

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.

RdF44 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
ARGO01	Idaho National Laboratory	RdF
ARPL01	Analytical Support Operations - Radiochemical Processing Lab	RdF
ASUK99	AWE (Aldermaston)	RdF
CESL01	Lawrence Livermore National Laboratory - EMRL	RdF
CMRC01	Carlsbad Environmental Monitoring and Research Center	RdF
COPS99	Health Canada Radiation Protection Bureau	RdF
DEHS01	Department of Environmental Health & Safety	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
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
JLNN01	Jefferson Laboratory	RdF
LOCK03	Advanced Test Reactor (ATR) Complex Radioanalytical Laboratory	RdF
MART03	Radioactive Material Analysis Laboratory	RdF
MDPH01	MDPH-Radiation Control Program	RdF
MNDH01	Minnesota Department of Health, Public Health Lab. Division	RdF
MSDH01	Mississippi State Dept of Health	RdF
NARL01	National Analytical Radiation Environmental Laboratory	RdF
NARL02	USEPA - NAREL - MERL	RdF
NESI01	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
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
AREV01	Framatome - CMC	RdF
ARSL01	ARS Aleut Analytical, LLC	RdF
CSSL99	Chemistry Support Services	RdF
DINL99	Departamento Ingeniería Energética	RdF
HPAC99	PHE, CRCE Glasgow	RdF
IAEA20	IAEA Radiometrics Laboratory	RdF
LANL01	Los Alamos National Laboratory	RdF
LAWR01	LAWRENCE BERKELEY NATIONAL LABORATORY	RdF
MART01	Fluor B&W Ports Analytical Laboratory	RdF
SMER01	State of Michigan EGLE Radiological Lab	RdF
TELE01	Teledyne Brown Engineering - Environmental Services	RdF

Study Reference Values

MAPEP-21-RdF44

Radiological Reference Date: 02/01/2021

Analyte	Ref Value	Ref Unc
Inorganic	Units: (ug/sample)	
Uranium-235	0.0353	0.0007
Uranium-238	5.03	0.16
Uranium-Total	5.07	0.17

Analyte	Ref Value	Ref Unc
Radiological	Units: (Bq/sample)	
Americium-241	0.037	0.009
Cesium-134	2.14	0.05
Cobalt-57	0.686	0.015
Manganese-54	0.312	0.007
Plutonium-238	0.0228	0.0007
Plutonium-239/240	0.0453	0.0010
Strontium-90	0.749	0.017
Uranium-234	0.06	0.002
Uranium-238	0.063	0.002
Zinc-65	0.352	0.008

Sample Statistical Summary

MAPEP-21-RdF44

Radiological Reference Date: 02/01/2021

Analyte	T(1)	A(2)	Grand(3) Mean	Std Dev	Ref Value	Ref Unc	Acceptance Range
Inorganic							Units: (ug/sample)
Uranium-235	5	5			0.0353	0.0007	0.0247 - 0.0459
Uranium-238	5	5			5.03	0.16	3.52 - 6.54
Uranium-Total	7	7	5.09	0.31	5.07	0.17	3.55 - 6.59

Analyte	T(1)	A(2)	Grand(3) Mean	Std Dev	Ref Value	Ref Unc	Acceptance Range
Radiological							Units: (Bq/sample)
Americium-241	30	24	0.037	0.004	0.037	0.009	0.026 - 0.048
Cesium-134	52	51	1.93	0.21	2.14	0.05	1.50 - 2.78
Cesium-137	48	47					False Positive Test
Cobalt-57	52	51	0.647	0.065	0.686	0.015	0.480 - 0.892
Cobalt-60	47	46					False Positive Test
Manganese-54	51	49	0.316	0.035	0.312	0.007	0.218 - 0.406
Plutonium-238	24	22	0.0226	0.0024	0.0228	0.0007	0.0160 - 0.0296
Plutonium-239/240	24	23	0.0443	0.0046	0.0453	0.0010	0.0317 - 0.0589
Strontium-90	22	20	0.712	0.093	0.749	0.017	0.524 - 0.974
Uranium-234	25	21	0.06	0.01	0.06	0.002	0.04 - 0.08
Uranium-238	26	24	0.062	0.007	0.063	0.002	0.044 - 0.082
Zinc-65	51	45	0.353	0.052	0.352	0.008	0.246 - 0.458

- 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-21-RdF44

Inorganic

Analyte	A	W	RW	N
Uranium-Total	7			
Uranium-235	5			
Uranium-238	5			

Radiological

Analyte	A	W	RW	N
Americium-241	22	2		6
Cesium-134	44	7		1
Cesium-137	47			4
Cobalt-57	47	4		1
Cobalt-60	46			4
Manganese-54	45	4		2
Plutonium-238	21	1		2
Plutonium-239/240	22	1		1
Strontium-90	18	2		2
Uranium-234	20	1		4
Uranium-238	22	2		2
Zinc-65	38	7		6



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

Laboratory Results For MAPEP-21-RdF44

(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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.037				0.026 - 0.048		
Cesium-134	2.0313	2.14	A		-5.1	1.50 - 2.78	0.1092	A
Cesium-137	NR		N	(11)		False Positive Test		
Cobalt-57	1.6576	0.686	N		141.6	0.480 - 0.892	0.0659	A
Cobalt-60	NR		N	(11)		False Positive Test		
Manganese-54	0.3075	0.312	A		-1.4	0.218 - 0.406	0.0290	A
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	0.4514	0.352	W		28.2	0.246 - 0.458	0.0644	A

