

MAPEP-09-RdV20 Receiving Laboratories

	Lab Code	Lab Name
1	ADEM01	Alabama Department of Environmental Management
2	AFOH01	USAFSAM/OEHHL
3	ANTE01	ALS Laboratory Group, Environmental Division
4	ARSL01	American Radiation Services Inc.
5	CDHS01	California Department of Public Health
6	CDPH01	Colorado Dept. of Public Health and Environment
7	CHMH01	222-S Laboratory
8	CMRC01	Carlsbad Environmental Monitoring and Research Center
9	DEHS01	Department of Environmental Health & Safety
10	ENES01	Energy Northwest Environmental Services
11	ERCL01	Washington State Public Health Laboratories
12	ERLG01	Environmental Radiation Laboratory
13	ERPD99	Ministry Of Health,Radiation Protection Department Lab
14	FDHE01	Florida Dept of Health Environmental Laboratory
15	FDOH01	Florida Dept. of Health, Mobile Environmental Radiological Lab
16	FMEC99	Foods and Water Laboratories Center
17	FNAL01	Fermi National Accelerator Laboratory (FermiLab)
18	GENE01	GEL Laboratories, LLC
19	GPCL01	Georgia Power Company Environmental Laboratory
20	HECR01	SC Dept. Health and Environmental Control Radiological Laboratory
21	IAEA99	International Atomic Energy Agency
22	ISUP01	ISU - Department of Physics/Health Physics/EAL
23	JAEC99	Radiation Measurements Laboratory
24	KDHE01	Kansas Dept. of Health & Environment
25	LANL01	Los Alamos National Laboratory
26	LAWR01	LAWRENCE BERKELEY NATIONAL LABORATORY
27	LAWR02	Lawrence Livermore National Laboratory
28	LDRA99	Laboratori de Radiologia Ambiental-Universitat de Barcelona
29	LECR99	Lancaster Environment Centre
30	LOCK03	Advanced Test Reactor (ATR) Complex Radioanalytical Laboratory
31	MART01	USEC, Inc.
32	MART02	United States Enrichment Corporation
33	MART03	Radioactive Material Analysis Laboratory
34	MDPH01	MDPH-Radiation Control Program
35	NARL01	National Air and Radiation Environmental Laboratory
36	NESI01	B&W Technical Services-Radioisotope & Analytical Chemistry Laboratory
37	NJDH01	New Jersey Dept. of Health & Senior Services, PHEL, ECLS
38	NRLL99	National Radiation Laboratory
39	NTSI01	Nuclear Technology Services, Inc.
40	ODHL01	Ohio Department of Health Laboratory
41	ORIS01	ORISE/IEAV
42	QUAN01	TestAmerica St. Louis
43	QUAN03	TestAmerica
44	RMCL99	Royal Scientific Society - Radiation Measurements Lab
45	RPSC01	Radiation Protection Service
46	RSIR99	Instituto de Radioprotecao e Dosimetria - IRD/CNEN
47	SCAL01	GPL Laboratories Alabama, LLC
48	SEML01	SRS Environmental Monitoring Laboratory

Setup and Process Data

MAPEP-09-RdV20

Analyte	Ref. Value	Total Ref.	Uncertainty	F.P.	S.E.
Inorganic					
Uranium-235	0.274		0.005		
Uranium-238	38.4		0.8		
Uranium-Total	38.6		0.8		
Radiological					
Cobalt-57	2.36		0.05		
Uranium-234/233	0.460		0.009		
Uranium-238	0.477		0.010		
Americium-241	0.306		0.005		
Cesium-134	3.40		0.06		
Cesium-137	0.93		0.02		
Cobalt-60					
Manganese-54	2.30		0.05		
Plutonium-238	0.213		0.004		
Plutonium-239/240	0.168		0.003		
Strontium-90	1.260		0.017		
Zinc-65	1.354		0.027		

Sample Statistical Summary

MAPEP-09-RdV20

Analyte	T(1)	A(2)	Grand(3) Mean	Std Dev	Ref Value	Ref Unc	Acceptance Range
Inorganic							Units: (ug/sample)
Uranium-235	2	2			0.274	0.005	0.192 - 0.356
Uranium-238	2	2			38.4	0.8	26.9 - 49.9
Uranium-Total	1	1			38.6	0.8	27.0 - 50.2

Analyte	T(1)	A(2)	Grand(3) Mean	Std Dev	Ref Value	Ref Unc	Acceptance Range
Radiological							Units: (Bq/sample)
Americium-241	37	30	0.293	0.034	0.306	0.005	0.214 - 0.398
Cesium-134	57	51	3.38	0.32	3.40	0.06	2.38 - 4.42
Cesium-137	57	50	0.97	0.11	0.93	0.02	0.65 - 1.21
Cobalt-57	57	49	2.54	0.30	2.36	0.05	1.65 - 3.07
Cobalt-58	1						
Cobalt-60	39	34					False Positive Test
Manganese-54	56	53	2.42	0.28	2.30	0.05	1.61 - 2.99
Plutonium-238	29	26	0.214	0.019	0.213	0.004	0.149 - 0.277
Plutonium-239/240	29	26	0.165	0.016	0.168	0.003	0.118 - 0.218
Potassium-40	12						
Strontium-90	27	25	1.209	0.110	1.260	0.017	0.882 - 1.638
Uranium-234/233	28	24	0.463	0.043	0.460	0.009	0.322 - 0.598
Uranium-235	3						
Uranium-238	30	27	0.464	0.044	0.477	0.010	0.334 - 0.620
Zinc-65	53	44	1.394	0.187	1.354	0.027	0.948 - 1.760

Note: (1) T = Total number of laboratories reporting analyte.
 (2) A = Number of laboratories with 'Acceptable' performance.
 (3) Mean excludes values derived as total metals and values indicated as "Not Acceptable".

Flag Summary Report

MAPEP-09-RdV20

Inorganic				
Analyte	A	W	RW	N
Uranium-Total	1			
Uranium-235	2			
Uranium-238	2			
Radiological				
Analyte	A	W	RW	N
Americium-241	27	3		7
Cesium-134	49	2		6
Cesium-137	43	7		7
Cobalt-57	40	9		8
Cobalt-60	34		19	5
Manganese-54	44	9		3
Plutonium-238	25	1		3
239/240	24	2		3
Strontium-90	24	1		2
Uranium-234/233	22	2		4
Uranium-238	24	3		3
Zinc-65	35	9		9



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (ADEM01) Alabama Department of Environmental Management
 Montgomery Laboratory
 Montgomery, AL 36110

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.306				0.214 - 0.398		
Cesium-134	1.63	3.40	N		-52.1	2.38 - 4.42	0.10	
Cesium-137	0.59	0.93	N		-36.6	0.65 - 1.21	0.05	
Cobalt-57	2.52	2.36	A		6.8	1.65 - 3.07	0.09	
Cobalt-60	NR			RW (11)				
Manganese-54	1.31	2.30	N		-43.0	1.61 - 2.99	0.09	
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	0.98	1.354	W		-27.6	0.948 - 1.760	0.08	

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
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Notes:

- (1) = False Positive
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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (AFOH01) USAFSAM/OEHHL
 2350 Gillingham Dr
 Brooks City-Base, TX 78235-5103

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.05	0.306	N		-83.7	0.214 - 0.398	0.01	
Cesium-134	2.07	3.40	N		-39.1	2.38 - 4.42	0.07	
Cesium-137	0.64	0.93	N		-31.2	0.65 - 1.21	0.05	
Cobalt-57	1.11	2.36	N		-53.0	1.65 - 3.07	0.05	
Cobalt-60	0.03		A				0.05	
Manganese-54	1.53	2.30	N		-33.5	1.61 - 2.99	0.08	
Plutonium-238	0.04	0.213	N		-81.2	0.149 - 0.277	0.01	H
Plutonium-239/240	0.03	0.168	N		-82.1	0.118 - 0.218	0.01	H
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	0.073	0.460	N		-84.1	0.322 - 0.598	0.006	
Uranium-238	0.077	0.477	N		-83.9	0.334 - 0.620	0.006	
Zinc-65	0.78	1.354	N		-42.4	0.948 - 1.760	0.10	

