

Participating Laboratories - GrW18

<i>Lab_Code</i>	<i>Lab_Name</i>
ADEM01	Alabama Department of Environmental Management
AFOH01	AFIOH/SDRR
ANLA01	Argonne National Laboratory/Analytical Chemistry Lab.
ANTE01	Paragon Analytics a Division of DataChem Laboratories, Inc.
ARSL01	American Radiation Services Inc.
ATLI01	ATL International, Inc.
AY1201	BWXT Y-12, Analytical Chemistry Organization Laboratory
CDHS01	California Department of Public Health
CESL01	Lawrence Livermore National Laboratory - EMRL
DEHS01	Department of Environmental Health & Safety
DLEA01	DLE Associates
DRMG01	BWXT Pantex - D&RMG
ENES01	Energy Northwest Environmental Services
EPAL01	U. S. EPA Office of Radiation and Indoor Air
ERCL01	Washington State Public Health Laboratories
ERLG01	Environmental Radiation Laboratory
ERPD99	Environmental Radiation Protection Division
FDHE01	Florida Dept of Health Environmental Laboratory
FMEC99	Food and Environment Monitoring Center
FNAL01	Fermi National Accelerator Laboratory (FermiLab)
GENE01	GEL Laboratories, LLC
GPLP01	GPL Laboratories, LLLP
GROW01	FGL Environmental
HCAL01	Hazards Control Analytical Lab
HECR01	SC Dept. Health and Environmental Control Radiological Laboratory
HWRL01	Lawrence Livermore National Laboratory - HWRL
ISUP01	ISU - Department of Physics/Health Physics/EAL
JAEC99	Radiation Measurements Laboratory
KDHE01	Kansas Dept. of Health & Environment
LOCK01	ICP Analytical Laboratories Department
LOCK03	Reactor Technology Complex (RTC) Radioanalytical Laboratory
MART01	USEC, Inc.
MART02	United States Enrichment Corporation
MART03	Radioactive Material Analysis Laboratory
MDPH01	MDPH-Radiation Control Program
MKME01	MKM Engineers, Inc
MSTH99	Radioecology
NESI01	BWXT Services-Radioisotope & Analytical Chemistry Laboratory
NJDH01	New Jersey Dept. of Health & Senior Services, PHEL, ECLS
NRLL99	National Radiation Laboratory
NTSI01	Nuclear Technology Services, Inc.
OBGL01	Life Science Laboratories, Inc.

Lab_Code***Lab_Name***

ODHL01	Ohio Department of Health Laboratory
ORIS01	ORISE/ESSAP
OTLI01	Outreach Technologies, Inc.
QUAN01	STL St. Louis
QUAN03	SEVERN TRENT LABORATORIES RICHLAND
RMCL99	Royal Scientific Society - Radiation Measurements Lab
RPCR01	CH2M Hill RadCon Program Count Room
RPSC01	Radiation Protection Service
RSAL01	RSA Laboratories, Inc.
SAVA01	WSRC/SAVANNAH RIVER NATIONAL LABORATORY/AD
SCAL01	Sanford Cohen and Associates, Inc.
SEML01	SRS Environmental Monitoring Laboratory
SLDL01	Scientific Laboratory Division
SNRC99	Soreq NRC
SOUT01	Southwest Research Institute
TDHL01	Texas Department of State Health Services Laboratory
TELE01	TELEDYNE BROWN ENGINEERING - ENVIRONMENTAL SERVICES
TELE02	Environmental, Inc., Midwest Lab
TMAE01	Eberline Services, Inc.
TMAO01	EBERLINE SERVICES OAK RIDGE LABORATORY
TMAR01	Eberline Services
TNUT01	FUSRAP
URSL01	UNLV Radioanalytical Services Laboratory
WEST03	Waste Sampling and Characterization Facility
WEST04	PACE ANALYTICAL SERVICES WALTZ MILL SITE
WSHL01	Wisconsin State Laboratory of Hygiene
WVDP01	WVDP Environmental Laboratory
WVNS01	West Valley Nuclear Services