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44

(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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.037				0.026 - 0.048		
Cesium-134	2.18	2.14	A		1.9	1.50 - 2.78	0.09	A
Cesium-137	0.01		A			False Positive Test	0.01	
Cobalt-57	0.63	0.686	A		-8.2	0.480 - 0.892	0.08	A
Cobalt-60	0.01		A			False Positive Test	0.01	
Manganese-54	0.30	0.312	A		-3.8	0.218 - 0.406	0.01	A
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	0.33	0.352	A		-6.3	0.246 - 0.458	0.02	A

Radiological Reference Date: February 1, 2021

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%

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

Laboratory Results For MAPEP-21-RdF44

(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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0300	0.037	A		-18.9	0.026 - 0.048	0.0024	A
Cesium-134	1.880	2.14	A		-12.2	1.50 - 2.78	0.053	A
Cesium-137	-0.031		A			False Positive Test	0.019	
Cobalt-57	0.544	0.686	W		-20.7	0.480 - 0.892	0.023	A
Cobalt-60	0.007		A			False Positive Test	0.020	
Manganese-54	0.255	0.312	A		-18.3	0.218 - 0.406	0.025	A
Plutonium-238	0.0199	0.0228	A		-12.7	0.0160 - 0.0296	0.0019	A
Plutonium-239/240	0.0404	0.0453	A		-10.8	0.0317 - 0.0589	0.0028	A
Strontium-90	0.736	0.749	A		-1.7	0.524 - 0.974	0.029	A
Uranium-234	0.0550	0.06	A		-8.3	0.04 - 0.08	0.0044	A
Uranium-238	0.0525	0.063	A		-16.7	0.044 - 0.082	0.0043	A
Zinc-65	0.262	0.352	W		-25.6	0.246 - 0.458	0.036	A

Radiological Reference Date: February 1, 2021

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

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0277	0.037	W		-25.1	0.026 - 0.048	0.0032	A
Cesium-134	2.30	2.14	A		7.5	1.50 - 2.78	0.31	A
Cesium-137	0.035		A			False Positive Test	0.034	
Cobalt-57	0.615	0.686	A		-10.4	0.480 - 0.892	0.019	A
Cobalt-60	0.048		A			False Positive Test	0.019	
Manganese-54	0.375	0.312	W		20.2	0.218 - 0.406	0.041	A
Plutonium-238	0.0248	0.0228	A		8.8	0.0160 - 0.0296	0.0026	A
Plutonium-239/240	0.0395	0.0453	A		-12.8	0.0317 - 0.0589	0.0033	A
Strontium-90	0.606	0.749	A		-19.1	0.524 - 0.974	0.046	A
Uranium-234	0.0545	0.06	A		-9.2	0.04 - 0.08	0.0034	A
Uranium-238	0.0529	0.063	A		-16.0	0.044 - 0.082	0.0033	A
Zinc-65	0.336	0.352	A		-4.5	0.246 - 0.458	0.055	W

Radiological Reference Date: February 1, 2021

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

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.034	0.037	A		-8.1	0.026 - 0.048	0.004	A
Cesium-134	1.79	2.14	A		-16.4	1.50 - 2.78	0.10	A
Cesium-137	0.009		A			False Positive Test	0.012	
Cobalt-57	0.645	0.686	A		-6.0	0.480 - 0.892	0.027	A
Cobalt-60	0.021		A			False Positive Test	0.010	
Manganese-54	0.322	0.312	A		3.2	0.218 - 0.406	0.030	A
Plutonium-238	0.026	0.0228	A		14.0	0.0160 - 0.0296	0.005	W
Plutonium-239/240	0.047	0.0453	A		3.8	0.0317 - 0.0589	0.007	A
Strontium-90	0.74	0.749	A		-1.2	0.524 - 0.974	0.022	A
Uranium-234	0.061	0.06	A		1.7	0.04 - 0.08	0.005	A
Uranium-238	0.060	0.063	A		-4.8	0.044 - 0.082	0.005	A
Zinc-65	0.378	0.352	A		7.4	0.246 - 0.458	0.05	A

Radiological Reference Date: February 1, 2021

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:

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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

(28) = Not Reporting Previously Reported Analyte

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

Laboratory Results For MAPEP-21-RdF44
 (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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.035	0.037	A		-5.4	0.026 - 0.048	0.004	A
Cesium-134	1.842	2.14	A		-13.9	1.50 - 2.78	0.120	A
Cesium-137	0.136		A			False Positive Test	0.136	
Cobalt-57	0.615	0.686	A		-10.4	0.480 - 0.892	0.051	A
Cobalt-60	0.142		A			False Positive Test	0.142	
Manganese-54	0.274	0.312	A		-12.2	0.218 - 0.406	0.048	W
Plutonium-238	0.023	0.0228	A		0.9	0.0160 - 0.0296	0.003	A
Plutonium-239/240	0.045	0.0453	A		-0.7	0.0317 - 0.0589	0.005	A
Strontium-90	0.761	0.749	A		1.6	0.524 - 0.974	0.090	A
Uranium-234	0.065	0.06	A		8.3	0.04 - 0.08	0.006	A
Uranium-238	0.063	0.063	A		0.0	0.044 - 0.082	0.006	A
Zinc-65	0.347	0.352	A		-1.4	0.246 - 0.458	0.094	W

Radiological Reference Date: February 1, 2021

Result Flags:

A = Result acceptable Bias <=20%

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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:

(1) = False Positive

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

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

Laboratory Results For MAPEP-21-RdF44

(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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.037				0.026 - 0.048		
Cesium-134	2.21	2.14	A		3.3	1.50 - 2.78	0.10	A
Cesium-137	0.0347			A		False Positive Test	0.0347	
Cobalt-57	0.705	0.686	A		2.8	0.480 - 0.892	0.032	A
Cobalt-60	0.0375			A		False Positive Test	0.0375	
Manganese-54	0.293	0.312	A		-6.1	0.218 - 0.406	0.031	A
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	0.261	0.352	W		-25.9	0.246 - 0.458	0.044	W

