

RESL CUSTOMER EXPORT CONTROL AGREEMENT

It is the Radiological and Environmental Sciences Laboratory's (RESL) policy to conduct business in accordance with all applicable U.S. export control laws and regulations. It is also RESL's policy that its Customers comply with U.S. export control laws and regulations. Therefore, Customer agrees to the following:

1. Because products, technical data, and technical assistance (i.e., services) provided to Customer by RESL may be subject to U.S. export control laws and regulations, (i) transactions with certain persons and companies and (ii) the export or reexport of certain types and levels of products, technical data, and services are prohibited or restricted.
2. Customer acknowledges that it is responsible for its own compliance with U.S. export control laws and regulations. Customer further agrees that it assumes the responsibility to obtain all necessary U.S. export licenses or other U.S. governmental authorizations, as well as all liability for the failure to do so.
3. Customer acknowledges that export control requirements may change and that the export or reexport of RESL products, technical data, and services without an export license or other appropriate governmental authorization may result in criminal and/or civil liability.
4. The obligations and requirements described herein shall survive the expiration or termination of any agreement or contract between RESL and Customer.

RdF43 Participating Laboratories

Lab Code	Lab Name	Matrix Code
ADEM01	Alabama Department of Environmental Management	RdF
ADFC99	Abu Dhabi Quality and Conformity Council-Central Testing Lab	RdF
AFOH01	USAFSAM/OEA	RdF
AMEC99	Jacobs Clean Energy Limited - Analytical Services	RdF
ANLB01	Argonne National Laboratory	RdF
ANTE01	ALS Environmental - Fort Collins, CO	RdF
AREV01	Framatome - CMC	RdF
ARGO01	Idaho National Laboratory	RdF
ARPL01	Analytical Support Operations - Radiochemical Processing Lab	RdF
ARSL01	ARS Aleut Analytical, LLC	RdF
CDHS01	California Department of Public Health	RdF
CESL01	Lawrence Livermore National Laboratory - EMRL	RdF
CMRC01	Carlsbad Environmental Monitoring and Research Center	RdF
DEHS01	Department of Environmental Health & Safety	RdF
DINL99	Departamento Ingeniería Energética	RdF
DLEA01	DLE Associates	RdF
ERCL01	Washington State Public Health Laboratories	RdF
ERHD99	Radiation Protection Bureau Health Canada RSD NMS	RdF
EULC01	EnergySolutions, LLC	RdF
FDHE01	Florida Dept of Health Environmental Laboratory	RdF
FDOH01	Florida Dept. of Health, Mobile Environmental Radiological Lab	RdF
GENE01	GEL Laboratories, LLC	RdF
GPCL01	Georgia Power Company Environmental Laboratory	RdF
HECR01	SC Dept. Health and Environmental Control Radiological Laboratory	RdF
HPAC99	PHE, CRCE Glasgow	RdF
HPAL01	Los Alamos National Laboratory	RdF
IAEA99	International Atomic Energy Agency	RdF
IEMA01	Illinois Emergency Management Agency Radiochemistry Laboratory	RdF
ISUP01	ISU - Department of Physics/Health Physics/EAL	RdF
JAEC99	Research Laboratories and Information Directorate	RdF
JLNN01	Jefferson Laboratory	RdF
LANL01	Los Alamos National Laboratory	RdF
LAWR01	LAWRENCE BERKELEY NATIONAL LABORATORY	RdF
LOCK03	Advanced Test Reactor (ATR) Complex Radioanalytical Laboratory	RdF
MALA99	Alypz Sdn. Bhd.	RdF
MART01	Fluor B&W Ports Analytical Laboratory	RdF
MART03	Radioactive Material Analysis Laboratory	RdF
MDPH01	MDPH-Radiation Control Program	RdF
MNDH01	Minnesota Department of Health, Public Health Lab. Division	RdF
NEIS01	BWXT-Radioisotope & Analytical Chemistry Laboratory	RdF
NJDH01	New Jersey Dept. of Health, PHEL, ECLS	RdF
NOCS99	National Oceanography Centre, Southampton	RdF
ODHL01	Ohio Department of Health Laboratory	RdF
ORIS01	ORISE/IEAV	RdF

OTLI01	Pace Analytical National Center for Testing & Innovation	RdF
RAVR99	Radiactividad Ambiental y Vigilancia Radiologica	RdF
RPSC01	Radiation Protection Service	RdF
SEML01	SRS Environmental Monitoring Laboratory	RdF
SOUT01	Southwest Research Institute	RdF
SRPD01	Sandia National Laboratories, Radiation Protection Sample Diagnostics	RdF
TDHL01	Texas Department of State Health Services Laboratory	RdF
TELE02	ATI Environmental, Inc., Midwest Lab	RdF
TMAO01	EBERLINE SERVICES OAK RIDGE LABORATORY	RdF
UNTE01	UniTech-235	RdF
WEST04	PACE ANALYTICAL SERVICES, PITTSBURGH	RdF
WIPH01	WI, DPH, Radiation Protection Section	RdF
WIPP01	WIPP Laboratories	RdF
WSHL01	Wisconsin State Laboratory of Hygiene	RdF
WSTP99	Cavendish Nuclear Limited	RdF
WVDP01	WVDP Environmental Laboratory	RdF
YPGA01	US Army Yuma Proving Ground / Material Analysis Lab	RdF

Laboratories Not Reporting

Lab Code	Lab Name	Matrix Code
IAEA20	IAEA Radiometrics Laboratory	RdF
MSDH01	Mississippi State Dept of Health	RdF
NARL01	National Analytical Radiation Environmental Laboratory	RdF
NARL02	USEPA - NAREL - MERL	RdF
TELE01	Teledyne Brown Engineering - Environmental Services	RdF

Study Reference Values

MAPEP-20-RdF43

Radiological Reference Date: 08/01/2020

Analyte	Ref Value	Ref Unc
Inorganic	Units: (ug/sample)	
Uranium-235	0.102	0.003
Uranium-238	14.6	0.5
Uranium-Total	14.7	0.5

Analyte	Ref Value	Ref Unc
Radiological	Units: (Bq/sample)	
Americium-241	0.134	0.003
Cesium-134	1.83	0.04
Cesium-137	0.996	0.018
Cobalt-60	1.73	0.04
Manganese-54	1.40	0.03
Plutonium-238	0.0867	0.0017
Plutonium-239/240	0.0017	0.0003
Strontium-90	2.08	0.05
Uranium-234	0.175	0.006
Uranium-238	0.182	0.006
Zinc-65	2.00	0.05

Sample Statistical Summary

MAPEP-20-RdF43

Radiological Reference Date: 08/01/2020

Analyte	T(1)	A(2)	Grand(3) Mean	Std Dev	Ref Value	Ref Unc	Acceptance Range
Inorganic							Units: (ug/sample)
Uranium-235	7	6	0.098	0.008	0.102	0.003	0.071 - 0.133
Uranium-238	7	7	13.9	1.2	14.6	0.5	10.2 - 19.0
Uranium-Total	10	10	13.9	1.3	14.7	0.5	10.3 - 19.1

Analyte	T(1)	A(2)	Grand(3) Mean	Std Dev	Ref Value	Ref Unc	Acceptance Range
Radiological							Units: (Bq/sample)
Americium-241	35	29	0.122	0.016	0.134	0.003	0.094 - 0.174
Cesium-134	60	54	1.66	0.17	1.83	0.04	1.28 - 2.38
Cesium-137	60	57	0.979	0.117	0.996	0.018	0.697 - 1.295
Cobalt-57	51	49					False Positive Test
Cobalt-60	60	59	1.65	0.14	1.73	0.04	1.21 - 2.25
Manganese-54	60	58	1.40	0.15	1.40	0.03	0.98 - 1.82
Plutonium-238	27	26	0.0843	0.0085	0.0867	0.0017	0.0607 - 0.1127
Plutonium-239/240	27	26	0.0022	0.0013	0.0017	0.0003	Sensitivity Evaluation
Strontium-90	24	21	1.85	0.15	2.08	0.05	1.46 - 2.70
Uranium-234	29	25	0.168	0.013	0.175	0.006	0.123 - 0.228
Uranium-238	30	26	0.175	0.014	0.182	0.006	0.127 - 0.237
Zinc-65	60	56	2.00	0.22	2.00	0.05	1.40 - 2.60

- 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".

Result Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- RW = Report Warning
- NR = Not Reported

Uncertainty Flags:

- NOT ACCEPTABLE.....RP<2%
- ACCEPTABLE.....2%<=RP<=15%
- ACCEPTABLE WITH WARNING.....15%<RP<=30%
- NOT ACCEPTABLE.....RP>30%

Flag Summary Report

MAPEP-20-RdF43

Inorganic				
Analyte	A	W	RW	N
Uranium-Total	10			
Uranium-235	6			1
Uranium-238	7			
Radiological				
Analyte	A	W	RW	N
Americium-241	23	6		6
Cesium-134	48	6		6
Cesium-137	52	5		3
Cobalt-57	49			4
Cobalt-60	57	2		1
Manganese-54	54	4		2
Plutonium-238	25	1		1
Plutonium-239/240	26			1
Strontium-90	19	2		3
Uranium-234	24	1		4
Uranium-238	25	1		4
Zinc-65	51	5		4



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

Laboratory Results For MAPEP-20-RdF43

(ADEM01) Alabama Department of Environmental Management
 1350 Coliseum Blvd.
 Montgomery, Alabama 36110

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.134				0.094 - 0.174		
Cesium-134	1.8019	1.83	A		-1.5	1.28 - 2.38	0.1	A
Cesium-137	1.2395	0.996	W		24.4	0.697 - 1.295	0.1	A
Cobalt-57	NR		N	(11)		False Positive Test		
Cobalt-60	1.7982	1.73	A		3.9	1.21 - 2.25	0.1	A
Manganese-54	1.4763	1.40	A		5.5	0.98 - 1.82	0.1	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	2.3902	2.00	A		19.5	1.40 - 2.60	0.1	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
- (6) = Not Evaluated
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- (17) = NOT DETECTED - reported a statistically zero result
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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-20-RdF43

(ADFC99) Abu Dhabi Quality and Conformity Council-Central Testing Lab

Radiation Lab

Abu Dhabi, - -

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.134				0.094 - 0.174		
Cesium-134	1.81	1.83	A		-1.1	1.28 - 2.38	0.05	A
Cesium-137	0.94	0.996	A		-5.6	0.697 - 1.295	0.04	A
Cobalt-57	0.01			A		False Positive Test	0.01	
Cobalt-60	1.67	1.73	A		-3.5	1.21 - 2.25	0.06	A
Manganese-54	1.30	1.40	A		-7.1	0.98 - 1.82	0.06	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	1.83	2.00	A		-8.5	1.40 - 2.60	0.09	A

Radiological Reference Date: August 1, 2020

Result Flags:

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NR = Not Reported

Uncertainty Flags:

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

Laboratory Results For MAPEP-20-RdF43

(AFOH01) USAFSAM/OEA

2510 Fifth Street, Area B

Wright-Patterson AFB, OH 45433-7913

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.1170	0.134	A		-12.7	0.094 - 0.174	0.0082	A
Cesium-134	1.537	1.83	A		-16.0	1.28 - 2.38	0.072	A
Cesium-137	0.828	0.996	A		-16.9	0.697 - 1.295	0.035	A
Cobalt-57	0.003		A			False Positive Test	0.018	
Cobalt-60	1.495	1.73	A		-13.6	1.21 - 2.25	0.059	A
Manganese-54	1.148	1.40	A		-18.0	0.98 - 1.82	0.043	A
Plutonium-238	0.0795	0.0867	A		-8.3	0.0607 - 0.1127	0.0058	A
Plutonium-239/240	0.00191	0.0017	A			Sensitivity Evaluation	0.00060	
Strontium-90	1.545	2.08	W		-25.7	1.46 - 2.70	0.059	A
Uranium-234	0.1550	0.175	A		-11.4	0.123 - 0.228	0.0090	A
Uranium-238	0.1657	0.182	A		-9.0	0.127 - 0.237	0.0095	A
Zinc-65	1.70	2.00	A		-15.0	1.40 - 2.60	0.17	A

Radiological Reference Date: August 1, 2020

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

Laboratory Results For MAPEP-20-RdF43
 (AMEC99) Jacobs Clean Energy Limited - Analytical Services
 612 Faraday Street
 Birchwood Park, Warrington WA3 6GN

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.1198	0.134	A		-10.6	0.094 - 0.174	0.0048	A
Cesium-134	1.56	1.83	A		-14.8	1.28 - 2.38	0.15	A
Cesium-137	0.837	0.996	A		-16.0	0.697 - 1.295	0.034	A
Cobalt-57	0.011			A		False Positive Test	0.010	
Cobalt-60	1.548	1.73	A		-10.5	1.21 - 2.25	0.064	A
Manganese-54	1.285	1.40	A		-8.2	0.98 - 1.82	0.065	A
Plutonium-238	0.1026	0.0867	A		18.3	0.0607 - 0.1127	0.0054	A
Plutonium-239/240	0.00282	0.0017	A			Sensitivity Evaluation	0.00079	
Strontium-90	1.772	2.08	A		-14.8	1.46 - 2.70	0.098	A
Uranium-234	0.1587	0.175	A		-9.3	0.123 - 0.228	0.0059	A
Uranium-238	0.1649	0.182	A		-9.4	0.127 - 0.237	0.0061	A
Zinc-65	1.84	2.00	A		-8.0	1.40 - 2.60	0.11	A

Radiological Reference Date: August 1, 2020

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

Laboratory Results For MAPEP-20-RdF43

(ANLB01) Argonne National Laboratory

9700 S. Cass Ave

Argonne, IL 60439

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.1196	0.134	A		-10.7	0.094 - 0.174	0.012	A
Cesium-134	1.57	1.83	A		-14.2	1.28 - 2.38	0.11	A
Cesium-137	0.99	0.996	A		-0.6	0.697 - 1.295	0.05	A
Cobalt-57	0.0013		A			False Positive Test	0.01	
Cobalt-60	1.68	1.73	A		-2.9	1.21 - 2.25	0.05	A
Manganese-54	1.387	1.40	A		-0.9	0.98 - 1.82	0.04	A
Plutonium-238	0.082	0.0867	A		-5.4	0.0607 - 0.1127	0.007	A
Plutonium-239/240	0.003	0.0017	A	(17)		Sensitivity Evaluation	0.001	
Strontium-90	1.98	2.08	A		-4.8	1.46 - 2.70	0.058	A
Uranium-234	0.171	0.175	A		-2.3	0.123 - 0.228	0.016	A
Uranium-238	0.170	0.182	A		-6.6	0.127 - 0.237	0.016	A
Zinc-65	2.10	2.00	A		5.0	1.40 - 2.60	0.15	A

Radiological Reference Date: August 1, 2020

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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-20-RdF43
 (ANTE01) ALS Environmental - Fort Collins, CO
 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	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.112	0.134	A		-16.4	0.094 - 0.174	0.010	A
Cesium-134	1.49	1.83	A		-18.6	1.28 - 2.38	0.10	A
Cesium-137	0.831	0.996	A		-16.6	0.697 - 1.295	0.060	A
Cobalt-57	0.074			A		False Positive Test	0.074	
Cobalt-60	1.50	1.73	A		-13.3	1.21 - 2.25	0.11	A
Manganese-54	1.31	1.40	A		-6.4	0.98 - 1.82	0.08	A
Plutonium-238	0.089	0.0867	A		2.7	0.0607 - 0.1127	0.008	A
Plutonium-239/240	0.002	0.0017	A	(17)		Sensitivity Evaluation	0.002	
Strontium-90	1.97	2.08	A		-5.3	1.46 - 2.70	0.23	A
Uranium-234	0.166	0.175	A		-5.1	0.123 - 0.228	0.014	A
Uranium-238	0.179	0.182	A		-1.6	0.127 - 0.237	0.016	A
Zinc-65	1.77	2.00	A		-11.5	1.40 - 2.60	0.16	A

Radiological Reference Date: August 1, 2020

Result Flags:

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NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

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

Laboratory Results For MAPEP-20-RdF43

(AREV01) Framatome - CMC

1724 Mount Athos Road

Lynchburg, VA 24504

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.134				0.094 - 0.174		
Cesium-134	1.85	1.83	A		1.1	1.28 - 2.38	0.08	A
Cesium-137	0.92	0.996	A		-7.6	0.697 - 1.295	0.05	A
Cobalt-57	NR					False Positive Test		
Cobalt-60	1.75	1.73	A		1.2	1.21 - 2.25	0.06	A
Manganese-54	1.51	1.40	A		7.9	0.98 - 1.82	0.08	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	1.94	2.00	A		-3.0	1.40 - 2.60	0.11	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43

(ARGO01) Idaho National Laboratory
 INL, Materials and Fuels Complex
 Idaho Falls, ID 83415

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.134				0.094 - 0.174		
Cesium-134	1.77	1.83	A		-3.3	1.28 - 2.38	0.05	A
Cesium-137	0.834	0.996	A		-16.3	0.697 - 1.295	0.045	A
Cobalt-57	0.0874			A		False Positive Test	0.0874	
Cobalt-60	1.59	1.73	A		-8.1	1.21 - 2.25	0.05	A
Manganese-54	1.25	1.40	A		-10.7	0.98 - 1.82	0.05	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	1.95	2.00	A		-2.5	1.40 - 2.60	0.09	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

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

Laboratory Results For MAPEP-20-RdF43

(ARPL01) Analytical Support Operations - Radiochemical Processing Lab

PO Box 999

Richland, WA 99354

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.1173	0.134	A		-12.5	0.094 - 0.174	0.0052	A
Cesium-134	1.531	1.83	A		-16.3	1.28 - 2.38	0.071	A
Cesium-137	0.885	0.996	A		-11.1	0.697 - 1.295	0.049	A
Cobalt-57	.044			(6)		False Positive Test	.0022	
Cobalt-60	1.531	1.73	A		-11.5	1.21 - 2.25	0.110	A
Manganese-54	1.256	1.40	A		-10.3	0.98 - 1.82	0.083	A
Plutonium-238	0.0786	0.0867	A		-9.3	0.0607 - 0.1127	0.0034	A
Plutonium-239/240	0.0030	0.0017	A			Sensitivity Evaluation	0.0006	
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	0.1781	0.175	A		1.8	0.123 - 0.228	.0060	A
Uranium-238	0.1780	0.182	A		-2.2	0.127 - 0.237	.0060	A
Zinc-65	1.804	2.00	A		-9.8	1.40 - 2.60	0.088	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

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NOT ACCEPTABLE.....RP > 30%

Notes:

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

Laboratory Results For MAPEP-20-RdF43

(ARSL01) ARS Aleut Analytical, LLC

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	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	.121	0.134	A		-9.7	0.094 - 0.174	.010	A
Cesium-134	1.904	1.83	A		4.0	1.28 - 2.38	.082	A
Cesium-137	1.169	0.996	A		17.4	0.697 - 1.295	.056	A
Cobalt-57	-.011			A		False Positive Test	.034	
Cobalt-60	1.935	1.73	A		11.9	1.21 - 2.25	.062	A
Manganese-54	1.623	1.40	A		15.9	0.98 - 1.82	.110	A
Plutonium-238	.092	0.0867	A		6.1	0.0607 - 0.1127	.008	A
Plutonium-239/240	.002	0.0017	A	(17)		Sensitivity Evaluation	.002	
Strontium-90	2.065	2.08	A		-0.7	1.46 - 2.70	.168	A
Uranium-234	.174	0.175	A		-0.6	0.123 - 0.228	.013	A
Uranium-238	.178	0.182	A		-2.2	0.127 - 0.237	.013	A
Zinc-65	2.427	2.00	W		21.4	1.40 - 2.60	.156	A

Radiological Reference Date: August 1, 2020

Result Flags:

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N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

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

Laboratory Results For MAPEP-20-RdF43
 (CDHS01) California Department of Public Health
 Drinking Water & 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	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.112	0.134	A		-16.4	0.094 - 0.174	0.00502	A
Cesium-134	1.83	1.83	A		0.0	1.28 - 2.38	0.0459	A
Cesium-137	0.992	0.996	A		-0.4	0.697 - 1.295	0.0338	A
Cobalt-57	0.000122		A			False Positive Test	0.00463	
Cobalt-60	1.61	1.73	A		-6.9	1.21 - 2.25	0.0332	A
Manganese-54	1.37	1.40	A		-2.1	0.98 - 1.82	0.041	A
Plutonium-238	0.0838	0.0867	A		-3.3	0.0607 - 0.1127	0.0477	N
Plutonium-239/240	0.00044	0.0017	A	(17)		Sensitivity Evaluation	0.00152	
Strontium-90	1.80	2.08	A		-13.5	1.46 - 2.70	0.115	A
Uranium-234	0.132	0.175	W		-24.6	0.123 - 0.228	0.0123	A
Uranium-238	0.149	0.182	A		-18.1	0.127 - 0.237	0.0120	A
Zinc-65	1.93	2.00	A		-3.5	1.40 - 2.60	0.0757	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

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

Laboratory Results For MAPEP-20-RdF43
 (CESL01) Lawrence Livermore National Laboratory - EMRL
 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	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.134				0.094 - 0.174		
Cesium-134	1.63e+00	1.83	A		-10.9	1.28 - 2.38	9.33e-02	A
Cesium-137	1.00e+00	0.996	A		0.4	0.697 - 1.295	1.09e-01	A
Cobalt-57	-1.37e-03			A		False Positive Test	2.19e-02	
Cobalt-60	1.71e+00	1.73	A		-1.2	1.21 - 2.25	1.04e-01	A
Manganese-54	1.49e+00	1.40	A		6.4	0.98 - 1.82	1.37e-01	A
Plutonium-238	8.82e-02	0.0867	A		1.7	0.0607 - 0.1127	1.75e-03	N
Plutonium-239/240	1.67e-03	0.0017	A			Sensitivity Evaluation	3.74e-04	
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	2.02e+00	2.00	A		1.0	1.40 - 2.60	2.20e-01	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

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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-20-RdF43
 (CMRC01) Carlsbad Environmental Monitoring and Research Center
 1400 University Dr.
 Carlsbad, NM 88220

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	1.33E-01	0.134	A		-0.7	0.094 - 0.174	8.71E-03	A
Cesium-134	1.61E+00	1.83	A		-12.0	1.28 - 2.38	1.75E-01	A
Cesium-137	1.12E+00	0.996	A		12.5	0.697 - 1.295	2.96E-02	A
Cobalt-57	3.12E-03			A		False Positive Test	3.32E-02	
Cobalt-60	1.77E+00	1.73	A		2.3	1.21 - 2.25	3.71E-02	A
Manganese-54	1.47E+00	1.40	A		5.0	0.98 - 1.82	3.57E-02	A
Plutonium-238	9.00E-02	0.0867	A		3.8	0.0607 - 0.1127	6.47E-03	A
Plutonium-239/240	1.58E-03	0.0017	A			Sensitivity Evaluation	3.78E-04	
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	1.74E-01	0.175	A		-0.6	0.123 - 0.228	1.22E-02	A
Uranium-238	1.81E-01	0.182	A		-0.5	0.127 - 0.237	1.26E-02	A
Zinc-65	2.23E+00	2.00	A		11.5	1.40 - 2.60	8.54E-02	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

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ACCEPTABLE WITH WARNING.....15% <RP <= 30%

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

Laboratory Results For MAPEP-20-RdF43
 (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	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.134				0.094 - 0.174		
Cesium-134	1.89	1.83	A		3.3	1.28 - 2.38	0.03	N
Cesium-137	0.93	0.996	A		-6.6	0.697 - 1.295	0.03	A
Cobalt-57	0.02			A		False Positive Test	0.04	
Cobalt-60	1.62	1.73	A		-6.4	1.21 - 2.25	0.05	A
Manganese-54	1.31	1.40	A		-6.4	0.98 - 1.82	0.05	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	1.65	2.00	A		-17.5	1.40 - 2.60	0.05	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

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RW = Report Warning

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Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

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NOT ACCEPTABLE.....RP > 30%

Notes:

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- (17) = NOT DETECTED - reported a statistically zero result
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- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43
 (DINL99) Departamento Ingeniería Energética
 Escuela de Ingeniería de Bilbao
 Bilbao, Vizcaya 48013

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	0.140	0.102	N		37.3	0.071 - 0.133	0.02682	W
Uranium-238	13.35	14.6	A		-8.6	10.2 - 19.0	0.850	A
Uranium-Total	13.35	14.7	A		-9.2	10.3 - 19.1	0.850	A