Lab Code	Lab Name	Standard
<u>AFOH01</u>	USAFSAM/SDRR	GrW
<u>DLEA01</u>	DLE Associates	GrW
<u>DRMG01</u>	BWXT Pantex - D&RMG	GrW
<u>EPAL01</u>	U. S. EPA Office of Radiation and Indoor Air	GrW
<u>GPLP01</u>	GPL Laboratories, LLLP	GrW
<u>GROW01</u>	FGL Environmental	GrW
<u>HWRL01</u>	Lawrence Livermore National Laboratory - HWRL	GrW
<u>MSTH99</u>	Radioecology	GrW
<u>NRLL99</u>	National Radiation Laboratory	GrW
<u>RMCL99</u>	Royal Scientific Society - Radiation Measurements Lab	GrW
<u>RPCR01</u>	CH2M Hill RadCon Program Count Room	GrW
<u>SAVA01</u>	WSRC/SAVANNAH RIVER NATIONAL LABORATORY/AD	GrW
<u>URSL01</u>	UNLV Radioanalytical Services Laboratory	GrW

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7	AY1201	BWXT Y-12, Analytical Chemistry Organization Laboratory
8	CDHS01	California Department of Public Health
9	CESL01	Lawrence Livermore National Laboratory - EMRL
10	DEHS01	Department of Environmental Health & Safety
11	ENES01	Energy Northwest Environmental Services
12	ERCL01	Washington State Public Health Laboratories
13	ERLG01	Environmental Radiation Laboratory
14	ERPD99	Environmental Radiation Protection Division
15	FDHE01	Florida Dept of Health Environmental Laboratory
16	FMEC99	Food and Environment Monitoring Center
17	FNAL01	Fermi National Accelerator Laboratory (FermiLab)
18	GENE01	GEL Laboratories, LLC
19	HCAL01	Hazards Control Analytical Lab
20	HECR01	SC Dept. Health and Environmental Control Radiological Laboratory
21	ISUP01	ISU - Department of Physics/Health Physics/EAL
22	JAEC99	Radiation Measurements Laboratory
23	KDHE01	Kansas Dept. of Health & Environment
24	LOCK01	ICP Analytical Services Laboratories
25	LOCK03	Reactor Technology Complex (RTC) Radioanalytical Laboratory
26	MART01	USEC, Inc.
27	MART02	United States Enrichment Corporation
28	MART03	Radioactive Material Analysis Laboratory
29	MDPH01	MDPH-Radiation Control Program
30	MKME01	MKM Engineers, Inc
31	NESI01	BWXT Services-Radioisotope & Analytical Chemistry Laboratory
32	NJDH01	New Jersey Dept. of Health & Senior Services, PHEL, ECLS
33	NTSI01	Nuclear Technology Services, Inc.
34	OBGL01	Life Science Laboratories, Inc.
35	ODHL01	Ohio Department of Health Laboratory
36	ORIS01	ORISE/ESSAP
37	OTLI01	Outreach Technologies, Inc.
38	QUAN01	STL St. Louis

39	QUAN03	I estAmerica
40	RPSC01	Radiation Protection Service
41	RSAL01	RSA Laboratories, Inc.
42	SCAL01	GPL Laboratories Alabama, LLC
43	SEML01	SRS Environmental Monitoring Laboratory
44	SLDL01	Scientific Laboratory Division
45	SNRC99	Soreq NRC
46	SOUT01	Southwest Research Institute
47	TDHL01	Texas Department of State Health Services Laboratory
48	TELE01	TELEDYNE BROWN ENGINEERING - ENVIRONMENTAL SERVICES
49	TELE02	Environmental, Inc., Midwest Lab
50	TMAE01	Eberline Services, Inc.
51	TMAO01	EBERLINE SERVICES OAK RIDGE LABORATORY
52	TMAR01	Eberline Services
53	TNUT01	FUSRAP
54	WEST03	Waste Sampling and Characterization Facility
55	WEST04	PACE ANALYTICAL SERVICES WALTZ MILL SITE
56	WSHL01	Wisconsin State Laboratory of Hygiene
57	WVDP01	WVDP Environmental Laboratory
58	WVNS01	West Valley Process Chemistry
Total:		