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44

(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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.037				0.026 - 0.048		
Cesium-134	1.821	2.14	A		-14.9	1.50 - 2.78	0.076	A
Cesium-137	0.003		A			False Positive Test	0.020	
Cobalt-57	0.590	0.686	A		-14.0	0.480 - 0.892	0.023	A
Cobalt-60	0.008		A			False Positive Test	0.024	
Manganese-54	0.279	0.312	A		-10.6	0.218 - 0.406	.012	A
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	0.652	0.749	A		-13.0	0.524 - 0.974	0.016	A
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	0.307	0.352	A		-12.8	0.246 - 0.458	0.024	A

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44

(ASUK99) AWE (Aldermaston)

A38.1 AWE,

Reading, Berkshire RG7 4PR

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.037				0.026 - 0.048		
Cesium-134	NR	2.14				1.50 - 2.78		
Cesium-137	NR					False Positive Test		
Cobalt-57	NR	0.686				0.480 - 0.892		
Cobalt-60	NR					False Positive Test		
Manganese-54	NR	0.312				0.218 - 0.406		
Plutonium-238	0.0204	0.0228	A		-10.5	0.0160 - 0.0296	0.0015	A
Plutonium-239/240	0.0399	0.0453	A		-11.9	0.0317 - 0.0589	0.002	A
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	0.0466	0.06	W		-22.3	0.04 - 0.08	0.0017	A
Uranium-238	0.0486	0.063	W		-22.9	0.044 - 0.082	0.0017	A
Zinc-65	NR	0.352				0.246 - 0.458		

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.037				0.026 - 0.048		
Cesium-134	1.90E+00	2.14	A		-11.2	1.50 - 2.78	8.93E-02	A
Cesium-137	-1.47E-02			A		False Positive Test	4.52E-02	
Cobalt-57	6.72E-01	0.686	A		-2.0	0.480 - 0.892	4.19E-02	A
Cobalt-60	-7.58E-03			A		False Positive Test	5.13E-02	
Manganese-54	3.17E-01	0.312	A		1.6	0.218 - 0.406	4.17E-02	A
Plutonium-238	2.13E-02	0.0228	A		-6.6	0.0160 - 0.0296	6.87E-04	A
Plutonium-239/240	4.23E-02	0.0453	A		-6.6	0.0317 - 0.0589	9.66E-04	A
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	3.41E-01	0.352	A		-3.1	0.246 - 0.458	7.27E-02	W

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	3.84E-02	0.037	A		3.8	0.026 - 0.048	3.02E-03	A
Cesium-134	1.86E+00	2.14	A		-13.1	1.50 - 2.78	3.94E-02	A
Cesium-137	-5.96E-03		A			False Positive Test	2.81E-02	
Cobalt-57	6.97E-01	0.686	A		1.6	0.480 - 0.892	2.96E-02	A
Cobalt-60	1.16E-02		A			False Positive Test	4.85E-02	
Manganese-54	3.20E-01	0.312	A		2.6	0.218 - 0.406	1.55E-01	N
Plutonium-238	2.39E-02	0.0228	A		4.8	0.0160 - 0.0296	2.07E-03	A
Plutonium-239/240	4.53E-02	0.0453	A		0.0	0.0317 - 0.0589	3.57E-03	A
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	6.09E-02	0.06	A		1.5	0.04 - 0.08	5.03E-03	A
Uranium-238	6.01E-02	0.063	A		-4.6	0.044 - 0.082	4.97E-03	A
Zinc-65	4.15E-01	0.352	A		17.9	0.246 - 0.458	6.93E-02	W

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (COPS99) Health Canada Radiation Protection Bureau
 2720 Riverside drive
 Ottawa, Ontario K1A0K9

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.01897	0.037	N		-48.7	0.026 - 0.048	0.00544	W
Cesium-134	2.159	2.14	A		0.9	1.50 - 2.78	0.051	A
Cesium-137	-0.0055		A			False Positive Test	0.0062	
Cobalt-57	0.6867	0.686	A		0.1	0.480 - 0.892	0.0555	A
Cobalt-60	0.0057		A			False Positive Test	0.0053	
Manganese-54	0.3255	0.312	A		4.3	0.218 - 0.406	0.0213	A
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	0.3215	0.352	A		-8.7	0.246 - 0.458	0.0229	A

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.037				0.026 - 0.048		
Cesium-134	2.20	2.14	A		2.8	1.50 - 2.78	0.04	N
Cesium-137	0.04		A			False Positive Test	0.02	
Cobalt-57	0.50	0.686	W		-27.1	0.480 - 0.892	0.02	A
Cobalt-60	0.05		A			False Positive Test	0.06	
Manganese-54	0.34	0.312	A		9.0	0.218 - 0.406	0.07	W
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	0.36	0.352	A		2.3	0.246 - 0.458	0.13	N

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (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	0.0338	0.0353	A		-4.2	0.0247 - 0.0459	0.0021	A
Uranium-238	5.49	5.03	A		9.1	3.52 - 6.54	0.34	A
Uranium-Total	5.52	5.07	A		8.9	3.55 - 6.59	0.34	A