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.09678	0.134	W		-27.8	0.094 - 0.174	0.00538	A
Cesium-134	1.665	1.83	A		-9.0	1.28 - 2.38	0.08755	A
Cesium-137	0.9517	0.996	A		-4.4	0.697 - 1.295	0.05315	A
Cobalt-57	0.1987		A			False Positive Test	0.1987	
Cobalt-60	1.646	1.73	A		-4.9	1.21 - 2.25	0.08605	A
Manganese-54	1.327	1.40	A		-5.2	0.98 - 1.82	0.0704	A
Plutonium-238	0.07325	0.0867	A		-15.5	0.0607 - 0.1127	0.004408	A
Plutonium-239/240	0.002598	0.0017	A			Sensitivity Evaluation	0.000684	
Strontium-90	1.699	2.08	A		-18.3	1.46 - 2.70	0.0777	A
Uranium-234	0.1626	0.175	A		-7.1	0.123 - 0.228	0.01040	A
Uranium-238	0.1660	0.182	A		-8.8	0.127 - 0.237	0.01057	A
Zinc-65	1.879	2.00	A		-6.1	1.40 - 2.60	0.1014	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

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NOT ACCEPTABLE.....RP > 30%

Notes:

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

Laboratory Results For MAPEP-20-RdF43

(DLEA01) DLE Associates
730 Alfred Nobel Drive
Hercules, CA 94547

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.134				0.094 - 0.174		
Cesium-134	0.96	1.83	N		-47.5	1.28 - 2.38	0.04	A
Cesium-137	0.81	0.996	A		-18.7	0.697 - 1.295	0.04	A
Cobalt-57	0.04		A			False Positive Test	0.13	
Cobalt-60	1.45	1.73	A		-16.2	1.21 - 2.25	0.11	A
Manganese-54	1.17	1.40	A		-16.4	0.98 - 1.82	0.07	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	1.57	2.00	W		-21.5	1.40 - 2.60	0.08	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

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RW = Report Warning

NR = Not Reported

Uncertainty Flags:

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- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43
 (ERCL01) Washington State Public Health Laboratories
 1610 N.E. 150th Street
 Shoreline, WA 98155-9701

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	0.0902	0.102	A		-11.6	0.071 - 0.133	0.0046	A
Uranium-238	13.0	14.6	A		-11.0	10.2 - 19.0	0.7	A
Uranium-Total	13.1	14.7	A		-10.9	10.3 - 19.1	0.7	A

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.141	0.134	A		5.2	0.094 - 0.174	0.023	W
Cesium-134	1.88	1.83	A		2.7	1.28 - 2.38	0.08	A
Cesium-137	0.96	0.996	A		-3.6	0.697 - 1.295	0.10	A
Cobalt-57	0.0041		A			False Positive Test	0.0055	
Cobalt-60	1.69	1.73	A		-2.3	1.21 - 2.25	0.03	N
Manganese-54	1.43	1.40	A		2.1	0.98 - 1.82	0.16	A
Plutonium-238	0.104	0.0867	A		20.0	0.0607 - 0.1127	0.010	A
Plutonium-239/240	0.0027	0.0017	A	(17)		Sensitivity Evaluation	0.0013	
Strontium-90	1.92	2.08	A		-7.7	1.46 - 2.70	0.15	A
Uranium-234	0.172	0.175	A		-1.7	0.123 - 0.228	0.013	A
Uranium-238	0.206	0.182	A		13.2	0.127 - 0.237	0.014	A
Zinc-65	1.91	2.00	A		-4.5	1.40 - 2.60	0.11	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43

(ERHD99) Radiation Protection Bureau Health Canada RSD NMS
 775 Brookfield Road AL6302D1
 Ottawa, Ontario K1A 1C1

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.153	0.134	A		14.2	0.094 - 0.174	0.083	N
Cesium-134	2.089	1.83	A		14.2	1.28 - 2.38	0.078	A
Cesium-137	1.249	0.996	W		25.4	0.697 - 1.295	0.051	A
Cobalt-57	0.006		A			False Positive Test	0.008	
Cobalt-60	1.636	1.73	A		-5.4	1.21 - 2.25	0.065	A
Manganese-54	1.694	1.40	W		21.0	0.98 - 1.82	0.060	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	2.362	2.00	A		18.1	1.40 - 2.60	0.085	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

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NOT ACCEPTABLE.....RP > 30%

Notes:

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

Laboratory Results For MAPEP-20-RdF43

(EULC01) EnergySolutions, LLC

I-80, Exit 49

Clive, UT 84029

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	.137566	0.134	A		2.7	0.094 - 0.174	.0355422	W
Cesium-134	1.71162	1.83	A		-6.5	1.28 - 2.38	.115884	A
Cesium-137	1.0915	0.996	A		9.6	0.697 - 1.295	.145188	A
Cobalt-57	-.467		A			False Positive Test	.39	
Cobalt-60	1.66944	1.73	A		-3.5	1.21 - 2.25	.111148	A
Manganese-54	1.5244	1.40	A		8.9	0.98 - 1.82	.1813	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	2.1978	2.00	A		9.9	1.40 - 2.60	.230214	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

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NOT ACCEPTABLE.....RP > 30%

Notes:

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

Laboratory Results For MAPEP-20-RdF43

(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	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.105	0.134	W		-21.6	0.094 - 0.174	0.099	N
Cesium-134	1.561	1.83	A		-14.7	1.28 - 2.38	0.050	A
Cesium-137	0.944	0.996	A		-5.2	0.697 - 1.295	0.061	A
Cobalt-57	0.005		A			False Positive Test	0.038	
Cobalt-60	1.632	1.73	A		-5.7	1.21 - 2.25	0.057	A
Manganese-54	1.433	1.40	A		2.4	0.98 - 1.82	0.064	A
Plutonium-238	0.08127	0.0867	A		-6.3	0.0607 - 0.1127	0.0042	A
Plutonium-239/240	0.00196	0.0017	A			Sensitivity Evaluation	0.00061	
Strontium-90	2.1915	2.08	A		5.4	1.46 - 2.70	0.0855	A
Uranium-234	0.1545	0.175	A		-11.7	0.123 - 0.228	0.0064	A
Uranium-238	0.16295	0.182	A		-10.5	0.127 - 0.237	0.0066	A
Zinc-65	2.117	2.00	A		5.9	1.40 - 2.60	0.222	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

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Notes:

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- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43

(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	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.105	0.134	W		-21.6	0.094 - 0.174	0.119	N
Cesium-134	1.638	1.83	A		-10.5	1.28 - 2.38	0.032	N
Cesium-137	1.011	0.996	A		1.5	0.697 - 1.295	0.029	A
Cobalt-57	0.007		A			False Positive Test	0.025	
Cobalt-60	1.7	1.73	A		-1.7	1.21 - 2.25	0.034	A
Manganese-54	1.477	1.40	A		5.5	0.98 - 1.82	0.039	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	0.144	0.182	W		-20.9	0.127 - 0.237	0.28	N
Zinc-65	2.253	2.00	A		12.7	1.40 - 2.60	0.097	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

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NOT ACCEPTABLE.....RP > 30%

Notes:

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

Laboratory Results For MAPEP-20-RdF43

(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	0.0920	0.102	A		-9.8	0.071 - 0.133	0.00619	A
Uranium-238	13.1	14.6	A		-10.3	10.2 - 19.0	0.876	A
Uranium-Total	13.2	14.7	A		-10.2	10.3 - 19.1	0.0165	N

Radiological							Units: (Bq/sample)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.129	0.134	A		-3.7	0.094 - 0.174	0.00725	A
Cesium-134	1.72	1.83	A		-6.0	1.28 - 2.38	0.107	A
Cesium-137	1.04	0.996	A		4.4	0.697 - 1.295	0.0747	A
Cobalt-57	0.00126		A			False Positive Test	0.0167	
Cobalt-60	1.85	1.73	A		6.9	1.21 - 2.25	0.112	A
Manganese-54	1.64	1.40	A		17.1	0.98 - 1.82	0.104	A
Plutonium-238	0.0917	0.0867	A		5.8	0.0607 - 0.1127	0.00707	A
Plutonium-239/240	0.00189	0.0017	A	(17)		Sensitivity Evaluation	0.000808	
Strontium-90	1.79	2.08	A		-13.9	1.46 - 2.70	0.243	A
Uranium-234	0.182	0.175	A		4.0	0.123 - 0.228	0.00981	A
Uranium-238	0.186	0.182	A		2.2	0.127 - 0.237	0.01	A
Zinc-65	2.29	2.00	A		14.5	1.40 - 2.60	0.169	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

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- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
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- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43
 (GPCL01) Georgia Power Company Environmental Laboratory
 2480 Maner Road
 Atlanta, GA 30339

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.134				0.094 - 0.174		
Cesium-134	1.749	1.83	A		-4.4	1.28 - 2.38	0.1548	A
Cesium-137	1.032	0.996	A		3.6	0.697 - 1.295	0.1478	A
Cobalt-57	0.005			A		False Positive Test	0.0946	
Cobalt-60	1.610	1.73	A		-6.9	1.21 - 2.25	0.1684	A
Manganese-54	1.389	1.40	A		-0.8	0.98 - 1.82	0.1811	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	1.978	2.00	A		-1.1	1.40 - 2.60	0.3311	W

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
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- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-20-RdF43

(HECR01) SC Dept. Health and Environmental Control Radiological Laboratory
 8231 Parklane Road
 Columbia, SC 29223

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.134				0.094 - 0.174		
Cesium-134	1.435	1.83	W		-21.6	1.28 - 2.38	0.1520	A
Cesium-137	0.7913	0.996	W		-20.6	0.697 - 1.295	0.1478	W
Cobalt-57	0.04190		A			False Positive Test	0.08818	
Cobalt-60	1.424	1.73	A		-17.7	1.21 - 2.25	0.1501	A
Manganese-54	1.194	1.40	A		-14.7	0.98 - 1.82	0.1853	W
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	1.595	2.00	W		-20.3	1.40 - 2.60	0.3536	W

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

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NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
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- (11) = False Positive Test, Result Not Reported
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- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43

(HPAC99) PHE, CRCE Glasgow
 155 Hardgate Road
 Glasgow, Scotland G514LS

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.231	0.134	N		72.4	0.094 - 0.174	0.038	W
Cesium-134	2.42	1.83	N		32.2	1.28 - 2.38	0.328	A
Cesium-137	1.45	0.996	N		45.6	0.697 - 1.295	0.199	A
Cobalt-57	NR		N	(11)		False Positive Test		
Cobalt-60	2.38	1.73	N		37.6	1.21 - 2.25	0.324	A
Manganese-54	1.97	1.40	N		40.7	0.98 - 1.82	0.27	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175	N	(28)		0.123 - 0.228		
Uranium-238	NR	0.182	N	(28)		0.127 - 0.237		
Zinc-65	2.74	2.00	N		37.0	1.40 - 2.60	0.379	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

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ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

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- (11) = False Positive Test, Result Not Reported
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- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43
 (HPAL01) Los Alamos National Laboratory
 Milan Gadd, MS G761
 Los Alamos, NM 87545-1663

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.18	0.134	N		34.3	0.094 - 0.174	0.03	W
Cesium-134	1.71	1.83	A		-6.6	1.28 - 2.38	0.10	A
Cesium-137	1.18	0.996	A		18.5	0.697 - 1.295	0.11	A
Cobalt-57	0.01		A			False Positive Test	0.06	
Cobalt-60	1.95	1.73	A		12.7	1.21 - 2.25	0.13	A
Manganese-54	1.75	1.40	W		25.0	0.98 - 1.82	0.14	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	1.61	0.175	N		820.0	0.123 - 0.228	25.34	N
Uranium-238	-0.17	0.182	N		-193.4	0.127 - 0.237	0.60	N
Zinc-65	2.91	2.00	N		45.5	1.40 - 2.60	0.33	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43
 (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	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.173	0.134	W		29.1	0.094 - 0.174	0.017	A
Cesium-134	1.88	1.83	A		2.7	1.28 - 2.38	0.09	A
Cesium-137	1.00	0.996	A		0.4	0.697 - 1.295	0.06	A
Cobalt-57	-0.1		A			False Positive Test	0.2	
Cobalt-60	1.72	1.73	A		-0.6	1.21 - 2.25	0.09	A
Manganese-54	1.42	1.40	A		1.4	0.98 - 1.82	0.08	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	2.00	2.00	A		0.0	1.40 - 2.60	0.11	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43

(IEMA01) Illinois Emergency Management Agency Radiochemistry Laboratory
 1301 Knotts St.
 Springfield, IL 62703

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	14.8	14.7	A		0.7	10.3 - 19.1	1.1	A

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.1164	0.134	A		-13.1	0.094 - 0.174	0.0049	A
Cesium-134	1.615	1.83	A		-11.7	1.28 - 2.38	0.047	A
Cesium-137	0.920	0.996	A		-7.6	0.697 - 1.295	0.060	A
Cobalt-57	0.011			A		False Positive Test	0.010	
Cobalt-60	1.635	1.73	A		-5.5	1.21 - 2.25	0.058	A
Manganese-54	1.250	1.40	A		-10.7	0.98 - 1.82	0.068	A
Plutonium-238	0.0891	0.0867	A		2.8	0.0607 - 0.1127	0.0060	A
Plutonium-239/240	0.00170	0.0017	A			Sensitivity Evaluation	0.00039	
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	0.1637	0.175	A		-6.5	0.123 - 0.228	0.0054	A
Uranium-238	0.1711	0.182	A		-6.0	0.127 - 0.237	0.0056	A
Zinc-65	2.08	2.00	A		4.0	1.40 - 2.60	0.15	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43

(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	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.134				0.094 - 0.174		
Cesium-134	1.6	1.83	A		-12.6	1.28 - 2.38	.09	A
Cesium-137	.98	0.996	A		-1.6	0.697 - 1.295	.08	A
Cobalt-57	NR		N	(11)		False Positive Test		
Cobalt-60	1.65	1.73	A		-4.6	1.21 - 2.25	.1	A
Manganese-54	1.36	1.40	A		-2.9	0.98 - 1.82	.11	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	2.07	2.00	A		3.5	1.40 - 2.60	.18	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43
 (JAEC99) Research Laboratories and Information Directorate
 Jordan Atomic Energy Commission
 Amman, Jordan 70 (11934)

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.134				0.094 - 0.174		
Cesium-134	1.91	1.83	A		4.4	1.28 - 2.38	0.08	A
Cesium-137	1.06	0.996	A		6.4	0.697 - 1.295	0.08	A
Cobalt-57	NR					False Positive Test		
Cobalt-60	1.7	1.73	A		-1.7	1.21 - 2.25	0.11	A
Manganese-54	1.46	1.40	A		4.3	0.98 - 1.82	0.11	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	0.039	2.08	N		-98.1	1.46 - 2.70	0.012	N
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	1.99	2.00	A		-0.5	1.40 - 2.60	0.17	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43

(JLNN01) Jefferson Laboratory
 111 Hadron Drive
 Newport News, VA 23606

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.107	0.134	W		-20.1	0.094 - 0.174	0.012	A
Cesium-134	1.439	1.83	W		-21.4	1.28 - 2.38	0.033	A
Cesium-137	0.898	0.996	A		-9.8	0.697 - 1.295	0.049	A
Cobalt-57	0.003		A			False Positive Test	0.010	
Cobalt-60	1.605	1.73	A		-7.2	1.21 - 2.25	0.049	A
Manganese-54	1.173	1.40	A		-16.2	0.98 - 1.82	0.059	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	1.546	2.00	W		-22.7	1.40 - 2.60	0.101	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

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

Laboratory Results For MAPEP-20-RdF43
 (LANL01) Los Alamos National Laboratory
 Mail Stop J514
 Los Alamos, NM 87545

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.134				0.094 - 0.174		
Cesium-134	1.55	1.83	A		-15.3	1.28 - 2.38	0.08	A
Cesium-137	1.56	0.996	N		56.6	0.697 - 1.295	0.08	A
Cobalt-57	NR					False Positive Test		
Cobalt-60	1.54	1.73	A		-11.0	1.21 - 2.25	0.08	A
Manganese-54	1.42	1.40	A		1.4	0.98 - 1.82	0.08	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	1.93	2.00	A		-3.5	1.40 - 2.60	0.13	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

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- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43

(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	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.134				0.094 - 0.174		
Cesium-134	1.658	1.83	A		-9.4	1.28 - 2.38	.1094	A
Cesium-137	.9087	0.996	A		-8.8	0.697 - 1.295	.09719	A
Cobalt-57	0.06462		A			False Positive Test	0.04481	
Cobalt-60	1.466	1.73	A		-15.3	1.21 - 2.25	.1208	A
Manganese-54	1.506	1.40	A		7.6	0.98 - 1.82	.1236	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	2.028	2.00	A		1.4	1.40 - 2.60	.2626	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43

(LOCK03) Advanced Test Reactor (ATR) Complex Radioanalytical Laboratory

INL/Battelle Energy Alliance, LLC

Idaho Falls, ID 83415-7111

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.134				0.094 - 0.174		
Cesium-134	1.63	1.83	A		-10.9	1.28 - 2.38	0.09	A
Cesium-137	1.00	0.996	A		0.4	0.697 - 1.295	0.07	A
Cobalt-57	0.001			A		False Positive Test	0.011	
Cobalt-60	1.71	1.73	A		-1.2	1.21 - 2.25	0.10	A
Manganese-54	1.43	1.40	A		2.1	0.98 - 1.82	0.09	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	2.09	2.00	A		4.5	1.40 - 2.60	0.15	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43

(MALA99) Alypz Sdn. Bhd.

No. 14, JLN USJ 1/1

Subang Jaya, Selangor 47600

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.134				0.094 - 0.174		
Cesium-134	1.54	1.83	A		-15.8	1.28 - 2.38	0.05	A
Cesium-137	1.15	0.996	A		15.5	0.697 - 1.295	0.07	A
Cobalt-57	-0.01			A		False Positive Test	0.02	
Cobalt-60	1.56	1.73	A		-9.8	1.21 - 2.25	0.06	A
Manganese-54	1.49	1.40	A		6.4	0.98 - 1.82	0.08	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	2.06	2.00	A		3.0	1.40 - 2.60	0.13	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43
 (MART01) Fluor B&W Ports Analytical Laboratory
 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	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.1305	0.134	A		-2.6	0.094 - 0.174	0.009425	A
Cesium-134	1.741	1.83	A		-4.9	1.28 - 2.38	0.05196	A
Cesium-137	1.021	0.996	A		2.5	0.697 - 1.295	0.05777	A
Cobalt-57	0.01291			A		False Positive Test	0.01254	
Cobalt-60	1.827	1.73	A		5.6	1.21 - 2.25	0.06137	A
Manganese-54	1.594	1.40	A		13.9	0.98 - 1.82	0.07814	A
Plutonium-238	0.07963	0.0867	A		-8.2	0.0607 - 0.1127	0.007228	A
Plutonium-239/240	0.0009785	0.0017	A	(17)		Sensitivity Evaluation	0.000622	
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	0.1632	0.175	A		-6.7	0.123 - 0.228	0.01328	A
Uranium-238	0.1826	0.182	A		0.3	0.127 - 0.237	0.01503	A
Zinc-65	2.102	2.00	A		5.1	1.40 - 2.60	0.1516	A

Radiological Reference Date: August 1, 2020

Result Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- RW = Report Warning
- NR = Not Reported

Uncertainty Flags:

- NOT ACCEPTABLE.....RP<2%
- ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43
 (MART03) Radioactive Material Analysis Laboratory
 ORNL
 Oak Ridge, TN 37830

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.133	0.134	A		-0.7	0.094 - 0.174	0.007	A
Cesium-134	1.446	1.83	W		-21.0	1.28 - 2.38	0.028	N
Cesium-137	1.034	0.996	A		3.8	0.697 - 1.295	0.038	A
Cobalt-57	0.001		A			False Positive Test	0.011	
Cobalt-60	1.701	1.73	A		-1.7	1.21 - 2.25	0.041	A
Manganese-54	1.522	1.40	A		8.7	0.98 - 1.82	0.049	A
Plutonium-238	0.080	0.0867	A		-7.7	0.0607 - 0.1127	0.006	A
Plutonium-239/240	0.001	0.0017	A	(17)		Sensitivity Evaluation	0.001	
Strontium-90	1.815	2.08	A		-12.7	1.46 - 2.70	0.080	A
Uranium-234	0.188	0.175	A		7.4	0.123 - 0.228	0.010	A
Uranium-238	0.196	0.182	A		7.7	0.127 - 0.237	0.011	A
Zinc-65	2.27	2.00	A		13.5	1.40 - 2.60	0.10	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43
 (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	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.134				0.094 - 0.174		
Cesium-134	1.57	1.83	A		-14.2	1.28 - 2.38	0.06	A
Cesium-137	0.95	0.996	A		-4.6	0.697 - 1.295	0.06	A
Cobalt-57	NR					False Positive Test		
Cobalt-60	1.60	1.73	A		-7.5	1.21 - 2.25	0.08	A
Manganese-54	1.47	1.40	A		5.0	0.98 - 1.82	0.07	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	1.93	2.00	A		-3.5	1.40 - 2.60	0.10	A

Radiological Reference Date: August 1, 2020

Result Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- RW = Report Warning
- NR = Not Reported

Uncertainty Flags:

- NOT ACCEPTABLE.....RP<2%
- ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43

(MNDH01) Minnesota Department of Health, Public Health Lab. Division
601 Robert St. N.
St. Paul, MN 55155

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.18012	0.134	N		34.4	0.094 - 0.174	0.08540	N
Cesium-134	1.5167	1.83	A		-17.1	1.28 - 2.38	0.04255	A
Cesium-137	1.1002	0.996	A		10.5	0.697 - 1.295	0.05306	A
Cobalt-57	0.0013194		A			False Positive Test	0.0194	
Cobalt-60	1.5762	1.73	A		-8.9	1.21 - 2.25	0.04239	A
Manganese-54	1.5008	1.40	A		7.2	0.98 - 1.82	0.0547	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	2.1948	2.00	A		9.7	1.40 - 2.60	0.1110	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43
 (NESI01) BWXT-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	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.134	N	(28)		0.094 - 0.174		
Cesium-134	1.68	1.83	A		-8.2	1.28 - 2.38	0.069	A
Cesium-137	1.08	0.996	A		8.4	0.697 - 1.295	0.066	A
Cobalt-57	0.151		N	(1)		False Positive Test	0.025	
Cobalt-60	1.82	1.73	A		5.2	1.21 - 2.25	0.085	A
Manganese-54	1.43	1.40	A		2.1	0.98 - 1.82	0.081	A
Plutonium-238	NR	0.0867	N	(28)		0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017	N	(18)		Sensitivity Evaluation		
Strontium-90	NR	2.08	N	(28)		1.46 - 2.70		
Uranium-234	NR	0.175	N	(28)		0.123 - 0.228		
Uranium-238	NR	0.182	N	(28)		0.127 - 0.237		
Zinc-65	2.12	2.00	A		6.0	1.40 - 2.60	0.158	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

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- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43
 (NJDH01) New Jersey Dept. of Health, PHEL, ECLS
 3 Schwarzkopf Drive
 West Trenton, NJ 08628

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.134				0.094 - 0.174		
Cesium-134	1.29	1.83	W		-29.5	1.28 - 2.38	0.16	A
Cesium-137	0.770	0.996	W		-22.7	0.697 - 1.295	0.096	A
Cobalt-57	0.033		A			False Positive Test	0.024	
Cobalt-60	1.32	1.73	W		-23.7	1.21 - 2.25	0.13	A
Manganese-54	0.980	1.40	W		-30.0	0.98 - 1.82	0.082	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	1.31	2.00	N		-34.5	1.40 - 2.60	0.14	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

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- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43
 (NOCS99) National Oceanography Centre, Southampton
 GAU-Radioanalytical
 Southampton, Hampshire SO14 3ZH

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.126	0.134	A		-6.0	0.094 - 0.174	0.008	A
Cesium-134	1.81	1.83	A		-1.1	1.28 - 2.38	0.06	A
Cesium-137	0.92	0.996	A		-7.6	0.697 - 1.295	0.03	A
Cobalt-57	0.01			A		False Positive Test	0.01	
Cobalt-60	1.60	1.73	A		-7.5	1.21 - 2.25	0.05	A
Manganese-54	1.26	1.40	A		-10.0	0.98 - 1.82	0.05	A
Plutonium-238	0.086	0.0867	A		-0.8	0.0607 - 0.1127	0.005	A
Plutonium-239/240	0.004	0.0017	A	(17)		Sensitivity Evaluation	0.004	
Strontium-90	1.9	2.08	A		-8.7	1.46 - 2.70	0.2	A
Uranium-234	0.163	0.175	A		-6.9	0.123 - 0.228	0.009	A
Uranium-238	0.167	0.182	A		-8.2	0.127 - 0.237	0.009	A
Zinc-65	1.85	2.00	A		-7.5	1.40 - 2.60	0.09	A

Radiological Reference Date: August 1, 2020

Result Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- RW = Report Warning
- NR = Not Reported

Uncertainty Flags:

- NOT ACCEPTABLE.....RP<2%
- ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43
 (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	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.134				0.094 - 0.174		
Cesium-134	1.59	1.83	A		-13.1	1.28 - 2.38	0.0563	A
Cesium-137	0.859	0.996	A		-13.8	0.697 - 1.295	0.0555	A
Cobalt-57	0.00510		A			False Positive Test	0.0116	
Cobalt-60	1.48	1.73	A		-14.5	1.21 - 2.25	0.0470	A
Manganese-54	1.17	1.40	A		-16.4	0.98 - 1.82	0.0749	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	1.66	2.00	A		-17.0	1.40 - 2.60	0.0899	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43