Study	Analyte Name	Reference Value	RESL Uncertainty
MAPEP-07-GrW18	Gross alpha	1.399	0.015
MAPEP-07-GrW18	Gross beta	2.43	0.03

Sample Statistical Summary

MAPEP-07-GrW18

Analyte	T(1)	A(2)	Grand(3) Mean	Std Dev	Ref Value	Ref Unc	Acceptance Range
Radiological							Units: (Bq/L)
Gross alpha	57	55	1.115	0.396	1.399	0.015	>0.0 - 2.798
Gross beta	56	55	2.53	0.40	2.43	0.03	1.22 - 3.65

Note: (1) T = Total number of laboratories reporting analyte.
(2) A = Number of laboratories with 'Acceptable' performance.

Gross Alpha Criteria:

Acceptable Result: Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

Gross Beta Criteria:

Acceptable Result: Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

Flag Summary Report

Generated April 24, 2008

MAPEP-07-GrW18

Radiological				
Analyte	A	W	RW	N
alpha	55			2
Gross beta	55			1



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

Laboratory Results For MAPEP-07-GrW18
 Alabama Department of Environmental Management (ADEM01)
 Montgomery Laboratory
 Montgomery, AL 36110

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.61	1.399	A		15.1	>0.0 - 2.798	0.01	L
Gross beta	2.84	2.43	A		16.9	1.22 - 3.65	0.01	L

Gross Alpha Flags:

A = Result acceptable, Bias $\leq \pm 100\%$ with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $> \pm 100\%$ or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias $\leq \pm 50\%$ with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

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

Laboratory Results For MAPEP-07-GrW18

USAFSAM/SDRR (AFOH01)

2350 Gillingham Dr

Brooks City-Base, TX 78235-5103

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	NR	1.399				>0.0 - 2.798		
Gross beta	NR	2.43				1.22 - 3.65		

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

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

Laboratory Results For MAPEP-07-GrW18

Argonne National Laboratory/Analytical Chemistry Lab. (ANLA01)

9700 S. Cass Avenue

Argonne, IL 60439-4803

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.60	1.399	A		-57.1	>0.0 - 2.798	0.06	
Gross beta	1.97	2.43	A		-18.9	1.22 - 3.65	0.08	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

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

Laboratory Results For MAPEP-07-GrW18

Paragon Analytics a Division of DataChem Laboratories, Inc. (ANTE01)

225 Commerce Drive

Fort Collins, CO 80524-1416

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.14	1.399	A		-18.5	>0.0 - 2.798	0.12	
Gross beta	2.62	2.43	A		7.8	1.22 - 3.65	0.22	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

Laboratory Results For MAPEP-07-GrW18
 American Radiation Services Inc. (ARSL01)
 2609 North River Road
 Port Allen, LA 70767

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.924	1.399	A		-34.0	>0.0 - 2.798	0.229	H
Gross beta	2.204	2.43	A		-9.3	1.22 - 3.65	0.520	H

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

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

Laboratory Results For MAPEP-07-GrW18

ATL International, Inc. (ATLI01)

20010 Century Blvd, Suite 500

Germantown, MD 20874

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.9250	1.399	A		-33.9	>0.0 - 2.798	0.2130	H
Gross beta	2.6100	2.43	A		7.4	1.22 - 3.65	0.1875	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

Laboratory Results For MAPEP-07-GrW18

BWXT Y-12, Analytical Chemistry Organization Laboratory (AY1201)

Y12, NSC, Bldg. 9995, Rm 142

Oak Ridge, TN 37831-8189

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.48	1.399	A		5.8	>0.0 - 2.798	0.12	
Gross beta	2.38	2.43	A		-2.1	1.22 - 3.65	0.13	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