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0385	0.037	A		4.1	0.026 - 0.048	0.0055	A
Cesium-134	2.09	2.14	A		-2.3	1.50 - 2.78	0.08	A
Cesium-137	0.0189		A			False Positive Test	0.0091	
Cobalt-57	0.710	0.686	A		3.5	0.480 - 0.892	0.019	A
Cobalt-60	0.0126		A			False Positive Test	0.0094	
Manganese-54	0.281	0.312	A		-9.9	0.218 - 0.406	0.028	A
Plutonium-238	0.0281	0.0228	W		23.2	0.0160 - 0.0296	0.0045	W
Plutonium-239/240	0.0488	0.0453	A		7.7	0.0317 - 0.0589	0.0042	A
Strontium-90	0.625	0.749	A		-16.6	0.524 - 0.974	0.066	A
Uranium-234	0.0659	0.06	A		9.8	0.04 - 0.08	0.0068	A
Uranium-238	0.0755	0.063	A		19.8	0.044 - 0.082	0.0072	A
Zinc-65	0.266	0.352	W		-24.4	0.246 - 0.458	0.032	A

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0417	0.037	A		12.7	0.026 - 0.048	0.0017	A
Cesium-134	2.288	2.14	A		6.9	1.50 - 2.78	0.086	A
Cesium-137	0.0036		A			False Positive Test	0.004	
Cobalt-57	0.741	0.686	A		8.0	0.480 - 0.892	0.025	A
Cobalt-60	0.003		A			False Positive Test	0.004	
Manganese-54	0.355	0.312	A		13.8	0.218 - 0.406	0.013	A
Plutonium-238	0.0222	0.0228	A		-2.6	0.0160 - 0.0296	0.0009	A
Plutonium-239/240	0.0437	0.0453	A		-3.5	0.0317 - 0.0589	0.0017	A
Strontium-90	0.727	0.749	A		-2.9	0.524 - 0.974	0.013	N
Uranium-234	0.0595	0.06	A		-0.8	0.04 - 0.08	0.0025	A
Uranium-238	0.0601	0.063	A		-4.6	0.044 - 0.082	0.0025	A
Zinc-65	0.407	0.352	A		15.6	0.246 - 0.458	0.016	A

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44

(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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	-.256	0.037	N		-791.9	0.026 - 0.048	.19	N
Cesium-134	1.96544	2.14	A		-8.2	1.50 - 2.78	.127428	A
Cesium-137	.013		A			False Positive Test	.009	
Cobalt-57	.8103	0.686	A		18.1	0.480 - 0.892	.138972	W
Cobalt-60	.03		A			False Positive Test	.021	
Manganese-54	.330188	0.312	A		5.8	0.218 - 0.406	.052614	W
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	.412994	0.352	A		17.3	0.246 - 0.458	.0777	W

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44

(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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.043	0.037	A		16.2	0.026 - 0.048	0.054	N
Cesium-134	1.841	2.14	A		-14.0	1.50 - 2.78	0.035	N
Cesium-137	0.004		A			False Positive Test	0.029	
Cobalt-57	0.620	0.686	A		-9.6	0.480 - 0.892	0.018	A
Cobalt-60	0.018		A			False Positive Test	0.024	
Manganese-54	0.300	0.312	A		-3.8	0.218 - 0.406	0.015	A
Plutonium-238	0.02458	0.0228	A		7.8	0.0160 - 0.0296	0.00203	A
Plutonium-239/240	0.04295	0.0453	A		-5.2	0.0317 - 0.0589	0.00271	A
Strontium-90	0.769	0.749	A		2.7	0.524 - 0.974	0.054	A
Uranium-234	0.057858	0.06	A		-3.6	0.04 - 0.08	0.00367	A
Uranium-238	0.062	0.063	A		-1.6	0.044 - 0.082	0.0038	A
Zinc-65	0.358	0.352	A		1.7	0.246 - 0.458	0.028	A

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44

(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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.038	0.037	A		2.7	0.026 - 0.048	0.043	N
Cesium-134	1.759	2.14	A		-17.8	1.50 - 2.78	0.03	N
Cesium-137	0.016		A			False Positive Test	0.036	
Cobalt-57	0.594	0.686	A		-13.4	0.480 - 0.892	0.015	A
Cobalt-60	0.013		A			False Positive Test	0.052	
Manganese-54	0.279	0.312	A		-10.6	0.218 - 0.406	0.02	A
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	0.071	0.063	A		12.7	0.044 - 0.082	0.143	N
Zinc-65	0.376	0.352	A		6.8	0.246 - 0.458	0.043	A

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44

(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	0.0366	0.0353	A		3.7	0.0247 - 0.0459	0.00096	A
Uranium-238	5.19	5.03	A		3.2	3.52 - 6.54	0.0740	N
Uranium-Total	5.22	5.07	A		3.0	3.55 - 6.59	0.0740	N

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0385	0.037	A		4.1	0.026 - 0.048	0.00212	A
Cesium-134	2.12	2.14	A		-0.9	1.50 - 2.78	0.120	A
Cesium-137	-0.0168		A			False Positive Test	0.0248	
Cobalt-57	0.74	0.686	A		7.9	0.480 - 0.892	0.0450	A
Cobalt-60	0.0325		A			False Positive Test	0.0309	
Manganese-54	0.368	0.312	A		17.9	0.218 - 0.406	0.0443	A
Plutonium-238	0.0207	0.0228	A		-9.2	0.0160 - 0.0296	0.00148	A
Plutonium-239/240	0.0417	0.0453	A		-7.9	0.0317 - 0.0589	0.0024	A
Strontium-90	0.890	0.749	A		18.8	0.524 - 0.974	0.127	A
Uranium-234	0.063	0.06	A		5.0	0.04 - 0.08	0.00372	A
Uranium-238	0.0617	0.063	A		-2.1	0.044 - 0.082	0.00364	A
Zinc-65	0.457	0.352	W		29.8	0.246 - 0.458	0.0749	W

