0077003

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

COMPLETE COPY OF DATA PACKAGE TO:

Rick Kerkow	L6-06	KW 4/14/08 Initials/Date
Kathy Wendt	H4-21	KW 4/14/08 Initials/Date

COMMENTS:

SDG J00165 SAF-RC-087

Rad only X Chem only Rad & Chem

X Complete Partial

WASTE SITE: 618-7 Burial Ground/Stockpiles

RECEIVED
MAY 01 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
APR 2008

SDG Number: J00165

Data Package Contains 80 Pages

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

Washington Closure Hanford
2620 Fermi Avenue
Richland, WA 99354

April 14, 2008

Attention: Joan Kessner

SAF Number	:	RC-087
Date SDG Closed	:	March 31, 2008
Number of Samples	:	Fifteen (15)
Sample Type	:	Soil
SDG Number	:	J00165
Data Deliverable	:	Quick Turn Metals / Summary

CASE NARRATIVE

I. Introduction

Between March 20, 2008 and March 27, 2008 fifteen soils were received at STL Richland (STLR) 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
J16DC0	J16DB0	SOIL	03/20/08
J16DC1	KJ0W5	SOIL	03/20/08
J16DC2	KJ0W6	SOIL	03/20/08
J16DL9	KJ6K7	SOIL	03/25/08
J16DM0	KJ6K1	SOIL	03/25/08
J16DX2	KJ6K4	SOIL	03/25/08
J16DL5	KJ6K8	SOIL	03/25/08
J16DL6	KJ6K9	SOIL	03/25/08
J16DL7	KJ6LA	SOIL	03/25/08
J16DL8	KJ6LC	SOIL	03/25/08
J16DX3	KT6Q8	SOIL	03/25/08
J16DX4	J16DW4	SOIL	03/27/08
J16DX5	KKANE	SOIL	03/27/08
J16DX6	KKANG	SOIL	03/27/08
J16DX7	KKANH	SOIL	03/27/08

II. Sample Receipt

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

III. Analytical Results/Methodology

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

ICP Metals
ICP Metals by method SW-846 6010A

IV. Quality Control

SDG J00165 includes a minimum of one Laboratory Control Samples (LCS) and one method (reagent) blank. A duplicate sample, matrix spike sample and a matrix spike duplicate sample will be analyzed per 20 samples or per month, whichever is more frequent. Any exceptions have been noted in the "Comments" section.

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

V. Comments

ICP Metals
ICP Metals by method SW-846 6010A
Four batches were analyzed in March 2008 for samples with the standard metal request list and add ons aluminum, beryllium, copper, iron, zinc and zirconium.

Batch J8C210115:
Iron in both the ICV and CCV recovered high. Suspect iron contamination in 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.

Batch 8085471:
Iron in both the ICV and CCV recovered high. Suspect iron contamination in 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.

Batch 8086189:
Iron in both the ICV and CCV recovered high. Suspect iron contamination in system due to high level iron samples. Except as noted, the LCS, batch blank, sample, sample duplicate, MS, MSD, ICB and CCB results are within contractual limits.

Washington Closure Hanford
April 14, 2008

Batch 8087344:
Iron in both the ICV and CCV recovered high. Suspect iron contamination in 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

TESTAMERICA

SDG Number: J00165
SAF Number: RC-087
Lot Number: J8C210115

Amended Data

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
Blank		1.000	0.002	0.001	0.000	0.000	0.0011	-0.002	0.001	0.028	0.0016	-0.002	0.000	0.010
LCS		1.000	0.939	1.014	0.982	1.061	0.994	1.037	0.997	1.129	0.963	0.959	0.946	0.960
LCS Recovery %			0.939	1.014	0.982	1.061	0.994	1.037	0.997	1.129	0.963	0.959	0.946	0.960
		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
KJ0W4	***J16DC0***	0.486	23016.304	0.879	59.946	<MDL	1.830	17.772	13.179	19492.754	116.667	<MDL	<MDL	77.101
KJ0W4-DUP	***J16DC0***	0.519	19906.559	0.623	59.436	<MDL	1.704	14.419	13.018	18642.360	105.900	<MDL	<MDL	72.554
KJ0W5	***J16DC1***	0.531	6495.186	0.802	74.731	<MDL	1.086	43.279	12.450	22805.362	17.057	<MDL	0.491	39.513
KJOW6	***J16DC2***	0.512	91156.710	1.099	46.750	<MDL	0.981	13646.268	38.996	8844.198	37.861	<MDL	<MDL	88.987
KJ0W4-MS	***J16DC0***	0.528	n/a	88.896	149.991	91.388	84.608	110.863	99.607	N/A	348.222	80.979	79.686	187.243
% Recovery				88.017	90.045	91.388	82.778	93.091	86.428		231.556	80.979	79.686	110.142
KJ0W4-MSD	***J16DC0***	0.519	n/a	93.601	152.133	95.696	88.373	114.666	102.397	N/A	417.516	85.314	84.041	193.847
% Recovery				92.723	92.187	95.696	86.543	96.894	89.218		300.849	85.314	84.041	116.745

TESTAMERICA

SDG Number: J00165
SAF Number: RC-087
Batch Number: 8085471

Sample Number	Client ID	Aliquant	Aluminum	Arsenic	Barium	Beryllium	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
KJ6N71AA-B		1.000	0.004	-0.002	0.000	0.000	-0.0001	0.002	-0.001	0.022	0.0021	0.000	0.000	0.047
KJ6N71AJ-C		1.000	0.942	1.005	0.973	1.060	0.9933	1.017	1.000	1.137	0.9652	0.941	0.933	0.989
LCS Recovery %			94.230%	100.500%	97.320%	106.000%	99.330%	101.700%	99.950%	113.700%	96.520%	94.141%	93.300%	98.870%
		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
KJ6K81AA	J16DL5	0.5087	19087.871	<MDL	441.026	0.058974	8.118734	92.225	101.926	28533.517	667.4857	<MDL	<MDL	2197.759
KJ6K81A1-DUP	J16DL5-DUP	0.5009	21032.142	0.799	254.642	0.150	4.641645	64.364	63.845	28778.199	2263.925	<MDL	<MDL	237.173
KJ6K91AA	J16DL6	0.51	7555.882	<MDL	102.549	<MDL	3.490196	89.363	79.412	26892.157	49.7451	<MDL	<MDL	337.941
KJ6LA1AA	J16DL7	0.4883	10454.639	<MDL	70.438	0.154	2.887569	164.550	34.507	24472.660	19.06615	<MDL	<MDL	114.888
KJ6LC1AA	J16DL8	0.4968	6254.026	<MDL	92.130	0.181	3.321256	64.493	30.898	30475.040	10.56763	<MDL	<MDL	103.563
KJ6K71AA	J16DL9	0.5176	127994.590	1.072	4.318	<MDL	<MDL	12.259	68.576	1778.400	210.3941	<MDL	<MDL	4.405
KJ6K11AA	J16DM0	0.5047	7535.169	<MDL	70.478	0.198	2.496533	12.502	8.312	23400.040	19.64533	<MDL	<MDL	41.540
KJ6K41AA	J16DX2	0.513	13391.813	<MDL	128.850	0.068	5.419103	101.365	57.427	40536.062	234.1131	<MDL	<MDL	286.257
KJ6K81AJ-MS	J16DL5-MS	0.4976	N/A	130.727	334.908	140.876	127.1101	193.227	170.217	N/A	340.635	120.318	120.076	452.773
% Recovery				130.727	-106.119	140.817	118.991	101.002	68.291		-326.851	120.318	120.076	-1744.986
KJ6K81AK-MSD	J16DL5-MSD	0.5283	N/A	94.321	324.626	98.429	92.0689	158.811	136.286	N/A	757.1456	86.268	86.031	316.771
% Recovery				94.321	-116.400	98.370	83.950	66.586	34.360		89.660	86.268	86.031	-1880.988

SDG Number: J00165
SAF Number: RC-087
Batch Number: 8086189

	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
	KJ7F31AA-B		1.000	0.015	0.000	0.000	0.000	0.0001	0.000	0.000	0.002	0.0033	0.000	0.000	0.003
	KJ7F31AJ-C		1.000	0.941	1.022	0.984	1.072	0.999	1.040	0.998	1.134	0.9961	0.959	0.937	0.972
	LCS Recovery %			94.120%	102.200%	98.440%	107.200%	99.900%	104.000%	99.790%	113.400%	99.610%	95.889%	93.710%	97.150%
			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
	KT6Q81AA	J16DX3	0.5087	9063.495	0.895701	85.77826	0.258758	2.378583	25.07962	15.814	23049.363	145.8997	<MDL	<MDL	162.12182
	KT6Q81A1-DUP	J16DX3-DUP	0.5009	10944.248	<MDL	93.63958	0.186494	2.267373	27.19867	17.687	21142.521	207.1064	<MDL	<MDL	217.80526
	KT6Q81AJ-MS	J16DX3-MS	0.4976	N/A	131.2438	209.3532	140.597	125.7711	158.806	142.886	N/A	672.0398	121.4726	118.408	249.35323
	% Recovery				131.244	123.575	140.338	123.393	133.726	127.071		526.140	121.473	118.408	87.231
	KT6Q81AK-MSD	J16DX3-MSD	0.5283	N/A	133.8409	203.3661	142.3562	127.3292	165.4979	140.753	N/A	217.3913	123.4823	120.6171	265.67822
	% Recovery				133.841	117.588	142.097	124.951	140.418	124.939		71.492	123.482	120.617	103.556

TESTAMERICA

SDG Number: J00165
SAF Number: RC-087
Batch Number: 8087344

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
KKA231AA-B		1.000	-0.006	-0.003	0.000	0.000	0.0003	0.000	0.000	0.019	0.0022	0.002	0.000	0.005
KKA231AJ-C		1.000	0.893	0.977	0.957	1.036	0.9699	1.003	0.971	1.112	0.9437	0.926	0.913	0.944
LCS Recovery %			89.260%	97.740%	95.710%	103.600%	96.990%	100.300%	97.080%	111.200%	94.370%	92.625%	91.280%	94.440%
		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
KKAM91AA	J16DX4	0.50939	13554.936	<MDL	94.535	0.06871	3.435482	115.236	73.068	24823.809	55.49775	<MDL	<MDL	174.562
KKAM91A1-DUP	J16DX4-DUP	0.51269	10904.986	<MDL	86.524	0.098	3.471884	88.026	139.948	24195.908	79.35595	<MDL	<MDL	464.861
KKANE1AA	J16DX5	0.50429	5749.902	<MDL	75.591	0.159	2.607627	50.179	21.525	22715.104	22.01114	<MDL	<MDL	100.805
KKANG1AA	J16DX6	0.50209	5184.531	0.856	64.540	0.179	2.489593	25.065	12.398	21778.964	9.440539	<MDL	<MDL	105.026
KKANH1AA	J16DX7	0.49619	5340.597	<MDL	62.526	0.181	2.347891	13.956	6.036	21453.475	15.89109	<MDL	<MDL	45.878
KKAM91AJ-MS	J16DX4-MS	0.51639	N/A	95.451	171.382	100.312	94.17301	200.624	158.311	N/A	146.3041	87.447	86.504	315.622
% Recovery				95.451	76.847	100.243	90.738	85.388	85.243		90.806	87.447	86.504	141.060
KKAM91AK-MSD	J16DX4-MSD	0.50589	N/A	94.724	170.986	99.528	94.11137	178.497	356.204	N/A	125.0272	86.535	85.631	280.906
% Recovery				94.724	76.451	99.459	90.676	63.261	283.136		69.529	86.535	85.631	106.344

TESTAMERICA

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-030	Page 1 of 1

Collector B Lawrence	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. RC 3/12/08 ~~EL-1350-12~~ EL-1395-12	COA RG61878500	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.											
Sample No.	Matrix *	Sample Date	Sample Time									
J16DC0	SOIL	3/12/08	1420	X		RCF	J16DB0				BLACK	SOIL

CHAIN OF POSSESSION		Sign/Print Names	
Relinquished By/Removed From B LAWRENCE	Date/Time 1600 3-12-08	Received By/Stored In RT COFFMAN / RT Coffman	Date/Time 1600 3/12/08
Relinquished By/Removed From RT COFFMAN / RT Coffman	Date/Time 1615 3/12/08	Received By/Stored In MS Stankovich	Date/Time 1615 3/12/08
Relinquished By/Removed From DAVID St. JOHN	Date/Time 3/20/08 1545	Received By/Stored In WLANE TALK	Date/Time 3 2008 1545
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}

J8C210115
J00165 KJOW4
DUE 3-21-08

Mike Stankovich unavailable to relinquish samples due to illness. Samples relinquished from 1060 Batelle Blvd Ref 13 by D. St. John on 3/20/08

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

9

TESTAMERICA

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-031	Page 1 of 1

Collector B Lawrence	Company Contact Joan Kessner	Telephone No. 509-375-4688	Project Coordinator KESSNER, JH
Project Designation 618-7 Burial Ground - Soil	Sampling Location 618-7 Burial Ground/Stockpiles		SAF No. RC-087
Ice Chest No.	Field Logbook No. RTC 3/12/08 ~~EL-1259-12~~ EL-1395-12	COA RG61878500	Method of Shipment
Shipped To TestAmerica Incorporated, Richland	Offsite Property No.		Bill of Lading/Air Bill No.

