.93		12.20	1.87E-01		1.11E+00
		174.94		9.50	4.34E-01		1.58E+00

Analysis Report for RCF19716

J16VP9 SAF-RC-087 FF2 B-012

+ = 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. WALLAC

MAY 27 2008 Edward S Wallace

(print/sign/date)

Radiological Counting Facility

Analysis Report for RCF19715

J16VP8 SAF-RC-087 FF2 B-011

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19715
Sample Description	: J16VP8 SAF-RC-087 FF2 B-011
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 7.000E+01 grams
Facility	: Default
Sample Taken On	: 5/23/2008 7:45:00AM
Acquisition Started	: 5/27/2008 8:57:00AM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: REGIE02
Geometry	: 80 Gram Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3667.0 seconds
Dead Time	: 1.83 %
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	: 19447

J16VV8

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.999	9.56E+00	2.20E+00	
PB-212		0.706	5.07E-01	1.64E-01	
RA-226d		0.790	3.61E-01	1.31E-01	
TH-232d		0.825	4.27E-01	1.45E-01	
U-235		1.000	1.74E+00	3.17E-01	
U-238d	@	1.000	2.96E+01	3.10E+00	

Analysis Report for RCF19715

J16VP8 SAF-RC-087 FF2 B-011

? = 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 : 5/27/2008 9:58:10AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
M	4	84.14	No peak	2.62E-02	16.92
m	5	89.81	No peak	2.18E-02	18.14
m	7	98.48	No peak	2.79E-02	13.72
	8	121.03	No peak	1.56E-02	42.77
	17	511.19	Annihilation Photon	7.51E-03	52.28
	22	1000.85	Pa-234m	1.64E-02	17.78

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	9.56E+00	2.08E+00	2.08E+00
	CO-60	1173.24		99.90	-2.90E-01	2.16E-01	2.18E-01
		1332.50		99.98	-5.46E-03		2.16E-01
	NB-94	702.63		99.81	-1.85E-02	1.74E-01	1.74E-01
		871.10		99.89	1.22E-01		2.07E-01
	AG-108m	433.94		90.50	-2.98E-02	1.50E-01	1.50E-01
		614.28		89.80	-1.53E-01		2.37E-01
		722.94		90.80	1.08E-01		2.03E-01
	CS-137	661.66		85.21	1.39E-01	2.13E-01	2.13E-01
	EU-152	40.12		38.40	9.82E-02	2.65E-01	2.65E-01
		45.38		11.10	-8.73E-01		9.90E-01
		121.78		28.40	7.30E-02		3.33E-01
		244.69		7.51	-8.63E-02		1.49E+00

Analysis Report for RCF19715

J16VP8 SAF-RC-087 FF2 B-011

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		344.29		26.60	-2.83E-01		4.71E-01
		411.12		2.23	3.38E-01		5.46E+00
		443.89		2.80	1.50E-01		4.72E+00
		778.92		12.98	-1.40E-01		1.37E+00
		867.38		4.21	2.01E+00		5.33E+00
		964.11		14.50	-3.90E-01		1.68E+00
		1085.89		9.94	-2.94E-01		1.92E+00
		1089.71		1.71	7.40E+00		1.19E+01
		1112.07		13.60	-1.01E+00		1.52E+00
		1212.93		1.40	3.40E+00		2.03E+01
		1299.16		1.63	3.80E+00		1.27E+01
		1408.00		20.80	6.22E-01		1.15E+00
	EU-154	123.10		40.50	4.50E-03	2.37E-01	2.37E-01
		723.36		19.70	2.55E-01		9.28E-01
		873.23		11.45	-4.06E-01		1.70E+00
		1004.78		17.90	2.82E+00		1.70E+00
		1274.54		35.50	-6.65E-02		6.73E-01
	EU-155	86.54		34.00	-4.76E+00	4.21E-01	4.21E-01
		105.31		20.60	-3.79E-01		4.88E-01
+	PB-212	74.81	*	10.50	4.82E-01	4.32E-01	8.28E-01
		77.11	*	17.70	5.16E-01		4.32E-01
		87.19		6.27	-6.05E+01		2.43E+00
+	RA-226d	186.11	*	3.28	2.67E+01	2.95E-01	2.77E+00
		241.92	*	7.46	8.09E-01		8.73E-01
		295.09	*	19.20	5.91E-01		4.70E-01
		351.87	*	37.10	2.54E-01		2.95E-01
		609.31	*	46.10	3.38E-01		3.04E-01
		1120.27		15.00	5.38E-01		1.41E+00
		1764.49		15.90	2.92E-01		1.20E+00
+	TH-232d	238.58	*	43.60	5.13E-01	1.57E-01	1.57E-01
		338.42		12.40	9.74E-01		1.06E+00
		583.02	*	30.87	3.10E-01		4.15E-01
		911.16	*	29.00	3.80E-01		4.46E-01
		968.97	*	17.40	5.71E-01		6.11E-01
+	U-235	143.79	*	10.50	1.92E+00	1.71E-01	8.30E-01
		163.38	*	4.70	1.31E+00		1.66E+00
		185.74	*	53.00	1.65E+00		1.71E-01
		205.33	*	4.70	3.13E+00		1.90E+00
+	U-238d	63.29	*	3.80	2.96E+01	1.36E+00	3.11E+00
		92.56	*	5.41	2.79E+01		1.36E+00
	AM-241	59.54		35.70	-5.21E-02	5.27E-01	5.27E-01
	CM-243	99.52		14.40	-6.65E-04	4.35E-01	7.86E-01
		103.73		23.00	-1.82E-01		4.35E-01
		116.93		8.32	8.20E-02		1.26E+00
		228.19		10.56	-2.41E-04		9.51E-01
		277.60		14.00	-1.89E-01		7.93E-01
	CM-245	99.52		21.10	-4.53E-04	2.98E-01	5.36E-01
		103.73		33.60	-1.24E-01		2.98E-01