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.037				0.026 - 0.048		
Cesium-134	2.03	2.14	A		-5.1	1.50 - 2.78	0.175	A
Cesium-137	-0.0004		A			False Positive Test	0.102	
Cobalt-57	0.640	0.686	A		-6.7	0.480 - 0.892	0.102	W
Cobalt-60	-0.014		A			False Positive Test	0.095	
Manganese-54	0.335	0.312	A		7.4	0.218 - 0.406	0.094	W
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	0.354	0.352	A		0.6	0.246 - 0.458	0.191	N

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44

(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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.037				0.026 - 0.048		
Cesium-134	1.840	2.14	A		-14.0	1.50 - 2.78	0.1591	A
Cesium-137	-0.08337		A			False Positive Test	0.1441	
Cobalt-57	0.6048	0.686	A		-11.8	0.480 - 0.892	0.09575	W
Cobalt-60	-0.1960		A			False Positive Test	0.3185	
Manganese-54	0.3260	0.312	A		4.5	0.218 - 0.406	0.1290	N
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	0.2959	0.352	A		-15.9	0.246 - 0.458	0.3988	N

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.01	0.037	N		-73.0	0.026 - 0.048	0.07	N
Cesium-134	1.97	2.14	A		-7.9	1.50 - 2.78	0.10	A
Cesium-137	-0.02		A			False Positive Test	0.13	
Cobalt-57	0.71	0.686	A		3.5	0.480 - 0.892	0.05	A
Cobalt-60	0.04		A			False Positive Test	0.13	
Manganese-54	0.48	0.312	N		53.8	0.218 - 0.406	0.08	W
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	13.89	0.06	N		23050.0	0.04 - 0.08	22.02	N
Uranium-238	-0.52	0.063	N		-925.4	0.044 - 0.082	0.74	N
Zinc-65	0.50	0.352	N		42.0	0.246 - 0.458	0.20	N

Radiological Reference Date: February 1, 2021

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

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.038	0.037	A		2.7	0.026 - 0.048	0.004	A
Cesium-134	2.09	2.14	A		-2.3	1.50 - 2.78	0.08	A
Cesium-137	0.09		A			False Positive Test	0.07	
Cobalt-57	0.69	0.686	A		0.6	0.480 - 0.892	0.04	A
Cobalt-60	0.01		A			False Positive Test	0.07	
Manganese-54	0.29	0.312	A		-7.1	0.218 - 0.406	0.04	A
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	0.31	0.352	A		-11.9	0.246 - 0.458	0.05	W

Radiological Reference Date: February 1, 2021

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
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44

(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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.036	0.037	A		-2.7	0.026 - 0.048	0.002	A
Cesium-134	2.0	2.14	A		-6.5	1.50 - 2.78	0.1	A
Cesium-137	0.02		A			False Positive Test	0.04	
Cobalt-57	0.63	0.686	A		-8.2	0.480 - 0.892	0.03	A
Cobalt-60	0.01		A			False Positive Test	0.04	
Manganese-54	0.30	0.312	A		-3.8	0.218 - 0.406	0.05	W
Plutonium-238	0.023	0.0228	A		0.9	0.0160 - 0.0296	0.002	A
Plutonium-239/240	0.042	0.0453	A		-7.3	0.0317 - 0.0589	0.002	A
Strontium-90	0.71	0.749	A		-5.2	0.524 - 0.974	0.06	A
Uranium-234	0.054	0.06	A		-10.0	0.04 - 0.08	0.003	A
Uranium-238	0.055	0.063	A		-12.7	0.044 - 0.082	0.003	A
Zinc-65	0.25	0.352	W		-29.0	0.246 - 0.458	0.10	N

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44

(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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.037				0.026 - 0.048		
Cesium-134	1.96	2.14	A		-8.4	1.50 - 2.78	0.10	A
Cesium-137	NR		N	(11)		False Positive Test		
Cobalt-57	0.68	0.686	A		-0.9	0.480 - 0.892	0.05	A
Cobalt-60	NR		N	(11)		False Positive Test		
Manganese-54	0.31	0.312	A		-0.6	0.218 - 0.406	0.05	W
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	0.37	0.352	A		5.1	0.246 - 0.458	0.08	W

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44

(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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.03509	0.037	A		-5.2	0.026 - 0.048	0.009812	W
Cesium-134	1.721	2.14	A		-19.6	1.50 - 2.78	0.03364	N
Cesium-137	0.007890		A			False Positive Test	0.01194	
Cobalt-57	0.5982	0.686	A		-12.8	0.480 - 0.892	0.01870	A
Cobalt-60	0.009607		A			False Positive Test	0.01548	
Manganese-54	0.3126	0.312	A		0.2	0.218 - 0.406	0.02754	A
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	0.3586	0.352	A		1.9	0.246 - 0.458	0.05563	W

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44

(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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.037				0.026 - 0.048		
Cesium-134	1.890	2.14	A		-11.7	1.50 - 2.78	0.104	A
Cesium-137	0.002		A			False Positive Test	0.024	
Cobalt-57	0.673	0.686	A		-1.9	0.480 - 0.892	0.038	A
Cobalt-60	0.007		A			False Positive Test	0.019	
Manganese-54	0.319	0.312	A		2.2	0.218 - 0.406	0.032	A
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	0.419	0.352	A		19.0	0.246 - 0.458	0.06	A

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.034	0.037	A		-8.1	0.026 - 0.048	0.004	A
Cesium-134	1.668	2.14	W		-22.1	1.50 - 2.78	0.029	N
Cesium-137	0.023		A			False Positive Test	0.023	
Cobalt-57	0.670	0.686	A		-2.3	0.480 - 0.892	0.018	A
Cobalt-60	0.026		A			False Positive Test	0.025	
Manganese-54	0.316	0.312	A		1.3	0.218 - 0.406	0.023	A
Plutonium-238	0.021	0.0228	A		-7.9	0.0160 - 0.0296	0.003	A
Plutonium-239/240	0.039	0.0453	A		-13.9	0.0317 - 0.0589	0.004	A
Strontium-90	0.618	0.749	A		-17.5	0.524 - 0.974	0.035	A
Uranium-234	0.063	0.06	A		5.0	0.04 - 0.08	0.005	A
Uranium-238	0.067	0.063	A		6.3	0.044 - 0.082	0.005	A
Zinc-65	0.348	0.352	A		-1.1	0.246 - 0.458	0.047	A