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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (ANTE01) ALS Laboratory Group, Environmental Division
 225 Commerce Drive
 Fort Collins, CO 80524-1416

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.233	0.306	W		-23.9	0.214 - 0.398	0.022	
Cesium-134	2.730	3.40	A		-19.7	2.38 - 4.42	0.175	
Cesium-137	0.726	0.93	W		-21.9	0.65 - 1.21	0.076	
Cobalt-57	2.125	2.36	A		-10.0	1.65 - 3.07	0.135	
Cobalt-60	-0.047			A			0.064	
Manganese-54	2.035	2.30	A		-11.5	1.61 - 2.99	0.150	
Plutonium-238	0.159	0.213	W		-25.4	0.149 - 0.277	0.015	
Plutonium-239/240	0.122	0.168	W		-27.4	0.118 - 0.218	0.012	
Strontium-90	1.14	1.260	A		-9.5	0.882 - 1.638	0.14	
Uranium-234/233	0.321	0.460	N		-30.2	0.322 - 0.598	0.028	
Uranium-238	0.361	0.477	W		-24.3	0.334 - 0.620	0.031	
Zinc-65	0.995	1.354	W		-26.5	0.948 - 1.760	0.165	

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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (ARSL01) American Radiation Services Inc.
 2609 North River Road
 Port Allen, LA 70767

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.199	0.306	N		-35.0	0.214 - 0.398	0.028	
Cesium-134	3.202	3.40	A		-5.8	2.38 - 4.42	0.239	
Cesium-137	0.981	0.93	A		5.5	0.65 - 1.21	0.097	
Cobalt-57	2.682	2.36	A		13.6	1.65 - 3.07	0.213	
Cobalt-60	0.017		A				0.099	
Manganese-54	2.506	2.30	A		9.0	1.61 - 2.99	0.220	
Plutonium-238	0.213	0.213	A		0.0	0.149 - 0.277	0.031	
Plutonium-239/240	0.170	0.168	A		1.2	0.118 - 0.218	0.025	
Strontium-90	1.197	1.260	A		-5.0	0.882 - 1.638	0.099	
Uranium-234/233	0.486	0.460	A		5.7	0.322 - 0.598	0.063	
Uranium-238	0.466	0.477	A		-2.3	0.334 - 0.620	0.061	
Zinc-65	1.543	1.354	A		14.0	0.948 - 1.760	0.297	

Radiological Reference Date: January 1, 2009

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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (CDHS01) California Department of Public Health
 Sanitation & Radiation Lab.
 Richmond, CA 94804-6403

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.272	0.306	A		-11.1	0.214 - 0.398	0.011	
Cesium-134	3.372	3.40	A		-0.8	2.38 - 4.42	0.029	L
Cesium-137	0.939	0.93	A		1.0	0.65 - 1.21	0.019	L
Cobalt-57	2.489	2.36	A		5.5	1.65 - 3.07	0.026	L
Cobalt-60	0.045		N	(1)			0.014	
Manganese-54	2.376	2.30	A		3.3	1.61 - 2.99	0.030	L
Plutonium-238	0.228	0.213	A		7.0	0.149 - 0.277	0.0076	
Plutonium-239/240	0.175	0.168	A		4.2	0.118 - 0.218	0.0067	
Potassium-40	6.963						0.212	
Strontium-90	1.313	1.260	A		4.2	0.882 - 1.638	0.110	
Uranium-234/233	0.449	0.460	A		-2.4	0.322 - 0.598	0.011	L
Uranium-238	0.475	0.477	A		-0.4	0.334 - 0.620	0.011	L
Zinc-65	1.396	1.354	A		3.1	0.948 - 1.760	0.055	

Radiological Reference Date: January 1, 2009

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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20

(CHMH01) 222-S Laboratory

P.O. Box 250, MS T6-10

Richland, WA 99352

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	0.278	0.274	A		1.5	0.192 - 0.356		
Uranium-238	39.4	38.4	A		2.6	26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.306				0.214 - 0.398		
Cesium-134	1.96	3.40	N		-42.4	2.38 - 4.42	0.229	
Cesium-137	1.03	0.93	A		10.8	0.65 - 1.21	0.487	H
Cobalt-57	2.06	2.36	A		-12.7	1.65 - 3.07	0.338	
Cobalt-60	NR			RW (11)				
Manganese-54	2.03	2.30	A		-11.7	1.61 - 2.99	0.469	H
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Strontium-90	1.21	1.260	A		-4.0	0.882 - 1.638	0.0487	
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	NR	1.354				0.948 - 1.760		

Radiological Reference Date: January 1, 2009

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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (DEHS01) Department of Environmental Health & Safety
 North Carolina State Univ.
 Raleigh, NC 27695-8007

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.306				0.214 - 0.398		
Cesium-134	3.36	3.40	A		-1.2	2.38 - 4.42	0.16	
Cesium-137	0.90	0.93	A		-3.2	0.65 - 1.21	0.10	
Cobalt-57	2.52	2.36	A		6.8	1.65 - 3.07	0.18	
Cobalt-60	NR			RW (11)				
Manganese-54	2.25	2.30	A		-2.2	1.61 - 2.99	0.19	
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	1.06	1.354	W		-21.7	0.948 - 1.760	0.19	

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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20

(DPHE01) Colorado Dept. of Public Health & Env. / Laboratory Services Div.

8100 Lowry Blvd
Denver, CO 80230

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.293	0.306	A		-4.2	0.214 - 0.398	.013	
Cesium-134	1.807	3.40	N		-46.9	2.38 - 4.42	.262	
Cesium-137	0.639	0.93	N		-31.3	0.65 - 1.21	.110	
Cobalt-57	1.645	2.36	N		-30.3	1.65 - 3.07	.225	
Cobalt-60	0.039		A				0.037	
Manganese-54	1.717	2.30	W		-25.3	1.61 - 2.99	0.249	
Plutonium-238	0.225	0.213	A		5.6	0.149 - 0.277	0.014	
Plutonium-239/240	0.180	0.168	A		7.1	0.118 - 0.218	0.011	
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	0.493	0.460	A		7.2	0.322 - 0.598	0.052	
Uranium-238	0.498	0.477	A		4.4	0.334 - 0.620	0.052	
Zinc-65	0.942	1.354	N		-30.4	0.948 - 1.760	0.192	H

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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (ERCL01) Washington State Public Health Laboratories
 1610 N.E. 150 th Srteet
 Shoreline, WA 98155-9701

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.276	0.306	A		-9.8	0.214 - 0.398	0.020	
Cesium-134	3.16	3.40	A		-7.1	2.38 - 4.42	0.11	
Cesium-137	0.825	0.93	A		-11.3	0.65 - 1.21	0.066	
Cobalt-57	2.33	2.36	A		-1.3	1.65 - 3.07	0.26	
Cobalt-60	0.096		N	(1)			0.030	
Manganese-54	2.09	2.30	A		-9.1	1.61 - 2.99	0.12	
Plutonium-238	0.182	0.213	A		-14.6	0.149 - 0.277	0.009	
Plutonium-239/240	0.148	0.168	A		-11.9	0.118 - 0.218	0.008	
Strontium-90	1.23	1.260	A		-2.4	0.882 - 1.638	0.13	
Uranium-234/233	0.444	0.460	A		-3.5	0.322 - 0.598	0.020	
Uranium-238	0.478	0.477	A		0.2	0.334 - 0.620	0.021	
Zinc-65	1.01	1.354	W		-25.4	0.948 - 1.760	0.11	

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (ERLG01) Environmental Radiation Laboratory
 Georgia Institute of Tech.
 Atlanta, GA 30332

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	.4	0.306	N		30.7	0.214 - 0.398	.2	H
Cesium-134	3.5	3.40	A		2.9	2.38 - 4.42	.3	
Cesium-137	1.0	0.93	A		7.5	0.65 - 1.21	.2	
Cobalt-57	2.5	2.36	A		5.9	1.65 - 3.07	.5	
Cobalt-60	.01		A				.1	
Manganese-54	2.5	2.30	A		8.7	1.61 - 2.99	.4	
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	.5	0.477	A		4.8	0.334 - 0.620	.1	
Zinc-65	1.5	1.354	A		10.8	0.948 - 1.760	.5	H