Analysis Report for RCF19715

J16VP8 SAF-RC-087 FF2 B-011

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	116.93	12.20	5.59E-02		8.60E-01
	174.94	9.50	-3.73E-01		1.03E+00

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

Reviewed and Approved: EDWARD S. WALLACE

MAY 27 2008 Edward S Wallace

(print/sign/date)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 52808 0800 GM Screen Result 0.1K

Client: WCH SDG #: J00171 NA[ ] SAF #: RC-087 NA [ ]

Work Order Number: J8E280121 Chain of Custody # RC-087-146

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: 5
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: RJL Date: 52808

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-087-171	Page 1 of 1
Collector B Lawrence, E. Harries	Company Contact Joan Kessner	Telephone No. 509-375-4688	Project Coordinator KESSNER, JH	Price Code 3B
Project Designation 618-7 Burial Ground - Soil	Sampling Location 618-7 Burial Ground/anomalous materials		SAF No. RC-087	Data Turnaround 24 Hours
Ice Chest No.	Field Logbook No. EL-1395-13	COA RG61872600	Method of Shipment	
Shipped To TestAmerica Incorporated, Richland	Offsite Property No.		Bill of Lading/Air Bill No.	

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

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

Sample No.	Matrix *	Sample Date	Sample Time										
J16W51	SOIL	5/28/08	0830	X				J16W46		WHITE	MARSH	MALLOW	

CHAIN OF POSSESSION		Sign/Print Names	
Relinquished By/Removed From E. Harries / E. Harries	Date/Time 5/28/08 0930	Received By/Stored In RT COFFMAN / RT Coffman	Date/Time 0930 5/28/08
Relinquished By/Removed From RT COFFMAN / RT Coffman	Date/Time 1125 5/28/08	Received By/Stored In REFER # 1A, 3060 BLDG.	Date/Time 1125 5/28/08
Relinquished By/Removed From Refer 1A / 1060	Date/Time 5-29-08 0805	Received By/Stored In JRDeBuigne JRDeBuigne	Date/Time 0805 5-29-08
Relinquished By/Removed From JRDeBuigne JRDeBuigne	Date/Time 5-29-08 0830	Received By/Stored In FJK WLANE TAL	Date/Time 0830 52908
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

None

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

J8E290138
J00171
DUE 53008
KN2AC

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

Analysis Report for RCF19739

J16W46 SAF-RC-087 FF2 618-7 BG ANOMOLY

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19739
Sample Description	: J16W46 SAF-RC-087 FF2 618-7 BG ANOMOLY
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 4.300E+01 grams
Facility	: Default
Sample Taken On	: 5/28/2008 8:30:00AM
Acquisition Started	: 5/28/2008 10:43:15AM
Procedure	: 50 gram pill box
Operator	: RCT
Detector Name	: REGIE02
Geometry	: 50 ml Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3645.1 seconds
Dead Time	: 1.24 %
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	: 19520

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.988	2.67E+00	2.32E+00	
U-235		0.548	2.23E-01	1.37E-01	
U-238d	@	1.000	3.47E+00	1.56E+00	

J16W46 SAF-RC-087 FF2 618-7 BG ANOMOLY

? = 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 : 5/28/2008 11:44:12AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

Peak No.		Energy (keV)	Peak Rate (CPS)	Peak Rate (%) Uncertainty
m	2	77.08 Bi-214	7.73E-03	30.36

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

NP = No Peak
UK = Unknown

NUCLIDE MDA REPORT

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

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	K-40	1460.83	*	10.67	2.67E+00	3.62E+00	3.62E+00
	CO-60	1173.24		99.90	-2.42E-02	3.25E-01	3.25E-01
		1332.50		99.98	-1.47E-01		3.27E-01
	NB-94	702.63		99.81	3.19E-02	2.30E-01	2.63E-01
		871.10		99.89	-1.31E-01		2.30E-01
	AG-108m	433.94		90.50	-1.16E-01	1.98E-01	1.98E-01
		614.28		89.80	1.91E-01		3.19E-01
		722.94		90.80	5.37E-02		2.70E-01
	CS-137	661.66		85.21	-1.08E-01	2.82E-01	2.82E-01
	EU-152	40.12		38.40	2.11E-01	3.68E-01	3.68E-01
		45.38		11.10	6.74E-01		1.12E+00
		121.78		28.40	4.51E-02		3.91E-01
		244.69		7.51	-3.25E+00		2.04E+00
		344.29		26.60	-9.28E-01		6.25E-01
		411.12		2.23	3.77E+00		8.57E+00
		443.89		2.80	1.54E-01		6.79E+00
		778.92		12.98	-1.01E-01		1.79E+00
		867.38		4.21	2.92E+00		6.02E+00
		964.11		14.50	-2.42E-01		2.15E+00