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.037				0.026 - 0.048		
Cesium-134	1.88	2.14	A		-12.2	1.50 - 2.78	0.06	A
Cesium-137	NR		N	(11)		False Positive Test		
Cobalt-57	0.63	0.686	A		-8.2	0.480 - 0.892	0.04	A
Cobalt-60	NR		N	(11)		False Positive Test		
Manganese-54	0.29	0.312	A		-7.1	0.218 - 0.406	0.04	A
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	0.32	0.352	A		-9.1	0.246 - 0.458	0.05	W

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44

(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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	-0.00486	0.037	N		-113.1	0.026 - 0.048	0.125	N
Cesium-134	1.81	2.14	A		-15.4	1.50 - 2.78	0.0468	A
Cesium-137	0.00806		A			False Positive Test	0.0315	
Cobalt-57	.810	0.686	A		18.1	0.480 - 0.892	0.0278	A
Cobalt-60	0.00479		A			False Positive Test	0.0283	
Manganese-54	0.385	0.312	W		23.4	0.218 - 0.406	0.0391	A
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	0.409	0.352	A		16.2	0.246 - 0.458	0.0722	W

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (MSDH01) Mississippi State Dept of Health
 Radiological Environmental Laboratory
 Jackson, MS 39216

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.037				0.026 - 0.048		
Cesium-134	1.67	2.14	W		-22.0	1.50 - 2.78	.05	A
Cesium-137	.14		A			False Positive Test	.05	
Cobalt-57	.6	0.686	A		-12.5	0.480 - 0.892	.03	A
Cobalt-60	NR					False Positive Test		
Manganese-54	0.4	0.312	W		28.2	0.218 - 0.406	.1	W
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	.67	0.352	N		90.3	0.246 - 0.458	.19	W

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44

(NARL01) National Analytical Radiation Environmental Laboratory
 540 S. Morris Ave.
 Montgomery, AL 36115-2601

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0384	0.037	A		3.8	0.026 - 0.048	0.00468	A
Cesium-134	2.02	2.14	A		-5.6	1.50 - 2.78	0.113	A
Cesium-137	0.00341		A			False Positive Test	0.0154	
Cobalt-57	0.611	0.686	A		-10.9	0.480 - 0.892	0.0354	A
Cobalt-60	-0.0140		A			False Positive Test	0.0169	
Manganese-54	0.355	0.312	A		13.8	0.218 - 0.406	0.0289	A
Plutonium-238	0.0225	0.0228	A		-1.3	0.0160 - 0.0296	0.00320	A
Plutonium-239/240	0.0365	0.0453	A		-19.4	0.0317 - 0.0589	0.00427	A
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	0.0633	0.06	A		5.5	0.04 - 0.08	0.00671	A
Uranium-238	0.0650	0.063	A		3.2	0.044 - 0.082	0.00683	A
Zinc-65	0.442	0.352	W		25.6	0.246 - 0.458	0.0425	A

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44

(NARL02) USEPA - NAREL - MERL

540 S Morris Ave

Montgomery, AL 36115

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.037				0.026 - 0.048		
Cesium-134	2.14	2.14	A		0.0	1.50 - 2.78	0.0420	N
Cesium-137	-0.00241		A			False Positive Test	0.00960	
Cobalt-57	0.647	0.686	A		-5.7	0.480 - 0.892	0.0150	A
Cobalt-60	-0.000589		A			False Positive Test	0.0100	
Manganese-54	0.315	0.312	A		1.0	0.218 - 0.406	0.0150	A
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	0.349	0.352	A		-0.9	0.246 - 0.458	0.0240	A

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.034	0.037	A		-8.1	0.026 - 0.048	0.003	A
Cesium-134	1.88	2.14	A		-12.2	1.50 - 2.78	0.087	A
Cesium-137	0.033		A			False Positive Test	0.065	
Cobalt-57	0.670	0.686	A		-2.3	0.480 - 0.892	0.038	A
Cobalt-60	0.061		A			False Positive Test	0.075	
Manganese-54	0.29	0.312	A		-7.1	0.218 - 0.406	0.057	W
Plutonium-238	0.027	0.0228	A		18.4	0.0160 - 0.0296	0.004	A
Plutonium-239/240	0.044	0.0453	A		-2.9	0.0317 - 0.0589	0.004	A
Strontium-90	0.872	0.749	A		16.4	0.524 - 0.974	0.068	A
Uranium-234	0.062	0.06	A		3.3	0.04 - 0.08	0.004	A
Uranium-238	0.062	0.063	A		-1.6	0.044 - 0.082	0.005	A
Zinc-65	0.147	0.352	N		-58.2	0.246 - 0.458	0.071	N

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.037				0.026 - 0.048		
Cesium-134	1.96	2.14	A		-8.4	1.50 - 2.78	0.13	A
Cesium-137	-0.024		A			False Positive Test	0.026	
Cobalt-57	0.586	0.686	A		-14.6	0.480 - 0.892	0.069	A
Cobalt-60	-0.024		A			False Positive Test	0.036	
Manganese-54	0.177	0.312	N		-43.3	0.218 - 0.406	0.033	W
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	0.296	0.352	A		-15.9	0.246 - 0.458	0.061	W