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
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- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (ERPD99) Ministry Of Health, Radiation Protection Department Lab
 Al-Awqaf Complex-Tower#12
 Sharq, Kuwait 656

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.306				0.214 - 0.398		
Cesium-134	3.653	3.40	A		7.4	2.38 - 4.42	0.092	L
Cesium-137	0.957	0.93	A		2.9	0.65 - 1.21	0.053	
Cobalt-57	0.965	2.36	N		-59.1	1.65 - 3.07	0.051	
Cobalt-60	0.106		A				0.042	
Manganese-54	2.242	2.30	A		-2.5	1.61 - 2.99	0.191	
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	1.377	1.354	A		1.7	0.948 - 1.760	0.123	

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20

(FDHE01) Florida Dept of Health Environmental Laboratory

PO Box 680069

Orlando, FL 32868-0069

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.28	0.306	A		-8.5	0.214 - 0.398	0.06	H
Cesium-134	3.25	3.40	A		-4.4	2.38 - 4.42	0.09	L
Cesium-137	0.9	0.93	A		-3.2	0.65 - 1.21	0.07	
Cobalt-57	2.27	2.36	A		-3.8	1.65 - 3.07	0.06	L
Cobalt-60	0.08			A			0.05	
Manganese-54	2.19	2.30	A		-4.8	1.61 - 2.99	0.1	
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Potassium-40	56.14						2.28	
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	0.5	0.477	A		4.8	0.334 - 0.620	0.57	H
Zinc-65	1.33	1.354	A		-1.8	0.948 - 1.760	0.14	

Radiological Reference Date: January 1, 2009

Flags:

A = Result acceptable Bias <=20%
 W = Result acceptable with warning 20% < Bias < 30%
 N = Result not acceptable Bias > 30%
 L = Uncertainty potentially too low (for information purposes only)
 H = Uncertainty potentially too high (for information purposes only)
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20

(FDOH01) Florida Dept. of Health, Mobile Environmental Radiological Lab
 PO Box 680069
 Orlando, FL 32868-0069

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.306				0.214 - 0.398		
Cesium-134	3.3	3.40	A		-2.9	2.38 - 4.42	.067	L
Cesium-137	.952	0.93	A		2.4	0.65 - 1.21	.064	
Cobalt-57	2.622	2.36	A		11.1	1.65 - 3.07	.082	
Cobalt-60	.043		A				.022	
Manganese-54	2.346	2.30	A		2.0	1.61 - 2.99	.148	
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Potassium-40	59.398						1.114	L
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	1.378	1.354	A		1.8	0.948 - 1.760	.127	

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
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- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (FMEC99) Foods and Water Laboratories Center
 Ministry of Regional Municipalities and Water Resources
 Muscat, B.O.Box. 3094 111

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.2808	0.306	A		-8.2	0.214 - 0.398	0.04	
Cesium-134	3.114	3.40	A		-8.4	2.38 - 4.42	0.05	L
Cesium-137	0.982	0.93	A		5.6	0.65 - 1.21	0.04	
Cobalt-57	2.376	2.36	A		0.7	1.65 - 3.07	0.03	L
Cobalt-60	NR			RW (11)				
Manganese-54	2.253	2.30	A		-2.0	1.61 - 2.99	0.04	L
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Potassium-40	50.08						0.86	L
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	1.375	1.354	A		1.6	0.948 - 1.760	0.07	

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (GENE01) GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.338	0.306	A		10.5	0.214 - 0.398	0.027	
Cesium-134	3.430	3.40	A		0.9	2.38 - 4.42	.094	L
Cesium-137	0.907	0.93	A		-2.5	0.65 - 1.21	.042	
Cobalt-57	2.557	2.36	A		8.3	1.65 - 3.07	0.060	L
Cobalt-60	-0.010		A				.025	
Manganese-54	2.353	2.30	A		2.3	1.61 - 2.99	0.074	
Plutonium-238	0.216	0.213	A		1.4	0.149 - 0.277	0.012	
Plutonium-239/240	0.163	0.168	A		-3.0	0.118 - 0.218	0.010	
Strontium-90	1.16	1.260	A		-7.9	0.882 - 1.638	0.025	L
Uranium-234/233	0.478	0.460	A		3.9	0.322 - 0.598	0.018	
Uranium-238	0.484	0.477	A		1.5	0.334 - 0.620	0.018	
Zinc-65	1.350	1.354	A		-0.3	0.948 - 1.760	0.090	

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (GPCL01) Georgia Power Company Environmental Laboratory
 5131 Maner Road
 Smyrna, GA 30080

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.306				0.214 - 0.398		
Cesium-134	3.32	3.40	A		-2.4	2.38 - 4.42	.19	
Cesium-137	1.1	0.93	A		18.3	0.65 - 1.21	.2	
Cobalt-57	2.8	2.36	A		18.6	1.65 - 3.07	.165	
Cobalt-60	NR			RW (11)				
Manganese-54	2.7	2.30	A		17.4	1.61 - 2.99	.22	
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	1.7	1.354	W		25.6	0.948 - 1.760	.40	H

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20

(HECR01) SC Dept. Health and Environmental Control Radiological Laboratory
 2600 Bull St.
 Columbia, SC 29201

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.306				0.214 - 0.398		
Cesium-134	3.15	3.40	A		-7.4	2.38 - 4.42	0.18	
Cesium-137	0.836	0.93	A		-10.1	0.65 - 1.21	0.118	
Cobalt-57	2.12	2.36	A		-10.2	1.65 - 3.07	0.16	
Cobalt-60	0.0167			A			0.0449	
Manganese-54	2.14	2.30	A		-7.0	1.61 - 2.99	0.21	
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	1.29	1.354	A		-4.7	0.948 - 1.760	0.25	

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (IAEA99) International Atomic Energy Agency
 Agency's Laboratories Seibersdorf
 Seibersdorf, Austria A-2444

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.251	0.306	A		-18.0	0.214 - 0.398	0.011	
Cesium-134	3.39	3.40	A		-0.3	2.38 - 4.42	0.058	L
Cesium-137	0.829	0.93	A		-10.9	0.65 - 1.21	0.027	
Cobalt-57	2.15	2.36	A		-8.9	1.65 - 3.07	0.036	L
Cobalt-60	NR			RW (11)				
Manganese-54	2.17	2.30	A		-5.7	1.61 - 2.99	0.043	L
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	1.25	1.354	A		-7.7	0.948 - 1.760	0.041	

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20

(ISUP01) ISU - Department of Physics/Health Physics/EAL

785 S. 8th Ave, Rm 120

Pocatello, ID 83209-8106

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.306				0.214 - 0.398		
Cesium-134	3.24	3.40	A		-4.7	2.38 - 4.42	0.03	L
Cesium-137	0.91	0.93	A		-2.2	0.65 - 1.21	0.04	
Cobalt-57	2.40	2.36	A		1.7	1.65 - 3.07	0.04	L
Cobalt-60	0.11		N	(1)			0.03	
Manganese-54	2.51	2.30	A		9.1	1.61 - 2.99	0.05	L
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	1.20	1.354	A		-11.4	0.948 - 1.760	0.08	

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (KDHE01) Kansas Dept. of Health & Environment
 Forbes Bldg. 740
 Topeka, KS 66620

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	6.07	0.306	N		1883.7	0.214 - 0.398	1.20	
Cesium-134	64.98	3.40	N		1811.2	2.38 - 4.42	2.77	
Cesium-137	17.54	0.93	N		1786.0	0.65 - 1.21	2.27	
Cobalt-57	51.73	2.36	N		2091.9	1.65 - 3.07	2.32	
Cobalt-60	NR			RW (11)				
Manganese-54	48.55	2.30	N		2010.9	1.61 - 2.99	3.71	
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	20.97	1.354	N		1448.7	0.948 - 1.760	1.38	