Price Code: 2B

Data Turnaround: 24 Hours

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

Special Handling and/or Storage

None

Preservation	None											
Type of Container	aG											
No. of Container(s)	1											
Volume	60mL											
SAMPLE ANALYSIS	See item (1) in Special Instructions.											
Sample No.	Matrix *	Sample Date	Sample Time									
J16DC1	SOIL	3/12/08	1425	X		RCF J16DB1				YELLOW POWDER		

CHAIN OF POSSESSION

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
B Lawrence	1600 3-12-08	RTCoffman/RTCoffman	1600 3/12/08
RTCoffman/RTCoffman	1615 3/12/08	MStankovich	1615 3/12/08
P.St.John	3/20/08 1545	WLANE TALR	3 20 08 1545

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}

J8C210115
J00165 KJOW5
DUE 3-21-08

Mike Stankovich unavailable to relinquish samples due to illness. Samples relinquished from 1060 Battelle Blvd RCF 1B by P.St.John on 3/20/08

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

TESTAMERICA

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-032	Page 1 of 1

Collector B Lawrence	Company Contact Joan Kessner	Telephone No. 509-375-4688	Project Coordinator KUSSNER, 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. RTC 3/13/08 ~~EL-1359-12~~ EL-1395-12	COA RG61878500	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	NONE									
Type of Container	aG	2G									
No. of Container(s)	1	0									
Volume	60mL	60mL									
SAMPLE ANALYSIS	See item (1) in Special Instructions.	IC-ANIONS 300.0									

Sample No.	Matrix *	Sample Date	Sample Time										
J16DC2	SOIL	3/13/08	1330	X	X			REF J16DB2				BLUE GRANULES	

CHAIN OF POSSESSION	Sign/Print Names	
Relinquished By/Removed From B Lawrence	Date/Time 1500 3-13-08	Received By/Stored In RT Coffman / RT Coffman
Date/Time 1500 3/13/08		
Relinquished By/Removed From RT Coffman / RT Coffman	Date/Time 1700 3/13/08	Received By/Stored In REFER #1A
Date/Time 1700 3/13/08		
Relinquished By/Removed From 1060 Battelle Ref. 1A	Date/Time 3/20/08 1300 3/18/08 1300	Received By/Stored In David St John David St John
Date/Time 3/18/08 1300		
Relinquished By/Removed From David St John David St John	Date/Time 1545 3/20/08	Received By/Stored In L J LANE TALR 3 2008 1545
Date/Time 3/20/08 1545		
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}

J8C210115
J00165
DUE 3-21-08
KJDW6

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 RCF19269

J16DB0 SAF:RC-087 FF2/618-7 Stockpiles Soil Sample

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19269
Sample Description	: J16DB0 SAF:RC-087 FF2/618-7 Stockpiles Soil Sample
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 9.100E+01 grams
Facility	: Default
Sample Taken On	: 3/12/2008 2:20:00PM
Acquisition Started	: 3/13/2008 12:05:52PM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: REGIE02
Geometry	: 80 Gram Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3644.4 seconds
Dead Time	: 1.22 %
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	: 17887

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.998	1.03E+01	1.99E+00	
PB-212		0.707	8.31E-01	1.66E-01	
RA-226d		0.774	3.72E-01	1.21E-01	
TH-232d		0.856	4.82E-01	1.47E-01	
U-235		0.795	9.74E-01	2.31E-01	
U-238d	@	1.000	2.83E+01	2.94E+00	

Analysis Report for RCF19269

J16DB0 SAF:RC-087 FF2/618-7 Stockpiles Soil Sample

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

UNIDENTIFIED PEAKS

Peak Locate Performed on : 3/13/2008 1:06:40PM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)	Peak Rate (CPS)	Peak Rate (%) Uncertainty
m	5	98.37NP	4.72E-02	9.74
	6	112.71NP	3.48E-02	27.12
	16	1001.19NP	1.29E-02	21.10

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	1.03E+01	1.76E+00	1.76E+00
	CO-60	1173.24		99.90	-4.09E-02	1.75E-01	1.84E-01
		1332.50		99.98	-2.04E-02		1.75E-01
	NB-94	702.63		99.81	-1.06E-01	1.56E-01	1.56E-01
		871.10		99.89	5.67E-02		1.71E-01
	AG-108m	433.94		90.50	-3.54E-03	1.25E-01	1.25E-01
		614.28		89.80	-1.11E-01		1.98E-01
		722.94		90.80	7.34E-02		1.83E-01
	CS-137	661.66		85.21	-9.56E-02	1.77E-01	1.77E-01
	EU-152	40.12		38.40	-7.11E-02	2.32E-01	2.32E-01
		45.38		11.10	2.04E-01		8.68E-01
		121.78		28.40	7.28E-03		2.85E-01
		244.69		7.51	-5.27E-02		1.30E+00
		344.29		26.60	2.96E-03		4.22E-01
		411.12		2.23	-1.31E+00		4.99E+00
		443.89		2.80	1.24E+00		4.15E+00

Analysis Report for RCF19269

J16DB0 SAF:RC-087 FF2/618-7 Stockpiles Soil Sample

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		778.92		12.98	-5.84E-01		1.30E+00
		867.38		4.21	-2.74E-02		3.95E+00
		964.11		14.50	2.01E+00		1.56E+00
		1085.89		9.94	-1.77E+00		1.35E+00
		1089.71		1.71	-2.48E-01		8.16E+00
		1112.07		13.60	-1.92E+00		1.46E+00
		1212.93		1.40	5.60E+00		1.35E+01
		1299.16		1.63	4.95E+00		1.11E+01
		1408.00		20.80	1.96E-01		8.04E-01
	EU-154	123.10		40.50	-8.60E-02	1.98E-01	1.98E-01
		723.36		19.70	5.52E-01		8.59E-01
		873.23		11.45	9.56E-01		1.51E+00
		1004.78		17.90	1.59E+00		1.37E+00
		1274.54		35.50	2.05E-01		6.02E-01
	EU-155	86.54		34.00	-9.49E-02	3.65E-01	3.65E-01
		105.31		20.60	-1.07E-02		4.32E-01
+	PB-212	74.81	*	10.50	1.04E+00	4.07E-01	7.16E-01
		77.11	*	17.70	7.53E-01		4.07E-01
		87.19		6.27	-9.20E-01		2.07E+00
+	RA-226d	186.11	*	3.28	1.59E+01	2.37E-01	2.92E+00
		241.92		7.46	-5.66E-01		1.67E+00
		295.09	*	19.20	5.34E-01		4.25E-01
		351.87	*	37.10	3.94E-01		3.05E-01
		609.31	*	46.10	2.93E-01		2.37E-01
		1120.27		15.00	8.86E-01		1.42E+00
		1764.49	*	15.90	7.73E-01		6.73E-01
+	TH-232d	238.58	*	43.60	6.03E-01	2.23E-01	2.23E-01
		338.42	*	12.40	5.39E-01		6.80E-01
		583.02	*	30.87	3.70E-01		3.38E-01
		911.16	*	29.00	5.41E-01		4.26E-01
		968.97		17.40	9.40E-01		1.25E+00
+	U-235	143.79	*	10.50	1.02E+00	1.81E-01	6.95E-01
		163.38		4.70	-2.48E-01		1.93E+00
		185.74	*	53.00	9.82E-01		1.81E-01
		205.33		4.70	1.85E+00		2.12E+00
+	U-238d	63.29	*	3.80	2.83E+01	1.21E+00	3.16E+00
		92.56	*	5.41	2.82E+01		1.21E+00
	AM-241	59.54		35.70	6.20E-02	4.69E-01	4.69E-01
	CM-243	99.52		14.40	2.42E-02	3.83E-01	7.13E-01
		103.73		23.00	-8.09E-02		3.83E-01
		116.93		8.32	-1.83E-01		1.10E+00
		228.19		10.56	7.37E-01		8.47E-01
		277.60		14.00	1.28E-01		6.95E-01
	CM-245	99.52		21.10	1.65E-02	2.62E-01	4.86E-01
		103.73		33.60	-5.54E-02		2.62E-01
		116.93		12.20	-1.25E-01		7.51E-01
		174.94		9.50	-7.47E-01		8.93E-01

Analysis Report for RCF19269

J16DB0 SAF:RC-087 FF2/618-7 Stockpiles Soil Sample

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

Reviewed and Approved: DAVID M. BREHM

MAR 13 2008
(print/sign/date)

Radiological Counting Facility

Analysis Report for RCF19270

J16DB1 SAF:RC-087 FF2/618-7 Stockpiles Soil (Not full container)

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19270
Sample Description	: J16DB1 SAF:RC-087 FF2/618-7 Stockpiles Soil (Not full container)
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 2.400E+01 grams
Facility	: Default
Sample Taken On	: 3/12/2008 2:25:00PM
Acquisition Started	: 3/13/2008 12:06:00PM
Procedure	: 50 gram pill box
Operator	: RCT
Detector Name	: PGTWHITE
Geometry	: 50 ml Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3604.1 seconds
Dead Time	: 0.11 %
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	: 17888

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.990	1.45E+01	7.20E+00	
U-235		1.000	1.69E+02	7.15E+00	
U-238d	@	1.000	9.17E+03	5.38E+02	

Analysis Report for RCF19270

J16DB1 SAF:RC-087 FF2/618-7 Stockpiles Soil (Not full container)

? = 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 : 3/13/2008 1:06:10PM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)	Peak Rate (CPS)	Peak Rate (%) Uncertainty
M	1	49.52NP	3.33E-01	7.21
m	2	53.08NP	4.53E-01	6.39
	4	73.98NP	1.38E-01	48.63
	5	83.82Th-231	1.25E+00	5.41
M	6	89.77NP	3.21E-01	7.88
m	8	94.61NP	2.68E+00	1.13
m	9	98.42NP	3.55E+00	0.92
M	10	110.98NP	9.07E-01	2.59
m	11	112.76NP	1.95E+00	1.53
	12	131.34NP	1.90E-01	17.68
M	16	202.21NP	6.73E-02	13.57
	18	258.16NP	2.90E-01	11.96
	19	569.15NP	4.73E-02	32.46
	20	742.94NP	1.62E-01	9.34
	21	766.46NP	5.69E-01	3.14
	22	786.46NP	7.17E-02	18.98
	23	946.03NP	3.57E-02	19.78
	24	1001.11UNK	1.25E+00	1.60
	25	1193.85NP	2.21E-02	23.53
	27	1510.52NP	9.29E-03	32.85
	28	1553.82NP	7.67E-03	35.22
	29	1738.16NP	1.58E-02	16.44
	30	1765.88NP	4.89E-03	43.75
	31	1809.65NP	4.28E-03	31.50
	32	1832.08NP	1.75E-02	16.10
	33	1868.80NP	5.97E-03	31.76

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

NP = No Peak
UK = Unknown

NUCLIDE MDA REPORT

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

Analysis Report for RCF19270

J16DB1 SAF:RC-087 FF2/618-7 Stockpiles Soil (Not full container)

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	K-40	1460.83	*	10.67	1.45E+01	1.05E+01	1.05E+01
	CO-60	1173.24		99.90	-8.06E-01	1.28E+00	1.52E+00
		1332.50		99.98	6.14E-01		1.28E+00
	NB-94	702.63		99.81	2.44E+00	2.22E+00	2.66E+00
		871.10		99.89	1.71E-01		2.22E+00
	AG-108m	433.94		90.50	8.58E-02	2.12E+00	2.12E+00
		614.28		89.80	2.48E-01		2.44E+00
		722.94		90.80	-2.92E-01		2.65E+00
	CS-137	661.66		85.21	-9.13E-01	2.67E+00	2.67E+00
	EU-152	40.12		38.40	-6.56E+00	5.37E+00	6.80E+00
		45.38		11.10	9.49E-01		2.09E+01
		121.78		28.40	7.20E-01		5.37E+00
		244.69		7.51	-1.35E+01		2.09E+01
		344.29		26.60	-2.98E+00		6.24E+00
		411.12		2.23	-1.10E+01		8.05E+01
		443.89		2.80	2.26E+01		7.04E+01
		778.92		12.98	-1.90E+00		2.07E+01
		867.38		4.21	-1.62E+01		5.23E+01
		964.11		14.50	-6.77E+00		1.33E+01
		1085.89		9.94	3.90E+00		1.74E+01
		1089.71		1.71	3.45E+01		1.00E+02
		1112.07		13.60	-7.68E+00		1.18E+01
		1212.93		1.40	-6.61E-01		1.09E+02
		1299.16		1.63	5.72E+01		8.78E+01
		1408.00		20.80	7.37E-01		5.91E+00
	EU-154	123.10		40.50	6.28E+00	3.78E+00	3.78E+00
		723.36		19.70	-1.35E+00		1.22E+01
		873.23		11.45	-3.99E+01		1.91E+01
		1004.78		17.90	-8.14E+00		4.02E+01
		1274.54		35.50	-9.90E-01		3.80E+00
	EU-155	86.54		34.00	1.03E+00	8.26E+00	8.26E+00
		105.31		20.60	-2.34E+01		8.70E+00
	PB-212	74.81		10.50	4.04E+00	1.51E+01	2.17E+01
		77.11		17.70	-1.44E+01		1.51E+01
		87.19		6.27	5.57E+00		4.39E+01
	RA-226d	186.11		3.28	2.86E+03	4.69E+00	1.14E+02
		241.92		7.46	8.14E-01		2.13E+01
		295.09		19.20	2.96E+00		8.33E+00
		351.87		37.10	2.03E+00		4.69E+00
		609.31		46.10	-1.49E+00		4.77E+00
		1120.27		15.00	7.73E+00		1.19E+01
		1764.49		15.90	8.33E+00		9.31E+00
	TH-232d	238.58		43.60	-2.62E+00	3.61E+00	3.61E+00
		338.42		12.40	5.36E+00		1.35E+01
		583.02		30.87	2.66E-01		7.10E+00
		911.16		29.00	-5.27E-01		7.14E+00
		968.97		17.40	9.91E+00		1.15E+01
+	U-235	143.79	*	10.50	1.48E+02	3.56E+00	1.38E+01

Analysis Report for RCF19270

J16DB1 SAF:RC-087 FF2/618-7 Stockpiles Soil (Not full container)

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		163.38	*	4.70	1.66E+02		4.29E+01
		185.74	*	53.00	1.75E+02		3.56E+00
		205.33	*	4.70	1.80E+02		2.61E+01
+	U-238d	63.29	*	3.80	9.17E+03	3.78E+01	7.48E+01
		92.56	*	5.41	9.24E+03		3.78E+01
	AM-241	59.54		35.70	-4.48E+00	6.94E+00	6.94E+00
	CM-243	99.52		14.40	-7.77E+00	7.74E+00	1.86E+01
		103.73		23.00	-1.97E+01		7.74E+00
		116.93		8.32	-7.40E+01		2.12E+01
		228.19		10.56	2.53E+01		1.53E+01
		277.60		14.00	6.32E+00		1.14E+01
	CM-245	99.52		21.10	-5.30E+00	5.29E+00	1.27E+01
		103.73		33.60	-1.35E+01		5.29E+00
		116.93		12.20	-5.04E+01		1.44E+01
		174.94		9.50	1.31E+00		1.65E+01