(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	0.106	0.102	A		3.9	0.071 - 0.133	0.003	A
Uranium-238	15.28	14.6	A		4.7	10.2 - 19.0	0.38	A
Uranium-Total	15.39	14.7	A		4.7	10.3 - 19.1	0.38	A

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.128	0.134	A		-4.5	0.094 - 0.174	0.007	A
Cesium-134	2.00	1.83	A		9.3	1.28 - 2.38	0.10	A
Cesium-137	1.073	0.996	A		7.7	0.697 - 1.295	0.068	A
Cobalt-57	0.002		A			False Positive Test	0.022	
Cobalt-60	1.783	1.73	A		3.1	1.21 - 2.25	0.086	A
Manganese-54	1.522	1.40	A		8.7	0.98 - 1.82	0.089	A
Plutonium-238	0.083	0.0867	A		-4.3	0.0607 - 0.1127	0.005	A
Plutonium-239/240	0.0019	0.0017	A			Sensitivity Evaluation	0.0004	
Strontium-90	1.914	2.08	A		-8.0	1.46 - 2.70	0.036	N
Uranium-234	0.179	0.175	A		2.3	0.123 - 0.228	0.009	A
Uranium-238	0.194	0.182	A		6.6	0.127 - 0.237	0.010	A
Zinc-65	2.19	2.00	A		9.5	1.40 - 2.60	0.13	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43
 (OTLI01) Pace Analytical National Center for Testing & Innovation
 12065 Lebanon Road
 Mt. Juliet, TN 37122

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	11.9	14.7	A		-19.0	10.3 - 19.1	1	A

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.088	0.134	N		-34.3	0.094 - 0.174	0.012	A
Cesium-134	1.25	1.83	N		-31.7	1.28 - 2.38	0.152	A
Cesium-137	0.982	0.996	A		-1.4	0.697 - 1.295	0.127	A
Cobalt-57	0.004		A			False Positive Test	.032	
Cobalt-60	1.69	1.73	A		-2.3	1.21 - 2.25	0.165	A
Manganese-54	1.51	1.40	A		7.9	0.98 - 1.82	0.180	A
Plutonium-238	0.074	0.0867	A		-14.6	0.0607 - 0.1127	0.011	A
Plutonium-239/240	.002	0.0017	A	(17)		Sensitivity Evaluation	.003	
Strontium-90	1.98	2.08	A		-4.8	1.46 - 2.70	0.09	A
Uranium-234	0.189	0.175	A		8.0	0.123 - 0.228	0.026	A
Uranium-238	0.182	0.182	A		0.0	0.127 - 0.237	0.024	A
Zinc-65	2.08	2.00	A		4.0	1.40 - 2.60	0.287	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43
 (RAVR99) Radiactividad Ambiental y Vigilancia Radiologica
 CIEMAT (Ed 70 P2 D11)
 Madrid, Madrid 28040

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	14.8	14.7	A		0.7	10.3 - 19.1	0.9	A

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.1172	0.134	A		-12.5	0.094 - 0.174	0.0046	A
Cesium-134	1.66	1.83	A		-9.3	1.28 - 2.38	0.10	A
Cesium-137	1.141	0.996	A		14.6	0.697 - 1.295	0.049	A
Cobalt-57	0.045			A		False Positive Test	0.5	
Cobalt-60	1.870	1.73	A		8.1	1.21 - 2.25	0.073	A
Manganese-54	1.642	1.40	A		17.3	0.98 - 1.82	0.060	A
Plutonium-238	0.0666	0.0867	W		-23.2	0.0607 - 0.1127	0.0022	A
Plutonium-239/240	0.00102	0.0017	A			Sensitivity Evaluation	0.00031	
Strontium-90	1.81	2.08	A		-13.0	1.46 - 2.70	0.07	A
Uranium-234	0.821	0.175	N		369.1	0.123 - 0.228	0.030	A
Uranium-238	0.818	0.182	N		349.5	0.127 - 0.237	0.029	A
Zinc-65	2.31	2.00	A		15.5	1.40 - 2.60	0.14	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43
 (RPSC01) Radiation Protection Service
 Ontario Ministry of Labour, Training And Skills Development
 Toronto, Ontario M9P 3T1

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.134				0.094 - 0.174		
Cesium-134	1.51	1.83	A		-17.5	1.28 - 2.38	0.099	A
Cesium-137	0.775	0.996	W		-22.2	0.697 - 1.295	0.102	A
Cobalt-57	NR					False Positive Test		
Cobalt-60	1.34	1.73	W		-22.5	1.21 - 2.25	0.089	A
Manganese-54	1.07	1.40	W		-23.6	0.98 - 1.82	0.119	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	1.34	2.00	N		-33.0	1.40 - 2.60	0.151	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
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- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43
 (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	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.114	0.134	A		-14.9	0.094 - 0.174	0.017	A
Cesium-134	1.840	1.83	A		0.5	1.28 - 2.38	0.071	A
Cesium-137	1.053	0.996	A		5.7	0.697 - 1.295	0.064	A
Cobalt-57	-0.014		A			False Positive Test	0.019	
Cobalt-60	1.658	1.73	A		-4.2	1.21 - 2.25	0.067	A
Manganese-54	1.500	1.40	A		7.1	0.98 - 1.82	0.080	A
Plutonium-238	0.082	0.0867	A		-5.4	0.0607 - 0.1127	0.013	W
Plutonium-239/240	0.001	0.0017	A	(17)		Sensitivity Evaluation	0.001	
Strontium-90	1.89	2.08	A		-9.1	1.46 - 2.70	0.14	A
Uranium-234	0.176	0.175	A		0.6	0.123 - 0.228	0.023	A
Uranium-238	0.183	0.182	A		0.5	0.127 - 0.237	0.023	A
Zinc-65	2.17	2.00	A		8.5	1.40 - 2.60	0.14	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
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- (11) = False Positive Test, Result Not Reported
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- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43
 (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	0.110	0.102	A		7.8	0.071 - 0.133	0.00753	A
Uranium-238	15.9	14.6	A		8.9	10.2 - 19.0	1.07	A
Uranium-Total	16.1	14.7	A		9.5	10.3 - 19.1	1.09	A

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.110	0.134	A		-17.9	0.094 - 0.174	0.0112	A
Cesium-134	1.24	1.83	N		-32.2	1.28 - 2.38	0.0837	A
Cesium-137	0.848	0.996	A		-14.9	0.697 - 1.295	0.0674	A
Cobalt-57	0.0168		A			False Positive Test	0.0130	
Cobalt-60	1.67	1.73	A		-3.5	1.21 - 2.25	0.0930	A
Manganese-54	1.51	1.40	A		7.9	0.98 - 1.82	0.104	A
Plutonium-238	0.0700	0.0867	A		-19.3	0.0607 - 0.1127	0.00789	A
Plutonium-239/240	0.00519	0.0017	A	(17)		Sensitivity Evaluation	0.00185	
Strontium-90	1.32	2.08	N		-36.5	1.46 - 2.70	0.109	A
Uranium-234	0.186	0.175	A		6.3	0.123 - 0.228	0.0151	A
Uranium-238	0.187	0.182	A		2.7	0.127 - 0.237	0.0152	A
Zinc-65	2.11	2.00	A		5.5	1.40 - 2.60	0.156	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

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- (11) = False Positive Test, Result Not Reported
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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-20-RdF43

(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	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.134				0.094 - 0.174		
Cesium-134	1.57	1.83	A		-14.2	1.28 - 2.38	0.0671	A
Cesium-137	0.811	0.996	A		-18.6	0.697 - 1.295	0.0381	A
Cobalt-57	0.0137			A		False Positive Test	0.0128	
Cobalt-60	1.40	1.73	A		-19.1	1.21 - 2.25	0.0603	A
Manganese-54	1.15	1.40	A		-17.9	0.98 - 1.82	0.0478	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	1.44	2.00	W		-28.0	1.40 - 2.60	0.0882	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
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- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43
 (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	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.126	0.134	A		-6.0	0.094 - 0.174	0.012	A
Cesium-134	1.503	1.83	A		-17.9	1.28 - 2.38	0.041	A
Cesium-137	0.936	0.996	A		-6.0	0.697 - 1.295	0.044	A
Cobalt-57	-0.002		A			False Positive Test	0.024	
Cobalt-60	1.543	1.73	A		-10.8	1.21 - 2.25	0.040	A
Manganese-54	1.315	1.40	A		-6.1	0.98 - 1.82	0.048	A
Plutonium-238	0.0873	0.0867	A		0.7	0.0607 - 0.1127	0.0088	A
Plutonium-239/240	0.0019	0.0017	A	(17)		Sensitivity Evaluation	0.0010	
Strontium-90	1.683	2.08	A		-19.1	1.46 - 2.70	0.038	A
Uranium-234	0.168	0.175	A		-4.0	0.123 - 0.228	0.016	A
Uranium-238	0.165	0.182	A		-9.3	0.127 - 0.237	0.015	A
Zinc-65	1.861	2.00	A		-7.0	1.40 - 2.60	0.085	A

Radiological Reference Date: August 1, 2020

Result Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- RW = Report Warning
- NR = Not Reported

Uncertainty Flags:

- NOT ACCEPTABLE.....RP<2%
- ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
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- (17) = NOT DETECTED - reported a statistically zero result
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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-20-RdF43
 (TELE02) ATI 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	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.134				0.094 - 0.174		
Cesium-134	1.28	1.83	N		-30.1	1.28 - 2.38	0.05	A
Cesium-137	0.981	0.996	A		-1.5	0.697 - 1.295	0.068	A
Cobalt-57	0.020		A			False Positive Test	0.027	
Cobalt-60	1.57	1.73	A		-9.2	1.21 - 2.25	0.06	A
Manganese-54	0.751	1.40	N		-46.4	0.98 - 1.82	0.077	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	2.07	2.00	A		3.5	1.40 - 2.60	0.15	A

Radiological Reference Date: August 1, 2020

Result Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- RW = Report Warning
- NR = Not Reported

Uncertainty Flags:

- NOT ACCEPTABLE.....RP<2%
- ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

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- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-20-RdF43
 (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	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.134				0.094 - 0.174		
Cesium-134	1.572	1.83	A		-14.1	1.28 - 2.38	.206	A
Cesium-137	1.015	0.996	A		1.9	0.697 - 1.295	.253	W
Cobalt-57	-.004		A			False Positive Test	.019	
Cobalt-60	1.642	1.73	A		-5.1	1.21 - 2.25	.278	W
Manganese-54	1.527	1.40	A		9.1	0.98 - 1.82	.437	W
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	1.627	2.08	W		-21.8	1.46 - 2.70	.083	A
Uranium-234	.155	0.175	A		-11.4	0.123 - 0.228	.04	W
Uranium-238	.164	0.182	A		-9.9	0.127 - 0.237	.041	W
Zinc-65	1.771	2.00	A		-11.5	1.40 - 2.60	.673	N

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

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- (11) = False Positive Test, Result Not Reported
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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-20-RdF43

(UNTE01) UniTech-235

178 Aldo Drive

Barnwell, SC 29812

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.134				0.094 - 0.174		
Cesium-134	1.41	1.83	W		-23.0	1.28 - 2.38	0.28	W
Cesium-137	0.84	0.996	A		-15.7	0.697 - 1.295	0.32	N
Cobalt-57	NR					False Positive Test		
Cobalt-60	1.71	1.73	A		-1.2	1.21 - 2.25	0.31	W
Manganese-54	1.44	1.40	A		2.9	0.98 - 1.82	0.40	W
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	1.70	2.00	A		-15.0	1.40 - 2.60	0.73	N

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43
 (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	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.120	0.134	A		-10.4	0.094 - 0.174	0.022	W
Cesium-134	1.45	1.83	W		-20.8	1.28 - 2.38	0.073	A
Cesium-137	0.9932	0.996	A		-0.3	0.697 - 1.295	0.0841	A
Cobalt-57	0.0083		A			False Positive Test	0.0112	
Cobalt-60	1.617	1.73	A		-6.5	1.21 - 2.25	0.1016	A
Manganese-54	1.300	1.40	A		-7.1	0.98 - 1.82	0.118	A
Plutonium-238	0.087	0.0867	A		0.3	0.0607 - 0.1127	0.016	W
Plutonium-239/240	0.006	0.0017	A	(17)		Sensitivity Evaluation	0.003	
Strontium-90	1.914	2.08	A		-8.0	1.46 - 2.70	0.307	W
Uranium-234	0.162	0.175	A		-7.4	0.123 - 0.228	0.025	W
Uranium-238	0.177	0.182	A		-2.7	0.127 - 0.237	0.027	W
Zinc-65	1.941	2.00	A		-3.0	1.40 - 2.60	0.2028	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

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

Laboratory Results For MAPEP-20-RdF43
 (WIPH01) WI, DPH, Radiation Protection Section
 1 West Wilson Street
 Madison, WI 53701

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	.0001	0.134	N		-99.9	0.094 - 0.174	.0411	N
Cesium-134	1.28	1.83	N		-30.1	1.28 - 2.38	.0295	A
Cesium-137	.089	0.996	N		-91.1	0.697 - 1.295	.0391	N
Cobalt-57	0.0001		A			False Positive Test	.0759	
Cobalt-60	1.781	1.73	A		2.9	1.21 - 2.25	.0517	A
Manganese-54	1.366	1.40	A		-2.4	0.98 - 1.82	.0543	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	2.022	2.00	A		1.1	1.40 - 2.60	.1143	A

Radiological Reference Date: August 1, 2020

Result Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- RW = Report Warning
- NR = Not Reported

Uncertainty Flags:

- NOT ACCEPTABLE.....RP<2%
- ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43

(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	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	.106	0.134	W		-20.9	0.094 - 0.174	.00418	A
Cesium-134	1.59	1.83	A		-13.1	1.28 - 2.38	.0544	A
Cesium-137	1.03	0.996	A		3.4	0.697 - 1.295	.0455	A
Cobalt-57	.000479		A			False Positive Test	.00425	
Cobalt-60	1.9	1.73	A		9.8	1.21 - 2.25	.0637	A
Manganese-54	1.45	1.40	A		3.6	0.98 - 1.82	.0484	A
Plutonium-238	.0877	0.0867	A		1.2	0.0607 - 0.1127	.00465	A
Plutonium-239/240	.00220	0.0017	A			Sensitivity Evaluation	.000545	
Strontium-90	1.93	2.08	A		-7.2	1.46 - 2.70	.0779	A
Uranium-234	.175	0.175	A		0.0	0.123 - 0.228	.0195	A
Uranium-238	.172	0.182	A		-5.5	0.127 - 0.237	.0193	A
Zinc-65	2.24	2.00	A		12.0	1.40 - 2.60	.0878	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43
 (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	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.134				0.094 - 0.174		
Cesium-134	1.88	1.83	A		2.7	1.28 - 2.38	0.0454	A
Cesium-137	1.17	0.996	A		17.5	0.697 - 1.295	0.0403	A
Cobalt-57	0.00306			A		False Positive Test	0.0175	
Cobalt-60	1.83	1.73	A		5.8	1.21 - 2.25	0.104	A
Manganese-54	1.45	1.40	A		3.6	0.98 - 1.82	0.0643	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	2.1	2.00	A		5.0	1.40 - 2.60	0.162	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43

(WSTP99) Cavendish Nuclear Limited

Greson Court

Cumbria, UK CA24 3HZ

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	0.0967	0.102	A		-5.2	0.071 - 0.133	0.0048	A
Uranium-238	13.76	14.6	A		-5.8	10.2 - 19.0	0.59	A
Uranium-Total	13.50	14.7	A		-8.2	10.3 - 19.1	0.42	A

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.117	0.134	A		-12.7	0.094 - 0.174	0.015	A
Cesium-134	1.79	1.83	A		-2.2	1.28 - 2.38	0.14	A
Cesium-137	1.010	0.996	A		1.4	0.697 - 1.295	0.086	A
Cobalt-57	-0.0068		A			False Positive Test	0.0096	
Cobalt-60	1.631	1.73	A		-5.7	1.21 - 2.25	0.0634	A
Manganese-54	1.47	1.40	A		5.0	0.98 - 1.82	0.11	A
Plutonium-238	0.0830	0.0867	A		-4.3	0.0607 - 0.1127	0.0062	A
Plutonium-239/240	0.00158	0.0017	A	(17)		Sensitivity Evaluation	0.00061	
Strontium-90	1.69	2.08	A		-18.8	1.46 - 2.70	0.28	W
Uranium-234	0.162	0.175	A		-7.4	0.123 - 0.228	0.061	N
Uranium-238	0.1712	0.182	A		-5.9	0.127 - 0.237	0.0074	A
Zinc-65	2.13	2.00	A		6.5	1.40 - 2.60	0.11	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43
 (WVDP01) WVDP Environmental Laboratory
 10282 Rock Springs Road
 West Valley, NY 14171

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.102				0.071 - 0.133		
Uranium-238	NR	14.6				10.2 - 19.0		
Uranium-Total	NR	14.7				10.3 - 19.1		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.134				0.094 - 0.174		
Cesium-134	1.63	1.83	A		-10.9	1.28 - 2.38	0.0748	A
Cesium-137	0.901	0.996	A		-9.5	0.697 - 1.295	0.0509	A
Cobalt-57	0.00868			A		False Positive Test	0.0189	
Cobalt-60	1.56	1.73	A		-9.8	1.21 - 2.25	0.0611	A
Manganese-54	1.46	1.40	A		4.3	0.98 - 1.82	0.0726	A
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	2.03	2.00	A		1.5	1.40 - 2.60	0.124	A

Radiological Reference Date: August 1, 2020

Result Flags:

A = Result acceptable Bias <=20%

W = Result acceptable with warning 20% < Bias < 30%

N = Result not acceptable Bias > 30%

RW = Report Warning

NR = Not Reported

Uncertainty Flags:

NOT ACCEPTABLE.....RP<2%

ACCEPTABLE.....2%<=RP<=15%

ACCEPTABLE WITH WARNING.....15% <RP <= 30%

NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte



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

Laboratory Results For MAPEP-20-RdF43
 (YPGA01) US Army Yuma Proving Ground / Material Analysis Lab
 301 C. Street
 Yuma, AZ 85365

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	0.091	0.102	A		-10.8	0.071 - 0.133	0.01	A
Uranium-238	12.99	14.6	A		-11.0	10.2 - 19.0	1.6	A
Uranium-Total	13.08	14.7	A		-11.0	10.3 - 19.1	1.6	A

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.134				0.094 - 0.174		
Cesium-134	NR	1.83				1.28 - 2.38		
Cesium-137	NR	0.996				0.697 - 1.295		
Cobalt-57	NR					False Positive Test		
Cobalt-60	NR	1.73				1.21 - 2.25		
Manganese-54	NR	1.40				0.98 - 1.82		
Plutonium-238	NR	0.0867				0.0607 - 0.1127		
Plutonium-239/240	NR	0.0017				Sensitivity Evaluation		
Strontium-90	NR	2.08				1.46 - 2.70		
Uranium-234	NR	0.175				0.123 - 0.228		
Uranium-238	NR	0.182				0.127 - 0.237		
Zinc-65	NR	2.00				1.40 - 2.60		

Radiological Reference Date: August 1, 2020

Result Flags:

- A = Result acceptable Bias <=20%
- W = Result acceptable with warning 20% < Bias < 30%
- N = Result not acceptable Bias > 30%
- RW = Report Warning
- NR = Not Reported

Uncertainty Flags:

- NOT ACCEPTABLE.....RP<2%
- ACCEPTABLE.....2%<=RP<=15%

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag

ACCEPTABLE WITH WARNING.....15% < RP <= 30%

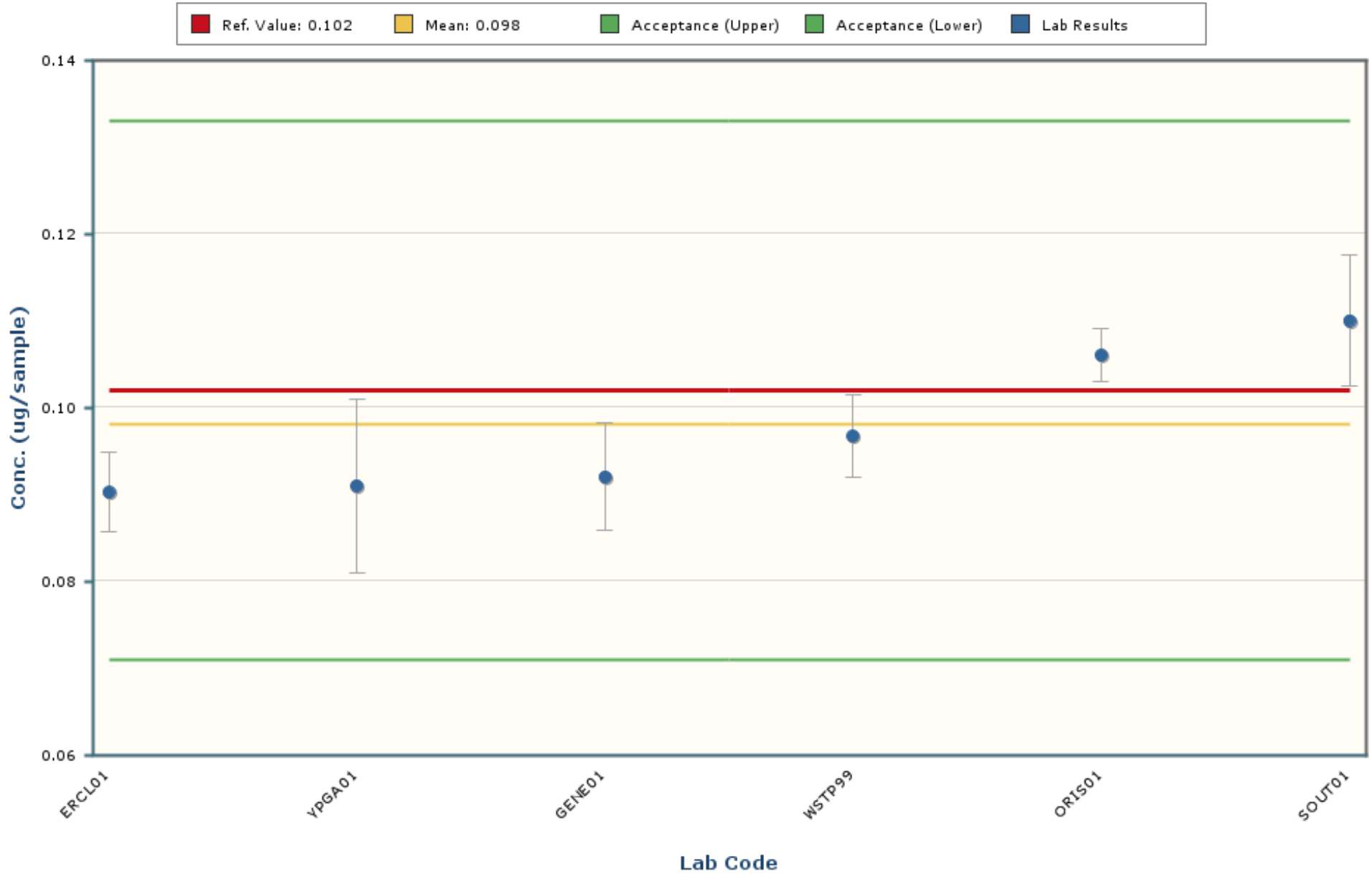
NOT ACCEPTABLE.....RP > 30%

Notes:

- (1) = False Positive
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (18) = Sensitivity Evaluation, Value Not Reported
- (28) = Not Reporting Previously Reported Analyte

Uranium-235

MAPEP-20-RdF43



Notes:

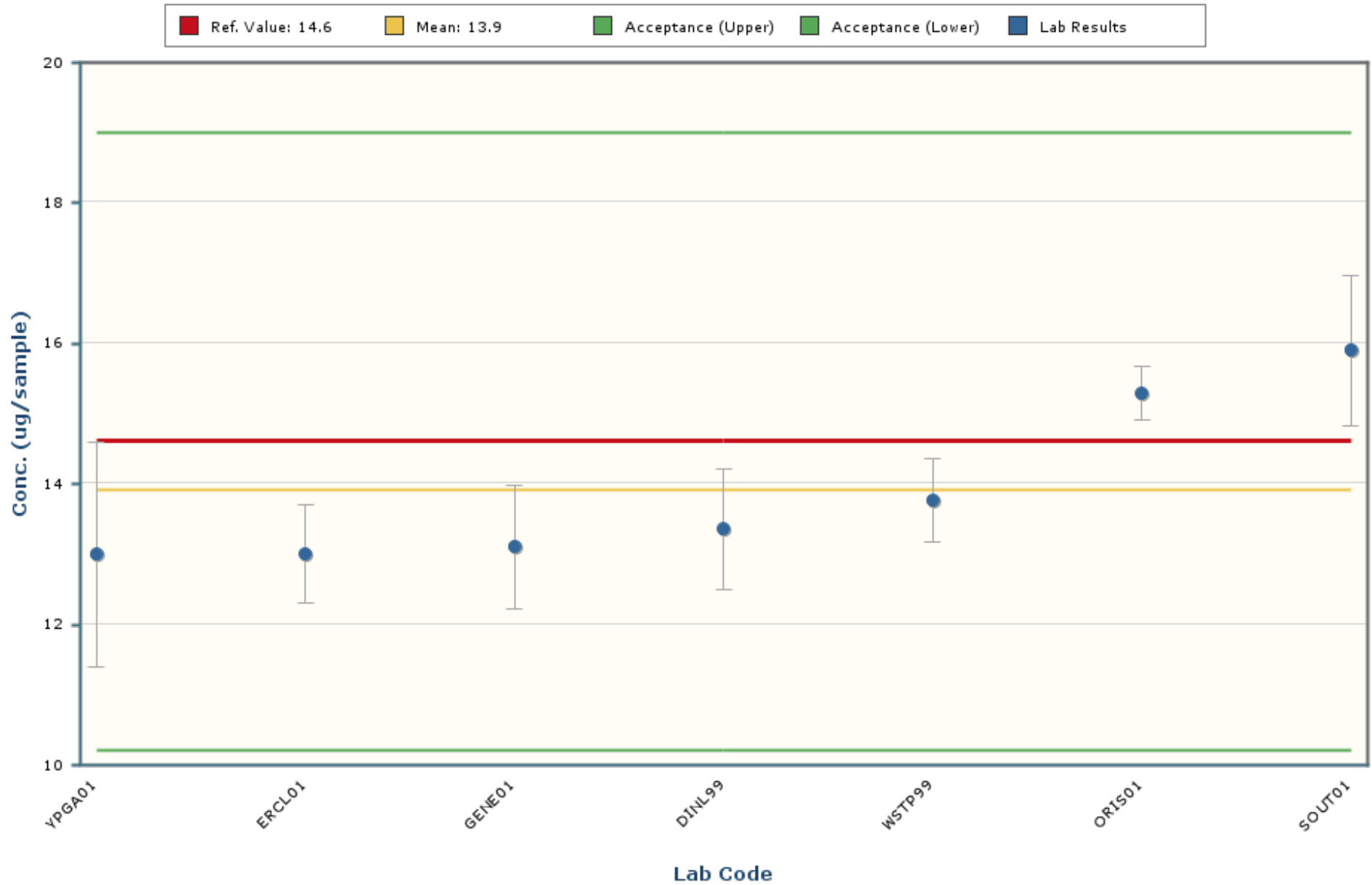
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.056 and 0.140 (± 5 Standard Deviations).