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
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- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (LAWR01) LAWRENCE BERKELEY NATIONAL LABORATORY
 1 CYCLOTRON RD.
 BERKELEY, CA 94720

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.306				0.214 - 0.398		
Cesium-134	3.62	3.40	A		6.5	2.38 - 4.42	.13	
Cesium-137	1.03	0.93	A		10.8	0.65 - 1.21	.06	
Cobalt-57	2.66	2.36	A		12.7	1.65 - 3.07	.09	
Cobalt-60	NR			RW (11)				
Manganese-54	2.64	2.30	A		14.8	1.61 - 2.99	.11	
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	1.66	1.354	W		22.6	0.948 - 1.760	.14	

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
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- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
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Notes:

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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (LAWR02) Lawrence Livermore National Laboratory
 7000 East Avenue
 Livermore, CA 94551

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.21	0.306	N		-31.4	0.214 - 0.398	0.06	H
Cesium-134	2.48	3.40	W		-27.1	2.38 - 4.42	0.08	
Cesium-137	0.75	0.93	A		-19.4	0.65 - 1.21	0.04	
Cobalt-57	2.41	2.36	A		2.1	1.65 - 3.07	0.09	
Cobalt-60	NR			RW (11)				
Manganese-54	2.23	2.30	A		-3.0	1.61 - 2.99	0.09	
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Potassium-40	4.21						0.70	
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	1.42	1.354	A		4.9	0.948 - 1.760	0.10	

Radiological Reference Date: January 1, 2009

Flags:

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- H = Uncertainty potentially too high (for information purposes only)
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- RW = Report Warning
- NR = Not Reported

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (LECR99) Lancaster Environment Centre
 Library Avenue
 Lancaster, LA1 4AP

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.306				0.214 - 0.398		
Cesium-134	NR	3.40				2.38 - 4.42		
Cesium-137	NR	0.93				0.65 - 1.21		
Cobalt-57	NR	2.36				1.65 - 3.07		
Cobalt-60	NR							
Manganese-54	NR	2.30				1.61 - 2.99		
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	NR	1.354				0.948 - 1.760		

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
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Notes:

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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (LOCK03) Advanced Test Reactor (ATR) Complex Radioanalytical Laboratory
 INL/Battelle Energy Alliance, LLC
 Scoville, ID 83415-7111

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.306				0.214 - 0.398		
Cesium-134	3.6	3.40	A		5.9	2.38 - 4.42	0.3	
Cesium-137	0.94	0.93	A		1.1	0.65 - 1.21	0.14	
Cobalt-57	2.3	2.36	A		-2.5	1.65 - 3.07	0.2	
Cobalt-60	NR			RW (11)				
Manganese-54	2.3	2.30	A		0.0	1.61 - 2.99	0.2	
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	1.3	1.354	A		-4.0	0.948 - 1.760	0.3	H

Radiological Reference Date: January 1, 2009

Flags:

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- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20

(MART01) USEC, Inc.
 Lab COC, Bldg. X-710, Rm 222
 Piketon, OH 45661-

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.3093	0.306	A		1.1	0.214 - 0.398	0.0300	
Cesium-134	3.06	3.40	A		-10.0	2.38 - 4.42	0.16	
Cesium-137	1.03	0.93	A		10.8	0.65 - 1.21	0.13	
Cobalt-57	2.24	2.36	A		-5.1	1.65 - 3.07	0.18	
Cobalt-60	0.07		A				0.10	
Manganese-54	2.48	2.30	A		7.8	1.61 - 2.99	0.19	
Plutonium-238	0.2133	0.213	A		0.1	0.149 - 0.277	0.0277	
Plutonium-239/240	0.1831	0.168	A		9.0	0.118 - 0.218	0.0246	
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	0.876	0.460	N		90.4	0.322 - 0.598	0.090	
Uranium-238	0.7959	0.477	N		66.9	0.334 - 0.620	0.087	
Zinc-65	1.42	1.354	A		4.9	0.948 - 1.760	0.44	H

Radiological Reference Date: January 1, 2009

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- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
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Notes:

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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (MART02) United States Enrichment Corporation
 PO Box 1410
 Paducah, KY 42002

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.28	0.306	A		-8.5	0.214 - 0.398	0.014	
Cesium-134	3.4	3.40	A		0.0	2.38 - 4.42	0.135	
Cesium-137	1.02	0.93	A		9.7	0.65 - 1.21	0.1528	
Cobalt-57	2.45	2.36	A		3.8	1.65 - 3.07	0.120	
Cobalt-60	0.077			A			0.136	
Manganese-54	2.57	2.30	A		11.7	1.61 - 2.99	0.212	
Plutonium-238	0.214	0.213	A		0.5	0.149 - 0.277	0.0129	
Plutonium-239/240	0.175	0.168	A		4.2	0.118 - 0.218	0.0116	
Strontium-90	1.23	1.260	A		-2.4	0.882 - 1.638	0.05	
Uranium-234/233	0.456	0.460	A		-0.9	0.322 - 0.598	0.0202	
Uranium-238	0.447	0.477	A		-6.3	0.334 - 0.620	0.0199	
Zinc-65	1.62	1.354	A		19.6	0.948 - 1.760	0.388	H

Radiological Reference Date: January 1, 2009

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- QL = Quantitation Limit
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Notes:

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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (MART03) Radioactive Material Analysis Laboratory
 ORNL
 Oak Ridge, TN 37831-6223

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.31	0.306	A		1.3	0.214 - 0.398	0.02	
Cesium-134	3.23	3.40	A		-5.0	2.38 - 4.42	0.14	
Cesium-137	1.00	0.93	A		7.5	0.65 - 1.21	0.12	
Cobalt-57	2.67	2.36	A		13.1	1.65 - 3.07	0.14	
Cobalt-60	0.03			A			0.12	
Manganese-54	2.55	2.30	A		10.9	1.61 - 2.99	0.17	
Plutonium-238	0.23	0.213	A		8.0	0.149 - 0.277	0.01	
Plutonium-239/240	0.18	0.168	A		7.1	0.118 - 0.218	0.01	
Strontium-90	1.20	1.260	A		-4.8	0.882 - 1.638	0.11	
Uranium-234/233	0.50	0.460	A		8.7	0.322 - 0.598	0.02	
Uranium-238	0.50	0.477	A		4.8	0.334 - 0.620	0.03	
Zinc-65	1.46	1.354	A		7.8	0.948 - 1.760	0.28	

Radiological Reference Date: January 1, 2009

Flags:

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- QL = Quantitation Limit
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Notes:

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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (MDPH01) MDPH-Radiation Control Program
 MERL-Room 002
 Jamaica Plain, MA 02130-3597

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.38	0.306	W		24.2	0.214 - 0.398	0.05	
Cesium-134	3.31	3.40	A		-2.6	2.38 - 4.42	0.07	L
Cesium-137	1.01	0.93	A		8.6	0.65 - 1.21	0.06	
Cobalt-57	2.75	2.36	A		16.5	1.65 - 3.07	0.10	
Cobalt-60	NR			RW (11)				
Manganese-54	2.59	2.30	A		12.6	1.61 - 2.99	0.14	
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	1.56	1.354	A		15.2	0.948 - 1.760	0.09	

Radiological Reference Date: January 1, 2009

Flags:

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- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (NARL01) National Air and Radiation Environmental Laboratory
 540 S. Morris Ave.
 Montgomery, AL 36115-2601

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.285	0.306	A		-6.9	0.214 - 0.398	0.023	
Cesium-134	3.26	3.40	A		-4.1	2.38 - 4.42	0.2	
Cesium-137	0.962	0.93	A		3.4	0.65 - 1.21	0.078	
Cobalt-57	2.74	2.36	A		16.1	1.65 - 3.07	0.160	
Cobalt-60	NR			RW (11)				
Manganese-54	2.43	2.30	A		5.7	1.61 - 2.99	0.160	
Plutonium-238	0.215	0.213	A		0.9	0.149 - 0.277	0.0145	
Plutonium-239/240	0.163	0.168	A		-3.0	0.118 - 0.218	0.0115	
Potassium-40	58.1						3.5	
Strontium-90	1.37	1.260	A		8.7	0.882 - 1.638	0.17	
Uranium-234/233	0.449	0.460	A		-2.4	0.322 - 0.598	0.029	
Uranium-235	0.0266						0.0003	L
Uranium-238	0.461	0.477	A		-3.4	0.334 - 0.620	0.03	
Zinc-65	1.30	1.354	A		-4.0	0.948 - 1.760	0.150	