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.034	0.037	A		-8.1	0.026 - 0.048	0.003	A
Cesium-134	1.54	2.14	W		-28.0	1.50 - 2.78	0.05	A
Cesium-137	0.085		A			False Positive Test	0.423	
Cobalt-57	0.583	0.686	A		-15.0	0.480 - 0.892	0.026	A
Cobalt-60	0.1		A			False Positive Test	0.52	
Manganese-54	0.28	0.312	A		-10.3	0.218 - 0.406	0.03	A
Plutonium-238	0.021	0.0228	A		-7.9	0.0160 - 0.0296	0.002	A
Plutonium-239/240	0.045	0.0453	A		-0.7	0.0317 - 0.0589	0.003	A
Strontium-90	0.23	0.749	N		-69.3	0.524 - 0.974	0.07	N
Uranium-234	0.071	0.06	A		18.3	0.04 - 0.08	0.004	A
Uranium-238	0.059	0.063	A		-6.3	0.044 - 0.082	0.003	A
Zinc-65	0.38	0.352	A		8.0	0.246 - 0.458	0.06	W

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.037				0.026 - 0.048		
Cesium-134	1.86	2.14	A		-13.1	1.50 - 2.78	0.0634	A
Cesium-137	0.000619		A			False Positive Test	0.00722	
Cobalt-57	0.623	0.686	A		-9.2	0.480 - 0.892	0.0465	A
Cobalt-60	0.00977		A			False Positive Test	0.0035	
Manganese-54	0.27	0.312	A		-13.5	0.218 - 0.406	0.0214	A
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	0.282	0.352	A		-19.9	0.246 - 0.458	0.0306	A

Radiological Reference Date: February 1, 2021

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
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44

(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	0.034	0.0353	A		-3.7	0.0247 - 0.0459	0.001	A
Uranium-238	4.81	5.03	A		-4.4	3.52 - 6.54	0.12	A
Uranium-Total	4.85	5.07	A		-4.3	3.55 - 6.59	0.12	A

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.036	0.037	A		-2.7	0.026 - 0.048	0.003	A
Cesium-134	2.24	2.14	A		4.7	1.50 - 2.78	0.11	A
Cesium-137	0.039		A			False Positive Test	0.038	
Cobalt-57	0.717	0.686	A		4.5	0.480 - 0.892	0.029	A
Cobalt-60	-0.013		A			False Positive Test	0.041	
Manganese-54	0.346	0.312	A		10.9	0.218 - 0.406	0.044	A
Plutonium-238	0.023	0.0228	A		0.9	0.0160 - 0.0296	0.002	A
Plutonium-239/240	0.043	0.0453	A		-5.1	0.0317 - 0.0589	0.003	A
Strontium-90	0.692	0.749	A		-7.6	0.524 - 0.974	0.018	A
Uranium-234	0.057	0.06	A		-5.0	0.04 - 0.08	0.003	A
Uranium-238	0.062	0.063	A		-1.6	0.044 - 0.082	0.004	A
Zinc-65	0.367	0.352	A		4.3	0.246 - 0.458	0.054	A

Radiological Reference Date: February 1, 2021

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
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	4.72	5.07	A		-6.9	3.55 - 6.59	.001	N

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.023	0.037	N		-37.8	0.026 - 0.048	0.009	N
Cesium-134	1.35	2.14	N		-36.9	1.50 - 2.78	0.093	A
Cesium-137	-0.001		A			False Positive Test	0.028	
Cobalt-57	0.57	0.686	A		-16.9	0.480 - 0.892	0.048	A
Cobalt-60	0.005		A			False Positive Test	0.023	
Manganese-54	0.343	0.312	A		9.9	0.218 - 0.406	0.051	A
Plutonium-238	0.010	0.0228	N		-56.1	0.0160 - 0.0296	0.007	N
Plutonium-239/240	0.022	0.0453	N		-51.4	0.0317 - 0.0589	0.008	N
Strontium-90	0.681	0.749	A		-9.1	0.524 - 0.974	0.039	A
Uranium-234	0.050	0.06	A		-16.7	0.04 - 0.08	0.026	N
Uranium-238	0.057	0.063	A		-9.5	0.044 - 0.082	0.024	N
Zinc-65	0.290	0.352	A		-17.6	0.246 - 0.458	0.101	N

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.037				0.026 - 0.048		
Cesium-134	1.75	2.14	A		-18.2	1.50 - 2.78	0.054	A
Cesium-137	0.026		A			False Positive Test	0.044	
Cobalt-57	0.536	0.686	W		-21.9	0.480 - 0.892	0.0483	A
Cobalt-60	0.0181		A			False Positive Test	0.0459	
Manganese-54	0.263	0.312	A		-15.7	0.218 - 0.406	0.0201	A
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	0.245	0.352	N		-30.4	0.246 - 0.458	0.031	A

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0350	0.037	A		-5.4	0.026 - 0.048	0.0063	W
Cesium-134	2.22	2.14	A		3.7	1.50 - 2.78	0.079	A
Cesium-137	0.034		A			False Positive Test	0.024	
Cobalt-57	0.66	0.686	A		-3.8	0.480 - 0.892	0.043	A
Cobalt-60	-0.018		A			False Positive Test	0.024	
Manganese-54	0.38	0.312	W		21.8	0.218 - 0.406	0.048	A
Plutonium-238	0.0232	0.0228	A		1.8	0.0160 - 0.0296	0.0040	W
Plutonium-239/240	0.045	0.0453	A		-0.7	0.0317 - 0.0589	0.0071	W
Strontium-90	0.642	0.749	A		-14.3	0.524 - 0.974	0.050	A
Uranium-234	0.0649	0.06	A		8.2	0.04 - 0.08	0.0091	A
Uranium-238	0.0645	0.063	A		2.4	0.044 - 0.082	0.0087	A
Zinc-65	0.32	0.352	A		-9.1	0.246 - 0.458	0.075	W