The error bars encompassing each result are plotted at ± 1 standard deviation.

Uranium-238

MAPEP-20-RdF43



Notes:

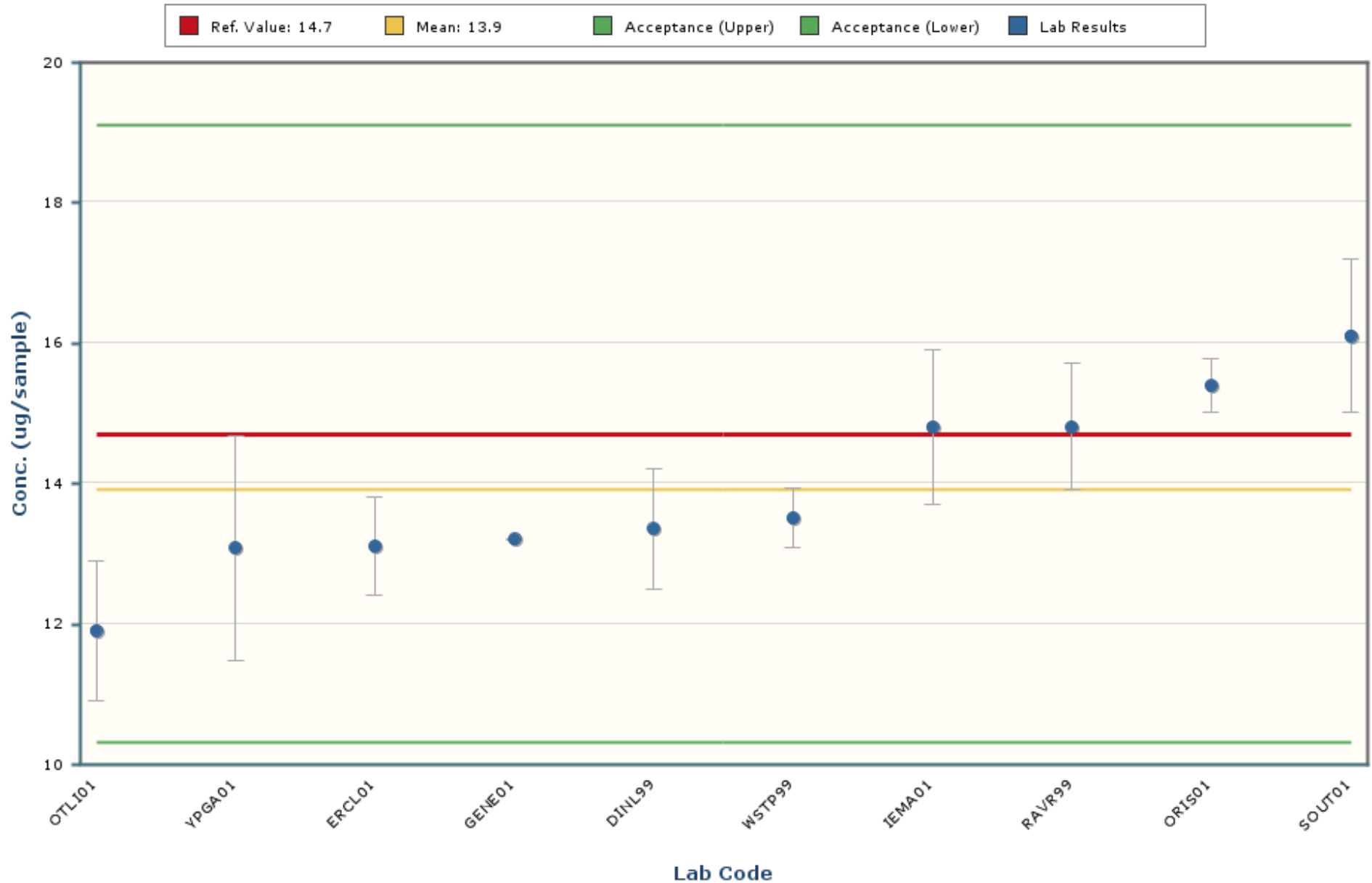
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 8.0 and 19.9 (± 5 Standard Deviations).

The error bars encompassing each result are plotted at \pm one standard deviation.

Uranium-Total

MAPEP-20-RdF43



Notes:

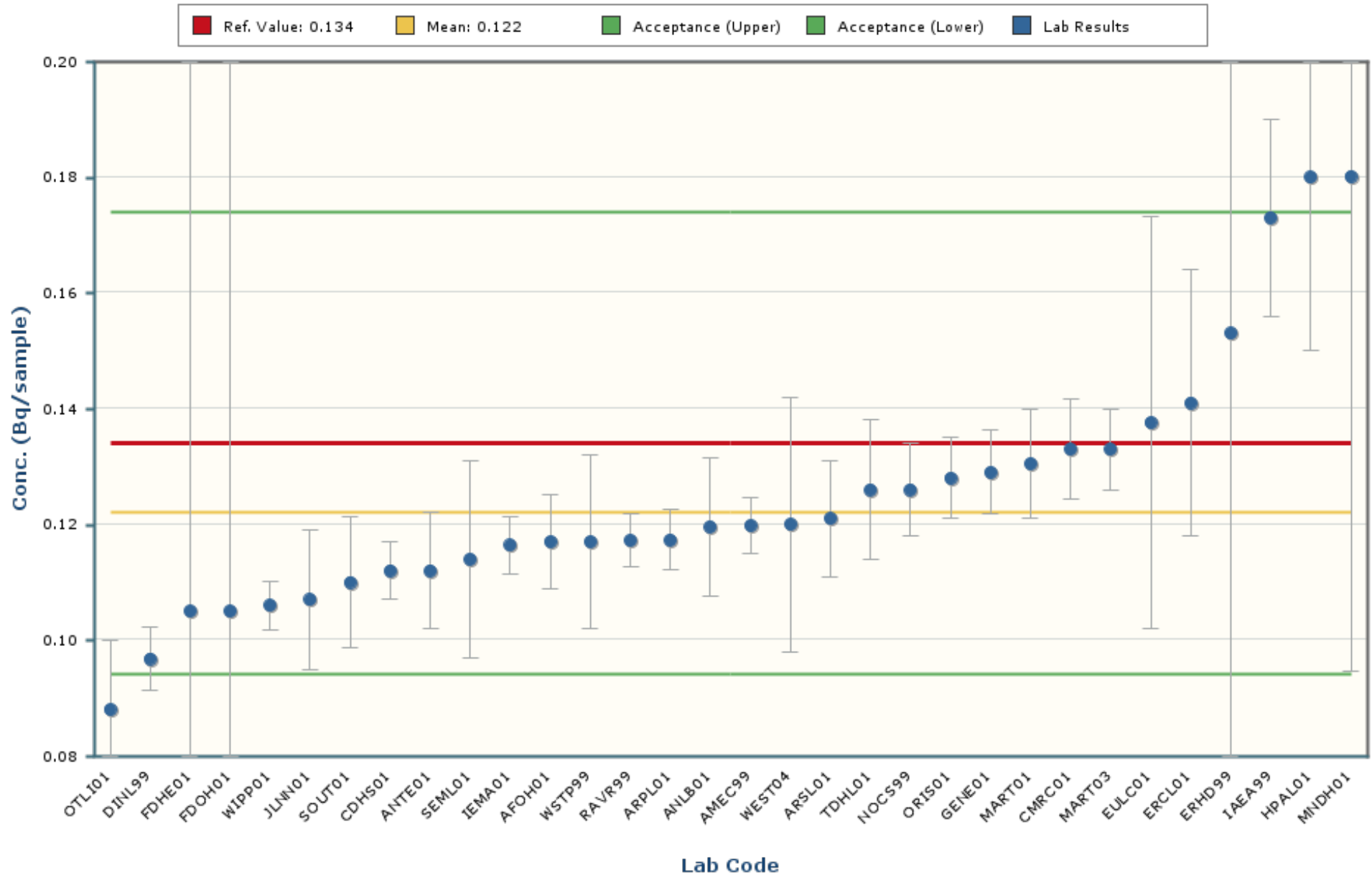
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 7.5 and 20.4 (± 5 Standard Deviations).

The error bars encompassing each result are plotted at \pm one standard deviation.

Americium-241

MAPEP-20-RdF43



Notes:

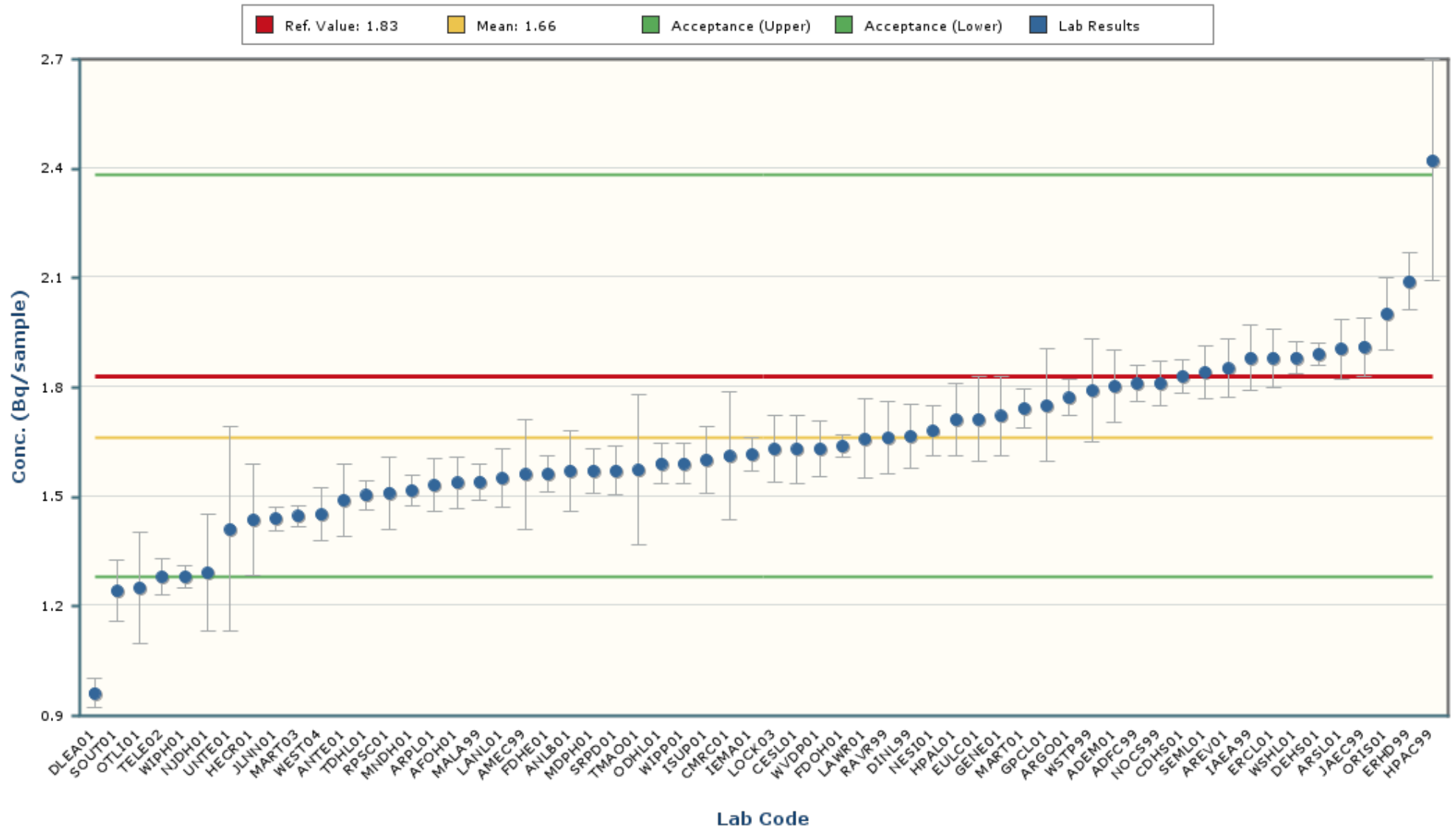
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.044 and 0.200 (± 5 Standard Deviations).

The error bars encompassing each result are plotted at ± 1 standard deviation.

Cesium-134

MAPEP-20-RdF43



Notes:

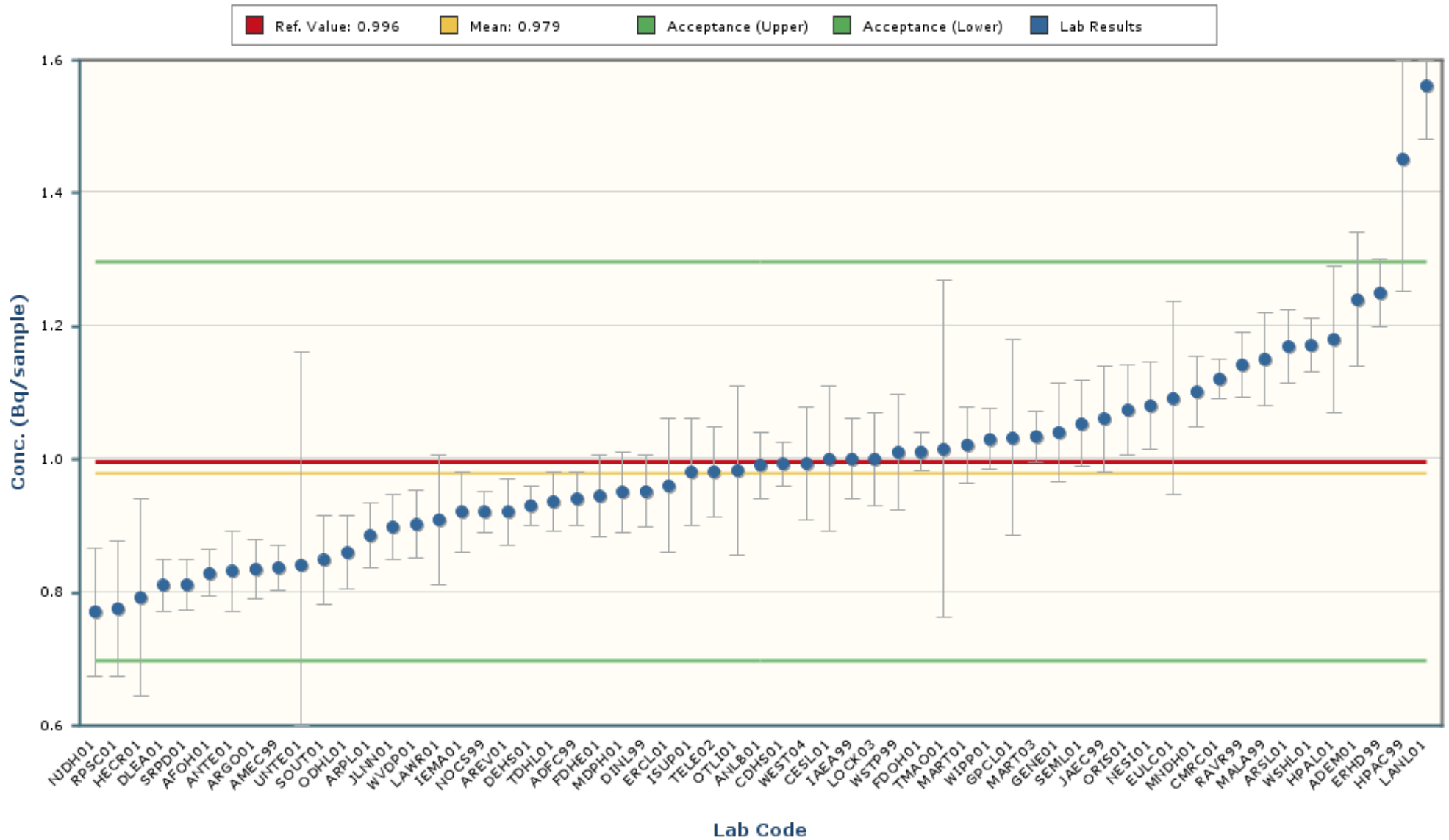
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.84 and 2.49 (± 5 Standard Deviations).

The error bars encompassing each result are plotted at \pm one standard deviation.

Cesium-137

MAPEP-20-RdF43



Notes:

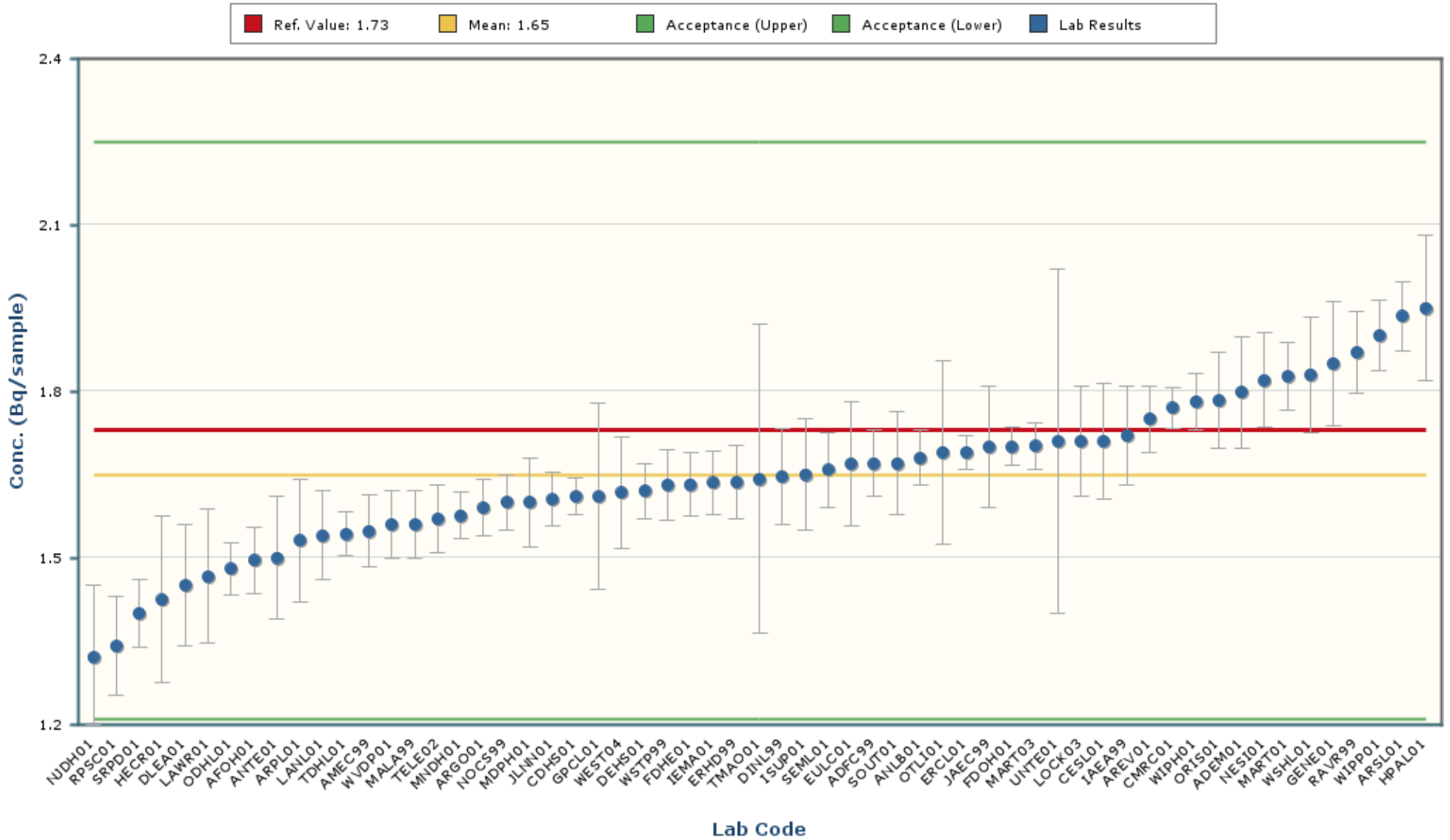
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.394 and 1.564 (± 5 Standard Deviations).

The error bars encompassing each result are plotted at \pm one standard deviation.

Cobalt-60

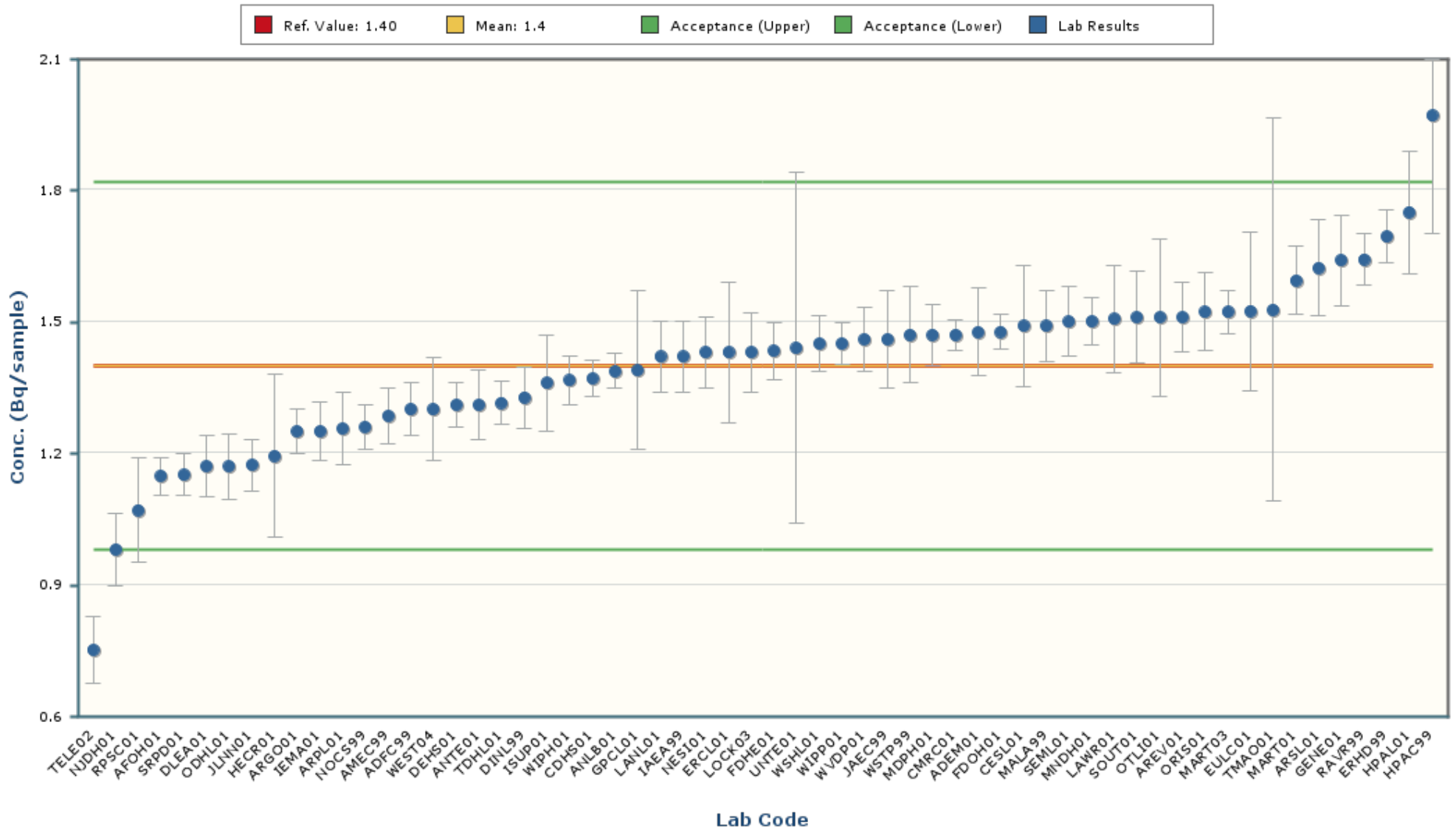
MAPEP-20-RdF43



Notes:
The chart mean excludes values outside of a bias range of $\pm 30\%$.
The chart shows only data points with values between 0.96 and 2.33 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at \pm one standard deviation.