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
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- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20

(NESI01) B&W Technical Services-Radioisotope & Analytical Chemistry Laboratory

Lynchburg Technology Center

Lynchburg, VA 24504-5447

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.28	0.306	A		-8.5	0.214 - 0.398	0.01	
Cesium-134	2.37	3.40	N		-30.3	2.38 - 4.42	0.13	
Cesium-137	0.73	0.93	W		-21.5	0.65 - 1.21	0.09	
Cobalt-57	1.72	2.36	W		-27.1	1.65 - 3.07	0.07	
Cobalt-60	0.08		A				0.09	
Manganese-54	1.77	2.30	W		-23.0	1.61 - 2.99	0.11	
Plutonium-238	0.25	0.213	A		17.4	0.149 - 0.277	0.01	
Plutonium-239/240	0.14	0.168	A		-16.7	0.118 - 0.218	0.01	
Strontium-90	1.04	1.260	A		-17.5	0.882 - 1.638	0.05	
Uranium-234/233	0.35	0.460	W		-23.9	0.322 - 0.598	0.02	
Uranium-238	0.38	0.477	W		-20.3	0.334 - 0.620	0.02	
Zinc-65	1.12	1.354	A		-17.3	0.948 - 1.760	0.14	

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
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- QL = Quantitation Limit
- RW = Report Warning
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Notes:

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- (11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20

(NJDH01) New Jersey Dept. of Health & Senior Services, PHEL, ECLS
 Market and Warren Streets
 Trenton, NJ 08625-0361

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.36	0.306	A		17.6	0.214 - 0.398	0.11	H
Cesium-134	4.32	3.40	W		27.1	2.38 - 4.42	0.27	
Cesium-137	1.01	0.93	A		8.6	0.65 - 1.21	0.14	
Cobalt-57	2.64	2.36	A		11.9	1.65 - 3.07	0.18	
Cobalt-60	NR			RW (11)				
Manganese-54	2.49	2.30	A		8.3	1.61 - 2.99	0.13	
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	1.44	1.354	A		6.4	0.948 - 1.760	0.18	

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (NRL99) National Radiation Laboratory
 PO Box 25099
 Christchurch, Christchurch 8144

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.35	0.306	A		14.4	0.214 - 0.398	.036	
Cesium-134	3.34	3.40	A		-1.8	2.38 - 4.42	0.18	
Cesium-137	1.057	0.93	A		13.7	0.65 - 1.21	0.077	
Cobalt-57	2.99	2.36	W		26.7	1.65 - 3.07	.22	
Cobalt-60	0.063		N	(1)			0.012	
Manganese-54	2.62	2.30	A		13.9	1.61 - 2.99	0.17	
Plutonium-238	0.0789	0.213	N		-63.0	0.149 - 0.277	.0056	
Plutonium-239/240	0.595	0.168	N		254.2	0.118 - 0.218	0.0048	L
Potassium-40	56.1						3.6	
Strontium-90	0.787	1.260	N		-37.5	0.882 - 1.638	0.018	L
Uranium-234/233	0.119	0.460	N		-74.1	0.322 - 0.598	.011	
Uranium-235	0.0047						0.0014	H
Uranium-238	0.121	0.477	N		-74.6	0.334 - 0.620	0.011	
Zinc-65	1.45	1.354	A		7.1	0.948 - 1.760	0.12	

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (NTSI01) Nuclear Technology Services, Inc.
 635 Hembree Parkway
 Roswell, GA 30076

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.306				0.214 - 0.398		
Cesium-134	3.03	3.40	A		-10.9	2.38 - 4.42	0.33	
Cesium-137	8.75	0.93	N		840.9	0.65 - 1.21	0.13	L
Cobalt-57	2.72	2.36	A		15.3	1.65 - 3.07	0.28	
Cobalt-60	NR			RW (11)				
Manganese-54	2.8	2.30	W		21.7	1.61 - 2.99	0.47	
Plutonium-238	0.22	0.213	A		3.3	0.149 - 0.277	0.016	
Plutonium-239/240	0.16	0.168	A		-4.8	0.118 - 0.218	0.013	
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	0.39	0.460	A		-15.2	0.322 - 0.598	0.024	
Uranium-238	0.37	0.477	W		-22.4	0.334 - 0.620	0.023	
Zinc-65	NR	1.354				0.948 - 1.760		

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (ODHL01) Ohio Department of Health Laboratory
 8995 E Main Street
 Reynoldsburg, OH 43068

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.306				0.214 - 0.398		
Cesium-134	3.47	3.40	A		2.1	2.38 - 4.42	0.11	
Cesium-137	1.15	0.93	W		23.7	0.65 - 1.21	0.09	
Cobalt-57	2.10	2.36	A		-11.0	1.65 - 3.07	0.12	
Cobalt-60	NR			RW (11)				
Manganese-54	2.03	2.30	A		-11.7	1.61 - 2.99	0.12	
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	NR	1.354				0.948 - 1.760		

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

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- (11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20

(ORIS01) ORISE/IEAV

PO Box 117

Oak Ridge, TN 37831-0117

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.302	0.306	A		-1.3	0.214 - 0.398	0.010	
Cesium-134	3.31	3.40	A		-2.6	2.38 - 4.42	0.11	
Cesium-137	0.898	0.93	A		-3.4	0.65 - 1.21	0.045	
Cobalt-57	2.318	2.36	A		-1.8	1.65 - 3.07	0.056	L
Cobalt-60	0.033			A			0.029	
Manganese-54	2.130	2.30	A		-7.4	1.61 - 2.99	0.075	
Plutonium-238	0.203	0.213	A		-4.7	0.149 - 0.277	0.010	
Plutonium-239/240	0.161	0.168	A		-4.2	0.118 - 0.218	0.008	
Strontium-90	1.314	1.260	A		4.3	0.882 - 1.638	0.029	L
Uranium-234/233	0.471	0.460	A		2.4	0.322 - 0.598	0.011	L
Uranium-238	0.489	0.477	A		2.5	0.334 - 0.620	0.011	L
Zinc-65	1.240	1.354	A		-8.4	0.948 - 1.760	0.079	

Radiological Reference Date: January 1, 2009

Flags:

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- N = Result not acceptable Bias > 30%
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- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20

(QUAN01) TestAmerica St. Louis

13715 Rider Trail North

Earth City, MO 63045-

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.305	0.306	A		-0.3	0.214 - 0.398	0.0265	
Cesium-134	3.625	3.40	A		6.6	2.38 - 4.42	0.1522	
Cesium-137	1.25	0.93	N		34.4	0.65 - 1.21	0.1226	
Cobalt-57	3.013	2.36	W		27.7	1.65 - 3.07	0.1284	
Cobalt-60	0.0538		A				0.0517	
Manganese-54	2.699	2.30	A		17.3	1.61 - 2.99	0.1574	
Plutonium-238	0.2127	0.213	A		-0.1	0.149 - 0.277	0.0222	
Plutonium-239/240	0.1339	0.168	W		-20.3	0.118 - 0.218	0.0171	
Potassium-40	56.18						2.436	
Strontium-90	1.368	1.260	A		8.6	0.882 - 1.638	0.0956	
Uranium-234/233	0.4645	0.460	A		1.0	0.322 - 0.598	0.0369	
Uranium-238	0.4685	0.477	A		-1.8	0.334 - 0.620	0.0369	
Zinc-65	2.193	1.354	N		62.0	0.948 - 1.760	0.2392	