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

Reviewed and Approved: DAVID M. BREHM

MAR 13 2008

Radiological Counting Facility

Analysis Report for RCF19275

J16DB2 SAF-RC-087-026618-7 STOCKPILES FF2

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19275
Sample Description	: J16DB2 SAF-RC-087-026618-7 STOCKPILES FF2
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 3.500E+01 grams
Facility	: Default
Sample Taken On	: 3/13/2008 1:30:00PM
Acquisition Started	: 3/17/2008 10:22:56AM
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	: 17920

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
U-235		0.796	2.68E+00	4.03E-01	
U-238d	@	1.000	9.00E+01	8.64E+00	

Analysis Report for RCF19275

J16DB2 SAF-RC-087-026618-7 STOCKPILES FF2

? = 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 : 3/17/2008 11:23:03AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

Peak No.	Energy (keV)		Peak Rate (CPS)		Peak Rate (%) Uncertainty
3	98.37	Pa-234	4.49E-02	No Peak	22.70
4	112.81	~~Pa-234~~ DW 3/17/08	2.47E-02		37.30
7	1001.24	Pa-234m (U-238 progeny)	1.95E-02		16.93

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	8.46E+00	8.45E+00	8.45E+00
CO-60	1173.24	99.90	2.80E-01	4.39E-01	4.39E-01
	1332.50	99.98	1.87E-01		4.83E-01
NB-94	702.63	99.81	2.73E-02	3.91E-01	4.02E-01
	871.10	99.89	-1.06E-01		3.91E-01
AG-108m	433.94	90.50	1.18E-01	3.19E-01	3.19E-01
	614.28	89.80	1.15E-01		4.40E-01
	722.94	90.80	-1.14E-01		4.30E-01
CS-137	661.66	85.21	-1.42E-02	4.02E-01	4.02E-01
EU-152	40.12	38.40	-1.64E-01	7.11E-01	7.76E-01
	45.38	11.10	9.55E-01		2.52E+00
	121.78	28.40	-1.51E-01		7.11E-01
	244.69	7.51	4.35E+00		3.74E+00
	344.29	26.60	1.66E-01		1.01E+00
	411.12	2.23	3.71E-01		1.28E+01
	443.89	2.80	-1.81E+00		1.07E+01
	778.92	12.98	2.32E+00		3.38E+00

Analysis Report for RCF19275

J16DB2 SAF-RC-087-026618-7 STOCKPILES FF2

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		867.38		4.21	-8.35E+00		8.73E+00
		964.11		14.50	1.99E+00		3.42E+00
		1085.89		9.94	-1.02E+00		4.34E+00
		1089.71		1.71	6.93E+00		2.53E+01
		1112.07		13.60	1.51E+00		3.35E+00
		1212.93		1.40	5.58E+00		3.41E+01
		1299.16		1.63	-3.92E+00		2.83E+01
		1408.00		20.80	3.19E-01		1.87E+00
	EU-154	123.10		40.50	-1.08E-01	4.89E-01	4.89E-01
		723.36		19.70	-5.25E-01		1.98E+00
		873.23		11.45	-2.46E+00		3.52E+00
		1004.78		17.90	8.97E-01		4.55E+00
		1274.54		35.50	7.31E-01		1.13E+00
	EU-155	86.54		34.00	4.04E-01	9.07E-01	9.07E-01
		105.31		20.60	3.87E-01		1.11E+00
	PB-212	74.81		10.50	4.57E-01	1.69E+00	2.51E+00
		77.11		17.70	5.07E-01		1.69E+00
		87.19		6.27	7.23E-01		4.86E+00
	RA-226d	186.11		3.28	4.12E+01	7.94E-01	1.29E+01
		241.92		7.46	3.74E-01		3.86E+00
		295.09		19.20	4.50E-01		1.46E+00
		351.87		37.10	-6.43E-02		7.94E-01
		609.31		46.10	7.25E-01		8.80E-01
		1120.27		15.00	-3.24E-01		2.63E+00
		1764.49		15.90	7.54E-01		2.99E+00
	TH-232d	238.58		43.60	4.37E-01	6.55E-01	6.55E-01
		338.42		12.40	1.61E+00		2.32E+00
		583.02		30.87	1.42E-01		1.20E+00
		911.16		29.00	1.49E+00		1.65E+00
		968.97		17.40	6.61E-01		2.83E+00
+	U-235	143.79	*	10.50	2.63E+00	5.03E-01	1.72E+00
		163.38		4.70	1.47E+00		5.30E+00
		185.74	*	53.00	2.69E+00		5.03E-01
		205.33		4.70	1.28E-01		5.74E+00
+	U-238d	63.29	*	3.80	9.00E+01	6.62E+00	8.11E+00
		92.56	*	5.41	9.33E+01		6.62E+00
	AM-241	59.54		35.70	1.18E-01	7.10E-01	7.10E-01
	CM-243	99.52		14.40	-2.28E-01	9.22E-01	2.02E+00
		103.73		23.00	-7.79E-01		9.22E-01
		116.93		8.32	3.86E-01		2.73E+00
		228.19		10.56	-2.12E+00		2.34E+00
		277.60		14.00	-6.66E-01		1.78E+00
	CM-245	99.52		21.10	-1.56E-01	6.31E-01	1.38E+00
		103.73		33.60	-5.33E-01		6.31E-01
		116.93		12.20	2.63E-01		1.86E+00
		174.94		9.50	1.86E+00		2.44E+00

Analysis Report for RCF19275

J16DB2 SAF-RC-087-026618-7 STOCKPILES FF2

+ = 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 3-17-08
(print/sign/date)

TESTAMERICA

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-049	Page 1 of 1

Collector: B Lawrence	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.: JEEP-1	Field Logbook No.: EL-1395-12	COA: RG61878500	Method of Shipment: HAND DELIVERY GOVT VEHICLE
Shipped To: TestAmerica Incorporated, Richland	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

< DOT LIMITS

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										
J16DL9	SOIL	3/20/08	1500	X	KJ	6K7		TIED TO	J16DK9			BLUE	600

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: B Lawrence	1600 3-20-08	Received By/Stored In: RT COFFMAN / RT Coffman	1600 3/20/08
Relinquished By/Removed From: RT COFFMAN / RT Coffman	1630 3/20/08	Received By/Stored In: DAVID ST JOHN	3/20/08 1630
Relinquished By/Removed From: DAVID ST JOHN	3/25/08 1130	Received By/Stored In: K A LWLANE TAL-R	1130 3-25-08
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

None

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

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

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Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-049	Page 1 of 1

Collector B Lawrence	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. JEEP-1	Field Logbook No. EL-1395-12	COA RG61878500	Method of Shipment HAND DELIVERY GOVT VEHICLE
Shipped To TestAmerica Incorporated, Richland	Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

< DOT LIMITS

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									
J16DM0	SOIL	3/21/08	0900	X		RCF No.	J16DL0		KJ6K1		SEG	D002
J16DX2	SOIL	3/21/08	0905	X		RCF No.	J16DW2		KJ6K4		"	D004

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From B Lawrence	Date/Time 1030 3-21-08	Received By/Stored In RT Coffman / RT Coffman	Date/Time 1030 3/21/08
Relinquished By/Removed From RT Coffman / RT Coffman	Date/Time 1200 3/21/08	Received By/Stored In Reefer # 1A	Date/Time 1200 3/21/08
Relinquished By/Removed From DAS 3/25/08 10 60 BATELLE 1A	Date/Time 3/25/08 1045	Received By/Stored In DAVID ST JOHN DAS	Date/Time 3/25/08 1045
Relinquished By/Removed From DAVID ST JOHN DAS	Date/Time 3/25/08 1130	Received By/Stored In W LANE TALR 32508	Date/Time 1130
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)

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

J 0L0220261 JU0165 Blue 03 26 08

TESTAMERICA

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Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-047	Page 1 of 1

Collector: B Lawrence	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.: JEEP-1	Field Logbook No.: EL-1395-12	COA: RG61878500	Method of Shipment: HAND DELIVERY GOVT VEHICLE
Shipped To: TestAmerica Incorporated, Richland	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

< DOT LIMITS

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											
J16DL5 / SOIL / 3-19-08 / 0730	X	KJ6K8		RCF J16DK5					SEG	C-004	
J16DL6 / SOIL / " / 0735	X	KJ6K9		RCF J16DK6					"	C-005	
J16DL7 / SOIL / " / 0740	X	KJ6LA		RCF J16DK7					"	C-006	
J16DL8 / SOIL / 3-19-08 / 0745	X	KJ6LC		RCF J16DK8					"	C-007	

CHAIN OF POSSESSION	Sign/Print Names	Date/Time
Relinquished By/Removed From: B Lawrence		3-19-08 0900
Received By/Stored In: RT COFFMAN / RT Coffman		3/19/08 0900
Relinquished By/Removed From: RT COFFMAN / RT Coffman		3/19/08 1010
Received By/Stored In: REFER # 1A		3/19/08 1010
Relinquished By/Removed From: FED BATTLE 1A		3/25/08 1045
Received By/Stored In: DAVID ST JOHN		3/25/08 1045
Relinquished By/Removed From: DAVID ST JOHN		3/25/08 1130
Received By/Stored In: LW LANE		32508 1130
Relinquished By/Removed From		
Received By/Stored In		
Relinquished By/Removed From		
Received By/Stored In		

SPECIAL INSTRUCTIONS

None

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

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 RCF19316

J16DK9 FF2 618-7 STOCKPILES

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19316
Sample Description	: J16DK9 FF2 618-7 STOCKPILES
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 4.500E+01 grams
Facility	: Default
Sample Taken On	: 3/20/2008 3:00:00PM
Acquisition Started	: 3/24/2008 12:56:16PM
Procedure	: 50 gram pill box
Operator	: RCT
Detector Name	: REGIE02
Geometry	: 50 ml Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3666.5 seconds
Dead Time	: 1.81 %
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	: 18053

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		1.000	1.05E+01	2.89E+00	
U-235		0.999	3.47E+00	2.80E-01	
U-238d	@	1.000	7.39E+01	5.50E+00	

Analysis Report for RCF19316

J16DK9 FF2 618-7 STOCKPILES

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

Errors quoted at 2.000 sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 3/24/2008 1:57:27PM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)		Peak Rate (CPS)		Peak Rate (%) Uncertainty
	1	52.98	Pa-231	3.27E-02		34.94
M	3	84.12	Th-231	5.05E-02		10.35
m	4	89.67	Pa-234m	2.74E-02		15.66
m	6	98.44	Pa-234	3.88E-02		11.22
	7	112.83	uranium progeny	3.06E-02	Sum Peak	27.74
	12	766.20	No Peak	8.05E-03		25.09
	13	1000.92	Pa-234m	1.94E-02		14.77

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

NP = No Peak
UK = Unknown

NUCLIDE MDA REPORT

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

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	K-40	1460.83	*	10.67	1.05E+01	3.03E+00	3.03E+00
	CO-60	1173.24		99.90	7.13E-02	2.78E-01	3.36E-01
		1332.50		99.98	3.54E-02		2.78E-01
	NB-94	702.63		99.81	1.01E-01	3.09E-01	3.11E-01
		871.10		99.89	4.09E-02		3.09E-01
	AG-108m	433.94		90.50	-3.05E-03	2.42E-01	2.42E-01
		614.28		89.80	1.42E-01		3.10E-01
		722.94		90.80	3.42E-02		3.17E-01
	CS-137	661.66		85.21	-1.37E-01	3.20E-01	3.20E-01
	EU-152	40.12		38.40	-1.27E-01	5.30E-01	5.47E-01
		45.38		11.10	-3.61E-01		1.78E+00
		121.78		28.40	-3.68E-01		5.30E-01
		244.69		7.51	-1.59E+00		2.33E+00
		344.29		26.60	-3.90E-01		7.17E-01

Analysis Report for RCF19316

J16DK9 FF2 618-7 STOCKPILES

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		411.12		2.23	5.85E+00		9.87E+00
		443.89		2.80	-2.05E+00		7.71E+00
		778.92		12.98	-1.22E+00		2.23E+00
		867.38		4.21	1.58E+00		7.52E+00
		964.11		14.50	1.32E+00		2.34E+00
		1085.89		9.94	1.53E+00		3.31E+00
		1089.71		1.71	-1.36E+00		1.83E+01
		1112.07		13.60	-1.10E+00		1.94E+00
		1212.93		1.40	7.05E+00		2.40E+01
		1299.16		1.63	-1.38E+01		1.71E+01
		1408.00		20.80	1.56E-02		1.40E+00
	EU-154	123.10		40.50	3.60E-01	3.84E-01	3.84E-01
		723.36		19.70	-3.27E-01		1.45E+00
		873.23		11.45	-6.03E-01		2.63E+00
		1004.78		17.90	3.93E+00		2.81E+00
		1274.54		35.50	1.67E-01		9.30E-01
	EU-155	86.54		34.00	-1.18E+01	6.75E-01	6.75E-01
		105.31		20.60	1.45E-01		7.99E-01
	PB-212	74.81		10.50	2.81E+00	1.11E+00	1.93E+00
		77.11		17.70	-4.85E-02		1.11E+00
		87.19		6.27	-1.44E+02		3.96E+00
	RA-226d	186.11		3.28	6.01E+01	5.26E-01	1.04E+01
		241.92		7.46	1.11E+00		2.45E+00
		295.09		19.20	1.27E-01		9.94E-01
		351.87		37.10	1.02E-01		5.26E-01
		609.31		46.10	-2.88E-01		5.89E-01
		1120.27		15.00	3.46E-01		1.85E+00
		1764.49		15.90	2.69E-01		1.86E+00
	TH-232d	238.58		43.60	2.54E-01	3.99E-01	3.99E-01
		338.42		12.40	-4.26E-03		1.58E+00
		583.02		30.87	-8.28E-02		8.53E-01
		911.16		29.00	1.10E+00		1.29E+00
		968.97		17.40	8.91E-01		1.87E+00
+	U-235	143.79	*	10.50	4.14E+00	2.66E-01	1.13E+00
		163.38	*	4.70	3.74E+00		2.95E+00
		185.74	*	53.00	3.42E+00		2.66E-01
		205.33	*	4.70	1.89E+00		3.00E+00
+	U-238d	63.29	*	3.80	7.39E+01	2.13E+00	4.92E+00
		92.56	*	5.41	6.55E+01		2.13E+00
	AM-241	59.54		35.70	-3.39E-01	9.16E-01	9.16E-01
	CM-243	99.52		14.40	-1.36E+01	6.86E-01	1.29E+00
		103.73		23.00	-2.04E-01		6.86E-01
		116.93		8.32	5.93E-01		2.13E+00
		228.19		10.56	-2.12E-01		1.40E+00
		277.60		14.00	1.94E-02		1.18E+00
	CM-245	99.52		21.10	-9.27E+00	4.69E-01	8.79E-01
		103.73		33.60	-1.40E-01		4.69E-01
		116.93		12.20	4.04E-01		1.45E+00