Manganese-54

MAPEP-20-RdF43



Notes:

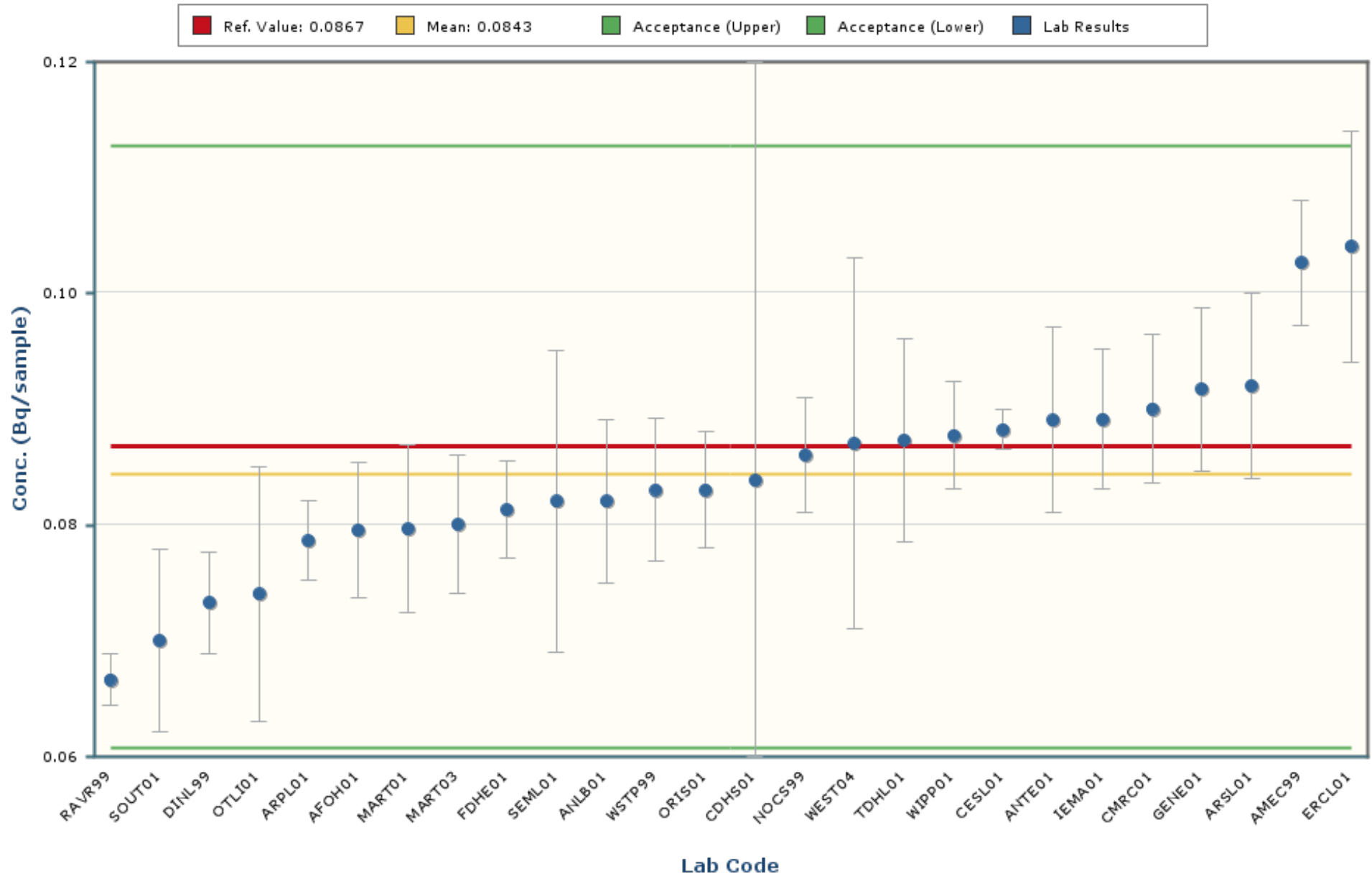
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.63 and 2.18 (± 5 Standard Deviations).

The error bars encompassing each result are plotted at \pm one standard deviation.

Plutonium-238

MAPEP-20-RdF43



Notes:

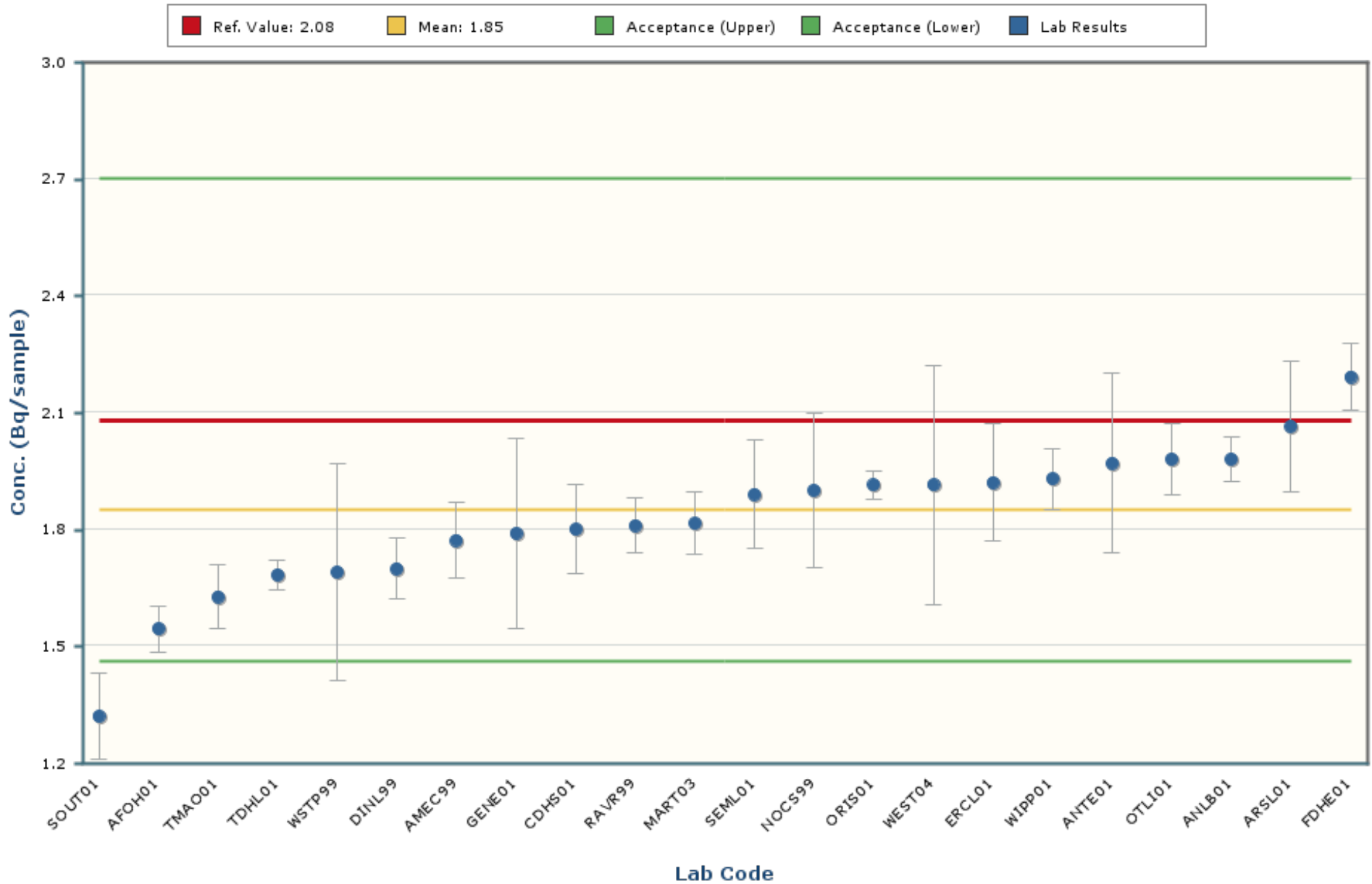
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.0415 and 0.1270 (± 5 Standard Deviations).

The error bars encompassing each result are plotted at \pm one standard deviation.

Strontium-90

MAPEP-20-RdF43



Notes:

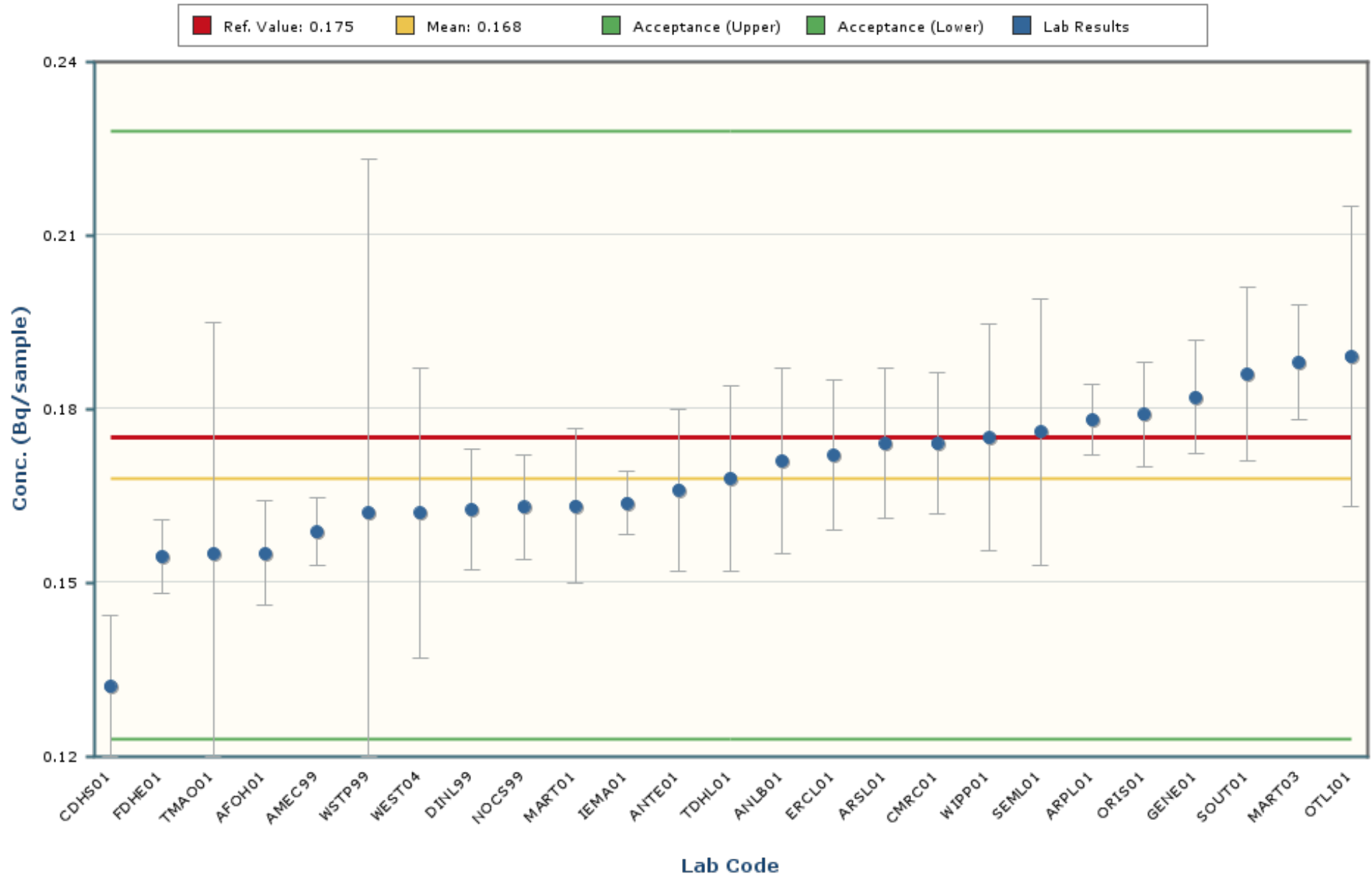
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 1.09 and 2.62 (± 5 Standard Deviations).

The error bars encompassing each result are plotted at ± 1 standard deviation.

Uranium-234

MAPEP-20-RdF43



Notes:

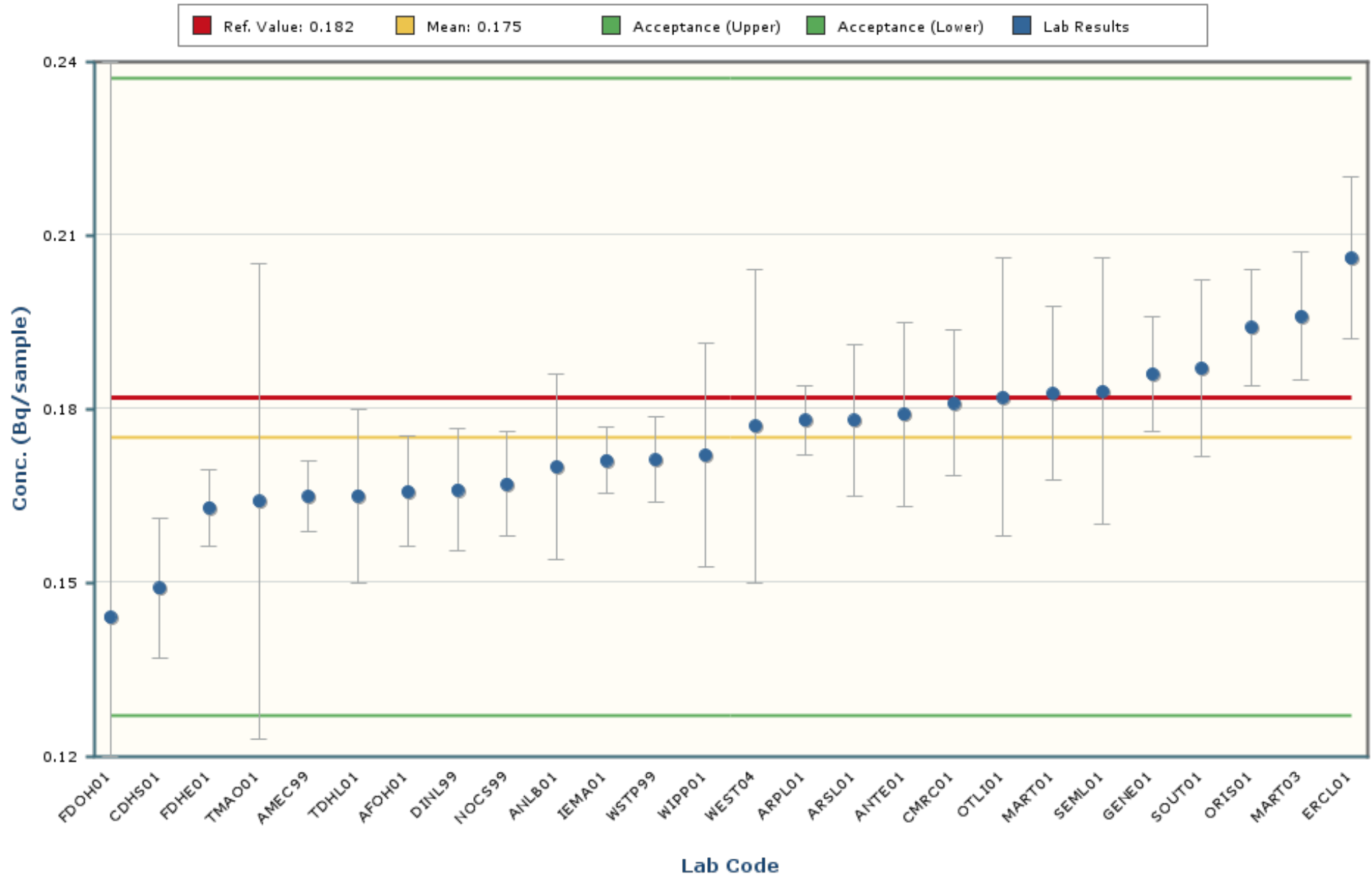
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.105 and 0.232 (± 5 Standard Deviations).

The error bars encompassing each result are plotted at \pm one standard deviation.

Uranium-238

MAPEP-20-RdF43



Notes:

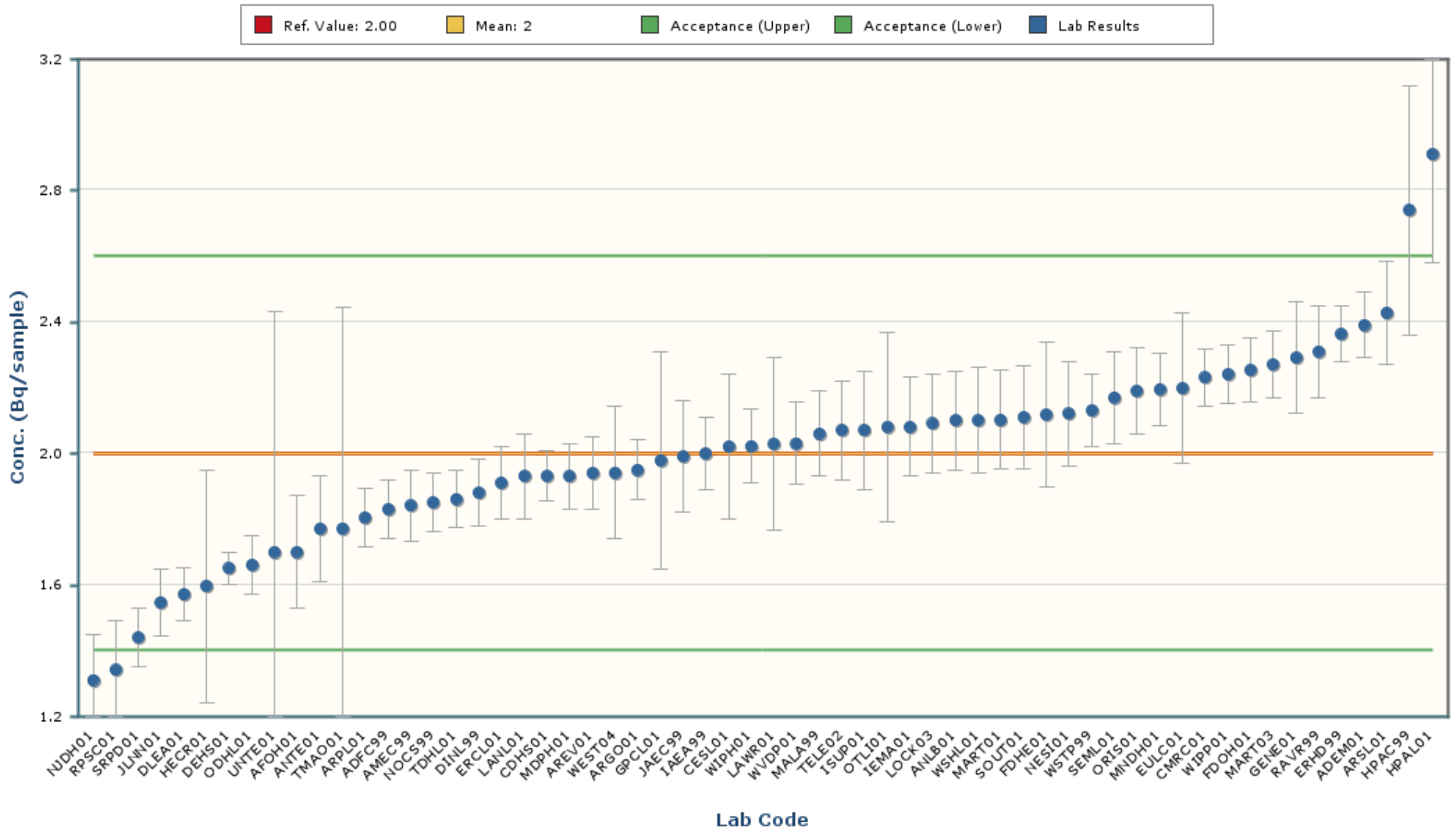
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.106 and 0.243 (± 5 Standard Deviations).

The error bars encompassing each result are plotted at \pm one standard deviation.

Zinc-65

MAPEP-20-RdF43



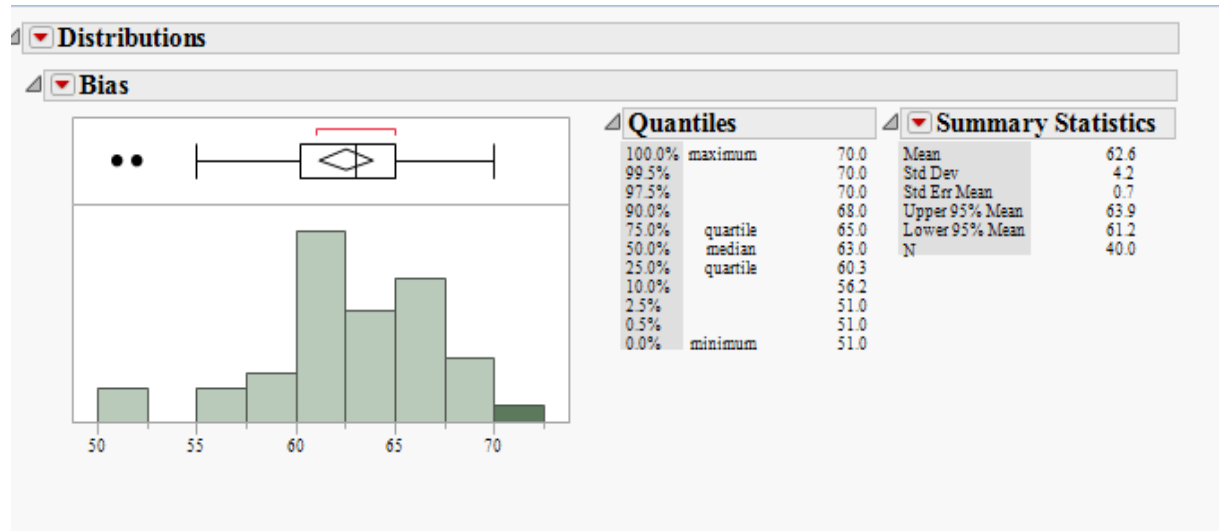
Notes:

The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.88 and 3.11 (± 5 Standard Deviations).

The error bars encompassing each result are plotted at \pm one standard deviation.

The intent of the distribution graphs contained within this report is to graphically demonstrate to users how % Bias data within the current MAPEP Series appears when examined by matrix, by analyte, by method of sample preparation or by method of detection. Biases greater than +/- 100% have been screened from the data. The box plot of the bias data points and the mean visually illustrate the breadth of the distribution and where potential outliers in the distribution might lie. The statistics for the distribution plot are provided adjacent to the Bias plot. In some cases, N becomes very small and thus developed statistics may not accurately reflect estimates of the population if N were a significantly larger value.