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20

(QUAN03) TestAmerica
 2800 GEORGE WASHINGTON WAY
 RICHLAND, WA 99354-

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	.249	0.306	A		-18.6	0.214 - 0.398	.019	
Cesium-134	3.29	3.40	A		-3.2	2.38 - 4.42	.229	
Cesium-137	.921	0.93	A		-1.0	0.65 - 1.21	.096	
Cobalt-57	2.64	2.36	A		11.9	1.65 - 3.07	.338	
Cobalt-60	-.014		A				.03	
Manganese-54	2.3	2.30	A		0.0	1.61 - 2.99	.171	
Plutonium-238	.186	0.213	A		-12.7	0.149 - 0.277	.016	
Plutonium-239/240	.156	0.168	A		-7.1	0.118 - 0.218	.014	
Strontium-90	1.26	1.260	A		0.0	0.882 - 1.638	.104	
Uranium-234/233	.414	0.460	A		-10.0	0.322 - 0.598	.036	
Uranium-235	.014						.003	H
Uranium-238	.422	0.477	A		-11.5	0.334 - 0.620	.036	
Zinc-65	1.29	1.354	A		-4.7	0.948 - 1.760	.17	

Radiological Reference Date: January 1, 2009

Flags:

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- H = Uncertainty potentially too high (for information purposes only)
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Notes:

(1) = False Positive

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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (RMCL99) Royal Scientific Society - Radiation Measurements Lab
 Ahmad Al-Tarawneh Str.
 Al-Jubaiha, Amman 11941

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.306				0.214 - 0.398		
Cesium-134	3.39	3.40	A		-0.3	2.38 - 4.42	.16	
Cesium-137	.85	0.93	A		-8.6	0.65 - 1.21	.05	
Cobalt-57	2.56	2.36	A		8.5	1.65 - 3.07	.12	
Cobalt-60	0.07		N	(1)			0.01	
Manganese-54	2.23	2.30	A		-3.0	1.61 - 2.99	.12	
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	1.56	1.354	A		15.2	0.948 - 1.760	.12	

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20

(RPSC01) Radiation Protection Service

Ontario Ministry of Labour

Weston, Ontario M9P 3T1

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.306				0.214 - 0.398		
Cesium-134	4.04	3.40	A		18.8	2.38 - 4.42	0.32	
Cesium-137	1.12	0.93	W		20.4	0.65 - 1.21	0.09	
Cobalt-57	3.06	2.36	W		29.7	1.65 - 3.07	.24	
Cobalt-60	0.03		A				.04	
Manganese-54	2.77	2.30	W		20.4	1.61 - 2.99	0.22	
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	1.43	1.354	A		5.6	0.948 - 1.760	0.11	

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20

(RSIR99) Instituto de Radioprotecao e Dosimetria - IRD/CNEN

Avenida Salvador Allende S/no.

RJ, Rio de Janeiro 22780-160

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.30	0.306	A		-2.0	0.214 - 0.398	0.10	H
Cesium-134	3.73	3.40	A		9.7	2.38 - 4.42	0.23	
Cesium-137	1.07	0.93	A		15.1	0.65 - 1.21	0.10	
Cobalt-57	2.90	2.36	W		22.9	1.65 - 3.07	0.13	
Cobalt-60	-0.23		A				0.20	
Manganese-54	2.63	2.30	A		14.3	1.61 - 2.99	0.22	
Plutonium-238	17.5	0.213	N		8116.0	0.149 - 0.277	1.8	
Plutonium-239/240	12.8	0.168	N		7519.0	0.118 - 0.218	1.3	
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	0.560	0.460	W		21.7	0.322 - 0.598	0.026	
Uranium-238	0.551	0.477	A		15.5	0.334 - 0.620	0.026	
Zinc-65	1.40	1.354	A		3.4	0.948 - 1.760	0.24	

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (SCAL01) GPL Laboratories Alabama, LLC
 1000 Monticello Court
 Montgomery, AL 36117-

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.2392	0.306	W		-21.8	0.214 - 0.398	0.0608	H
Cesium-134	3.7	3.40	A		8.8	2.38 - 4.42	.5476	
Cesium-137	1.0841	0.93	A		16.6	0.65 - 1.21	0.2183	H
Cobalt-57	3.2856	2.36	N		39.2	1.65 - 3.07	0.4255	
Cobalt-60	-.1680		A				0.0703	
Manganese-54	2.8749	2.30	W		25.0	1.61 - 2.99	.4588	
Plutonium-238	0.2510	0.213	A		17.8	0.149 - 0.277	0.0708	H
Plutonium-239/240	0.1828	0.168	A		8.8	0.118 - 0.218	0.0549	H
Strontium-90	1.1185	1.260	A		-11.2	0.882 - 1.638	0.0692	
Uranium-234/233	0.4662	0.460	A		1.3	0.322 - 0.598	0.0917	
Uranium-238	0.4599	0.477	A		-3.6	0.334 - 0.620	0.0906	
Zinc-65	1.8944	1.354	N		39.9	0.948 - 1.760	.4847	H

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (SEML01) SRS Environmental Monitoring Laboratory
 Bldg 735-B
 Aiken, SC 29808

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.293	0.306	A		-4.2	0.214 - 0.398	0.023	
Cesium-134	2.83	3.40	A		-16.8	2.38 - 4.42	0.17	
Cesium-137	0.86	0.93	A		-7.5	0.65 - 1.21	.17	
Cobalt-57	2.07	2.36	A		-12.3	1.65 - 3.07	0.18	
Cobalt-60	0.074		A				0.10	
Manganese-54	NR	2.30				1.61 - 2.99		
Plutonium-238	0.218	0.213	A		2.3	0.149 - 0.277	0.017	
Plutonium-239/240	0.170	0.168	A		1.2	0.118 - 0.218	0.014	
Strontium-90	1.22	1.260	A		-3.2	0.882 - 1.638	0.072	
Uranium-234/233	0.472	0.460	A		2.6	0.322 - 0.598	0.038	
Uranium-238	0.487	0.477	A		2.1	0.334 - 0.620	0.039	
Zinc-65	1.38	1.354	A		1.9	0.948 - 1.760	.35	H

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (SNRC99) Soreq NRC
 Radioactivity Measurement Section
 Yavne, Israel 81800

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.40	0.306	N		30.7	0.214 - 0.398	0.06	
Cesium-134	3.50	3.40	A		2.9	2.38 - 4.42	0.13	
Cesium-137	1.10	0.93	A		18.3	0.65 - 1.21	0.06	
Cobalt-57	2.99	2.36	W		26.7	1.65 - 3.07	0.11	
Cobalt-58	0.03						0.03	H
Cobalt-60	0.017		A				0.007	
Manganese-54	2.77	2.30	W		20.4	1.61 - 2.99	0.12	
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Potassium-40	3.57						0.28	
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	1.61	1.354	A		18.9	0.948 - 1.760	0.07	

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
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- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (SOUT01) Southwest Research Institute
 6220 Culebra Rd.
 San Antonio, TX 78228-0510

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	0.279	0.274	A		1.8	0.192 - 0.356	0.028	
Uranium-238	38.5	38.4	A		0.3	26.9 - 49.9	3.85	
Uranium-Total	38.8	38.6	A		0.5	27.0 - 50.2	3.88	

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0617	0.306	N		-79.8	0.214 - 0.398	0.0065	
Cesium-134	3.51	3.40	A		3.2	2.38 - 4.42	0.378	
Cesium-137	1.06	0.93	A		14.0	0.65 - 1.21	0.242	H
Cobalt-57	2.81	2.36	A		19.1	1.65 - 3.07	0.363	
Cobalt-60	0.00449		A				0.176	
Manganese-54	2.63	2.30	A		14.3	1.61 - 2.99	0.424	
Plutonium-238	0.231	0.213	A		8.5	0.149 - 0.277	0.0229	
Plutonium-239/240	0.180	0.168	A		7.1	0.118 - 0.218	0.0184	
Strontium-90	1.26	1.260	A		0.0	0.882 - 1.638	0.105	
Uranium-234/233	0.481	0.460	A		4.6	0.322 - 0.598	0.0455	
Uranium-238	0.457	0.477	A		-4.2	0.334 - 0.620	0.0432	
Zinc-65	1.29	1.354	A		-4.7	0.948 - 1.760	0.601	H