Analysis Report for RCF19316

J16DK9 FF2 618-7 STOCKPILES

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	174.94	9.50	7.91E-02		1.61E+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, Edward S Wallace 3-24-08
(print/sign/date)

Radiological Counting Facility

Analysis Report for RCF19318
J16DW2 FF2 618-7 STOCKPILES

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19318
Sample Description	: J16DW2 FF2 618-7 STOCKPILES
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 8.500E+01 grams
Facility	: Default
Sample Taken On	: 3/21/2008 9:05:00AM
Acquisition Started	: 3/24/2008 11:01:39AM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: PGTWHITE
Geometry	: 80 Gram Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3600.8 seconds
Dead Time	: 0.02 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 80 - 4096
Peak Area Range (in channels)	: 80 - 4096
Identification Energy Tolerance	: 1.300 keV
Energy Calibration Used Done On	: 1/31/2008
Efficiency Calibration Used Done On	: 2/5/2008
Efficiency Calibration Description	: 80g Pill box 2/5/2008
Sample Number	: 18051

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.999	9.51E+00	2.91E+00	
RA-226d		0.404	2.95E-01	1.36E-01	
TH-232d		0.825	4.01E-01	1.35E-01	
U-235		0.999	3.82E+00	6.59E-01	
U-238d	@	1.000	6.85E+01	7.18E+00	

Analysis Report for RCF19318

J16DW2 FF2 618-7 STOCKPILES

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

Errors quoted at 2.000 sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 3/24/2008 12:01:48PM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)		Peak Rate (CPS)		Peak Rate (%) Uncertainty
	2	84.29	Th231	6.87E-02		24.12
M	3	89.90	Pa-234m	4.26E-02		15.07
	5	98.36	Pa-234	4.53E-02		31.13
M	6	109.46	No Peak	3.74E-02	Sum Peaks	14.43
m	7	112.77	Uranium Progeny	9.10E-02		8.52
	16	766.75	No Peak	2.58E-02		17.02
	19	1001.18	Pa-234m	3.97E-02		10.05

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	9.51E+00	2.28E+00	2.28E+00
	CO-60	1173.24		99.90	-1.65E-02	1.73E-01	1.73E-01
		1332.50		99.98	8.50E-02		1.95E-01
	NB-94	702.63		99.81	4.55E-03	1.66E-01	1.66E-01
		871.10		99.89	-1.02E-01		1.75E-01
	AG-108m	433.94		90.50	-2.42E-02	1.25E-01	1.25E-01
		614.28		89.80	-1.53E-02		1.84E-01
		722.94		90.80	3.14E-02		1.85E-01
	CS-137	661.66		85.21	-4.64E-02	1.52E-01	1.52E-01
	EU-152	40.12		38.40	7.52E-02	3.44E-01	3.92E-01
		45.38		11.10	7.43E-01		1.27E+00
		121.78		28.40	-8.59E-02		3.44E-01
		244.69		7.51	3.48E-01		1.25E+00
		344.29		26.60	-2.11E-01		3.78E-01

Analysis Report for RCF19318

J16DW2 FF2 618-7 STOCKPILES

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		411.12		2.23	-2.07E+00		4.58E+00
		443.89		2.80	-9.65E-01		3.89E+00
		778.92		12.98	1.91E-01		1.27E+00
		867.38		4.21	-3.63E+00		4.04E+00
		964.11		14.50	-1.79E-01		1.35E+00
		1085.89		9.94	-1.57E-01		1.78E+00
		1089.71		1.71	-7.53E+00		9.69E+00
		1112.07		13.60	-1.45E+00		1.32E+00
		1212.93		1.40	-2.13E-01		1.32E+01
		1299.16		1.63	1.21E+00		1.11E+01
		1408.00		20.80	-3.20E-01		6.07E-01
	EU-154	123.10		40.50	1.86E-01	2.45E-01	2.45E-01
		723.36		19.70	1.45E-01		8.54E-01
		873.23		11.45	4.11E-01		1.56E+00
		1004.78		17.90	-2.07E+00		1.84E+00
		1274.54		35.50	-3.32E-01		4.78E-01
	EU-155	86.54		34.00	1.62E-02	4.87E-01	4.87E-01
		105.31		20.60	1.74E-01		5.32E-01
	PB-212	74.81		10.50	-2.69E-01	9.55E-01	1.39E+00
		77.11		17.70	3.75E-01		9.55E-01
		87.19		6.27	8.79E-02		2.67E+00
+	RA-226d	186.11	*	3.28	6.94E+01	2.26E-01	3.13E+00
		241.92		7.46	3.17E-01		1.72E+00
		295.09		19.20	3.08E-01		5.41E-01
		351.87	*	37.10	3.80E-01		2.26E-01
		609.31	*	46.10	2.10E-01		3.06E-01
		1120.27		15.00	3.33E-01		1.46E+00
		1764.49		15.90	1.04E+00		1.33E+00
+	TH-232d	238.58	*	43.60	4.72E-01	2.43E-01	2.43E-01
		338.42		12.40	6.49E-01		8.99E-01
		583.02	*	30.87	4.33E-01		3.43E-01
		911.16	*	29.00	2.39E-01		5.12E-01
		968.97	*	17.40	3.36E-01		6.79E-01
+	U-235	143.79	*	10.50	3.94E+00	1.94E-01	9.06E-01
		163.38	*	4.70	4.30E+00		1.97E+00
		185.74	*	53.00	4.29E+00		1.94E-01
		205.33	*	4.70	2.32E+00		2.34E+00
+	U-238d	63.29	*	3.80	6.85E+01	2.37E+00	3.55E+00
		92.56	*	5.41	6.93E+01		2.37E+00
	AM-241	59.54		35.70	5.86E-02	4.07E-01	4.07E-01
	CM-243	99.52		14.40	-1.85E-01	4.72E-01	9.33E-01
		103.73		23.00	-3.55E-01		4.72E-01
		116.93		8.32	-1.23E+00		1.23E+00
		228.19		10.56	-5.49E-01		7.77E-01
		277.60		14.00	8.57E-01		7.28E-01
	CM-245	99.52		21.10	-1.26E-01	3.23E-01	6.36E-01
		103.73		33.60	-2.43E-01		3.23E-01
		116.93		12.20	-8.40E-01		8.42E-01

Analysis Report for RCF19318

J16DW2 FF2 618-7 STOCKPILES

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	174.94	9.50	1.27E-01		9.87E-01

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

Reviewed and Approved: Edward S. Wallace, Edward S. Wallace 3-25-08
(print/sign/date)

Radiological Counting Facility

Analysis Report for RCF19317
J16DL0 FF2 618-7 STOCKPILES

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19317
Sample Description	: J16DL0 FF2 618-7 STOCKPILES
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 8.200E+01 grams
Facility	: Default
Sample Taken On	: 3/21/2008 9:00:00AM
Acquisition Started	: 3/24/2008 11:01:32AM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: REGIE02
Geometry	: 80 Gram Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3662.3 seconds
Dead Time	: 1.70 %
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	: 18050

INTERFERENCE CORRECTED REPORT

	Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
	K-40		1.000	1.14E+01	2.19E+00	
X	EU-155		0.372			
	PB-212		0.999	6.84E-01	1.23E-01	
	RA-226d		0.678	4.43E-01	1.33E-01	
	TH-232d		0.854	4.55E-01	1.34E-01	
	U-235		0.546	1.55E-01	9.52E-02	
	U-238d	@	0.999	1.64E+00	8.41E-01	

Analysis Report for RCF19317

J16DL0 FF2 618-7 STOCKPILES

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

UNIDENTIFIED PEAKS

Peak Locate Performed on : 3/24/2008 12:02:38PM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Rate (CPS)	Peak Rate (%) Uncertainty
13	860.34 No Peak	3.76E-03	49.31

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

NP = No Peak
UK = Unknown

NUCLIDE MDA REPORT

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

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	K-40	1460.83	*	10.67	1.14E+01	1.91E+00	1.91E+00
	CO-60	1173.24		99.90	-1.01E-01	1.77E-01	1.94E-01
		1332.50		99.98	-8.20E-04		1.77E-01
	NB-94	702.63		99.81	-5.51E-02	1.46E-01	1.46E-01
		871.10		99.89	7.53E-02		1.61E-01
	AG-108m	433.94		90.50	-1.71E-02	1.21E-01	1.21E-01
		614.28		89.80	-1.11E-01		2.04E-01
		722.94		90.80	-4.25E-03		1.73E-01
	CS-137	661.66		85.21	1.82E-02	1.61E-01	1.61E-01
	EU-152	40.12		38.40	-8.36E-02	1.68E-01	1.68E-01
		45.38		11.10	2.71E-01		6.33E-01
		121.78		28.40	6.89E-02		2.46E-01
		244.69		7.51	-3.62E+00		1.37E+00
		344.29		26.60	-8.75E-02		3.75E-01
		411.12		2.23	4.83E-01		4.46E+00
		443.89		2.80	2.31E+00		3.78E+00
		778.92		12.98	-2.93E-01		1.09E+00

Analysis Report for RCF19317

J16DL0 FF2 618-7 STOCKPILES

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		867.38		4.21	-5.04E-01		4.35E+00
		964.11		14.50	4.28E-01		1.56E+00
		1085.89		9.94	-9.06E-01		1.66E+00
		1089.71		1.71	-4.65E+00		9.98E+00
		1112.07		13.60	8.39E-02		1.44E+00
		1212.93		1.40	2.80E+00		1.60E+01
		1299.16		1.63	-1.10E+01		1.06E+01
		1408.00		20.80	7.50E-02		7.76E-01
	EU-154	123.10		40.50	8.26E-02	1.72E-01	1.72E-01
		723.36		19.70	1.59E-01		8.09E-01
		873.23		11.45	7.99E-01		1.41E+00
		1004.78		17.90	-2.07E-01		9.53E-01
		1274.54		35.50	-1.08E-02		5.82E-01
	EU-155	86.54	*	34.00	1.17E-01	1.50E-01	1.50E-01
		105.31		20.60	-1.11E-01		3.27E-01
+	PB-212	74.81	*	10.50	6.03E-01	2.69E-01	4.89E-01
		77.11	*	17.70	7.41E-01		2.69E-01
		87.19	*	6.27	6.35E-01		8.11E-01
+	RA-226d	186.11	*	3.28	2.95E+00	2.05E-01	2.08E+00
		241.92		7.46	-2.18E+00		1.79E+00
		295.09	*	19.20	4.66E-01		3.03E-01
		351.87	*	37.10	6.12E-01		2.05E-01
		609.31	*	46.10	3.53E-01		2.66E-01
		1120.27		15.00	6.88E-01		1.34E+00
		1764.49		15.90	1.35E+00		1.52E+00
+	TH-232d	238.58	*	43.60	4.33E-01	1.86E-01	1.86E-01
		338.42	*	12.40	6.12E-01		6.37E-01
		583.02	*	30.87	5.26E-01		2.76E-01
		911.16	*	29.00	2.65E-01		5.22E-01
		968.97		17.40	1.68E+00		1.32E+00
+	U-235	143.79		10.50	8.73E-02	1.29E-01	7.21E-01
		163.38		4.70	-6.70E-01		1.62E+00
		185.74	*	53.00	1.82E-01		1.29E-01
		205.33		4.70	-2.64E-01		1.81E+00
+	U-238d	63.29	*	3.80	1.64E+00	8.72E-01	1.27E+00
		92.56	*	5.41	1.35E+00		8.72E-01
	AM-241	59.54		35.70	-8.16E-02	2.22E-01	2.22E-01
	CM-243	99.52		14.40	4.12E-02	2.94E-01	4.61E-01
		103.73		23.00	-2.97E-02		2.94E-01
		116.93		8.32	-1.26E-01		8.48E-01
		228.19		10.56	1.97E-01		7.78E-01
		277.60		14.00	-3.00E-01		6.45E-01
	CM-245	99.52		21.10	2.81E-02	2.01E-01	3.14E-01
		103.73		33.60	-2.03E-02		2.01E-01
		116.93		12.20	-8.56E-02		5.78E-01
		174.94		9.50	-3.49E-01		8.18E-01

Analysis Report for RCF19317

J16DL0 FF2 618-7 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 Edward S Wallace 3-24-08
(print/sign/date)

Radiological Counting Facility

Analysis Report for RCF19303

J16DK8 SAF:RC-087 FF2/618-7 StockPiles Soil Sample

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19303
Sample Description	: J16DK8 SAF:RC-087 FF2/618-7 StockPiles Soil Sample
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 5.300E+01 grams
Facility	: Default
Sample Taken On	: 3/19/2008 7:45:00AM
Acquisition Started	: 3/20/2008 1:35:35PM
Procedure	: 50 gram pill box
Operator	: dmbrehm
Detector Name	: REGIE02
Geometry	: 50 ml Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3658.1 seconds
Dead Time	: 1.59 %
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	: 18024

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	2.92E+00	
PB-212		0.710	4.40E-01	1.78E-01	
RA-226d		0.402	3.52E-01	1.75E-01	
U-235		0.902	1.62E+00	2.02E-01	
U-238d	@	1.000	2.03E+01	2.81E+00	

Analysis Report for RCF19303

J16DK8 SAF:RC-087 FF2/618-7 StockPiles Soil Sample

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

UNIDENTIFIED PEAKS

Peak Locate Performed on : 3/20/2008 2:36:37PM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)	Peak Rate (CPS)	Peak Rate (%) Uncertainty
m	5	98.41 Pa-234	2.59E-02	13.71
	9	238.60 Pb-212	2.55E-02	22.27
	12	1000.93 No Peak	1.01E-02	22.82