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

Laboratory Results For MAPEP-07-GrW18
 California Department of Public Health (CDHS01)
 Sanitation & Radiation Lab.
 Richmond, CA 94804-6403

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.314	1.399	A		-6.1	>0.0 - 2.798	0.098	
Gross beta	2.724	2.43	A		12.1	1.22 - 3.65	0.087	

Gross Alpha Flags:

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Laboratory Results For MAPEP-07-GrW18
 Lawrence Livermore National Laboratory - EMRL (CESL01)
 7000 East Avenue
 Livermore, CA 94551

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	6.51E-01	1.399	A		-53.5	>0.0 - 2.798	3.18E-	
Gross beta	2.91E+00	2.43	A		19.8	1.22 - 3.65	8.52E-	L

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

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

Laboratory Results For MAPEP-07-GrW18
 Department of Environmental Health & Safety (DEHS01)
 North Carolina State Univ.
 Raleigh, NC 27695-8007

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.85	1.399	A		-39.2	>0.0 - 2.798	0.18	H
Gross beta	1.91	2.43	A		-21.4	1.22 - 3.65	0.22	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

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

Laboratory Results For MAPEP-07-GrW18
 Energy Northwest Environmental Services (ENES01)
 350 Hills St., Suite 107
 Richland, WA 99354

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.0	1.399	A		-28.5	>0.0 - 2.798	0.08	
Gross beta	3.0	2.43	A		23.5	1.22 - 3.65	0.07	L

Gross Alpha Flags:

A = Result acceptable, Bias $\leq \pm 100\%$ with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $> \pm 100\%$ or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

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

Laboratory Results For MAPEP-07-GrW18
 Washington State Public Health Laboratories (ERCL01)
 1610 N.E. 150 th Srteet
 Shoreline, WA 98155-9701

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.26	1.399	A		-9.9	>0.0 - 2.798	0.14	
Gross beta	2.61	2.43	A		7.4	1.22 - 3.65	0.12	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

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

Laboratory Results For MAPEP-07-GrW18
 Environmental Radiation Laboratory (ERLG01)
 Georgia Institute of Tech.
 Atlanta, GA 30332

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.3	1.399	A		-7.1	>0.0 - 2.798	.1	
Gross beta	2.5	2.43	A		2.9	1.22 - 3.65	.2	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18
 Environmental Radiation Protection Division (ERPD99)
 Mubarak Al-Kabeer Street, al-Awqaf Complex Tower 12
 Sharq, Kuwait 656

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.183	1.399	A		-86.9	>0.0 - 2.798	0.02	
Gross beta	2.632	2.43	A		8.3	1.22 - 3.65	0.271	

Gross Alpha Flags:

A = Result acceptable, Bias $\leq \pm 100\%$ with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $> \pm 100\%$ or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias $\leq \pm 50\%$ with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $> \pm 50\%$ or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18
 Florida Dept of Health Environmental Laboratory (FDHE01)
 PO Box 680069
 Orlando, FL 32868-0069

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.8	1.399	A		-42.8	>0.0 - 2.798	0.17	H
Gross beta	2.8	2.43	A		15.2	1.22 - 3.65	0.16	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18
 Food and Environment Monitoring Center (FMEC99)
 Ministry of Regional Municipalities
 Muscat, Sultanate of Oman 113

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.5575	1.399	A		-60.2	>0.0 - 2.798	0.004	L
Gross beta	1.278	2.43	A		-47.4	1.22 - 3.65	0.008	L

Gross Alpha Flags:

A = Result acceptable, Bias $\leq \pm 100\%$ with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $> \pm 100\%$ or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias $\leq \pm 50\%$ with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $> \pm 50\%$ or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18

Fermi National Accelerator Laboratory (FermiLab) (FNAL01)

PO Box 500, MS325

Batavia, IL 60510

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.19	1.399	A		-86.4	>0.0 - 2.798	0.03	
Gross beta	1.83	2.43	A		-24.7	1.22 - 3.65	0.27	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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Laboratory Results For MAPEP-07-GrW18