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
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Notes:

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- (11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20

(SRPD01) Sandia National Laboratories, Radiation Protection Sample Diagnostics

PO Box 5800, MS1103

Albuquerque, NM 87185-1103

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.306				0.214 - 0.398		
Cesium-134	3.25	3.40	A		-4.4	2.38 - 4.42	0.58	
Cesium-137	0.87	0.93	A		-6.5	0.65 - 1.21	0.27	H
Cobalt-57	2.92	2.36	W		23.7	1.65 - 3.07	0.49	
Cobalt-60	0.14		A				0.37	
Manganese-54	2.54	2.30	A		10.4	1.61 - 2.99	0.52	H
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Potassium-40	58.61						9.74	
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	1.34	1.354	A		-1.0	0.948 - 1.760	0.92	H

Radiological Reference Date: January 1, 2009

Flags:

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- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
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Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (TDHL01) Texas Department of State Health Services Laboratory
 1100 W 49th Street
 Austin, TX 78756

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	.319	0.306	A		4.2	0.214 - 0.398	.032	
Cesium-134	3.30	3.40	A		-2.9	2.38 - 4.42	0.40	
Cesium-137	.970	0.93	A		4.3	0.65 - 1.21	.227	H
Cobalt-57	2.47	2.36	A		4.7	1.65 - 3.07	0.17	
Cobalt-60	NR			RW (11)				
Manganese-54	2.37	2.30	A		3.0	1.61 - 2.99	0.41	
Plutonium-238	.223	0.213	A		4.7	0.149 - 0.277	.025	
Plutonium-239/240	.155	0.168	A		-7.7	0.118 - 0.218	.019	
Strontium-90	1.15	1.260	A		-8.7	0.882 - 1.638	0.10	
Uranium-234/233	.466	0.460	A		1.3	0.322 - 0.598	.052	
Uranium-238	.470	0.477	A		-1.5	0.334 - 0.620	.056	
Zinc-65	.658	1.354	N		-51.4	0.948 - 1.760	.215	H

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
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- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
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- NR = Not Reported

Notes:

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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20

(TELE01) TELEDYNE BROWN ENGINEERING - ENVIRONMENTAL SERVICES

2508 Quality Lane

Knoxville, TN 37931-6819

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.306				0.214 - 0.398		
Cesium-134	3.48	3.40	A		2.4	2.38 - 4.42	0.25	
Cesium-137	1.15	0.93	W		23.7	0.65 - 1.21	0.298	H
Cobalt-57	3.12	2.36	N		32.2	1.65 - 3.07	0.235	
Cobalt-60	-0.0105		A				0.150	
Manganese-54	2.98	2.30	W		29.6	1.61 - 2.99	0.391	
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Potassium-40	64.1						4.40	
Strontium-90	1.09	1.260	A		-13.5	0.882 - 1.638	0.0391	
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	1.73	1.354	W		27.8	0.948 - 1.760	0.451	H

Radiological Reference Date: January 1, 2009

Flags:

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- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
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Notes:

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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (TELE02) Environmental, Inc., Midwest Lab
 700 Landwehr Road
 Northbrook, IL 60062-

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.306				0.214 - 0.398		
Cesium-134	3.49	3.40	A		2.6	2.38 - 4.42	0.22	
Cesium-137	1.01	0.93	A		8.6	0.65 - 1.21	0.11	
Cobalt-57	2.75	2.36	A		16.5	1.65 - 3.07	0.11	
Cobalt-60	0.06		A				0.09	
Manganese-54	2.52	2.30	A		9.6	1.61 - 2.99	0.14	
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	1.52	1.354	A		12.3	0.948 - 1.760	0.18	

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

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- (11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (TMAO01) EBERLINE SERVICES OAK RIDGE LABORATORY
 601 SCARBORO RD
 OAK RIDGE, TN 37830-

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.281	0.306	A		-8.2	0.214 - 0.398	0.0824	H
Cesium-134	3.509	3.40	A		3.2	2.38 - 4.42	0.366	
Cesium-137	1.078	0.93	A		15.9	0.65 - 1.21	0.411	H
Cobalt-57	2.65	2.36	A		12.3	1.65 - 3.07	0.373	
Cobalt-60	0.056		A				0.218	
Manganese-54	2.82	2.30	W		22.6	1.61 - 2.99	0.602	H
Plutonium-238	0.203	0.213	A		-4.7	0.149 - 0.277	0.055	H
Plutonium-239/240	0.176	0.168	A		4.8	0.118 - 0.218	0.0477	H
Strontium-90	1.434	1.260	A		13.8	0.882 - 1.638	0.147	
Uranium-234/233	0.47	0.460	A		2.2	0.322 - 0.598	0.088	
Uranium-238	0.444	0.477	A		-6.9	0.334 - 0.620	0.083	
Zinc-65	1.91	1.354	N		41.1	0.948 - 1.760	0.909	H

Radiological Reference Date: January 1, 2009

Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- L = Uncertainty potentially too low (for information purposes only)
- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (TMAR01) Eberline Analytical Corp. Richmond CA Lab
 2030 Wright Ave
 Richmond, CA 94804-3849

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.287	0.306	A		-6.2	0.214 - 0.398	0.031	
Cesium-134	3.750	3.40	A		10.3	2.38 - 4.42	0.131	
Cesium-137	0.970	0.93	A		4.3	0.65 - 1.21	0.086	
Cobalt-57	2.750	2.36	A		16.5	1.65 - 3.07	0.146	
Cobalt-60	0.20			A			0.20	
Manganese-54	2.540	2.30	A		10.4	1.61 - 2.99	0.139	
Plutonium-238	0.210	0.213	A		-1.4	0.149 - 0.277	0.029	
Plutonium-239/240	0.180	0.168	A		7.1	0.118 - 0.218	0.023	
Strontium-90	1.318	1.260	A		4.6	0.882 - 1.638	0.090	
Uranium-234/233	0.505	0.460	A		9.8	0.322 - 0.598	0.028	
Uranium-238	0.497	0.477	A		4.2	0.334 - 0.620	0.028	
Zinc-65	1.480	1.354	A		9.3	0.948 - 1.760	0.199	

Radiological Reference Date: January 1, 2009

Flags:

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- H = Uncertainty potentially too high (for information purposes only)
- QL = Quantitation Limit
- RW = Report Warning
- NR = Not Reported

Notes:

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- (11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20

(USED99) National Center for Energy, Science and Nuclear Techniques

CNESTEN BP 1382

RABAT, RABAT RP 10001

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.306				0.214 - 0.398		
Cesium-134	2.99	3.40	A		-12.1	2.38 - 4.42	0.446	
Cesium-137	1.33	0.93	N		43.0	0.65 - 1.21	0.349	H
Cobalt-57	4.03	2.36	N		70.8	1.65 - 3.07	0.610	
Cobalt-60	-0.30		A				0.94	
Manganese-54	2.31	2.30	A		0.4	1.61 - 2.99	0.519	H
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	-3.09	1.354	N		-328.2	0.948 - 1.760	3.17	L

Radiological Reference Date: January 1, 2009

Flags:

A = Result acceptable Bias <=20%
 W = Result acceptable with warning 20% < Bias < 30%
 N = Result not acceptable Bias > 30%
 L = Uncertainty potentially too low (for information purposes only)
 H = Uncertainty potentially too high (for information purposes only)
 QL = Quantitation Limit
 RW = Report Warning
 NR = Not Reported

Notes:

(1) = False Positive
 (11) = False Positive Test, Result Not Reported



Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (VLUK99) Veterinary Laboratories Agency
 Woodham Lane
 Addlestone, Surrey KT15 3NB