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	2.91E+00	2.91E+00
	CO-60	1173.24		99.90	1.64E-03	2.36E-01	3.01E-01
		1332.50		99.98	-1.29E-01		2.36E-01
	NB-94	702.63		99.81	6.11E-02	2.19E-01	2.19E-01
		871.10		99.89	1.25E-03		2.77E-01
	AG-108m	433.94		90.50	-6.80E-02	1.89E-01	1.89E-01
		614.28		89.80	0.00E+00		3.09E-01
		722.94		90.80	1.11E-01		2.79E-01
	CS-137	661.66		85.21	-1.03E-01	2.29E-01	2.29E-01
	EU-152	40.12		38.40	-1.07E-01	4.05E-01	4.05E-01
		45.38		11.10	-4.96E-01		1.25E+00
		121.78		28.40	1.88E-01		4.20E-01
		244.69		7.51	-8.50E-01		2.00E+00
		344.29		26.60	-1.40E-01		6.11E-01
		411.12		2.23	-6.68E-01		7.84E+00
		443.89		2.80	-1.42E+00		6.29E+00
		778.92		12.98	-4.63E-01		1.68E+00

Analysis Report for RCF19303

J16DK8 SAF:RC-087 FF2/618-7 StockPiles Soil Sample

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		867.38		4.21	-8.40E-02		6.55E+00
		964.11		14.50	1.29E+00		2.22E+00
		1085.89		9.94	-8.50E-01		2.47E+00
		1089.71		1.71	2.41E+00		1.51E+01
		1112.07		13.60	-1.33E+00		1.88E+00
		1212.93		1.40	1.03E+01		2.24E+01
		1299.16		1.63	-6.62E+00		1.59E+01
		1408.00		20.80	1.86E-03		1.05E+00
	EU-154	123.10		40.50	7.71E-02	2.95E-01	2.95E-01
		723.36		19.70	4.19E-01		1.26E+00
		873.23		11.45	1.32E+00		2.46E+00
		1004.78		17.90	2.05E+00		2.03E+00
		1274.54		35.50	2.21E-01		8.42E-01
	EU-155	86.54		34.00	-3.61E+00	4.82E-01	4.82E-01
		105.31		20.60	-3.77E-01		5.81E-01
+	PB-212	74.81	*	10.50	4.33E-01	4.91E-01	7.81E-01
		77.11	*	17.70	4.43E-01		4.91E-01
		87.19		6.27	-1.81E+01		2.67E+00
+	RA-226d	186.11	*	3.28	2.68E+01	3.76E-01	4.01E+00
		241.92		7.46	3.23E-01		2.65E+00
		295.09		19.20	4.95E-02		8.52E-01
		351.87	*	37.10	2.80E-01		3.88E-01
		609.31	*	46.10	4.29E-01		3.76E-01
		1120.27		15.00	6.29E-01		1.97E+00
		1764.49		15.90	2.05E+00		2.40E+00
	TH-232d	238.58		43.60	8.59E-01	4.45E-01	4.45E-01
		338.42		12.40	1.18E+00		1.44E+00
		583.02		30.87	3.93E-01		7.83E-01
		911.16		29.00	3.85E-01		1.00E+00
		968.97		17.40	1.68E+00		1.90E+00
+	U-235	143.79	*	10.50	1.49E+00	2.48E-01	8.95E-01
		163.38	*	4.70	1.40E+00		2.59E+00
		185.74	*	53.00	1.66E+00		2.48E-01
		205.33		4.70	2.27E+00		3.23E+00
+	U-238d	63.29	*	3.80	2.03E+01	1.69E+00	3.54E+00
		92.56	*	5.41	2.08E+01		1.69E+00
	AM-241	59.54		35.70	-2.47E-01	5.22E-01	5.22E-01
	CM-243	99.52		14.40	-1.24E-01	5.19E-01	9.63E-01
		103.73		23.00	-3.59E-01		5.19E-01
		116.93		8.32	-6.19E-01		1.53E+00
		228.19		10.56	1.43E-01		1.32E+00
		277.60		14.00	4.05E-01		1.15E+00
	CM-245	99.52		21.10	-8.45E-02	3.55E-01	6.57E-01
		103.73		33.60	-2.46E-01		3.55E-01
		116.93		12.20	-4.22E-01		1.04E+00
		174.94		9.50	1.65E-01		1.32E+00

Analysis Report for RCF19303

J16DK8 SAF:RC-087 FF2/618-7 StockPiles Soil Sample

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

Reviewed and Approved: Edward S. Wallace Edward S. Wallace 3-24-08
(print/sign/date)

Radiological Counting Facility

Analysis Report for RCF19302

J16DK7 SAF:RC-087 FF2/618-7 StockPiles Soil Sample

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19302
Sample Description	: J16DK7 SAF:RC-087 FF2/618-7 StockPiles Soil Sample
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 6.200E+01 grams
Facility	: Default
Sample Taken On	: 3/19/2008 7:40:00AM
Acquisition Started	: 3/20/2008 1:35:26PM
Procedure	: 80 gram pill box
Operator	: dmbrehm
Detector Name	: PGTWHITE
Geometry	: 80 Gram Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3600.7 seconds
Dead Time	: 0.02 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 80 - 4096
Peak Area Range (in channels)	: 80 - 4096
Identification Energy Tolerance	: 1.300 keV
Energy Calibration Used Done On	: 1/31/2008
Efficiency Calibration Used Done On	: 2/5/2008
Efficiency Calibration Description	: 80g Pill box 2/5/2008
Sample Number	: 18023

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.994	1.09E+01	3.44E+00	
TH-232d		0.854	5.03E-01	1.50E-01	
U-235		0.794	8.57E-01	2.54E-01	
U-238d	@	1.000	1.56E+01	2.75E+00	

Analysis Report for RCF19302

J16DK7 SAF:RC-087 FF2/618-7 StockPiles Soil Sample

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

Errors quoted at 2.000 sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 3/20/2008 2:35:33PM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

Peak No.	Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
2	77.04	Bi-212	3.41E-02	26.09
7	295.07	Pb-214	6.14E-03	55.69
9	352.11	Bi-214	1.50E-02	30.36
12	1001.31	No Peak	4.87E-03	46.16

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

NP = No Peak
UK = Unknown

NUCLIDE MDA REPORT

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

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	K-40	1460.83	*	10.67	1.09E+01	2.72E+00	2.72E+00
	CO-60	1173.24		99.90	3.42E-02	2.33E-01	2.43E-01
		1332.50		99.98	9.66E-02		2.33E-01
	NB-94	702.63		99.81	-9.79E-02	1.59E-01	1.59E-01
		871.10		99.89	7.75E-02		1.83E-01
	AG-108m	433.94		90.50	1.69E-02	1.50E-01	1.50E-01
		614.28		89.80	-4.73E-02		1.95E-01
		722.94		90.80	1.23E-01		2.10E-01
	CS-137	661.66		85.21	5.26E-02	1.99E-01	1.99E-01
	EU-152	40.12		38.40	1.10E-01	2.72E-01	2.96E-01
		45.38		11.10	4.42E-01		1.01E+00
		121.78		28.40	6.56E-03		2.72E-01
		244.69		7.51	4.41E-02		1.28E+00
		344.29		26.60	5.84E-02		4.12E-01
		411.12		2.23	-5.28E-01		5.17E+00
		443.89		2.80	-5.59E+00		4.05E+00

Analysis Report for RCF19302

J16DK7 SAF:RC-087 FF2/618-7 StockPiles Soil Sample

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		778.92		12.98	-1.13E+00		1.42E+00
		867.38		4.21	-1.05E+00		4.58E+00
		964.11		14.50	1.04E-01		1.48E+00
		1085.89		9.94	-1.13E+00		2.13E+00
		1089.71		1.71	-5.82E-01		1.28E+01
		1112.07		13.60	-2.64E-01		1.57E+00
		1212.93		1.40	6.81E+00		1.83E+01
		1299.16		1.63	-1.06E+01		1.45E+01
		1408.00		20.80	1.44E-01		1.08E+00
	EU-154	123.10		40.50	3.97E-02	1.93E-01	1.93E-01
		723.36		19.70	5.68E-01		9.68E-01
		873.23		11.45	7.40E-01		1.54E+00
		1004.78		17.90	-1.44E-01		1.45E+00
		1274.54		35.50	1.24E-01		7.06E-01
	EU-155	86.54		34.00	9.20E-02	3.38E-01	3.38E-01
		105.31		20.60	-4.16E-01		3.75E-01
	PB-212	74.81		10.50	-5.56E-01	7.43E-01	1.03E+00
		77.11		17.70	1.31E+00		7.43E-01
		87.19		6.27	-1.31E+00		1.83E+00
	RA-226d	186.11		3.28	1.79E+01	4.33E-01	5.01E+00
		241.92		7.46	8.35E-01		1.93E+00
		295.09		19.20	1.24E-01		6.03E-01
		351.87		37.10	6.68E-01		4.33E-01
		609.31		46.10	2.85E-01		4.36E-01
		1120.27		15.00	6.45E-01		1.65E+00
		1764.49		15.90	1.09E+00		1.55E+00
+	TH-232d	238.58	*	43.60	4.35E-01	2.63E-01	2.63E-01
		338.42	*	12.40	8.09E-01		7.06E-01
		583.02	*	30.87	4.27E-01		3.88E-01
		911.16	*	29.00	7.25E-01		5.48E-01
		968.97		17.40	1.29E+00		1.41E+00
+	U-235	143.79	*	10.50	7.29E-01	2.33E-01	6.72E-01
		163.38		4.70	5.37E-02		1.81E+00
		185.74	*	53.00	9.13E-01		2.33E-01
		205.33		4.70	6.64E-01		2.07E+00
+	U-238d	63.29	*	3.80	1.56E+01	2.20E+00	3.13E+00
		92.56	*	5.41	1.53E+01		2.20E+00
	AM-241	59.54		35.70	-9.01E-02	2.58E-01	2.58E-01
	CM-243	99.52		14.40	3.54E-01	3.35E-01	6.10E-01
		103.73		23.00	1.45E-03		3.35E-01
		116.93		8.32	-1.55E+00		9.21E-01
		228.19		10.56	-8.24E-01		8.73E-01
		277.60		14.00	7.37E-01		7.88E-01
	CM-245	99.52		21.10	2.42E-01	2.29E-01	4.16E-01
		103.73		33.60	9.90E-04		2.29E-01
		116.93		12.20	-1.06E+00		6.28E-01
		174.94		9.50	2.99E-01		8.99E-01

Analysis Report for RCF19302

J16DK7 SAF:RC-087 FF2/618-7 StockPiles Soil Sample

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

Reviewed and Approved: Edward S. Wallace, Edward S Wallace 3-24-08
(print/sign/date)

Radiological Counting Facility

Analysis Report for RCF19301

J16DK6 SAF:RC-087 FF2/618-7 StockPiles Soil Sample

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19301
Sample Description	: J16DK6 SAF:RC-087 FF2/618-7 StockPiles Soil Sample
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 5.800E+01 grams
Facility	: Default
Sample Taken On	: 3/19/2008 7:35:00AM
Acquisition Started	: 3/20/2008 12:04:00PM
Procedure	: 50 gram pill box
Operator	: dmbrehm
Detector Name	: PGTWHITE
Geometry	: 50 ml Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3600.8 seconds
Dead Time	: 0.02 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 80 - 4096
Peak Area Range (in channels)	: 80 - 4096
Identification Energy Tolerance	: 1.300 keV
Energy Calibration Used Done On	: 1/31/2008
Efficiency Calibration Used Done On	: 2/4/2008
Efficiency Calibration Description	: 50ml Pill Box (1234-95-2) 2/4/2008
Sample Number	: 18019

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		1.000	1.39E+01	3.12E+00	
TH-232d		0.678	7.06E-01	2.37E-01	
U-235		1.000	6.04E+00	4.52E-01	
U-238d	@	1.000	9.15E+01	7.43E+00	

Analysis Report for RCF19301

J16DK6 SAF:RC-087 FF2/618-7 StockPiles Soil Sample

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

Errors quoted at 2.000 sigma

UNIDENTIFIED PEAKS

Peak Locate Performed on : 3/20/2008 1:04:07PM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
	2	84.29	Th-231	2.84E-02	49.07
M	3	89.87	Pa-234m	3.57E-02	15.30
	5	98.45	Pa-234	3.16E-02	33.59
	6	112.79	U progeny sym	4.98E-02	19.90
	13	766.54	No Peak	8.86E-03	34.67
	15	1001.15	Pa-234m	2.69E-02	12.50

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	3.05E+00	3.05E+00
	CO-60	1173.24		99.90	-2.77E-01	2.31E-01	2.89E-01
		1332.50		99.98	-1.79E-01		2.31E-01
	NB-94	702.63		99.81	-1.35E-01	2.78E-01	2.83E-01
		871.10		99.89	-2.62E-02		2.78E-01
	AG-108m	433.94		90.50	-3.70E-02	2.39E-01	2.39E-01
		614.28		89.80	-1.59E-01		3.17E-01
		722.94		90.80	-2.27E-02		2.94E-01
	CS-137	661.66		85.21	1.92E-02	2.74E-01	2.74E-01
	EU-152	40.12		38.40	2.36E-01	5.06E-01	5.54E-01
		45.38		11.10	1.56E+00		1.77E+00
		121.78		28.40	2.21E-01		5.06E-01
		244.69		7.51	-2.96E-01		2.22E+00
		344.29		26.60	2.14E-02		7.12E-01
		411.12		2.23	3.46E+00		8.44E+00