GEL Laboratories, LLC (GENE01)

2040 Savage Road

Charleston, SC 29407

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	2.01	1.399	A		43.7	>0.0 - 2.798	0.815	H
Gross beta	2.21	2.43	A		-9.1	1.22 - 3.65	0.681	H

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18
 Hazards Control Analytical Lab (HCAL01)
 Lawrence Livermore National
 Livermore, CA 94551

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.37	1.399	A		-2.1	>0.0 - 2.798	.15	
Gross beta	2.46	2.43	A		1.2	1.22 - 3.65	.14	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18
 SC Dept. Health and Environmental Control Radiological Laboratory (HECR01)
 2600 Bull St.
 Columbia, SC 29201

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	3.59	1.399	N		156.6	>0.0 - 2.798	0.52	
Gross beta	2.54	2.43	A		4.5	1.22 - 3.65	0.18	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18
 ISU - Department of Physics/Health Physics/EAL (ISUP01)
 785 S. 8th Ave, Rm 120
 Pocatello, ID 83209-8106

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.31	1.399	A		-77.8	>0.0 - 2.798	0.05	
Gross beta	3.59	2.43	A		47.7	1.22 - 3.65	0.10	L

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18
 Radiation Measurements Laboratory (JAEC99)
 Jordan Atomic Energy Commission
 Amman, Jordan 00962 6

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.022	1.399	A		-26.9	>0.0 - 2.798	0.12	
Gross beta	1.044	2.43	N		-57.0	1.22 - 3.65	0.05	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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Laboratory Results For MAPEP-07-GrW18
 Kansas Dept. of Health & Environment (KDHE01)
 Forbes Bldg. 740
 Topeka, KS 66620

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	2.9785	1.399	N		112.9	>0.0 - 2.798	0.9121	H
Gross beta	1.5663	2.43	A		-35.5	1.22 - 3.65	0.1692	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18
 ICP Analytical Services Laboratories (LOCK01)
 CH2M-WG Idaho, LLC
 Idaho Falls, ID 83415-5210

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.42	1.399	A		1.5	>0.0 - 2.798	0.13	
Gross beta	2.83	2.43	A		16.5	1.22 - 3.65	0.14	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18
 Reactor Technology Complex (RTC) Radioanalytical Laboratory (LOCK03)
 INL/Battelle Energy Alliance, LLC
 Scoville, ID 83415-7111

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.722	1.399	A		-48.4	>0.0 - 2.798	0.112	
Gross beta	2.87	2.43	A		18.1	1.22 - 3.65	0.21	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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Laboratory Results For MAPEP-07-GrW18

USEC, Inc. (MART01)

Lab COC, Bldg. X-710, Rm 222

Piketon, OH 45661-

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.4208	1.399	A		1.6	>0.0 - 2.798	0.3074	H
Gross beta	2.9674	2.43	A		22.1	1.22 - 3.65	0.3011	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18
 United States Enrichment Corporation (MART02)
 PO Box 1410
 Paducah, KY 42002

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.09	1.399	A		-22.1	>0.0 - 2.798	0.27	H
Gross beta	2.23	2.43	A		-8.2	1.22 - 3.65	0.14	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18
 Radioactive Material Analysis Laboratory (MART03)
 ORNL
 Oak Ridge, TN 37831-6223

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.150	1.399	A		-17.8	>0.0 - 2.798	0.115	
Gross beta	2.84	2.43	A		16.9	1.22 - 3.65	0.284	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18
 MDPH-Radiation Control Program (MDPH01)
 MERL-Room 002
 Jamaica Plain, MA 02130-3597

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.84	1.399	A		-40.0	>0.0 - 2.798	0.09	
Gross beta	2.72	2.43	A		11.9	1.22 - 3.65	0.11	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18

MKM Engineers, Inc (MKME01)