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.317	0.306	A		3.6	0.214 - 0.398	0.025	
Cesium-134	4.00	3.40	A		17.6	2.38 - 4.42	0.19	
Cesium-137	1.05	0.93	A		12.9	0.65 - 1.21	0.04	
Cobalt-57	2.87	2.36	W		21.6	1.65 - 3.07	0.12	
Cobalt-60	0.07		A				0.05	
Manganese-54	2.71	2.30	A		17.8	1.61 - 2.99	0.11	
Plutonium-238	0.216	0.213	A		1.4	0.149 - 0.277	0.015	
Plutonium-239/240	0.176	0.168	A		4.8	0.118 - 0.218	0.013	
Strontium-90	0.93	1.260	W		-26.2	0.882 - 1.638	0.04	
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	1.51	1.354	A		11.5	0.948 - 1.760	0.09	

Radiological Reference Date: January 1, 2009

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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (WEST03) Waste Sampling and Characterization Facility
 PO Box 1000, S3-30
 Richland, WA 99352

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.297	0.306	A		-2.9	0.214 - 0.398	0.043	
Cesium-134	3.62	3.40	A		6.5	2.38 - 4.42	0.24	
Cesium-137	1.17	0.93	W		25.8	0.65 - 1.21	0.093	
Cobalt-57	3.16	2.36	N		33.9	1.65 - 3.07	0.17	
Cobalt-60	0.047		A				0.027	
Manganese-54	2.87	2.30	W		24.8	1.61 - 2.99	0.20	
Plutonium-238	0.221	0.213	A		3.8	0.149 - 0.277	0.031	
Plutonium-239/240	0.177	0.168	A		5.4	0.118 - 0.218	0.025	
Strontium-90	1.82	1.260	N		44.4	0.882 - 1.638	0.15	
Uranium-234/233	0.502	0.460	A		9.1	0.322 - 0.598	0.069	
Uranium-238	0.522	0.477	A		9.4	0.334 - 0.620	0.071	
Zinc-65	1.94	1.354	N		43.3	0.948 - 1.760	0.21	

Radiological Reference Date: January 1, 2009

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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (WEST04) PACE ANALYTICAL SERVICES, PITTSBURGH
 1638 Roseytown Road
 Greensburg, PA 15601

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.2560	0.306	A		-16.3	0.214 - 0.398	0.0365	
Cesium-134	NR	3.40				2.38 - 4.42		
Cesium-137	NR	0.93				0.65 - 1.21		
Cobalt-57	NR	2.36				1.65 - 3.07		
Cobalt-60	NR			RW (11)				
Manganese-54	NR	2.30				1.61 - 2.99		
Plutonium-238	0.1960	0.213	A		-8.0	0.149 - 0.277	0.0315	
Plutonium-239/240	0.1535	0.168	A		-8.6	0.118 - 0.218	0.0250	
Strontium-90	1.180	1.260	A		-6.3	0.882 - 1.638	0.1917	
Uranium-234/233	0.4465	0.460	A		-2.9	0.322 - 0.598	0.0628	
Uranium-238	0.4595	0.477	A		-3.7	0.334 - 0.620	0.0646	
Zinc-65	NR	1.354				0.948 - 1.760		

Radiological Reference Date: January 1, 2009

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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (WIPH01) WI, DPH, Radiation Protection Section
 PO Box 2659
 Madison, WI 53701-2659

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.306				0.214 - 0.398		
Cesium-134	3.21	3.40	A		-5.6	2.38 - 4.42	0.25	
Cesium-137	0.92	0.93	A		-1.1	0.65 - 1.21	0.23	H
Cobalt-57	2.34	2.36	A		-0.8	1.65 - 3.07	0.22	
Cobalt-60	NR			RW (11)				
Manganese-54	2.03	2.30	A		-11.7	1.61 - 2.99	0.33	
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Potassium-40	52							6
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	NR	1.354				0.948 - 1.760		

Radiological Reference Date: January 1, 2009

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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20

(WIPP01) WIPP Laboratories

1400 University Drive

Carlsbad, NM 88220

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	2.83E-01	0.306	A		-7.5	0.214 - 0.398	2.01E-	
Cesium-134	3.22E+00	3.40	A		-5.3	2.38 - 4.42	1.88E-	
Cesium-137	9.45E-01	0.93	A		1.6	0.65 - 1.21	1.08E-	
Cobalt-57	2.71E+00	2.36	A		14.8	1.65 - 3.07	1.98E-	
Cobalt-60	2.75E-01			A			1.65E-	
Manganese-54	2.42E+00	2.30	A		5.2	1.61 - 2.99	1.97E-	
Plutonium-238	2.20E-01	0.213	A		3.3	0.149 - 0.277	1.60E-	
Plutonium-239/240	1.80E-01	0.168	A		7.1	0.118 - 0.218	1.43E-	
Strontium-90	1.15E+00	1.260	A		-8.7	0.882 - 1.638	1.31E-	
Uranium-234/233	4.87E-01	0.460	A		5.9	0.322 - 0.598	2.78E-	
Uranium-238	4.84E-01	0.477	A		1.5	0.334 - 0.620	2.76E-	
Zinc-65	1.66E+00	1.354	W		22.6	0.948 - 1.760	3.40E-	H

Radiological Reference Date: January 1, 2009

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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (WSHL01) Wisconsin State Laboratory of Hygiene
 2601 Agriculture Drive
 Madison, WI 53718

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.306				0.214 - 0.398		
Cesium-134	3.21	3.40	A		-5.6	2.38 - 4.42	0.16	
Cesium-137	0.87	0.93	A		-6.5	0.65 - 1.21	0.06	
Cobalt-57	2.30	2.36	A		-2.5	1.65 - 3.07	0.11	
Cobalt-60	NR			RW (11)				
Manganese-54	2.17	2.30	A		-5.7	1.61 - 2.99	0.11	
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Strontium-90	1.17	1.260	A		-7.1	0.882 - 1.638	0.13	
Uranium-234/233	0.405	0.460	A		-12.0	0.322 - 0.598	0.02	
Uranium-238	0.41	0.477	A		-14.0	0.334 - 0.620	0.02	
Zinc-65	1.21	1.354	A		-10.6	0.948 - 1.760	0.14	

Radiological Reference Date: January 1, 2009

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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (WSTP99) Westlakes Science and Technology Park
 Moor Row nr Whitehaven
 Cumbria, UK CA24 3HZ

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.280	0.306	A		-8.5	0.214 - 0.398	0.019	
Cesium-134	3.84	3.40	A		12.9	2.38 - 4.42	0.14	
Cesium-137	1.20	0.93	W		29.0	0.65 - 1.21	0.09	
Cobalt-57	2.96	2.36	W		25.4	1.65 - 3.07	0.09	
Cobalt-60	0.02		A				0.03	
Manganese-54	2.69	2.30	A		17.0	1.61 - 2.99	0.11	
Plutonium-238	0.205	0.213	A		-3.8	0.149 - 0.277	0.003	L
Plutonium-239/240	0.154	0.168	A		-8.3	0.118 - 0.218	0.003	L
Strontium-90	NR	1.260				0.882 - 1.638		
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	1.66	1.354	W		22.6	0.948 - 1.760	0.11	

Radiological Reference Date: January 1, 2009

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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-09-RdV20
 (YAEC01) AREVA NP Environmental Laboratory
 29 Research Drive
 Westboro, MA 01581

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.274				0.192 - 0.356		
Uranium-238	NR	38.4				26.9 - 49.9		
Uranium-Total	NR	38.6				27.0 - 50.2		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.306				0.214 - 0.398		
Cesium-134	3.22	3.40	A		-5.3	2.38 - 4.42	0.17	
Cesium-137	0.984	0.93	A		5.8	0.65 - 1.21	0.076	
Cobalt-57	2.50	2.36	A		5.9	1.65 - 3.07	0.13	
Cobalt-60	0.037			A			0.038	
Manganese-54	2.37	2.30	A		3.0	1.61 - 2.99	0.14	
Plutonium-238	NR	0.213				0.149 - 0.277		
Plutonium-239/240	NR	0.168				0.118 - 0.218		
Strontium-90	1.184	1.260	A		-6.0	0.882 - 1.638	0.084	
Uranium-234/233	NR	0.460				0.322 - 0.598		
Uranium-238	NR	0.477				0.334 - 0.620		
Zinc-65	1.52	1.354	A		12.3	0.948 - 1.760	0.16	

Radiological Reference Date: January 1, 2009

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