Analysis Report for RCF19301

J16DK6 SAF:RC-087 FF2/618-7 StockPiles Soil Sample

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		443.89		2.80	5.41E-01		8.09E+00
		778.92		12.98	-4.45E-01		1.95E+00
		867.38		4.21	-3.58E+00		6.30E+00
		964.11		14.50	1.87E+00		2.51E+00
		1085.89		9.94	-1.48E+00		2.99E+00
		1089.71		1.71	-2.13E+00		1.72E+01
		1112.07		13.60	-3.33E-01		2.53E+00
		1212.93		1.40	-1.04E+01		1.91E+01
		1299.16		1.63	-8.91E+00		1.64E+01
		1408.00		20.80	-4.05E-01		1.35E+00
	EU-154	123.10		40.50	3.67E-03	3.52E-01	3.52E-01
		723.36		19.70	-1.05E-01		1.36E+00
		873.23		11.45	9.59E-01		2.54E+00
		1004.78		17.90	-5.70E-01		2.78E+00
		1274.54		35.50	-1.06E-01		7.87E-01
	EU-155	86.54		34.00	1.78E-01	7.07E-01	7.07E-01
		105.31		20.60	-8.97E-01		7.31E-01
	PB-212	74.81		10.50	-2.96E-01	1.31E+00	1.94E+00
		77.11		17.70	7.09E-01		1.31E+00
		87.19		6.27	9.65E-01		3.90E+00
	RA-226d	186.11		3.28	9.89E+01	6.12E-01	1.35E+01
		241.92		7.46	2.07E-01		3.12E+00
		295.09		19.20	7.62E-01		1.01E+00
		351.87		37.10	5.14E-01		6.12E-01
		609.31		46.10	4.02E-01		6.90E-01
		1120.27		15.00	8.97E-01		2.38E+00
		1764.49		15.90	1.80E+00		2.53E+00
+	TH-232d	238.58	*	43.60	6.35E-01	4.77E-01	4.77E-01
		338.42		12.40	1.40E+00		1.76E+00
		583.02	*	30.87	8.10E-01		7.64E-01
		911.16	*	29.00	8.01E-01		8.21E-01
		968.97		17.40	5.34E-01		2.09E+00
+	U-235	143.79	*	10.50	5.79E+00	3.67E-01	1.38E+00
		163.38	*	4.70	5.08E+00		3.51E+00
		185.74	*	53.00	6.15E+00		3.67E-01
		205.33	*	4.70	5.80E+00		5.42E+00
+	U-238d	63.29	*	3.80	9.15E+01	3.29E+00	5.85E+00
		92.56	*	5.41	9.06E+01		3.29E+00
	AM-241	59.54		35.70	1.48E-01	5.38E-01	5.38E-01
	CM-243	99.52		14.40	-2.58E-01	6.27E-01	1.23E+00
		103.73		23.00	-3.60E-01		6.27E-01
		116.93		8.32	-2.64E+00		1.75E+00
		228.19		10.56	6.31E-01		1.55E+00
		277.60		14.00	1.46E-01		1.20E+00
	CM-245	99.52		21.10	-1.76E-01	4.29E-01	8.43E-01
		103.73		33.60	-2.46E-01		4.29E-01
		116.93		12.20	-1.80E+00		1.19E+00
		174.94		9.50	-9.64E-01		1.66E+00

Analysis Report for RCF19301

J16DK6 SAF:RC-087 FF2/618-7 StockPiles Soil Sample

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

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Reviewed and Approved: Edward S. Wallace Edward S. Wallace 3-24-08
(print/sign/date)

Radiological Counting Facility

Analysis Report for RCF19300

J16DK5 SAF:RC-087 FF2/618-7 StockPiles Soil Sample

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19300
Sample Description	: J16DK5 SAF:RC-087 FF2/618-7 StockPiles Soil Sample
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 6.900E+01 grams
Facility	: Default
Sample Taken On	: 3/19/2008 7:30:00AM
Acquisition Started	: 3/20/2008 12:03:43PM
Procedure	: 80 gram pill box
Operator	: dmbrehm
Detector Name	: REGIE02
Geometry	: 80 Gram Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3661.1 seconds
Dead Time	: 1.67 %
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	: 18018

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		1.000	1.04E+01	2.32E+00	
PB-212		0.706	9.80E-01	2.49E-01	
RA-226d		0.675	3.29E-01	1.41E-01	
TH-232d		0.680	4.78E-01	1.68E-01	
U-235		1.000	5.02E+00	6.35E-01	
U-238d	@	1.000	9.64E+01	7.10E+00	

Analysis Report for RCF19300

J16DK5 SAF:RC-087 FF2/618-7 StockPiles Soil Sample

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

UNIDENTIFIED PEAKS

Peak Locate Performed on : 3/20/2008 1:04:47PM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)		Peak Rate (CPS)		Peak Rate (%) Uncertainty
	1	53.23	Pa-231	4.01E-02		32.27
M	5	84.07	Th-231	1.04E-01		7.45
m	6	89.93	Pa-234m	5.53E-02		11.54
m	8	98.35	Pa-234	6.99E-02		8.94
M	9	109.29	No Peak	2.30E-02	Sum Peak	23.56
m	10	112.45	Uranium [illegible]	[illegible]0E-02		9.32
	16	258.34	No Peak	1.12E-02		45.49
	21	766.17	No Peak	1.20E-02		29.02
	23	1001.11	No Peak	4.28E-02		9.76

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

NP = No Peak
UK = Unknown

NUCLIDE MDA REPORT

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

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	K-40	1460.83	*	10.67	1.04E+01	2.21E+00	2.21E+00
	CO-60	1173.24		99.90	-1.54E-01	2.08E-01	2.08E-01
		1332.50		99.98	3.46E-02		2.14E-01
	NB-94	702.63		99.81	-1.13E-02	2.21E-01	2.26E-01
		871.10		99.89	-7.36E-02		2.21E-01
	AG-108m	433.94		90.50	-3.08E-02	1.61E-01	1.61E-01
		614.28		89.80	-1.30E-02		2.51E-01
		722.94		90.80	-7.68E-02		2.29E-01
	CS-137	661.66		85.21	-8.76E-02	2.30E-01	2.30E-01
	EU-152	40.12		38.40	-2.00E-01	3.88E-01	3.88E-01

Analysis Report for RCF19300

J16DK5 SAF:RC-087 FF2/618-7 StockPiles Soil Sample

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		45.38		11.10	-1.42E+00		1.47E+00
		121.78		28.40	-3.35E-02		4.77E-01
		244.69		7.51	-4.90E-01		1.67E+00
		344.29		26.60	-5.35E-01		5.44E-01
		411.12		2.23	-1.23E+00		6.63E+00
		443.89		2.80	-1.61E+00		5.05E+00
		778.92		12.98	-1.21E+00		1.84E+00
		867.38		4.21	2.15E+00		5.33E+00
		964.11		14.50	-2.36E-01		1.85E+00
		1085.89		9.94	-4.80E-01		2.39E+00
		1089.71		1.71	1.04E+01		1.43E+01
		1112.07		13.60	-1.88E+00		1.86E+00
		1212.93		1.40	3.59E+00		1.70E+01
		1299.16		1.63	-4.54E+00		1.45E+01
		1408.00		20.80	4.10E-02		1.08E+00
	EU-154	123.10		40.50	1.12E-04	3.33E-01	3.33E-01
		723.36		19.70	6.63E-02		1.07E+00
		873.23		11.45	4.95E-01		2.03E+00
		1004.78		17.90	-5.89E-01		2.56E+00
		1274.54		35.50	1.71E-01		7.54E-01
	EU-155	86.54		34.00	-1.66E+01	6.74E-01	6.74E-01
		105.31		20.60	-1.36E-01		7.11E-01
+	PB-212	74.81	*	10.50	1.82E+00	7.48E-01	1.29E+00
		77.11	*	17.70	7.47E-01		7.48E-01
		87.19		6.27	-2.10E+02		3.87E+00
+	RA-226d	186.11	*	3.28	8.38E+01	2.84E-01	3.01E+00
		241.92		7.46	-4.66E-01		2.16E+00
		295.09	*	19.20	3.48E-01		4.90E-01
		351.87	*	37.10	3.61E-01		2.84E-01
		609.31	*	46.10	2.91E-01		3.34E-01
		1120.27		15.00	5.40E-01		1.90E+00
		1764.49		15.90	7.11E-01		1.58E+00
+	TH-232d	238.58	*	43.60	5.44E-01	2.12E-01	2.12E-01
		338.42		12.40	1.90E-01		1.22E+00
		583.02	*	30.87	3.85E-01		3.70E-01
		911.16	*	29.00	5.82E-01		5.87E-01
		968.97		17.40	1.28E+00		1.59E+00
+	U-235	143.79	*	10.50	5.06E+00	1.86E-01	1.22E+00
		163.38	*	4.70	5.75E+00		2.18E+00
		185.74	*	53.00	5.19E+00		1.86E-01
		205.33	*	4.70	3.61E+00		1.99E+00
+	U-238d	63.29	*	3.80	9.64E+01	2.08E+00	5.06E+00
		92.56	*	5.41	9.00E+01		2.08E+00
	AM-241	59.54		35.70	5.88E-02	9.11E-01	9.11E-01
	CM-243	99.52		14.40	-1.52E-01	6.16E-01	1.21E+00
		103.73		23.00	-1.21E-01		6.16E-01
		116.93		8.32	-6.07E-01		1.93E+00
		228.19		10.56	-5.48E-01		1.13E+00

Analysis Report for RCF19300

J16DK5 SAF:RC-087 FF2/618-7 StockPiles Soil Sample

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	277.60	14.00	-8.87E-01		9.02E-01
CM-245	99.52	21.10	-1.04E-01	4.22E-01	8.28E-01
	103.73	33.60	-8.29E-02		4.22E-01
	116.93	12.20	-4.14E-01		1.31E+00
	174.94	9.50	-1.03E+00		1.33E+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, Edward S Wallace 3-24-08
(print/sign/date)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 03-25-08 11:20 **GM Screen Result** .2

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

Work Order Number: J8C250261 **Chain of Custody #** RC-087-049, 047

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: 7
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** _____ SOIL
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: LR, S. Smith **Date:** 03-25-08

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

TESTAMERICA

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-056	Page 1 of 1

Collector: B Lawrence	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.: JEEP-1	Field Logbook No.: EL-1395-12	COA: RG61878500	Method of Shipment: HAND DELIVERY - GOVT. VEHICLE
Shipped To: TestAmerica Incorporated, Richland	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

Potential Radiological and Beryllium contamination

< DOT LIMITS

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.							THE TO			

Sample No.	Matrix *	Sample Date	Sample Time										
~~J16DX2~~	~~SOIL~~						RJ 3/8						
J16DX3	SOIL	3/24/08	1430	X			KJ680 SKS 3/26/08		J16DW3				ORANGE CLAMPS
~~J16DX4~~	~~SOIL~~						KJ6Q8						

RC 3/24/08

RC 3/24/08

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: B Lawrence	1530 3-24-08	Received By/Stored In: RB KERKOW / RB Kerk	1530 3-24-08
Relinquished By/Removed From: RB KERKOW / RB Kerk	1600 3-24-08	Received By/Stored In: REF / C (RBK)	1600 3-24-08
Relinquished By/Removed From: 1060 BATELLE IC	3/25/08 1445	Received By/Stored In: DAVID STORDAN	3/25/08 1445
Relinquished By/Removed From: DAVID STORDAN	3/25/08 1455	Received By/Stored In: LJLANE TAL-R	3/25/08 1455
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}

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

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

WCH-EE-011

Radiological Counting Facility

Analysis Report for RCF19319

FF2 SAF RC-087 618-7 BURIAL GROUNDS/ STOCKPILES

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19319
Sample Description	: FF2 SAF RC-087 618-7 BURIAL GROUNDS/ STOCKPILES
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 7.600E+01 grams
Facility	: Default
Sample Taken On	: 3/24/2008 2:30:00PM
Acquisition Started	: 3/25/2008 7:12:23AM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: PGTWHITE
Geometry	: 80 Gram Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3600.7 seconds
Dead Time	: 0.02 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 80 - 4096
Peak Area Range (in channels)	: 80 - 4096
Identification Energy Tolerance	: 1.300 keV
Energy Calibration Used Done On	: 1/31/2008
Efficiency Calibration Used Done On	: 2/5/2008
Efficiency Calibration Description	: 80g Pill box 2/5/2008
Sample Number	: 18091

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		1.000	8.03E+00	2.50E+00	
PB-212		0.707	7.27E-01	1.53E-01	
RA-226d		0.674	4.12E-01	1.29E-01	
U-235		0.795	1.07E+00	2.74E-01	
U-238d	@	0.999	2.06E+01	2.85E+00	

Analysis Report for RCF19319

FF2 SAF RC-087 618-7 BURIAL GROUNDS/ 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 : 3/25/2008 8:12:29AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

Peak No.	Energy (keV)	Peak Rate (CPS)	Peak Rate (%) Uncertainty
7	238.50 Bi-212	2.51E-02	22.59

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

NP = No Peak
UK = Unknown

NUCLIDE MDA REPORT

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

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	K-40	1460.83	*	10.67	8.03E+00	1.66E+00	1.66E+00
	CO-60	1173.24		99.90	1.57E-02	1.62E-01	1.98E-01
		1332.50		99.98	4.84E-02		1.62E-01
	NB-94	702.63		99.81	1.74E-02	1.55E-01	1.55E-01
		871.10		99.89	4.27E-02		1.56E-01
	AG-108m	433.94		90.50	-4.67E-02	1.15E-01	1.15E-01
		614.28		89.80	-7.54E-03		1.84E-01
		722.94		90.80	2.42E-02		1.57E-01
	CS-137	661.66		85.21	-2.86E-02	1.44E-01	1.44E-01
	EU-152	40.12		38.40	-9.57E-02	2.34E-01	2.51E-01
		45.38		11.10	3.93E-01		8.72E-01
		121.78		28.40	4.33E-02		2.34E-01
		244.69		7.51	5.88E-01		1.17E+00
		344.29		26.60	-6.03E-02		3.05E-01
		411.12		2.23	2.14E+00		4.68E+00
		443.89		2.80	4.49E-01		3.59E+00
		778.92		12.98	-8.99E-01		8.35E-01
		867.38		4.21	-1.72E+00		3.65E+00
		964.11		14.50	3.48E-01		1.21E+00