5025 Arnold Ave

McClellan, CA 95652

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.295	1.399	A		-78.9	>0.0 - 2.798	.15	H
Gross beta	3.3	2.43	A		35.8	1.22 - 3.65	.15	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18
 BWXT Services-Radioisotope & Analytical Chemistry Laboratory (NESI01)
 Lynchburg Technology Center
 Lynchburg, VA 24504-5447

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.03	1.399	A		-26.4	>0.0 - 2.798	0.05	
Gross beta	2.65	2.43	A		9.1	1.22 - 3.65	0.04	L

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty \leq 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty \leq 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18
 New Jersey Dept. of Health & Senior Services, PHEL, ECLS (NJDH01)
 Market and Warren Streets
 Trenton, NJ 08625-0361

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.70	1.399	A		21.5	>0.0 - 2.798	0.11	
Gross beta	2.684	2.43	A		10.5	1.22 - 3.65	0.043	L

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18
 Nuclear Technology Services, Inc. (NTSI01)
 635 Hembree Parkway
 Roswell, GA 30076

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.72	1.399	A		-48.5	>0.0 - 2.798	0.02	L
Gross beta	2.5	2.43	A		2.9	1.22 - 3.65	0.05	L

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18

Life Science Laboratories, Inc. (OBGL01)

5000 Brittonfield Pkwy, Ste. 200

East Syracuse, NY 13057

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.9825	1.399	A		-29.8	>0.0 - 2.798	0.2013	H
Gross beta	2.6438	2.43	A		8.8	1.22 - 3.65	0.2984	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18
 Ohio Department of Health Laboratory (ODHL01)
 8995 E Main Street
 Reynoldsburg, OH 43068

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.12	1.399	A		-19.9	>0.0 - 2.798	0.29	H
Gross beta	2.98	2.43	A		22.6	1.22 - 3.65	0.32	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18

ORISE/ESSAP (ORIS01)

PO Box 117

Oak Ridge, TN 37831-0117

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.03	1.399	A		-26.4	>0.0 - 2.798	0.08	
Gross beta	2.49	2.43	A		2.5	1.22 - 3.65	0.14	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18

Outreach Technologies, Inc. (OTLI01)

311 N. Aspen

Broken Arrow, OK 74012-

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.31	1.399	A		-6.4	>0.0 - 2.798	0.111	
Gross beta	2.77	2.43	A		14.0	1.22 - 3.65	0.150	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18

STL St. Louis (QUAN01)

13715 Rider Trail North

Earth City, MO 63045-

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.312	1.399	A		-6.2	>0.0 - 2.798	0.0713	
Gross beta	2.256	2.43	A		-7.2	1.22 - 3.65	0.0886	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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Laboratory Results For MAPEP-07-GrW18

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

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.1655	1.399	A		-16.7	>0.0 - 2.798	0.0954	
Gross beta	2.294	2.43	A		-5.6	1.22 - 3.65	0.1520	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18
 Radiation Protection Service (RPSC01)
 Ontario Ministry of Labour
 Weston, Ontario M9P 3T1

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.63	1.399	A		16.5	>0.0 - 2.798	0.37	H
Gross beta	1.97	2.43	A		-18.9	1.22 - 3.65	0.20	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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Laboratory Results For MAPEP-07-GrW18

RSA Laboratories, Inc. (RSAL01)

PO Box 61

Hebron, CT 06248

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.93	1.399	A		-33.5	>0.0 - 2.798	0.14	
Gross beta	2.36	2.43	A		-2.9	1.22 - 3.65	.20	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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Laboratory Results For MAPEP-07-GrW18
 GPL Laboratories Alabama, LLC (SCAL01)
 1000 Monticello Court
 Montgomery, AL 36117-

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross beta	2.51	2.43	A		3.3	1.22 - 3.65	0.378	
Gross alpha	1.63	1.399	A		16.5	>0.0 - 2.798	0.412	H

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18
 SRS Environmental Monitoring Laboratory (SEML01)
 Bldg 735-B
 Aiken, SC 29808