J16W46 SAF-RC-087 FF2 618-7 BG ANOMOLY

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	1085.89	9.94	-9.66E-01		2.89E+00
	1089.71	1.71	1.30E+01		1.80E+01
	1112.07	13.60	7.10E-02		2.31E+00
	1212.93	1.40	3.90E+00		2.27E+01
	1299.16	1.63	4.28E+00		1.74E+01
	1408.00	20.80	6.75E-01		1.47E+00
EU-154	123.10	40.50	4.98E-02	2.76E-01	2.76E-01
	723.36	19.70	3.79E-01		1.23E+00
	873.23	11.45	-9.83E-01		2.05E+00
	1004.78	17.90	-4.14E-01		1.62E+00
	1274.54	35.50	-3.78E-02		9.72E-01
EU-155	86.54	34.00	-3.82E-01	3.52E-01	3.52E-01
	105.31	20.60	-3.37E-01		4.77E-01
PB-212	74.81	10.50	2.68E-02	6.92E-01	1.21E+00
	77.11	17.70	8.77E-03		6.92E-01
	87.19	6.27	-1.71E+00		1.89E+00
RA-226d	186.11	3.28	9.37E+00	5.35E-01	5.26E+00
	241.92	7.46	3.11E+00		2.48E+00
	295.09	19.20	1.96E-01		9.03E-01
	351.87	37.10	4.70E-01		5.35E-01
	609.31	46.10	2.28E-01		5.97E-01
	1120.27	15.00	1.35E+00		2.24E+00
	1764.49	15.90	1.09E+00		2.38E+00
TH-232d	238.58	43.60	3.76E-01	4.24E-01	4.24E-01
	338.42	12.40	-2.40E-01		1.47E+00
	583.02	30.87	2.00E-01		8.08E-01
	911.16	29.00	8.63E-01		1.02E+00
	968.97	17.40	9.57E-01		1.85E+00
+ U-235	143.79	10.50	5.89E-01	2.12E-01	1.19E+00
	163.38	4.70	4.08E-01		2.67E+00
	185.74 *	53.00	2.23E-01		2.12E-01
	205.33	4.70	-1.53E+00		2.81E+00
+ U-238d	63.29 *	3.80	3.47E+00	1.61E+00	2.34E+00
	92.56 *	5.41	3.71E+00		1.61E+00
AM-241	59.54	35.70	-3.66E-02	3.28E-01	3.28E-01
CM-243	99.52	14.40	-4.46E-01	4.27E-01	7.09E-01
	103.73	23.00	-2.54E-01		4.27E-01
	116.93	8.32	-6.00E-01		1.30E+00
	228.19	10.56	1.01E-01		1.37E+00
	277.60	14.00	1.69E-01		1.23E+00
CM-245	99.52	21.10	-3.04E-01	2.93E-01	4.84E-01
	103.73	33.60	-1.74E-01		2.93E-01
	116.93	12.20	-4.09E-01		8.88E-01
	174.94	9.50	4.35E-01		1.36E+00

J16W46 SAF-RC-087 FF2 618-7 BG ANOMOLY

+ = 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**

MAY 28 2008 Edward S Wallace
(print/sign/date)

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-087-166 | 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/anomalous materials		**SAF No.** RC-087
Ice Chest No.	**Field Logbook No.** EL-1395-13	**COA** RG61872600	**Method of Shipment**
Shipped To Radiological Counting Facility	**Offsite Property No.**		**Bill of Lading/Air Bill No.**

Price Code | **Data Turnaround** 24 Hours

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None											
Type of Container	Snap Vial											
No. of Container(s)	1											
Volume	80g											
SAMPLE ANALYSIS	RCF GEA Shipping Screen											
Sample No.	**Matrix ***	**Sample Date**	**Sample Time**									
J16W46	SOIL	5/28/08	0830	X	RCF 19739			TIED TO J16W51		WHITE MARSHMALLOW		

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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
E. Harries / E. Harries	5/28/08	RT Coffman / RT Coffman	0930 5/28/08
RT Coffman / RT Coffman	1030 5/28/08	K. Eliason / K. Eliason	5-28-08 1030

SPECIAL INSTRUCTIONS

None

Matrix *

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

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

COPY

WCH-EE-011

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 52908 0830 GM Screen Result 0.2K

Client: WCH SDG #: J00171 NA[ ] SAF #: RC-087 NA [ ]

Work Order Number: J8E290138 Chain of Custody # RC-087-171

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: _____ Date: 52908

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____