Analysis Report for RCF19319

FF2 SAF RC-087 618-7 BURIAL GROUNDS/ STOCKPILES

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		1085.89		9.94	1.05E+00		1.86E+00
		1089.71		1.71	7.14E-01		9.51E+00
		1112.07		13.60	-1.12E+00		1.20E+00
		1212.93		1.40	-1.57E+00		1.36E+01
		1299.16		1.63	3.00E+00		1.20E+01
		1408.00		20.80	2.18E-01		8.66E-01
	EU-154	123.10		40.50	5.40E-03	1.63E-01	1.63E-01
		723.36		19.70	1.12E-01		7.25E-01
		873.23		11.45	-8.91E-01		1.41E+00
		1004.78		17.90	6.87E-01		1.18E+00
		1274.54		35.50	2.19E-02		4.28E-01
	EU-155	86.54		34.00	-1.12E-01	2.94E-01	2.94E-01
		105.31		20.60	-5.95E-02		3.55E-01
+	PB-212	74.81	*	10.50	7.86E-01	4.01E-01	7.03E-01
		77.11	*	17.70	7.00E-01		4.01E-01
		87.19		6.27	1.08E+00		1.64E+00
+	RA-226d	186.11	*	3.28	1.76E+01	2.55E-01	2.35E+00
		241.92		7.46	6.10E-01		1.52E+00
		295.09	*	19.20	2.69E-01		4.10E-01
		351.87	*	37.10	3.66E-01		2.55E-01
		609.31	*	46.10	5.55E-01		2.82E-01
		1120.27		15.00	1.06E-01		1.25E+00
		1764.49		15.90	9.94E-01		1.60E+00
	TH-232d	238.58		43.60	1.91E-01	2.53E-01	2.53E-01
		338.42		12.40	3.65E-01		8.23E-01
		583.02		30.87	3.54E-01		4.87E-01
		911.16		29.00	2.34E-01		6.53E-01
		968.97		17.40	3.77E-01		9.75E-01
+	U-235	143.79	*	10.50	1.07E+00	1.46E-01	6.69E-01
		163.38		4.70	4.82E-01		1.64E+00
		185.74	*	53.00	1.09E+00		1.46E-01
		205.33		4.70	8.47E-01		1.74E+00
+	U-238d	63.29	*	3.80	2.06E+01	1.94E+00	2.55E+00
		92.56	*	5.41	1.63E+01		1.94E+00
	AM-241	59.54		35.70	-8.57E-02	2.36E-01	2.36E-01
	CM-243	99.52		14.40	-6.57E-03	3.16E-01	5.33E-01
		103.73		23.00	2.71E-02		3.16E-01
		116.93		8.32	-5.79E-01		8.34E-01
		228.19		10.56	-3.29E-01		7.04E-01
		277.60		14.00	-1.86E-01		5.81E-01
	CM-245	99.52		21.10	-4.49E-03	2.16E-01	3.64E-01
		103.73		33.60	1.85E-02		2.16E-01
		116.93		12.20	-3.95E-01		5.69E-01
		174.94		9.50	-2.14E-02		7.04E-01

Analysis Report for RCF19319

FF2 SAF RC-087 618-7 BURIAL GROUNDS/ 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 Edward S. Wallace 3-25-08
(print/sign/date)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 03.25.08 1455 GM Screen Result .2

Client: WCH SDG #: J00165 NA[ ] SAF #: RC-087 NA [ ]

Work Order Number: J8C250282 Chain of Custody # RC-087-056

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
   - 1 Appropriate Sample Lables
9. Samples are:
   - 1 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** _____ Soil
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: LR L. Smith Date: 03.25.08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

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TESTAMERICA

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Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-057	Page 1 of 1

Collector B Lawrence	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. JEEP - 1	Field Logbook No. EL-1395-12	COA 2600 RG61878~~500~~ 3/27/08	Method of Shipment HAND DELIVERY - GOVT VEHICLE
Shipped To TestAmerica Incorporated, Richland	Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A

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.							TPHTD			

Sample No.	Matrix *	Sample Date	Sample Time										
J16DX4 KKAM9	SOIL	3-25-08	0740	X						J16DW4		D005	6
J16DX5 KKANE	SOIL	3-25-08	0750	X						J16DW5		D006	7
J16DX6 KKANG	SOIL	3-25-08	0800	X						J16DW6		D007	8

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Blawrence	1030 3-25-08	RB KERKOW / RB Kerk	1030 3-25-08
Relinquished By/Removed From: RB KERKOW / RB Kerk	1530 3-25-08	DAVID ST. JOHN	3/27/08 1530
Relinquished By/Removed From: DAVID ST. JOHN	3/27/08 1100	KK LJLANE TAL-12	1100 3 27 08
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

None

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

J8C270223
J00165
DUE 3 28 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

TESTAMERICA

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-087-058	Page 1 of 1

Collector B Lawrence	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. JEEP-1	Field Logbook No. EL-1395-12	COA 2600 RG61878~~500~~ RK 3/26/08	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.							TRED			

Sample No.	Matrix *	Sample Date	Sample Time										
J16DX7 KKANH	SOIL	3-26-08	0815	X						J16DW7		E0D2a	9
~~J16DX8~~	~~SOIL~~												

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
BLawrence	0900 3-26-08	RB KERKOW/RB Kerk	0900 3-26-08
RB KERKOW/RB Kerk	0945 3-26-08	REF 1B (RBK)	0945 3-26-08
1060 BATELLE 1B	3/27/08 1000	David St John	3/27/08 1000
David St John	3/27/08 1100	LJLANE TALK	1100 3 27 08

SPECIAL INSTRUCTIONS

None

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

J8C270223
J00165
DUE 3-28 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
Li=Liquid
V=Vegetation
X=Other

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

WCH-EE-011

Radiological Counting Facility

Analysis Report for RCF19358

J16DW7 SAF-RC-087 FF2/618-7 BG-STOCKPILE

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19358
Sample Description	: J16DW7 SAF-RC-087 FF2/618-7 BG-STOCKPILE
Sample Type	: 50 gram pill box
Unit	:
Sample Point	
Sample Size	: 5.400E+01 grams
Facility	: Default
Sample Taken On	: 3/26/2008 8:15:00AM
Acquisition Started	: 3/26/2008 10:17:23AM
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	: 18162

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		1.000	1.45E+01	3.25E+00	
TH-232d		0.420	5.20E-01	2.23E-01	
U-238d	@	1.000	3.44E+00	1.88E+00	

Analysis Report for RCF19358

J16DW7 SAF-RC-087 FF2/618-7 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 : 3/26/2008 11:17:31AM
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	2.52E-02	30.27
6	609.18	Bi-214	5.06E-03	64.84

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	1.45E+01	3.03E+00	3.03E+00
	CO-60	1173.24		99.90	-1.14E-01	2.93E-01	3.25E-01
		1332.50		99.98	-1.42E-01		2.93E-01
	NB-94	702.63		99.81	-2.83E-02	2.50E-01	2.56E-01
		871.10		99.89	1.32E-01		2.50E-01
	AG-108m	433.94		90.50	3.29E-02	2.11E-01	2.11E-01
		614.28		89.80	6.84E-02		2.99E-01
		722.94		90.80	3.70E-02		2.68E-01
	CS-137	661.66		85.21	2.65E-01	3.01E-01	3.01E-01
	EU-152	40.12		38.40	5.35E-02	3.21E-01	3.21E-01
		45.38		11.10	3.62E-01		1.07E+00
		121.78		28.40	-6.75E-02		3.44E-01
		244.69		7.51	5.85E-01		2.02E+00
		344.29		26.60	-3.69E-01		5.89E-01
		411.12		2.23	2.34E+00		8.30E+00
		443.89		2.80	-3.87E+00		6.72E+00
		778.92		12.98	-8.97E-01		1.78E+00
		867.38		4.21	-1.43E+00		6.47E+00

Analysis Report for RCF19358

J16DW7 SAF-RC-087 FF2/618-7 BG-STOCKPILE

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		964.11		14.50	9.88E-02		2.34E+00
		1085.89		9.94	3.73E-01		3.08E+00
		1089.71		1.71	-9.75E+00		1.72E+01
		1112.07		13.60	-5.41E-01		2.20E+00
		1212.93		1.40	-3.21E+01		2.01E+01
		1299.16		1.63	8.02E+00		1.91E+01
		1408.00		20.80	-9.03E-01		1.25E+00
	EU-154	123.10		40.50	8.72E-02	2.44E-01	2.44E-01
		723.36		19.70	1.71E-01		1.23E+00
		873.23		11.45	-1.78E+00		2.16E+00
		1004.78		17.90	6.67E-02		1.66E+00
		1274.54		35.50	-1.99E-02		9.57E-01
	EU-155	86.54		34.00	-2.06E-01	3.48E-01	3.48E-01
		105.31		20.60	-8.18E-02		4.46E-01
	PB-212	74.81		10.50	-7.09E-01	8.69E-01	1.18E+00
		77.11		17.70	1.84E+00		8.69E-01
		87.19		6.27	2.26E+00		1.96E+00
	RA-226d	186.11		3.28	6.29E-01	6.09E-01	4.46E+00
		241.92		7.46	1.02E+00		2.97E+00
		295.09		19.20	4.24E-01		9.55E-01
		351.87		37.10	6.23E-01		6.09E-01
		609.31		46.10	7.21E-01		7.01E-01
		1120.27		15.00	-6.53E-01		2.43E+00
		1764.49		15.90	-3.00E+00		2.31E+00
+	TH-232d	238.58	*	43.60	4.69E-01	4.34E-01	4.34E-01
		338.42		12.40	3.42E-01		1.49E+00
		583.02	*	30.87	6.12E-01		5.54E-01
		911.16		29.00	2.22E-01		1.16E+00
		968.97		17.40	4.53E-01		1.96E+00
	U-235	143.79		10.50	-1.73E-02	2.76E-01	1.05E+00
		163.38		4.70	1.11E-01		2.37E+00
		185.74		53.00	3.89E-02		2.76E-01
		205.33		4.70	-9.89E-01		2.61E+00
+	U-238d	63.29	*	3.80	3.44E+00	2.07E+00	2.92E+00
		92.56	*	5.41	1.27E+00		2.07E+00
	AM-241	59.54		35.70	2.30E-02	2.55E-01	2.55E-01
	CM-243	99.52		14.40	3.95E-02	4.01E-01	6.52E-01
		103.73		23.00	-2.15E-02		4.01E-01
		116.93		8.32	-4.77E-01		1.14E+00
		228.19		10.56	-7.84E-03		1.37E+00
		277.60		14.00	2.42E-01		1.08E+00
	CM-245	99.52		21.10	2.70E-02	2.75E-01	4.45E-01
		103.73		33.60	-1.47E-02		2.75E-01
		116.93		12.20	-3.25E-01		7.76E-01
		174.94		9.50	-1.69E-01		1.17E+00

Analysis Report for RCF19358

J16DW7 SAF-RC-087 FF2/618-7 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, Edward S. Wallace 3-26-08
(print/sign/date)

Radiological Counting Facility

Analysis Report for RCF19355

J16DW4 SAF-RC-087 FF2/618-7 BG&STOCKPILES

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19355
Sample Description	: J16DW4 SAF-RC-087 FF2/618-7 BG&STOCKPILES
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 7.200E+01 grams
Facility	: Default
Sample Taken On	: 3/25/2008 7:40:00AM
Acquisition Started	: 3/26/2008 9:11:21AM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: REGIE02
Geometry	: 80 Gram Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3667.1 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	: 18155

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.999	1.26E+01	2.45E+00	
RA-226d		0.677	3.84E-01	1.58E-01	
TH-232d		0.996	5.89E-01	1.77E-01	
U-235		1.000	6.26E+00	7.33E-01	
U-238d	@	1.000	1.02E+02	7.52E+00	

Analysis Report for RCF19355

J16DW4 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 : 3/26/2008 10:12:31AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
	1	53.24	Bi-214	4.29E-02	26.35
M	3	84.07	Th-231	1.11E-01	7.57
m	4	89.82	Ac-228	8.23E-02	9.18
m	6	98.42	No Peak	1.08E-01	6.84
	7	112.76	U progeny	8.56E-02	16.93
M	11	201.98	No Peak Sum	1.85E-02	17.24
	14	258.43	No Peak	9.94E-03	58.99
	20	766.23	Bi-211	2.05E-02	16.48
	23	1001.16	Pa-234M	4.96E-02	9.00

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

NP = No Peak
UK = Unknown

NUCLIDE MDA REPORT

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

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
+	K-40	1460.83	*	10.67	1.26E+01	2.12E+00	2.12E+00
	CO-60	1173.24		99.90	2.74E-02	2.21E-01	2.35E-01
		1332.50		99.98	3.40E-02		2.21E-01
	NB-94	702.63		99.81	-9.47E-02	2.03E-01	2.07E-01
		871.10		99.89	7.49E-03		2.03E-01
	AG-108m	433.94		90.50	-1.05E-01	1.44E-01	1.44E-01
		614.28		89.80	9.10E-02		2.59E-01
		722.94		90.80	8.75E-02		2.35E-01
	CS-137	661.66		85.21	1.05E-01	2.32E-01	2.32E-01
	EU-152	40.12		38.40	-1.22E-01	3.89E-01	3.89E-01
		45.38		11.10	-1.61E+00		1.49E+00
		121.78		28.40	-1.16E-01		4.79E-01

Analysis Report for RCF19355

J16DW4 SAF-RC-087 FF2/618-7 BG&STOCKPILES

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		244.69		7.51	-2.19E+00		1.73E+00
		344.29		26.60	-4.31E-01		5.54E-01
		411.12		2.23	-6.56E-01		6.91E+00
		443.89		2.80	3.26E-01		4.95E+00
		778.92		12.98	-1.19E+00		1.58E+00
		867.38		4.21	6.39E-01		5.07E+00
		964.11		14.50	-6.70E-01		1.93E+00
		1085.89		9.94	-5.28E-01		2.26E+00
		1089.71		1.71	-3.69E-01		1.31E+01
		1112.07		13.60	-1.92E+00		1.78E+00
		1212.93		1.40	6.21E+00		1.81E+01
		1299.16		1.63	-2.67E+00		1.28E+01
		1408.00		20.80	2.08E-01		9.74E-01
	EU-154	123.10		40.50	-1.84E-01	3.35E-01	3.35E-01
		723.36		19.70	5.50E-01		1.09E+00
		873.23		11.45	-8.64E-01		1.73E+00
		1004.78		17.90	6.54E+00		2.57E+00
		1274.54		35.50	-2.77E-01		6.36E-01
	EU-155	86.54		34.00	-1.88E+01	7.25E-01	7.25E-01
		105.31		20.60	-3.47E-01		7.75E-01
	PB-212	74.81		10.50	2.77E+00	1.24E+00	2.11E+00
		77.11		17.70	1.38E-01		1.24E+00
		87.19		6.27	-2.26E+02		4.19E+00
+	RA-226d	186.11	*	3.28	1.01E+02	3.59E-01	3.80E+00
		241.92		7.46	-9.41E-01		2.24E+00
		295.09	*	19.20	5.37E-01		4.53E-01
		351.87	*	37.10	3.01E-01		3.82E-01
		609.31	*	46.10	3.91E-01		3.59E-01
		1120.27		15.00	1.54E+00		1.82E+00
		1764.49		15.90	3.84E-01		1.48E+00
+	TH-232d	238.58	*	43.60	7.78E-01	2.79E-01	2.79E-01
		338.42	*	12.40	5.61E-01		7.29E-01
		583.02	*	30.87	4.67E-01		4.88E-01
		911.16	*	29.00	5.43E-01		5.09E-01
		968.97	*	17.40	7.47E-01		8.91E-01
+	U-235	143.79	*	10.50	6.18E+00	2.35E-01	1.27E+00
		163.38	*	4.70	7.19E+00		2.99E+00
		185.74	*	53.00	6.22E+00		2.35E-01
		205.33	*	4.70	5.76E+00		1.67E+00
+	U-238d	63.29	*	3.80	1.02E+02	2.22E+00	5.70E+00
		92.56	*	5.41	1.04E+02		2.22E+00
	AM-241	59.54		35.70	-3.38E-01	9.36E-01	9.36E-01
	CM-243	99.52		14.40	-9.47E-02	6.86E-01	1.33E+00
		103.73		23.00	-8.24E-01		6.86E-01
		116.93		8.32	-1.10E+00		1.94E+00
		228.19		10.56	-4.70E-01		1.13E+00
		277.60		14.00	5.74E-01		9.26E-01
	CM-245	99.52		21.10	-6.47E-02	4.70E-01	9.04E-01