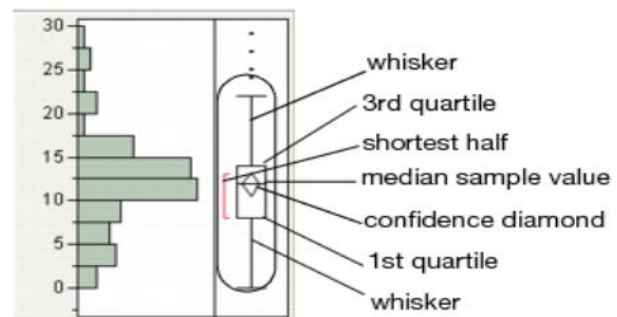


Outlier Box Plot

The BLACK small vertical line inside the small rectangle at the top of the data distribution graph is the median of the population of the bias shown for that analyte in the matrix. The confidence diamond contains the mean and the upper and lower 95% of the mean. If you drew a line through the middle of the diamond, you would have the mean. The top and bottom points of the diamond represent the upper and lower 95% of the mean. The ends of the box represent the 25th and 75th quantiles, also expressed as 1st and 3rd quartile. The difference between the 1st and 3rd quartiles is called the interquartile range. Each box has lines that extend from each end, sometimes called whiskers. The whiskers extend from the ends of the box to the outermost data point that falls within the distances computed as follows:

3rd quartile + 1.5*(interquartile range)

1st quartile - 1.5*(interquartile range)

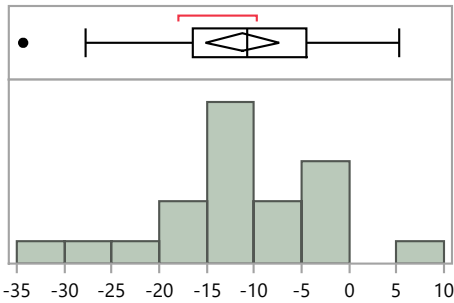


If the data points do not reach the computed ranges, then the whiskers are determined by the upper and lower data point values (not including outliers). The bracket outside of the box identifies the *shortest half*, which is the most dense 50% of the observations (Rousseuw and Leroy 1987).

RdF Distribution by Detection Method

Distributions Analyte_Detection=Americium-241 Alpha Spectrometry

Bias



Quantiles

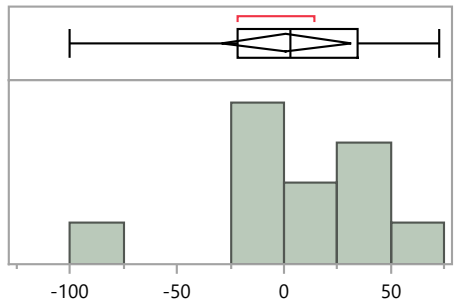
100.0%	maximum	5
99.5%		5
97.5%		5
90.0%		-1
75.0%	quartile	-5
50.0%	median	-11
25.0%	quartile	-16
10.0%		-25
2.5%		-34
0.5%		-34
0.0%	minimum	-34

Summary Statistics

Mean	-11
Std Dev	9
Std Err Mean	2
Upper 95% Mean	-7
Lower 95% Mean	-15
N	23

Distributions Analyte_Detection=Americium-241 Gamma Spectrometry

Bias



Quantiles

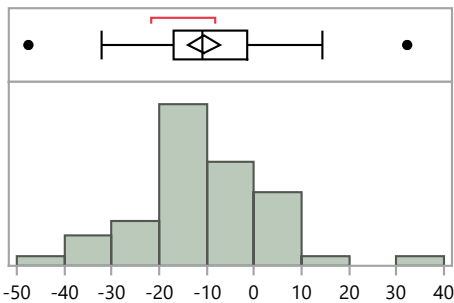
100.0%	maximum	72
99.5%		72
97.5%		72
90.0%		65
75.0%	quartile	34
50.0%	median	3
25.0%	quartile	-22
10.0%		-84
2.5%		-100
0.5%		-100
0.0%	minimum	-100

Summary Statistics

Mean	1
Std Dev	45
Std Err Mean	14
Upper 95% Mean	31
Lower 95% Mean	-29
N	11

Distributions Analyte_Detection=Cesium-134 Gamma Spectrometry

Bias



Quantiles

100.0%	maximum	32
99.5%		32
97.5%		23
90.0%		3
75.0%	quartile	-2
50.0%	median	-11
25.0%	quartile	-17
10.0%		-30
2.5%		-40
0.5%		-48
0.0%	minimum	-48

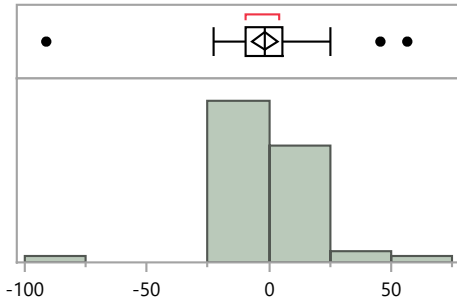
Summary Statistics

Mean	-11
Std Dev	13
Std Err Mean	2
Upper 95% Mean	-7
Lower 95% Mean	-14
N	59

RdF Distribution by Detection Method

Distributions Analyte_Detection=Cesium-137 Gamma Spectrometry

Bias



Quantiles

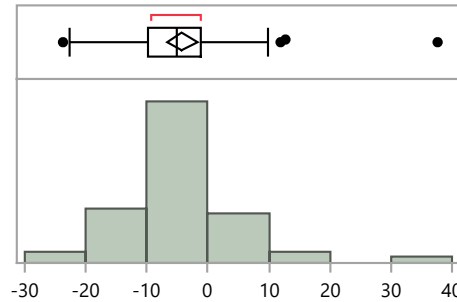
100.0%	maximum	57
99.5%		57
97.5%		51
90.0%		18
75.0%	quartile	6
50.0%	median	-1
25.0%	quartile	-10
10.0%		-19
2.5%		-57
0.5%		-91
0.0%	minimum	-91

Summary Statistics

Mean	-2
Std Dev	19
Std Err Mean	2
Upper 95% Mean	3
Lower 95% Mean	-7
N	59

Distributions Analyte_Detection=Cobalt-60 Gamma Spectrometry

Bias



Quantiles

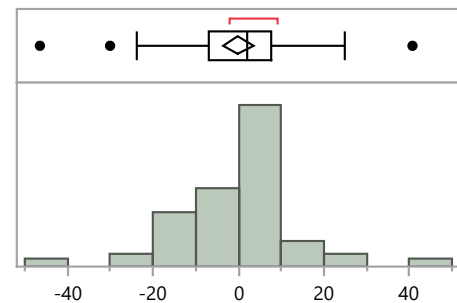
100.0%	maximum	38
99.5%		38
97.5%		25
90.0%		7
75.0%	quartile	-1
50.0%	median	-5
25.0%	quartile	-10
10.0%		-15
2.5%		-23
0.5%		-24
0.0%	minimum	-24

Summary Statistics

Mean	-4
Std Dev	10
Std Err Mean	1
Upper 95% Mean	-2
Lower 95% Mean	-7
N	59

Distributions Analyte_Detection=Manganese-54 Gamma Spectrometry

Bias



Quantiles

100.0%	maximum	41
99.5%		41
97.5%		33
90.0%		16
75.0%	quartile	8
50.0%	median	2
25.0%	quartile	-7
10.0%		-16
2.5%		-38
0.5%		-46
0.0%	minimum	-46

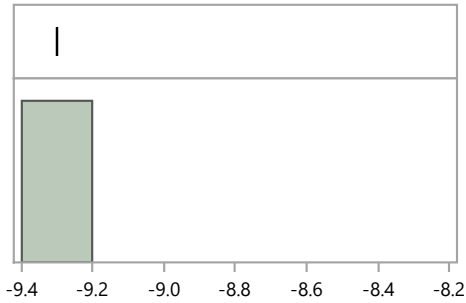
Summary Statistics

Mean	-0
Std Dev	14
Std Err Mean	2
Upper 95% Mean	4
Lower 95% Mean	-4
N	59

RdF Distribution by Detection Method

Distributions Analyte_Detection=Plutonium-238 Gamma Spectrometry

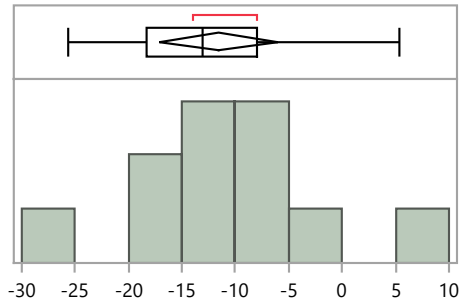
Bias



Quantiles			Summary Statistics	
100.0%	maximum	-9	Mean	-9
99.5%		-9	Std Dev	.
97.5%		-9	Std Err Mean	.
90.0%		-9	Upper 95% Mean	.
75.0%	quartile	-9	Lower 95% Mean	.
50.0%	median	-9	N	1
25.0%	quartile	-9		
10.0%		-9		
2.5%		-9		
0.5%		-9		
0.0%	minimum	-9		

Distributions Analyte_Detection=Strontium-90 Gas Flow Proportional Counter

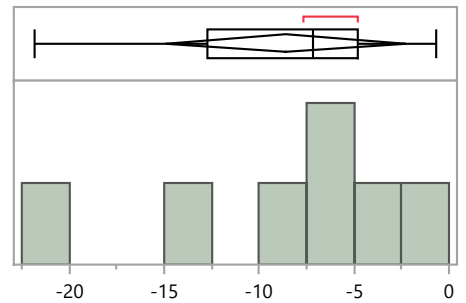
Bias



Quantiles			Summary Statistics	
100.0%	maximum	5	Mean	-12
99.5%		5	Std Dev	8
97.5%		5	Std Err Mean	2
90.0%		3	Upper 95% Mean	-6
75.0%	quartile	-8	Lower 95% Mean	-17
50.0%	median	-13	N	11
25.0%	quartile	-18		
10.0%		-24		
2.5%		-26		
0.5%		-26		
0.0%	minimum	-26		

Distributions Analyte_Detection=Strontium-90 Gross Alpha/Beta - 2 pi gas flow proportional counter

Bias

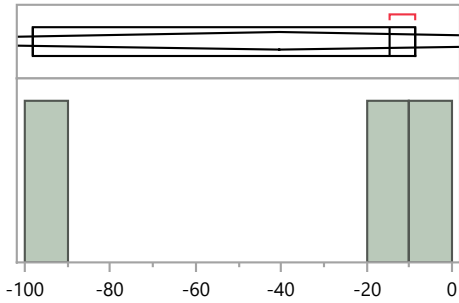


Quantiles			Summary Statistics	
100.0%	maximum	-1	Mean	-9
99.5%		-1	Std Dev	7
97.5%		-1	Std Err Mean	3
90.0%		-1	Upper 95% Mean	-2
75.0%	quartile	-5	Lower 95% Mean	-15
50.0%	median	-7	N	7
25.0%	quartile	-13		
10.0%		-22		
2.5%		-22		
0.5%		-22		
0.0%	minimum	-22		

RdF Distribution by Detection Method

Distributions Analyte_Detection=Strontium-90 Liquid Scintillation Counter

Bias



Quantiles

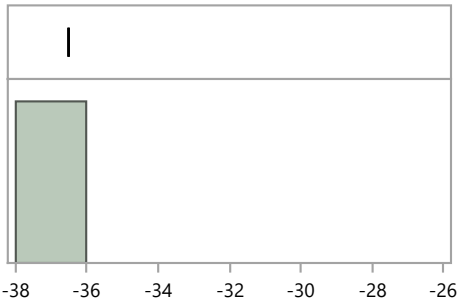
100.0%	maximum	-9
99.5%		-9
97.5%		-9
90.0%		-9
75.0%	quartile	-9
50.0%	median	-15
25.0%	quartile	-98
10.0%		-98
2.5%		-98
0.5%		-98
0.0%	minimum	-98

Summary Statistics

Mean	-41
Std Dev	50
Std Err Mean	29
Upper 95% Mean	84
Lower 95% Mean	-165
N	3

Distributions Analyte_Detection=Strontium-90 Other

Bias



Quantiles

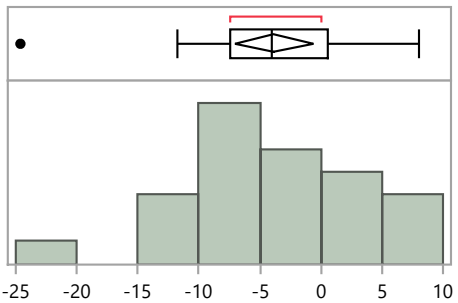
100.0%	maximum	-37
99.5%		-37
97.5%		-37
90.0%		-37
75.0%	quartile	-37
50.0%	median	-37
25.0%	quartile	-37
10.0%		-37
2.5%		-37
0.5%		-37
0.0%	minimum	-37

Summary Statistics

Mean	-37
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1

Distributions Analyte_Detection=Uranium-234 Alpha Spectrometry

Bias



Quantiles

100.0%	maximum	8
99.5%		8
97.5%		8
90.0%		7
75.0%	quartile	1
50.0%	median	-4
25.0%	quartile	-7
10.0%		-12
2.5%		-25
0.5%		-25
0.0%	minimum	-25

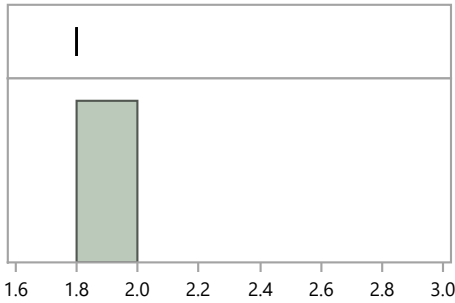
Summary Statistics

Mean	-4
Std Dev	7
Std Err Mean	2
Upper 95% Mean	-1
Lower 95% Mean	-7
N	23

RdF Distribution by Detection Method

Distributions Analyte_Detection=Uranium-234 Gamma Spectrometry

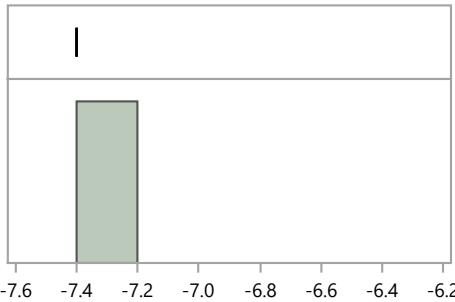
Bias



Quantiles			Summary Statistics	
100.0%	maximum	2	Mean	2
99.5%		2	Std Dev	.
97.5%		2	Std Err Mean	.
90.0%		2	Upper 95% Mean	.
75.0%	quartile	2	Lower 95% Mean	.
50.0%	median	2	N	1
25.0%	quartile	2		
10.0%		2		
2.5%		2		
0.5%		2		
0.0%	minimum	2		

Distributions Analyte_Detection=Uranium-234 Inductively Coupled Plasma Mass Spectrometry

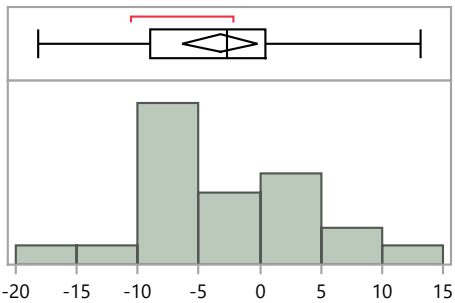
Bias



Quantiles			Summary Statistics	
100.0%	maximum	-7	Mean	-7
99.5%		-7	Std Dev	.
97.5%		-7	Std Err Mean	.
90.0%		-7	Upper 95% Mean	.
75.0%	quartile	-7	Lower 95% Mean	.
50.0%	median	-7	N	1
25.0%	quartile	-7		
10.0%		-7		
2.5%		-7		
0.5%		-7		
0.0%	minimum	-7		

Distributions Analyte_Detection=Uranium-238 Alpha Spectrometry

Bias

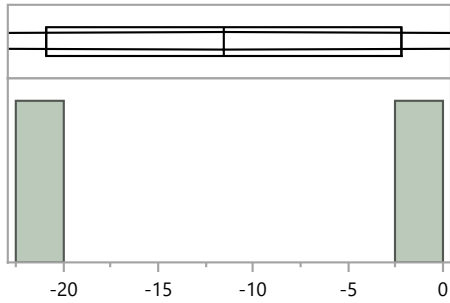


Quantiles			Summary Statistics	
100.0%	maximum	13	Mean	-3
99.5%		13	Std Dev	7
97.5%		13	Std Err Mean	1
90.0%		7	Upper 95% Mean	-0
75.0%	quartile	1	Lower 95% Mean	-6
50.0%	median	-3	N	23
25.0%	quartile	-9		
10.0%		-10		
2.5%		-18		
0.5%		-18		
0.0%	minimum	-18		

RdF Distribution by Detection Method

Distributions Analyte_Detection=Uranium-238 Gamma Spectrometry

Bias

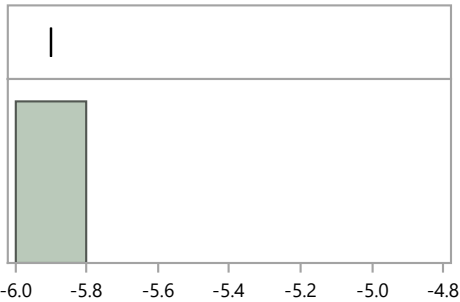


Quantiles		
100.0%	maximum	-2
99.5%		-2
97.5%		-2
90.0%		-2
75.0%	quartile	-2
50.0%	median	-12
25.0%	quartile	-21
10.0%		-21
2.5%		-21
0.5%		-21
0.0%	minimum	-21

Summary Statistics	
Mean	-12
Std Dev	13
Std Err Mean	9
Upper 95% Mean	107
Lower 95% Mean	-130
N	2

Distributions Analyte_Detection=Uranium-238 Inductively Coupled Plasma Mass Spectrometry

Bias

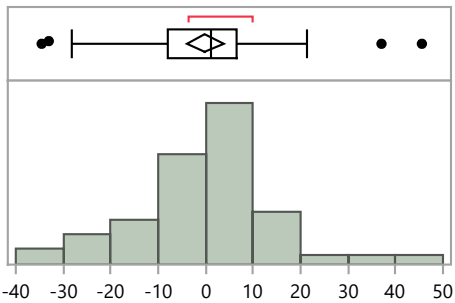


Quantiles		
100.0%	maximum	-6
99.5%		-6
97.5%		-6
90.0%		-6
75.0%	quartile	-6
50.0%	median	-6
25.0%	quartile	-6
10.0%		-6
2.5%		-6
0.5%		-6
0.0%	minimum	-6

Summary Statistics	
Mean	-6
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1

Distributions Analyte_Detection=Zinc-65 Gamma Spectrometry

Bias



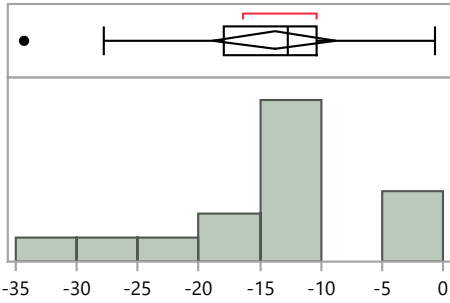
Quantiles		
100.0%	maximum	46
99.5%		46
97.5%		41
90.0%		16
75.0%	quartile	7
50.0%	median	1
25.0%	quartile	-8
10.0%		-20
2.5%		-34
0.5%		-35
0.0%	minimum	-35

Summary Statistics	
Mean	-0
Std Dev	15
Std Err Mean	2
Upper 95% Mean	4
Lower 95% Mean	-4
N	59

RdF Distribution by Prep Method

Distributions Analyte_Method=Americium-241 Acid dissolution with hydrofluoric acid

Bias



Quantiles

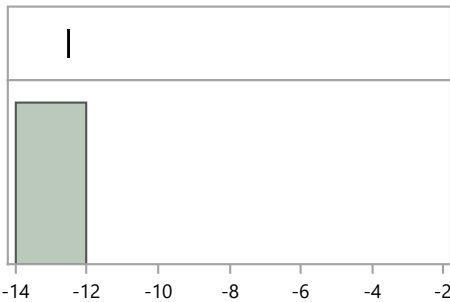
100.0%	maximum	-0.7
99.5%		-0.7
97.5%		-0.7
90.0%		-0.7
75.0%	quartile	-10.4
50.0%	median	-12.7
25.0%	quartile	-17.9
10.0%		-30.4
2.5%		-34.3
0.5%		-34.3
0.0%	minimum	-34.3

Summary Statistics

Mean	-13.8
Std Dev	9.1
Std Err Mean	2.4
Upper 95% Mean	-8.8
Lower 95% Mean	-18.9
N	15.0

Distributions Analyte_Method=Americium-241 Acid leaching without hydrofluoric acid

Bias



Quantiles

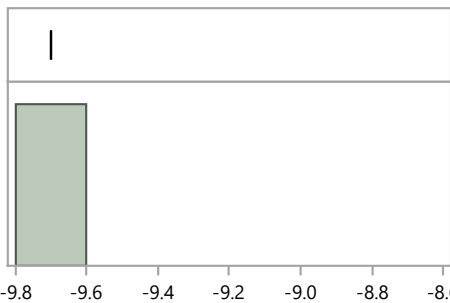
100.0%	maximum	-12.5
99.5%		-12.5
97.5%		-12.5
90.0%		-12.5
75.0%	quartile	-12.5
50.0%	median	-12.5
25.0%	quartile	-12.5
10.0%		-12.5
2.5%		-12.5
0.5%		-12.5
0.0%	minimum	-12.5

Summary Statistics

Mean	-12.5
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Americium-241 Evaporation, acidified

Bias



Quantiles

100.0%	maximum	-9.7
99.5%		-9.7
97.5%		-9.7
90.0%		-9.7
75.0%	quartile	-9.7
50.0%	median	-9.7
25.0%	quartile	-9.7
10.0%		-9.7
2.5%		-9.7
0.5%		-9.7
0.0%	minimum	-9.7

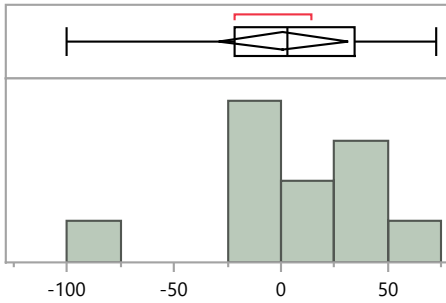
Summary Statistics

Mean	-9.7
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

RdF Distribution by Prep Method

Distributions Analyte_Method=Americium-241 No preparation - analyzed as received

Bias



Quantiles

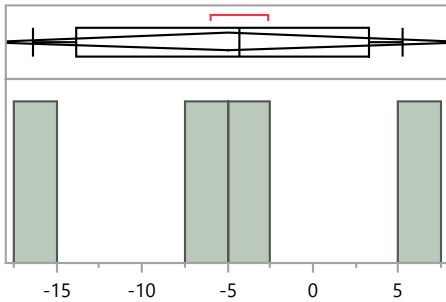
100.0%	maximum	72.4
99.5%		72.4
97.5%		72.4
90.0%		64.8
75.0%	quartile	34.3
50.0%	median	2.7
25.0%	quartile	-21.6
10.0%		-84.2
2.5%		-99.9
0.5%		-99.9
0.0%	minimum	-99.9

Summary Statistics

Mean	1.0
Std Dev	44.9
Std Err Mean	13.5
Upper 95% Mean	31.2
Lower 95% Mean	-29.1
N	11.0

Distributions Analyte_Method=Americium-241 Other

Bias



Quantiles

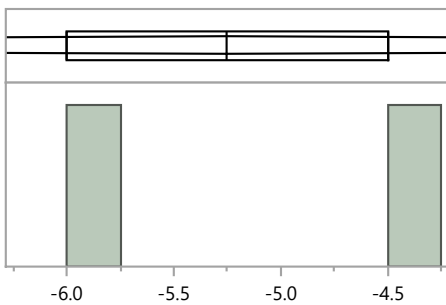
100.0%	maximum	5.2
99.5%		5.2
97.5%		5.2
90.0%		5.2
75.0%	quartile	3.3
50.0%	median	-4.3
25.0%	quartile	-13.8
10.0%		-16.4
2.5%		-16.4
0.5%		-16.4
0.0%	minimum	-16.4

Summary Statistics

Mean	-5.0
Std Dev	9.0
Std Err Mean	4.5
Upper 95% Mean	9.3
Lower 95% Mean	-19.2
N	4.0

Distributions Analyte_Method=Americium-241 Total dissolution by fusion

Bias



Quantiles

100.0%	maximum	-4.5
99.5%		-4.5
97.5%		-4.5
90.0%		-4.5
75.0%	quartile	-4.5
50.0%	median	-5.3
25.0%	quartile	-6.0
10.0%		-6.0
2.5%		-6.0
0.5%		-6.0
0.0%	minimum	-6.0

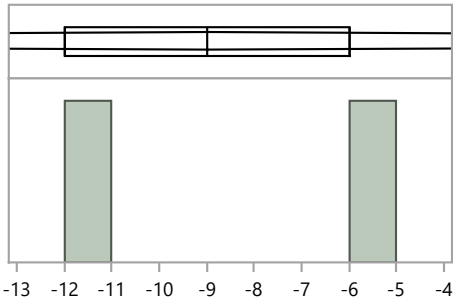
Summary Statistics

Mean	-5.3
Std Dev	1.1
Std Err Mean	0.8
Upper 95% Mean	4.3
Lower 95% Mean	-14.8
N	2.0