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.32	1.399	A		-5.6	>0.0 - 2.798	0.23	
Gross beta	2.52	2.43	A		3.7	1.22 - 3.65	0.30	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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Laboratory Results For MAPEP-07-GrW18
 Scientific Laboratory Division (SLDL01)
 700 Camino de Salud NE
 Albuquerque, NM 87196-4700

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.34	1.399	A		-4.2	>0.0 - 2.798	0.36	H
Gross beta	2.52	2.43	A		3.7	1.22 - 3.65	0.66	H

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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Laboratory Results For MAPEP-07-GrW18

Soreq NRC (SNRC99)

Radioactivity Measurement Section

Yavne, Israel 81800

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross beta	2.18	2.43	A		-10.3	1.22 - 3.65	0.49	H
Gross alpha	1.39	1.399	A		-0.6	>0.0 - 2.798	0.54	H

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18

Southwest Research Institute (SOUT01)

6220 Culebra Rd.

San Antonio, TX 78228-0510

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross beta	2.16	2.43	A		-11.1	1.22 - 3.65	0.15	
Gross alpha	1.57	1.399	A		12.2	>0.0 - 2.798	0.16	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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Laboratory Results For MAPEP-07-GrW18
 Texas Department of State Health Services Laboratory (TDHL01)
 1100 W 49th Street
 Austin, TX 78756

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.05	1.399	A		-24.9	>0.0 - 2.798	0.10	
Gross beta	2.39	2.43	A		-1.6	1.22 - 3.65	0.10	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18

TELEDYNE BROWN ENGINEERING - ENVIRONMENTAL SERVICES (TELE01)

2508 Quality Lane

Knoxville, TN 37931-6819

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross beta	3.06	2.43	A		25.9	1.22 - 3.65	0.252	
Gross alpha	1.4	1.399	A		0.1	>0.0 - 2.798	0.39	H

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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Laboratory Results For MAPEP-07-GrW18
 Environmental, Inc., Midwest Lab (TELE02)
 700 Landwehr Road
 Northbrook, IL 60062-

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.96	1.399	A		-31.4	>0.0 - 2.798	0.14	
Gross beta	2.3	2.43	A		-5.4	1.22 - 3.65	0.15	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18

Eberline Services, Inc. (TMAE01)

7021 Pan American Freeway N.E.

Albuquerque, NM 87109-

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.90	1.399	A		35.8	>0.0 - 2.798	0.332	
Gross beta	2.68	2.43	A		10.3	1.22 - 3.65	0.268	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18
 EBERLINE SERVICES OAK RIDGE LABORATORY (TMAO01)
 601 SCARBORO RD
 OAK RIDGE, TN 37830-

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.204	1.399	A		-13.9	>0.0 - 2.798	0.116	
Gross beta	2.758	2.43	A		13.5	1.22 - 3.65	0.101	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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Laboratory Results For MAPEP-07-GrW18

Eberline Services (TMAR01)

2030 Wright Ave

Richmond, CA 94804-0040

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.153	1.399	A		-17.6	>0.0 - 2.798	0.247	H
Gross beta	2.299	2.43	A		-5.4	1.22 - 3.65	0.159	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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Laboratory Results For MAPEP-07-GrW18

FUSRAP (TNUT01)
 8945 LATTY AVE
 BERKELEY, MO 63134-

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross beta	NR	2.43				1.22 - 3.65		
Gross alpha	1.33	1.399	A		-4.9	>0.0 - 2.798	0.27	H

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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Laboratory Results For MAPEP-07-GrW18
 Waste Sampling and Characterization Facility (WEST03)
 PO Box 1000, S3-30
 Richland, WA 99352

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.828	1.399	A		-40.8	>0.0 - 2.798	0.07	
Gross beta	2.90	2.43	A		19.3	1.22 - 3.65	0.158	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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Laboratory Results For MAPEP-07-GrW18
 PACE ANALYTICAL SERVICES WALTZ MILL SITE (WEST04)
 P.O. BOX 158
 MADISON, PA 15663-0158