Analysis Report for RCF19355

J16DW4 SAF-RC-087 FF2/618-7 BG&STOCKPILES

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	103.73	33.60	-5.64E-01		4.70E-01
	116.93	12.20	-7.50E-01		1.32E+00
	174.94	9.50	-6.36E-02		1.49E+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: Richard S. Wallace Richard S. Wallace 3-26-08
(print/sign/date)

Radiological Counting Facility

Analysis Report for RCF19356

J16DW5 SAF-RC-087 FF2/618-7 BG&STOCKPILES

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19356
Sample Description	: J16DW5 SAF-RC-087 FF2/618-7 BG&STOCKPILES
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 8.900E+01 grams
Facility	: Default
Sample Taken On	: 3/25/2008 7:50:00AM
Acquisition Started	: 3/26/2008 9:11:28AM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: PGTWHITE
Geometry	: 80 Gram Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3600.7 seconds
Dead Time	: 0.02 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 80 - 4096
Peak Area Range (in channels)	: 80 - 4096
Identification Energy Tolerance	: 1.300 keV
Energy Calibration Used Done On	: 1/31/2008
Efficiency Calibration Used Done On	: 2/5/2008
Efficiency Calibration Description	: 80g Pill box 2/5/2008
Sample Number	: 18156

INTERFERENCE CORRECTED REPORT

Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
K-40		0.996	1.11E+01	3.11E+00	
PB-212		0.707	5.71E-01	1.61E-01	
RA-226d		0.673	2.78E-01	1.18E-01	
TH-232d		0.681	4.22E-01	1.44E-01	
U-235		0.894	1.64E+00	3.68E-01	
U-238d	@	1.000	1.88E+01	2.75E+00	

Analysis Report for RCF19356

J16DW5 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 : 3/26/2008 10:11:35AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
M	4	84.27	Th-231	2.01E-02	24.30
m	5	90.01	No Peak	1.90E-02	23.31
	11	258.70	No Peak	6.98E-03	53.85
	16	766.13	Bi-211	1.05E-02	25.63
	18	1001.03	Pa-234/m	2.23E-02	14.58

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	1.74E+00	1.74E+00
	CO-60	1173.24		99.90	-6.74E-03	1.60E-01	1.78E-01
		1332.50		99.98	7.81E-03		1.60E-01
	NB-94	702.63		99.81	-5.88E-02	1.41E-01	1.41E-01
		871.10		99.89	-2.87E-02		1.44E-01
	AG-108m	433.94		90.50	-4.67E-02	1.09E-01	1.09E-01
		614.28		89.80	-1.02E-02		1.53E-01
		722.94		90.80	9.92E-02		1.68E-01
	CS-137	661.66		85.21	8.50E-02	1.50E-01	1.50E-01
	EU-152	40.12		38.40	1.65E-01	2.56E-01	2.56E-01
		45.38		11.10	2.34E-01		8.54E-01
		121.78		28.40	9.29E-03		2.68E-01
		244.69		7.51	-4.70E-01		1.09E+00
		344.29		26.60	-5.13E-01		3.11E-01

Analysis Report for RCF19356

J16DW5 SAF-RC-087 FF2/618-7 BG&STOCKPILES

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		411.12		2.23	-9.49E-01		4.25E+00
		443.89		2.80	2.92E-01		3.60E+00
		778.92		12.98	2.02E-01		1.15E+00
		867.38		4.21	-1.89E+00		3.33E+00
		964.11		14.50	6.90E-02		1.19E+00
		1085.89		9.94	-9.95E-01		1.55E+00
		1089.71		1.71	-3.83E+00		9.37E+00
		1112.07		13.60	-8.16E-01		1.20E+00
		1212.93		1.40	5.00E+00		1.35E+01
		1299.16		1.63	2.23E+00		1.01E+01
		1408.00		20.80	-7.43E-02		7.24E-01
	EU-154	123.10		40.50	1.33E-01	1.93E-01	1.93E-01
		723.36		19.70	4.57E-01		7.76E-01
		873.23		11.45	1.62E-01		1.25E+00
		1004.78		17.90	-2.01E-01		1.38E+00
		1274.54		35.50	-5.14E-02		4.85E-01
	EU-155	86.54		34.00	-1.54E-01	3.31E-01	3.31E-01
		105.31		20.60	-3.08E-01		3.88E-01
+	PB-212	74.81	*	10.50	6.00E-01	4.39E-01	7.18E-01
		77.11	*	17.70	5.59E-01		4.39E-01
		87.19		6.27	1.40E+00		1.85E+00
+	RA-226d	186.11	*	3.28	2.98E+01	2.58E-01	2.73E+00
		241.92		7.46	4.02E-02		1.56E+00
		295.09	*	19.20	3.74E-01		4.39E-01
		351.87	*	37.10	3.72E-01		2.58E-01
		609.31	*	46.10	1.85E-01		2.65E-01
		1120.27		15.00	7.33E-01		1.28E+00
		1764.49		15.90	-3.44E-02		1.10E+00
+	TH-232d	238.58	*	43.60	3.93E-01	2.42E-01	2.42E-01
		338.42		12.40	9.42E-01		8.21E-01
		583.02	*	30.87	3.56E-01		3.93E-01
		911.16	*	29.00	6.39E-01		5.09E-01
		968.97		17.40	9.30E-01		1.07E+00
+	U-235	143.79	*	10.50	1.52E+00	1.69E-01	7.28E-01
		163.38		4.70	3.12E+00		1.86E+00
		185.74	*	53.00	1.84E+00		1.69E-01
		205.33	*	4.70	1.30E+00		1.56E+00
+	U-238d	63.29	*	3.80	1.88E+01	1.63E+00	2.80E+00
		92.56	*	5.41	2.00E+01		1.63E+00
	AM-241	59.54		35.70	4.34E-02	2.66E-01	2.66E-01
	CM-243	99.52		14.40	1.50E-01	3.39E-01	6.11E-01
		103.73		23.00	-1.83E-01		3.39E-01
		116.93		8.32	-1.66E+00		9.05E-01
		228.19		10.56	-4.05E-01		7.20E-01
		277.60		14.00	2.50E-01		5.57E-01
	CM-245	99.52		21.10	1.03E-01	2.32E-01	4.17E-01
		103.73		33.60	-1.25E-01		2.32E-01
		116.93		12.20	-1.13E+00		6.17E-01

Analysis Report for RCF19356

J16DW5 SAF-RC-087 FF2/618-7 BG&STOCKPILES

Nuclide Name	Energy (keV)	Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
	174.94	9.50	-2.94E-03		7.77E-01

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

Reviewed and Approved: Edward S. Wallace Edward S Wallace 3-26-08
(print/sign/date)

Radiological Counting Facility

Analysis Report for RCF19357

J16DW6 SAF-RC-087 FF2/618-7 BG&STOCKPILES

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF19357
Sample Description	: J16DW6 SAF-RC-087 FF2/618-7 BG&STOCKPILES
Sample Type	: 80 gram pill box
Unit	:
Sample Point	
Sample Size	: 6.100E+01 grams
Facility	: Default
Sample Taken On	: 3/25/2008 8:00:00AM
Acquisition Started	: 3/26/2008 10:17:17AM
Procedure	: 80 gram pill box
Operator	: RCT
Detector Name	: REGIE02
Geometry	: 80 Gram Pill Box
Live Time	: 3600.0 seconds
Real Time	: 3647.4 seconds
Dead Time	: 1.30 %
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	: 18161

INTERFERENCE CORRECTED REPORT

	Nuclide Name		Nuclide Id Confidence	Wt mean Activity (pCi/grams)	Wt mean Activity Uncertainty	Comments
	K-40		0.999	1.07E+01	2.54E+00	
X	EU-155		0.380			
	PB-212		0.999	1.18E+00	1.70E-01	
	RA-226d		0.997	1.52E+00	2.35E-01	
	TH-232d		0.433	3.59E-01	1.62E-01	
	U-235		0.546	2.70E-01	1.60E-01	
	U-238d	@	1.000	2.89E+00	1.44E+00	

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J16DW6 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 : 3/26/2008 11:18:08AM
Peak Locate From Channel : 80
Peak Locate To Channel : 4096

	Peak No.	Energy (keV)		Peak Rate (CPS)	Peak Rate (%) Uncertainty
M	4	84.57	Th-231	9.30E-03	31.62
	15	1238.27	Bi-214	5.53E-03	33.51

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	1.07E+01	2.53E+00	2.53E+00
	CO-60	1173.24		99.90	4.96E-02	2.81E-01	2.83E-01
		1332.50		99.98	1.25E-01		2.81E-01
	NB-94	702.63		99.81	9.11E-02	2.01E-01	2.15E-01
		871.10		99.89	4.36E-02		2.01E-01
	AG-108m	433.94		90.50	-2.50E-03	1.55E-01	1.55E-01
		614.28		89.80	-5.67E-03		4.08E-01
		722.94		90.80	1.82E-01		2.29E-01
	CS-137	661.66		85.21	1.57E-02	2.11E-01	2.11E-01
	EU-152	40.12		38.40	1.22E-01	2.36E-01	2.36E-01
		45.38		11.10	-1.74E-01		8.42E-01
		121.78		28.40	-1.53E-01		3.13E-01
		244.69		7.51	-1.36E-01		1.94E+00
		344.29		26.60	9.45E-02		5.45E-01
		411.12		2.23	-1.59E+00		7.19E+00
		443.89		2.80	6.57E-01		5.17E+00
		778.92		12.98	2.87E-01		1.68E+00

Analysis Report for RCF19357

J16DW6 SAF-RC-087 FF2/618-7 BG&STOCKPILES

	Nuclide Name	Energy (keV)		Yield(%)	Activity (pCi/grams)	Nuclide MDA (pCi/grams)	Line MDA (pCi/grams)
		867.38		4.21	-6.38E+00		4.56E+00
		964.11		14.50	1.41E+00		2.01E+00
		1085.89		9.94	3.44E-02		2.52E+00
		1089.71		1.71	-1.40E+01		1.34E+01
		1112.07		13.60	-2.26E-01		1.82E+00
		1212.93		1.40	-4.38E+00		2.26E+01
		1299.16		1.63	2.00E+00		1.56E+01
		1408.00		20.80	7.93E-01		1.27E+00
	EU-154	123.10		40.50	1.17E-01	2.28E-01	2.28E-01
		723.36		19.70	8.25E-01		1.05E+00
		873.23		11.45	-2.23E-01		1.80E+00
		1004.78		17.90	9.33E-01		1.44E+00
		1274.54		35.50	3.94E-01		7.93E-01
	EU-155	86.54	*	34.00	2.65E-01	1.86E-01	1.86E-01
		105.31		20.60	-1.49E-02		4.44E-01
+	PB-212	74.81	*	10.50	1.38E+00	3.50E-01	6.11E-01
		77.11	*	17.70	1.05E+00		3.50E-01
		87.19	*	6.27	1.44E+00		1.01E+00
+	RA-226d	186.11	*	3.28	5.88E+00	3.87E-01	3.26E+00
		241.92	*	7.46	2.20E+00		1.02E+00
		295.09	*	19.20	9.80E-01		6.74E-01
		351.87	*	37.10	9.23E-01		3.87E-01
		609.31	*	46.10	1.94E+00		3.97E-01
		1120.27	*	15.00	1.93E+00		1.45E+00
		1764.49	*	15.90	2.74E+00		9.41E-01
+	TH-232d	238.58	*	43.60	4.23E-01	1.76E-01	1.76E-01
		338.42		12.40	1.27E-02		1.09E+00
		583.02	*	30.87	2.68E-01		3.99E-01
		911.16		29.00	1.33E+00		9.98E-01
		968.97		17.40	1.49E+00		1.69E+00
+	U-235	143.79		10.50	4.25E-01	2.02E-01	9.90E-01
		163.38		4.70	2.13E-01		2.17E+00
		185.74	*	53.00	3.64E-01		2.02E-01
		205.33		4.70	6.90E-01		2.53E+00
+	U-238d	63.29	*	3.80	2.89E+00	1.15E+00	2.22E+00
		92.56	*	5.41	3.82E+00		1.15E+00
	AM-241	59.54		35.70	2.00E-01	3.04E-01	3.04E-01
	CM-243	99.52		14.40	-7.31E-01	3.84E-01	6.06E-01
		103.73		23.00	-4.13E-01		3.84E-01
		116.93		8.32	1.81E-01		1.11E+00
		228.19		10.56	-1.59E-02		1.11E+00
		277.60		14.00	9.21E-01		9.46E-01
	CM-245	99.52		21.10	-4.99E-01	2.63E-01	4.13E-01
		103.73		33.60	-2.83E-01		2.63E-01
		116.93		12.20	1.24E-01		7.57E-01
		174.94		9.50	6.26E-01		1.19E+00

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+ = Nuclide identified during the nuclide identification
* = Energy line found in the spectrum
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@ = Half-life too short to be able to perform the decay correction

Reviewed and Approved: Edward S. Wallace, Edward S Wallace 3-26-08
(print/sign/date)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List DUE 3 28 08

Date/Time Received: 3 27 08 1100 GM Screen Result 0.2K

Client: WCH SDG #: J00165 NA[ ] SAF #: RC-087 NA [ ]

Work Order Number: J8C270223 Chain of Custody # RC-087-057,-058

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: 3 27 08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____