RdF Distribution by Prep Method

Distributions Analyte_Method=Cesium-134 Acid dissolution with hydrofluoric acid

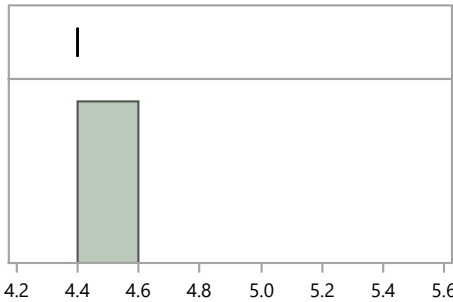
Bias



Quantiles			Summary Statistics	
100.0%	maximum	-6.0	Mean	-9.0
99.5%		-6.0	Std Dev	4.2
97.5%		-6.0	Std Err Mean	3.0
90.0%		-6.0	Upper 95% Mean	29.1
75.0%	quartile	-6.0	Lower 95% Mean	-47.1
50.0%	median	-9.0	N	2.0
25.0%	quartile	-12.0		
10.0%		-12.0		
2.5%		-12.0		
0.5%		-12.0		
0.0%	minimum	-12.0		

Distributions Analyte_Method=Cesium-134 Acid leaching without hydrofluoric acid

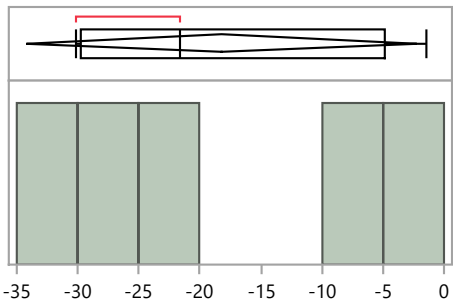
Bias



Quantiles			Summary Statistics	
100.0%	maximum	4.4	Mean	4.4
99.5%		4.4	Std Dev	.
97.5%		4.4	Std Err Mean	.
90.0%		4.4	Upper 95% Mean	.
75.0%	quartile	4.4	Lower 95% Mean	.
50.0%	median	4.4	N	1.0
25.0%	quartile	4.4		
10.0%		4.4		
2.5%		4.4		
0.5%		4.4		
0.0%	minimum	4.4		

Distributions Analyte_Method=Cesium-134 EPA 901.1, Gamma Emitting, 600/4-80-032

Bias

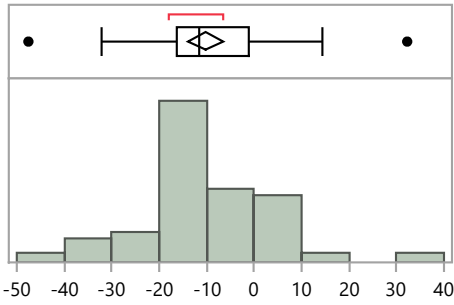


Quantiles			Summary Statistics	
100.0%	maximum	-1.5	Mean	-18.2
99.5%		-1.5	Std Dev	12.8
97.5%		-1.5	Std Err Mean	5.7
90.0%		-1.5	Upper 95% Mean	-2.2
75.0%	quartile	-4.9	Lower 95% Mean	-34.1
50.0%	median	-21.6	N	5.0
25.0%	quartile	-29.8		
10.0%		-30.1		
2.5%		-30.1		
0.5%		-30.1		
0.0%	minimum	-30.1		

RdF Distribution by Prep Method

Distributions Analyte_Method=Cesium-134 No preparation - analyzed as received

Bias



Quantiles

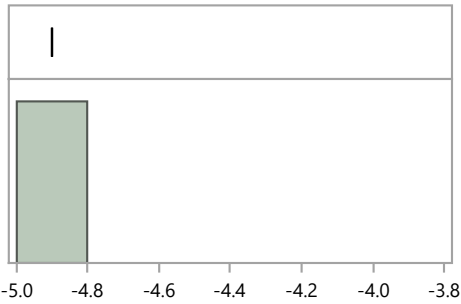
100.0%	maximum	32.2
99.5%		32.2
97.5%		26.8
90.0%		3.2
75.0%	quartile	-1.1
50.0%	median	-11.7
25.0%	quartile	-16.3
10.0%		-22.7
2.5%		-42.9
0.5%		-47.5
0.0%	minimum	-47.5

Summary Statistics

Mean	-10.2
Std Dev	12.7
Std Err Mean	1.8
Upper 95% Mean	-6.7
Lower 95% Mean	-13.8
N	51.0

Distributions Analyte_Method=Cesium-134 Other

Bias



Quantiles

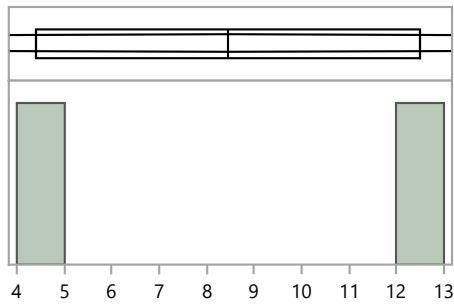
100.0%	maximum	-4.9
99.5%		-4.9
97.5%		-4.9
90.0%		-4.9
75.0%	quartile	-4.9
50.0%	median	-4.9
25.0%	quartile	-4.9
10.0%		-4.9
2.5%		-4.9
0.5%		-4.9
0.0%	minimum	-4.9

Summary Statistics

Mean	-4.9
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Cesium-137 Acid dissolution with hydrofluoric acid

Bias



Quantiles

100.0%	maximum	12.5
99.5%		12.5
97.5%		12.5
90.0%		12.5
75.0%	quartile	12.5
50.0%	median	8.5
25.0%	quartile	4.4
10.0%		4.4
2.5%		4.4
0.5%		4.4
0.0%	minimum	4.4

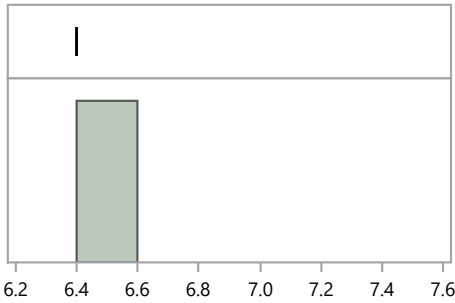
Summary Statistics

Mean	8.5
Std Dev	5.7
Std Err Mean	4.1
Upper 95% Mean	59.9
Lower 95% Mean	-43.0
N	2.0

RdF Distribution by Prep Method

Distributions Analyte_Method=Cesium-137 Acid leaching without hydrofluoric acid

Bias



Quantiles

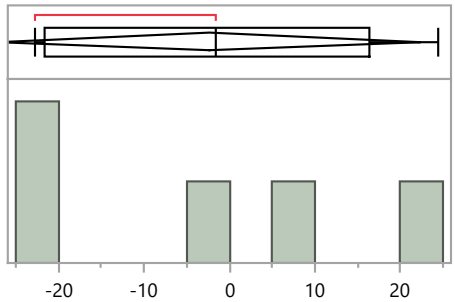
100.0%	maximum	6.4
99.5%		6.4
97.5%		6.4
90.0%		6.4
75.0%	quartile	6.4
50.0%	median	6.4
25.0%	quartile	6.4
10.0%		6.4
2.5%		6.4
0.5%		6.4
0.0%	minimum	6.4

Summary Statistics

Mean	6.4
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Cesium-137 EPA 901.1, Gamma Emitting, 600/4-80-032

Bias



Quantiles

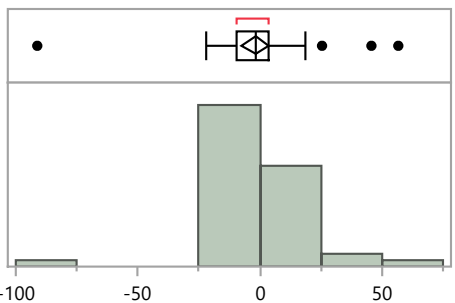
100.0%	maximum	24.4
99.5%		24.4
97.5%		24.4
90.0%		24.4
75.0%	quartile	16.4
50.0%	median	-1.5
25.0%	quartile	-21.7
10.0%		-22.7
2.5%		-22.7
0.5%		-22.7
0.0%	minimum	-22.7

Summary Statistics

Mean	-2.4
Std Dev	19.9
Std Err Mean	8.9
Upper 95% Mean	22.3
Lower 95% Mean	-27.1
N	5.0

Distributions Analyte_Method=Cesium-137 No preparation - analyzed as received

Bias



Quantiles

100.0%	maximum	56.6
99.5%		56.6
97.5%		53.3
90.0%		17.5
75.0%	quartile	3.8
50.0%	median	-1.6
25.0%	quartile	-9.8
10.0%		-16.8
2.5%		-70.4
0.5%		-91.1
0.0%	minimum	-91.1

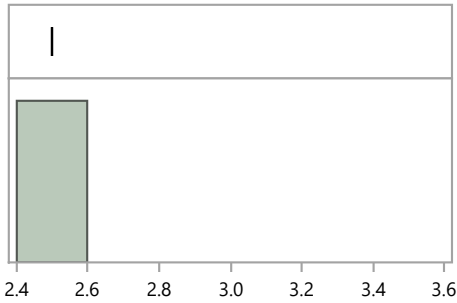
Summary Statistics

Mean	-2.0
Std Dev	19.7
Std Err Mean	2.8
Upper 95% Mean	3.6
Lower 95% Mean	-7.5
N	51.0

RdF Distribution by Prep Method

Distributions Analyte_Method=Cesium-137 Other

Bias



Quantiles

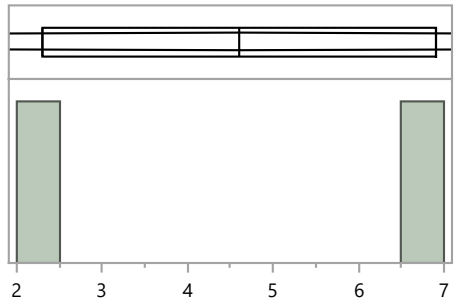
100.0%	maximum	2.5
99.5%		2.5
97.5%		2.5
90.0%		2.5
75.0%	quartile	2.5
50.0%	median	2.5
25.0%	quartile	2.5
10.0%		2.5
2.5%		2.5
0.5%		2.5
0.0%	minimum	2.5

Summary Statistics

Mean	2.5
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Cobalt-60 Acid dissolution with hydrofluoric acid

Bias



Quantiles

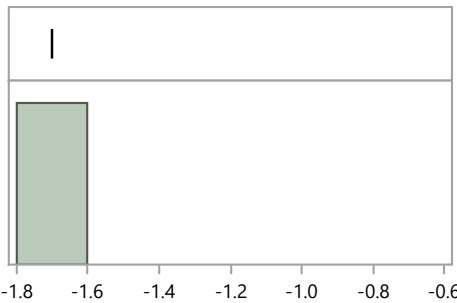
100.0%	maximum	6.9
99.5%		6.9
97.5%		6.9
90.0%		6.9
75.0%	quartile	6.9
50.0%	median	4.6
25.0%	quartile	2.3
10.0%		2.3
2.5%		2.3
0.5%		2.3
0.0%	minimum	2.3

Summary Statistics

Mean	4.6
Std Dev	3.3
Std Err Mean	2.3
Upper 95% Mean	33.8
Lower 95% Mean	-24.6
N	2.0

Distributions Analyte_Method=Cobalt-60 Acid leaching without hydrofluoric acid

Bias



Quantiles

100.0%	maximum	-1.7
99.5%		-1.7
97.5%		-1.7
90.0%		-1.7
75.0%	quartile	-1.7
50.0%	median	-1.7
25.0%	quartile	-1.7
10.0%		-1.7
2.5%		-1.7
0.5%		-1.7
0.0%	minimum	-1.7

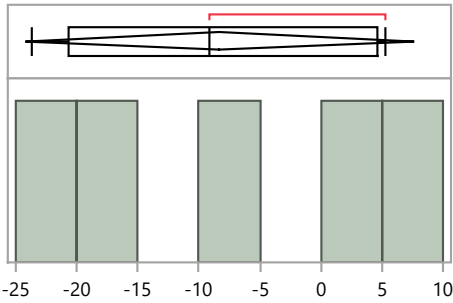
Summary Statistics

Mean	-1.7
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

RdF Distribution by Prep Method

Distributions Analyte_Method=Cobalt-60 EPA 901.1, Gamma Emitting, 600/4-80-032

Bias



Quantiles

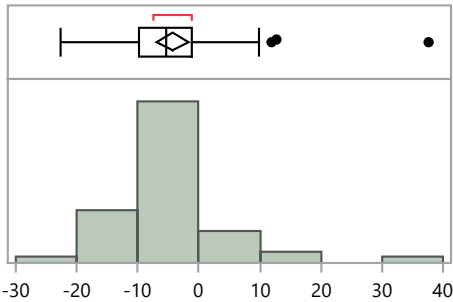
100.0%	maximum	5.2
99.5%		5.2
97.5%		5.2
90.0%		5.2
75.0%	quartile	4.6
50.0%	median	-9.2
25.0%	quartile	-20.7
10.0%		-23.7
2.5%		-23.7
0.5%		-23.7
0.0%	minimum	-23.7

Summary Statistics

Mean	-8.3
Std Dev	12.8
Std Err Mean	5.7
Upper 95% Mean	7.6
Lower 95% Mean	-24.2
N	5.0

Distributions Analyte_Method=Cobalt-60 No preparation - analyzed as received

Bias



Quantiles

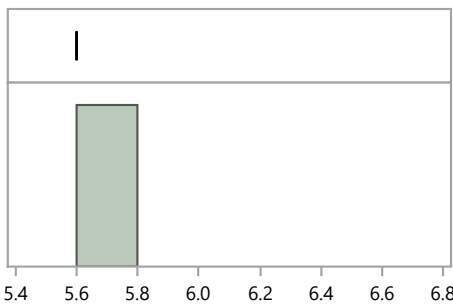
100.0%	maximum	37.6
99.5%		37.6
97.5%		30.1
90.0%		7.6
75.0%	quartile	-1.2
50.0%	median	-5.4
25.0%	quartile	-9.8
10.0%		-14.3
2.5%		-21.5
0.5%		-22.5
0.0%	minimum	-22.5

Summary Statistics

Mean	-4.3
Std Dev	9.4
Std Err Mean	1.3
Upper 95% Mean	-1.6
Lower 95% Mean	-6.9
N	51.0

Distributions Analyte_Method=Cobalt-60 Other

Bias



Quantiles

100.0%	maximum	5.6
99.5%		5.6
97.5%		5.6
90.0%		5.6
75.0%	quartile	5.6
50.0%	median	5.6
25.0%	quartile	5.6
10.0%		5.6
2.5%		5.6
0.5%		5.6
0.0%	minimum	5.6

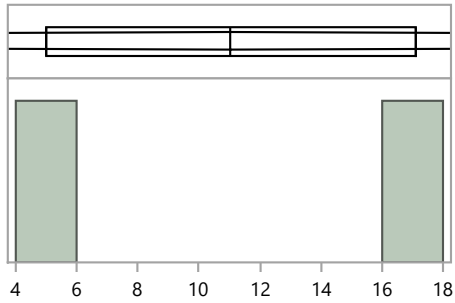
Summary Statistics

Mean	5.6
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

RdF Distribution by Prep Method

Distributions Analyte_Method=Manganese-54 Acid dissolution with hydrofluoric acid

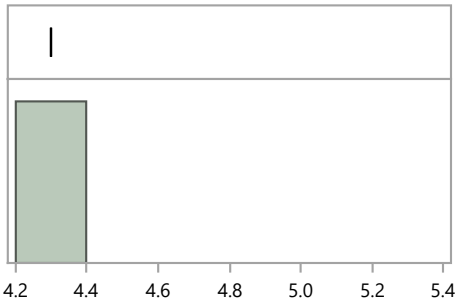
Bias



Quantiles			Summary Statistics	
100.0%	maximum	17.1	Mean	11.1
99.5%		17.1	Std Dev	8.6
97.5%		17.1	Std Err Mean	6.1
90.0%		17.1	Upper 95% Mean	87.9
75.0%	quartile	17.1	Lower 95% Mean	-65.8
50.0%	median	11.1	N	2.0
25.0%	quartile	5.0		
10.0%		5.0		
2.5%		5.0		
0.5%		5.0		
0.0%	minimum	5.0		

Distributions Analyte_Method=Manganese-54 Acid leaching without hydrofluoric acid

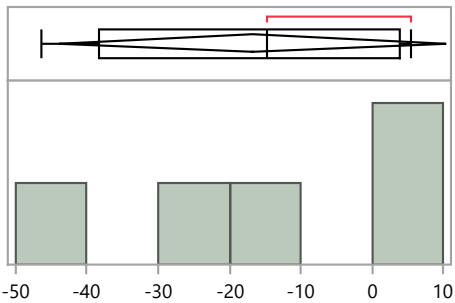
Bias



Quantiles			Summary Statistics	
100.0%	maximum	4.3	Mean	4.3
99.5%		4.3	Std Dev	.
97.5%		4.3	Std Err Mean	.
90.0%		4.3	Upper 95% Mean	.
75.0%	quartile	4.3	Lower 95% Mean	.
50.0%	median	4.3	N	1.0
25.0%	quartile	4.3		
10.0%		4.3		
2.5%		4.3		
0.5%		4.3		
0.0%	minimum	4.3		

Distributions Analyte_Method=Manganese-54 EPA 901.1, Gamma Emitting, 600/4-80-032

Bias

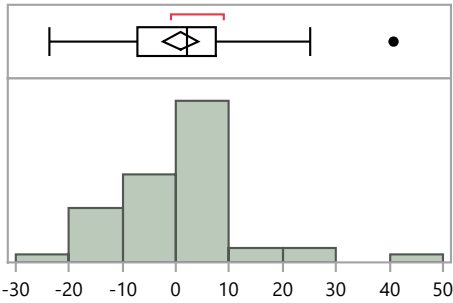


Quantiles			Summary Statistics	
100.0%	maximum	5.5	Mean	-16.7
99.5%		5.5	Std Dev	21.8
97.5%		5.5	Std Err Mean	9.8
90.0%		5.5	Upper 95% Mean	10.4
75.0%	quartile	3.8	Lower 95% Mean	-43.8
50.0%	median	-14.7	N	5.0
25.0%	quartile	-38.2		
10.0%		-46.4		
2.5%		-46.4		
0.5%		-46.4		
0.0%	minimum	-46.4		

RdF Distribution by Prep Method

Distributions Analyte_Method=Manganese-54 No preparation - analyzed as received

Bias



Quantiles

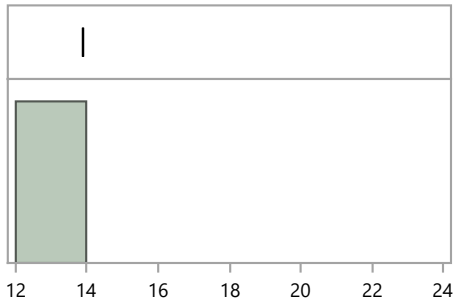
100.0%	maximum	40.7
99.5%		40.7
97.5%		36.0
90.0%		14.5
75.0%	quartile	7.6
50.0%	median	2.1
25.0%	quartile	-7.1
10.0%		-16.4
2.5%		-21.9
0.5%		-23.6
0.0%	minimum	-23.6

Summary Statistics

Mean	0.9
Std Dev	11.7
Std Err Mean	1.6
Upper 95% Mean	4.2
Lower 95% Mean	-2.4
N	51.0

Distributions Analyte_Method=Manganese-54 Other

Bias



Quantiles

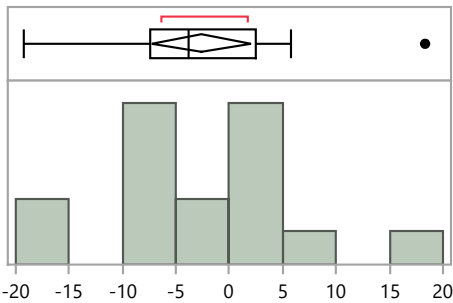
100.0%	maximum	13.9
99.5%		13.9
97.5%		13.9
90.0%		13.9
75.0%	quartile	13.9
50.0%	median	13.9
25.0%	quartile	13.9
10.0%		13.9
2.5%		13.9
0.5%		13.9
0.0%	minimum	13.9

Summary Statistics

Mean	13.9
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Plutonium-238 Acid dissolution with hydrofluoric acid

Bias



Quantiles

100.0%	maximum	18.3
99.5%		18.3
97.5%		18.3
90.0%		9.6
75.0%	quartile	2.5
50.0%	median	-3.8
25.0%	quartile	-7.4
10.0%		-16.6
2.5%		-19.3
0.5%		-19.3
0.0%	minimum	-19.3

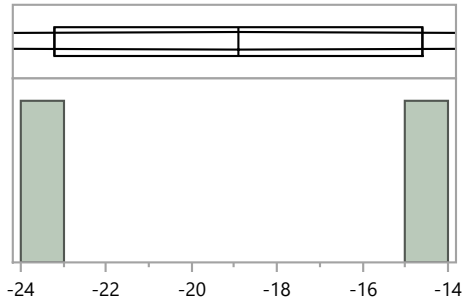
Summary Statistics

Mean	-2.6
Std Dev	8.8
Std Err Mean	2.2
Upper 95% Mean	2.1
Lower 95% Mean	-7.3
N	16.0

RdF Distribution by Prep Method

Distributions Analyte_Method=Plutonium-238 Acid leaching without hydrofluoric acid

Bias



Quantiles

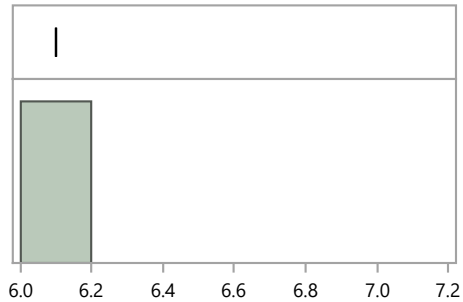
100.0%	maximum	-14.6
99.5%		-14.6
97.5%		-14.6
90.0%		-14.6
75.0%	quartile	-14.6
50.0%	median	-18.9
25.0%	quartile	-23.2
10.0%		-23.2
2.5%		-23.2
0.5%		-23.2
0.0%	minimum	-23.2

Summary Statistics

Mean	-18.9
Std Dev	6.1
Std Err Mean	4.3
Upper 95% Mean	35.7
Lower 95% Mean	-73.5
N	2.0

Distributions Analyte_Method=Plutonium-238 Evaporation, acidified

Bias



Quantiles

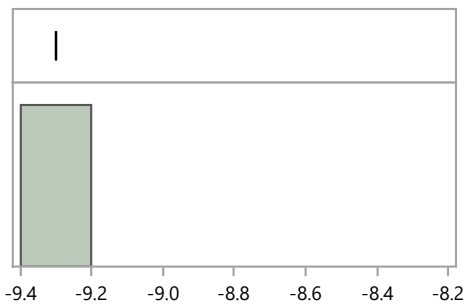
100.0%	maximum	6.1
99.5%		6.1
97.5%		6.1
90.0%		6.1
75.0%	quartile	6.1
50.0%	median	6.1
25.0%	quartile	6.1
10.0%		6.1
2.5%		6.1
0.5%		6.1
0.0%	minimum	6.1

Summary Statistics

Mean	6.1
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Plutonium-238 No preparation - analyzed as received

Bias



Quantiles

100.0%	maximum	-9.3
99.5%		-9.3
97.5%		-9.3
90.0%		-9.3
75.0%	quartile	-9.3
50.0%	median	-9.3
25.0%	quartile	-9.3
10.0%		-9.3
2.5%		-9.3
0.5%		-9.3
0.0%	minimum	-9.3

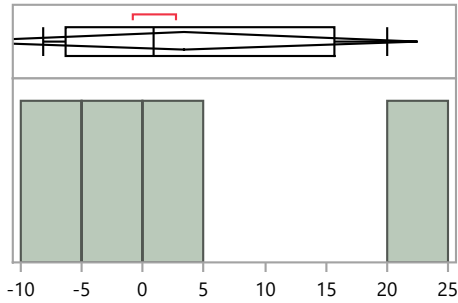
Summary Statistics

Mean	-9.3
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

RdF Distribution by Prep Method

Distributions Analyte_Method=Plutonium-238 Other

Bias



Quantiles

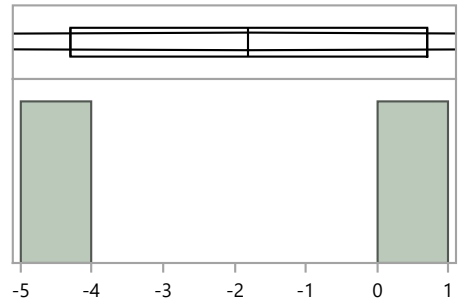
100.0%	maximum	20.0
99.5%		20.0
97.5%		20.0
90.0%		20.0
75.0%	quartile	15.7
50.0%	median	1.0
25.0%	quartile	-6.4
10.0%		-8.2
2.5%		-8.2
0.5%		-8.2
0.0%	minimum	-8.2