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.50	1.399	A		7.2	>0.0 - 2.798	0.300	
Gross beta	2.55	2.43	A		4.9	1.22 - 3.65	0.478	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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Laboratory Results For MAPEP-07-GrW18
 Wisconsin State Laboratory of Hygiene (WSHL01)
 2601 Agriculture Drive
 Madison, WI 53718

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.28	1.399	A		-8.5	>0.0 - 2.798	0.29	H
Gross beta	2.77	2.43	A		14.0	1.22 - 3.65	0.24	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias $>$ +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18
 WVDP Environmental Laboratory (WVDP01)
 10282 Rock Springs Road
 West Valley, NY 14171

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.03	1.399	A		-26.4	>0.0 - 2.798	.0658	
Gross beta	2.50	2.43	A		2.9	1.22 - 3.65	.0870	

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty \leq 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > +/- 50% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty \leq 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).



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

Laboratory Results For MAPEP-07-GrW18
 West Valley Process Chemistry (WVNS01)
 10282 Rock Springs Road
 West Valley, NY 14171-9799

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.09	1.399	A		-22.1	>0.0 - 2.798	.327	H
Gross beta	2.43	2.43	A		0.0	1.22 - 3.65	.728	H

Gross Alpha Flags:

A = Result acceptable, Bias \leq +/- 100% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

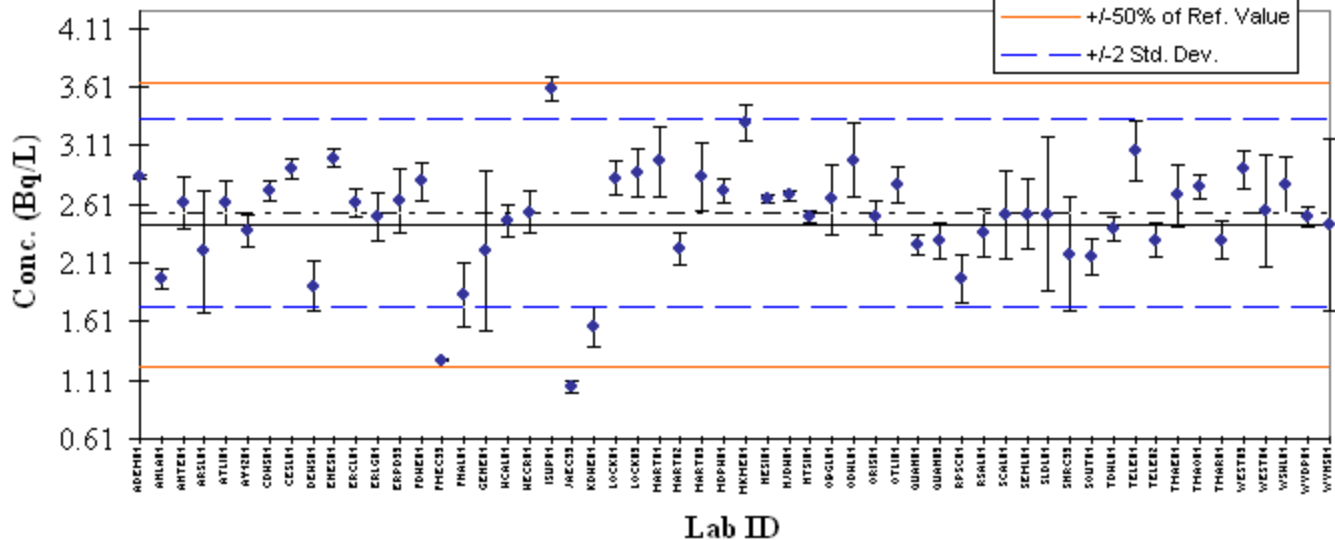
N = Result not acceptable, Bias $>$ +/- 100% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty ≤ 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

A = Result acceptable, Bias \leq +/- 50% with a statistically positive result at two standard deviations (Result/Uncertainty > 2 , i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

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Gross beta MAPEP-07-GrW18



Gross alpha MAPEP-07-GrW18