Summary Statistics

Mean	3.4
Std Dev	11.9
Std Err Mean	6.0
Upper 95% Mean	22.4
Lower 95% Mean	-15.6
N	4.0

Distributions Analyte_Method=Plutonium-238 Total dissolution by fusion

Bias



Quantiles

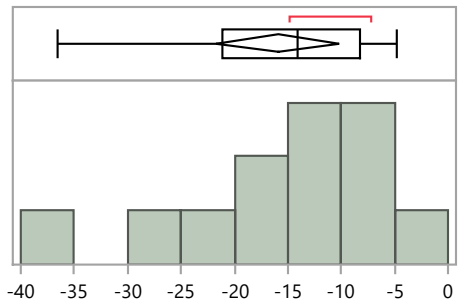
100.0%	maximum	0.7
99.5%		0.7
97.5%		0.7
90.0%		0.7
75.0%	quartile	0.7
50.0%	median	-1.8
25.0%	quartile	-4.3
10.0%		-4.3
2.5%		-4.3
0.5%		-4.3
0.0%	minimum	-4.3

Summary Statistics

Mean	-1.8
Std Dev	3.5
Std Err Mean	2.5
Upper 95% Mean	30.0
Lower 95% Mean	-33.6
N	2.0

Distributions Analyte_Method=Strontium-90 Acid dissolution with hydrofluoric acid

Bias



Quantiles

100.0%	maximum	-4.8
99.5%		-4.8
97.5%		-4.8
90.0%		-5.5
75.0%	quartile	-8.3
50.0%	median	-14.2
25.0%	quartile	-21.1
10.0%		-33.3
2.5%		-36.5
0.5%		-36.5
0.0%	minimum	-36.5

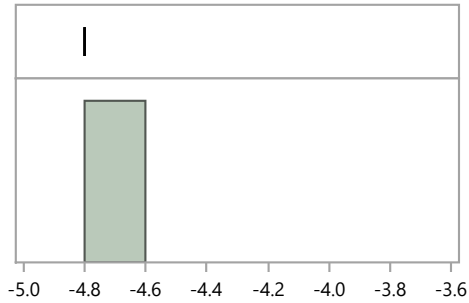
Summary Statistics

Mean	-15.9
Std Dev	9.0
Std Err Mean	2.6
Upper 95% Mean	-10.2
Lower 95% Mean	-21.7
N	12.0

RdF Distribution by Prep Method

Distributions Analyte_Method=Strontium-90 Acid leaching without hydrofluoric acid

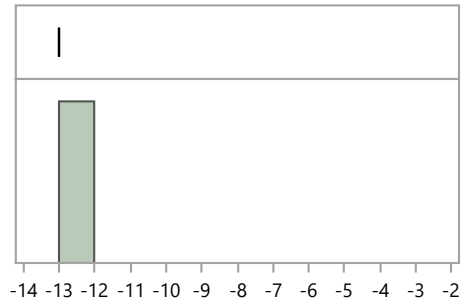
Bias



Quantiles			Summary Statistics	
100.0%	maximum	-4.8	Mean	-4.8
99.5%		-4.8	Std Dev	.
97.5%		-4.8	Std Err Mean	.
90.0%		-4.8	Upper 95% Mean	.
75.0%	quartile	-4.8	Lower 95% Mean	.
50.0%	median	-4.8	N	1.0
25.0%	quartile	-4.8		
10.0%		-4.8		
2.5%		-4.8		
0.5%		-4.8		
0.0%	minimum	-4.8		

Distributions Analyte_Method=Strontium-90 Coprecipitation, acidified

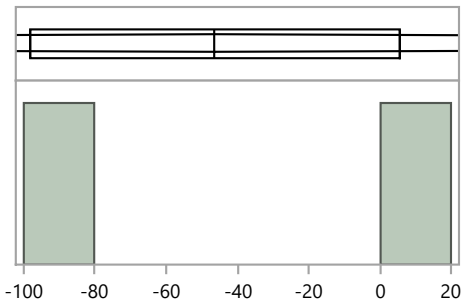
Bias



Quantiles			Summary Statistics	
100.0%	maximum	-13.0	Mean	-13.0
99.5%		-13.0	Std Dev	.
97.5%		-13.0	Std Err Mean	.
90.0%		-13.0	Upper 95% Mean	.
75.0%	quartile	-13.0	Lower 95% Mean	.
50.0%	median	-13.0	N	1.0
25.0%	quartile	-13.0		
10.0%		-13.0		
2.5%		-13.0		
0.5%		-13.0		
0.0%	minimum	-13.0		

Distributions Analyte_Method=Strontium-90 EPA 905, Radioactive Strontium, 600/4-80-032

Bias

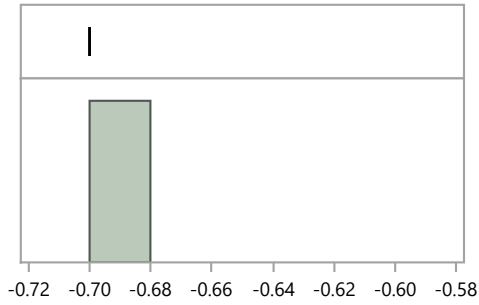


Quantiles			Summary Statistics	
100.0%	maximum	5.4	Mean	-46.4
99.5%		5.4	Std Dev	73.2
97.5%		5.4	Std Err Mean	51.8
90.0%		5.4	Upper 95% Mean	611.2
75.0%	quartile	5.4	Lower 95% Mean	-703.9
50.0%	median	-46.4	N	2.0
25.0%	quartile	-98.1		
10.0%		-98.1		
2.5%		-98.1		
0.5%		-98.1		
0.0%	minimum	-98.1		

RdF Distribution by Prep Method

Distributions Analyte_Method=Strontium-90 Evaporation, acidified

Bias



Quantiles

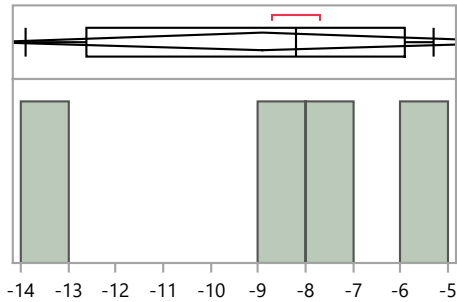
100.0%	maximum	-0.7
99.5%		-0.7
97.5%		-0.7
90.0%		-0.7
75.0%	quartile	-0.7
50.0%	median	-0.7
25.0%	quartile	-0.7
10.0%		-0.7
2.5%		-0.7
0.5%		-0.7
0.0%	minimum	-0.7

Summary Statistics

Mean	-0.7
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Strontium-90 Other

Bias



Quantiles

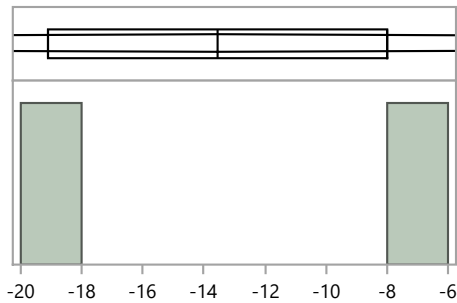
100.0%	maximum	-5.3
99.5%		-5.3
97.5%		-5.3
90.0%		-5.3
75.0%	quartile	-5.9
50.0%	median	-8.2
25.0%	quartile	-12.6
10.0%		-13.9
2.5%		-13.9
0.5%		-13.9
0.0%	minimum	-13.9

Summary Statistics

Mean	-8.9
Std Dev	3.6
Std Err Mean	1.8
Upper 95% Mean	-3.1
Lower 95% Mean	-14.7
N	4.0

Distributions Analyte_Method=Strontium-90 Total dissolution by fusion

Bias



Quantiles

100.0%	maximum	-8.0
99.5%		-8.0
97.5%		-8.0
90.0%		-8.0
75.0%	quartile	-8.0
50.0%	median	-13.6
25.0%	quartile	-19.1
10.0%		-19.1
2.5%		-19.1
0.5%		-19.1
0.0%	minimum	-19.1

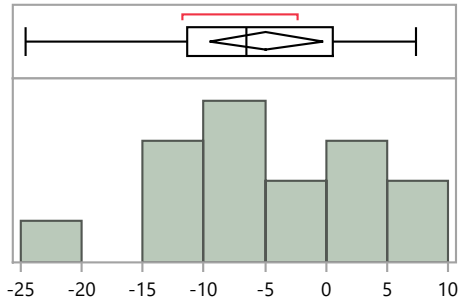
Summary Statistics

Mean	-13.6
Std Dev	7.8
Std Err Mean	5.6
Upper 95% Mean	57.0
Lower 95% Mean	-84.1
N	2.0

RdF Distribution by Prep Method

Distributions Analyte_Method=Uranium-234 Acid dissolution with hydrofluoric acid

Bias



Quantiles

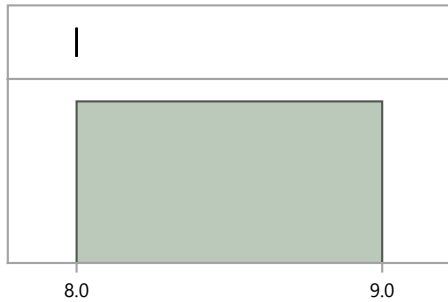
100.0%	maximum	7.4
99.5%		7.4
97.5%		7.4
90.0%		6.7
75.0%	quartile	0.6
50.0%	median	-6.5
25.0%	quartile	-11.4
10.0%		-16.9
2.5%		-24.6
0.5%		-24.6
0.0%	minimum	-24.6

Summary Statistics

Mean	-4.9
Std Dev	8.4
Std Err Mean	2.2
Upper 95% Mean	-0.3
Lower 95% Mean	-9.6
N	15.0

Distributions Analyte_Method=Uranium-234 Acid leaching without hydrofluoric acid

Bias



Quantiles

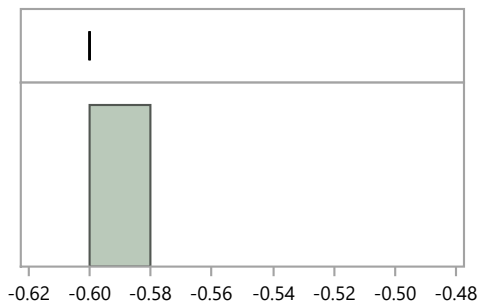
100.0%	maximum	8.0
99.5%		8.0
97.5%		8.0
90.0%		8.0
75.0%	quartile	8.0
50.0%	median	8.0
25.0%	quartile	8.0
10.0%		8.0
2.5%		8.0
0.5%		8.0
0.0%	minimum	8.0

Summary Statistics

Mean	8.0
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Uranium-234 Evaporation, acidified

Bias



Quantiles

100.0%	maximum	-0.6
99.5%		-0.6
97.5%		-0.6
90.0%		-0.6
75.0%	quartile	-0.6
50.0%	median	-0.6
25.0%	quartile	-0.6
10.0%		-0.6
2.5%		-0.6
0.5%		-0.6
0.0%	minimum	-0.6

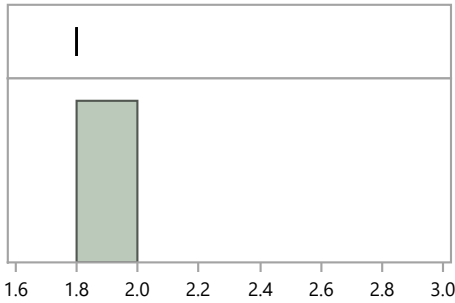
Summary Statistics

Mean	-0.6
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

RdF Distribution by Prep Method

Distributions Analyte_Method=Uranium-234 No preparation - analyzed as received

Bias



Quantiles

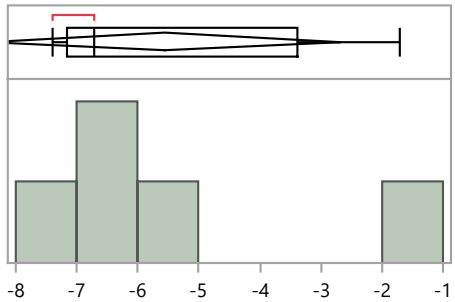
100.0%	maximum	1.8
99.5%		1.8
97.5%		1.8
90.0%		1.8
75.0%	quartile	1.8
50.0%	median	1.8
25.0%	quartile	1.8
10.0%		1.8
2.5%		1.8
0.5%		1.8
0.0%	minimum	1.8

Summary Statistics

Mean	1.8
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Uranium-234 Other

Bias



Quantiles

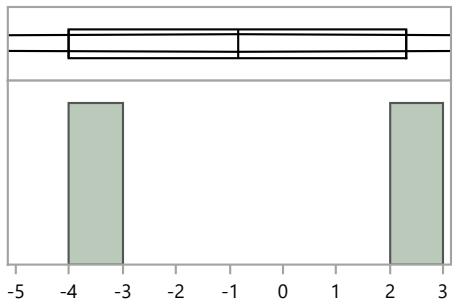
100.0%	maximum	-1.7
99.5%		-1.7
97.5%		-1.7
90.0%		-1.7
75.0%	quartile	-3.4
50.0%	median	-6.7
25.0%	quartile	-7.2
10.0%		-7.4
2.5%		-7.4
0.5%		-7.4
0.0%	minimum	-7.4

Summary Statistics

Mean	-5.6
Std Dev	2.3
Std Err Mean	1.0
Upper 95% Mean	-2.7
Lower 95% Mean	-8.4
N	5.0

Distributions Analyte_Method=Uranium-234 Total dissolution by fusion

Bias



Quantiles

100.0%	maximum	2.3
99.5%		2.3
97.5%		2.3
90.0%		2.3
75.0%	quartile	2.3
50.0%	median	-0.9
25.0%	quartile	-4.0
10.0%		-4.0
2.5%		-4.0
0.5%		-4.0
0.0%	minimum	-4.0

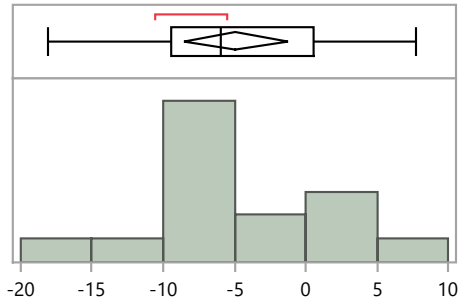
Summary Statistics

Mean	-0.9
Std Dev	4.5
Std Err Mean	3.2
Upper 95% Mean	39.2
Lower 95% Mean	-40.9
N	2.0

RdF Distribution by Prep Method

Distributions Analyte_Method=Uranium-238 Acid dissolution with hydrofluoric acid

Bias



Quantiles

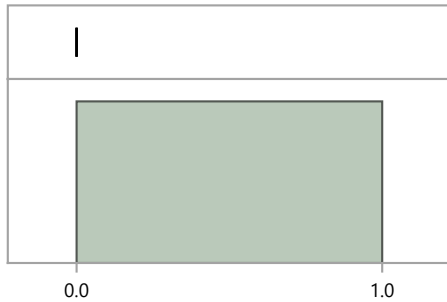
100.0%	maximum	7.7
99.5%		7.7
97.5%		7.7
90.0%		4.7
75.0%	quartile	0.5
50.0%	median	-6.0
25.0%	quartile	-9.4
10.0%		-13.5
2.5%		-18.1
0.5%		-18.1
0.0%	minimum	-18.1

Summary Statistics

Mean	-4.9
Std Dev	6.6
Std Err Mean	1.7
Upper 95% Mean	-1.3
Lower 95% Mean	-8.6
N	15.0

Distributions Analyte_Method=Uranium-238 Acid leaching without hydrofluoric acid

Bias



Quantiles

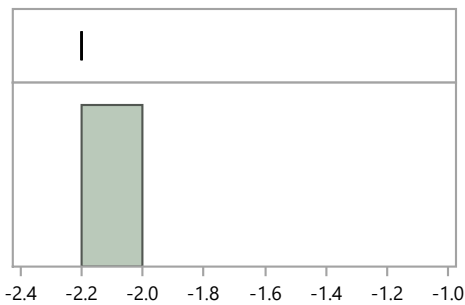
100.0%	maximum	0.0
99.5%		0.0
97.5%		0.0
90.0%		0.0
75.0%	quartile	0.0
50.0%	median	0.0
25.0%	quartile	0.0
10.0%		0.0
2.5%		0.0
0.5%		0.0
0.0%	minimum	0.0

Summary Statistics

Mean	0.0
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Uranium-238 Evaporation, acidified

Bias



Quantiles

100.0%	maximum	-2.2
99.5%		-2.2
97.5%		-2.2
90.0%		-2.2
75.0%	quartile	-2.2
50.0%	median	-2.2
25.0%	quartile	-2.2
10.0%		-2.2
2.5%		-2.2
0.5%		-2.2
0.0%	minimum	-2.2

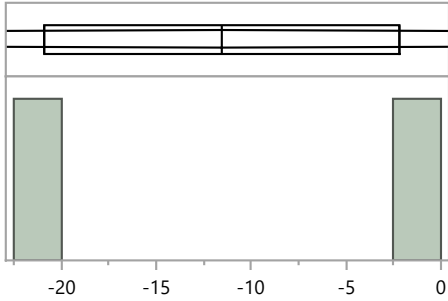
Summary Statistics

Mean	-2.2
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

RdF Distribution by Prep Method

Distributions Analyte_Method=Uranium-238 No preparation - analyzed as received

Bias



Quantiles

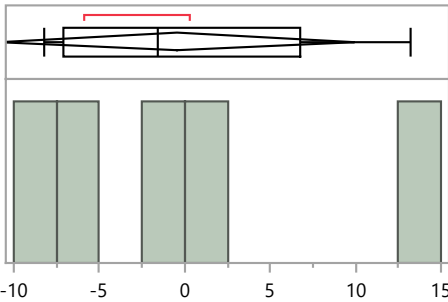
100.0%	maximum	-2.2
99.5%		-2.2
97.5%		-2.2
90.0%		-2.2
75.0%	quartile	-2.2
50.0%	median	-11.6
25.0%	quartile	-20.9
10.0%		-20.9
2.5%		-20.9
0.5%		-20.9
0.0%	minimum	-20.9

Summary Statistics

Mean	-11.6
Std Dev	13.2
Std Err Mean	9.3
Upper 95% Mean	107.3
Lower 95% Mean	-130.4
N	2.0

Distributions Analyte_Method=Uranium-238 Other

Bias



Quantiles

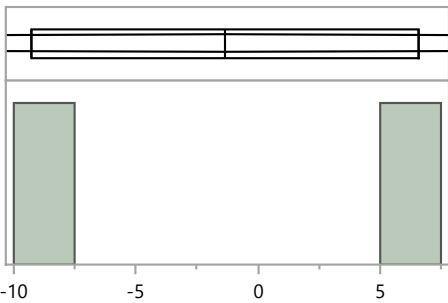
100.0%	maximum	13.2
99.5%		13.2
97.5%		13.2
90.0%		13.2
75.0%	quartile	6.8
50.0%	median	-1.6
25.0%	quartile	-7.1
10.0%		-8.2
2.5%		-8.2
0.5%		-8.2
0.0%	minimum	-8.2

Summary Statistics

Mean	-0.4
Std Dev	8.3
Std Err Mean	3.7
Upper 95% Mean	9.9
Lower 95% Mean	-10.8
N	5.0

Distributions Analyte_Method=Uranium-238 Total dissolution by fusion

Bias



Quantiles

100.0%	maximum	6.6
99.5%		6.6
97.5%		6.6
90.0%		6.6
75.0%	quartile	6.6
50.0%	median	-1.4
25.0%	quartile	-9.3
10.0%		-9.3
2.5%		-9.3
0.5%		-9.3
0.0%	minimum	-9.3

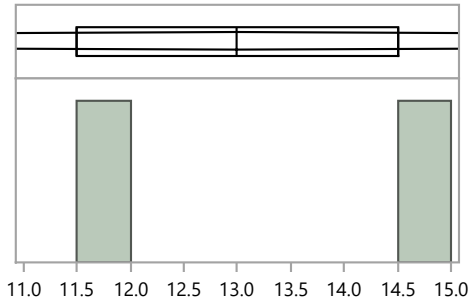
Summary Statistics

Mean	-1.4
Std Dev	11.2
Std Err Mean	8.0
Upper 95% Mean	99.7
Lower 95% Mean	-102.4
N	2.0

RdF Distribution by Prep Method

Distributions Analyte_Method=Zinc-65 Acid dissolution with hydrofluoric acid

Bias



Quantiles

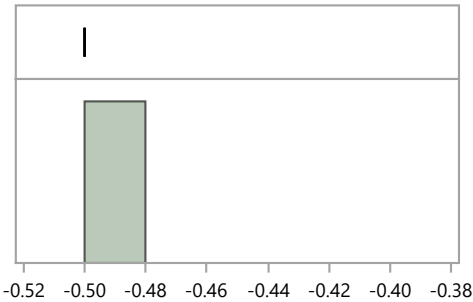
100.0%	maximum	14.5
99.5%		14.5
97.5%		14.5
90.0%		14.5
75.0%	quartile	14.5
50.0%	median	13.0
25.0%	quartile	11.5
10.0%		11.5
2.5%		11.5
0.5%		11.5
0.0%	minimum	11.5

Summary Statistics

Mean	13.0
Std Dev	2.1
Std Err Mean	1.5
Upper 95% Mean	32.1
Lower 95% Mean	-6.1
N	2.0

Distributions Analyte_Method=Zinc-65 Acid leaching without hydrofluoric acid

Bias



Quantiles

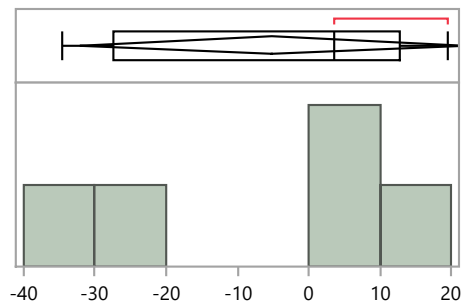
100.0%	maximum	-0.5
99.5%		-0.5
97.5%		-0.5
90.0%		-0.5
75.0%	quartile	-0.5
50.0%	median	-0.5
25.0%	quartile	-0.5
10.0%		-0.5
2.5%		-0.5
0.5%		-0.5
0.0%	minimum	-0.5

Summary Statistics

Mean	-0.5
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Zinc-65 EPA 901.1, Gamma Emitting, 600/4-80-032

Bias



Quantiles

100.0%	maximum	19.5
99.5%		19.5
97.5%		19.5
90.0%		19.5
75.0%	quartile	12.8
50.0%	median	3.5
25.0%	quartile	-27.4
10.0%		-34.5
2.5%		-34.5
0.5%		-34.5
0.0%	minimum	-34.5

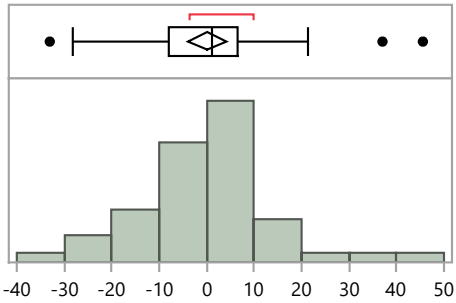
Summary Statistics

Mean	-5.2
Std Dev	21.8
Std Err Mean	9.7
Upper 95% Mean	21.9
Lower 95% Mean	-32.2
N	5.0

RdF Distribution by Prep Method

Distributions Analyte_Method=Zinc-65 No preparation - analyzed as received

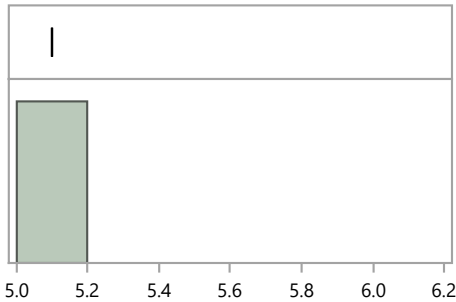
Bias



Quantiles			Summary Statistics	
100.0%	maximum	45.5	Mean	0.0
99.5%		45.5	Std Dev	14.3
97.5%		42.9	Std Err Mean	2.0
90.0%		15.1	Upper 95% Mean	4.0
75.0%	quartile	6.5	Lower 95% Mean	-4.0
50.0%	median	1.0	N	51.0
25.0%	quartile	-8.0		
10.0%		-17.4		
2.5%		-31.5		
0.5%		-33.0		
0.0%	minimum	-33.0		

Distributions Analyte_Method=Zinc-65 Other

Bias



Quantiles			Summary Statistics	
100.0%	maximum	5.1	Mean	5.1
99.5%		5.1	Std Dev	.
97.5%		5.1	Std Err Mean	.
90.0%		5.1	Upper 95% Mean	.
75.0%	quartile	5.1	Lower 95% Mean	.
50.0%	median	5.1	N	1.0
25.0%	quartile	5.1		
10.0%		5.1		
2.5%		5.1		
0.5%		5.1		
0.0%	minimum	5.1		