Radiological Reference Date: February 1, 2021

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

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (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	0.0368	0.0353	A		4.2	0.0247 - 0.0459	0.00278	A
Uranium-238	5.14	5.03	A		2.2	3.52 - 6.54	0.347	A
Uranium-Total	5.18	5.07	A		2.2	3.55 - 6.59	0.350	A

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0389	0.037	A		5.1	0.026 - 0.048	0.00526	A
Cesium-134	1.59	2.14	W		-25.7	1.50 - 2.78	0.0696	A
Cesium-137	-0.0136		A			False Positive Test	0.0295	
Cobalt-57	0.652	0.686	A		-5.0	0.480 - 0.892	0.0273	A
Cobalt-60	0.0251		A			False Positive Test	0.0279	
Manganese-54	0.297	0.312	A		-4.8	0.218 - 0.406	0.0374	A
Plutonium-238	0.0186	0.0228	A		-18.4	0.0160 - 0.0296	0.00361	W
Plutonium-239/240	0.0570	0.0453	W		25.8	0.0317 - 0.0589	0.00663	A
Strontium-90	0.570	0.749	W		-23.9	0.524 - 0.974	0.0670	A
Uranium-234	0.0811	0.06	N		35.2	0.04 - 0.08	0.00822	A
Uranium-238	0.0611	0.063	A		-3.0	0.044 - 0.082	0.00678	A
Zinc-65	0.367	0.352	A		4.3	0.246 - 0.458	0.153	N

Radiological Reference Date: February 1, 2021

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

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44

(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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.037				0.026 - 0.048		
Cesium-134	1.82E+00	2.14	A		-15.0	1.50 - 2.78	5.75E-02	A
Cesium-137	4.14E-02			A		False Positive Test	2.12E-02	
Cobalt-57	5.94E-01	0.686	A		-13.4	0.480 - 0.892	2.54E-02	A
Cobalt-60	-5.29E-02			A		False Positive Test	2.43E-02	
Manganese-54	2.52E-01	0.312	A		-19.2	0.218 - 0.406	2.44E-02	A
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	3.32E-01	0.352	A		-5.7	0.246 - 0.458	4.28E-02	A

Radiological Reference Date: February 1, 2021

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

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0358	0.037	A		-3.2	0.026 - 0.048	0.0055	W
Cesium-134	1.512	2.14	W		-29.3	1.50 - 2.78	0.030	N
Cesium-137	0.001		A			False Positive Test	0.012	
Cobalt-57	0.617	0.686	A		-10.1	0.480 - 0.892	0.018	A
Cobalt-60	0.044		A			False Positive Test	0.015	
Manganese-54	0.325	0.312	A		4.2	0.218 - 0.406	0.016	A
Plutonium-238	0.0209	0.0228	A		-8.3	0.0160 - 0.0296	0.0047	W
Plutonium-239/240	0.0491	0.0453	A		8.4	0.0317 - 0.0589	0.0078	W
Strontium-90	0.666	0.749	A		-11.1	0.524 - 0.974	0.025	A
Uranium-234	0.0573	0.06	A		-4.5	0.04 - 0.08	0.0073	A
Uranium-238	0.0590	0.063	A		-6.3	0.044 - 0.082	0.0074	A
Zinc-65	0.367	0.352	A		4.3	0.246 - 0.458	0.036	A

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.037				0.026 - 0.048		
Cesium-134	1.54	2.14	W		-28.0	1.50 - 2.78	0.06	A
Cesium-137	-0.011		A			False Positive Test	0.020	
Cobalt-57	0.636	0.686	A		-7.3	0.480 - 0.892	0.042	A
Cobalt-60	-0.64		N	(29)		False Positive Test	0.02	
Manganese-54	0.312	0.312	A		0.0	0.218 - 0.406	0.058	W
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	0.41	0.352	A		16.5	0.246 - 0.458	0.07	W

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (TMAO01) EBERLINE SERVICES OAK RIDGE LABORATORY
 601 A 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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.037				0.026 - 0.048		
Cesium-134	2.001	2.14	A		-6.5	1.50 - 2.78	0.181	A
Cesium-137	0.002		A			False Positive Test	0.090	
Cobalt-57	0.530	0.686	W		-22.7	0.480 - 0.892	0.117	W
Cobalt-60	0.0003		A			False Positive Test	0.056	
Manganese-54	0.366	0.312	A		17.3	0.218 - 0.406	0.156	N
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	0.899	0.749	W		20.0	0.524 - 0.974	0.048	A
Uranium-234	0.089	0.06	N		48.3	0.04 - 0.08	0.016	W
Uranium-238	0.080	0.063	W		27.0	0.044 - 0.082	0.015	W
Zinc-65	0.034	0.352	N		-90.3	0.246 - 0.458	0.277	N

Radiological Reference Date: February 1, 2021

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

(28) = Not Reporting Previously Reported Analyte

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

Laboratory Results For MAPEP-21-RdF44

(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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.037				0.026 - 0.048		
Cesium-134	1.963	2.14	A		-8.3	1.50 - 2.78	0.3	W
Cesium-137	NR					False Positive Test		
Cobalt-57	0.618	0.686	A		-9.9	0.480 - 0.892	0.206	N
Cobalt-60	NR					False Positive Test		
Manganese-54	NR	0.312				0.218 - 0.406		
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	NR	0.352				0.246 - 0.458		

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.048	0.037	W		29.7	0.026 - 0.048	0.011	W
Cesium-134	1.839	2.14	A		-14.1	1.50 - 2.78	0.193	A
Cesium-137	0.0156		A			False Positive Test	0.0263	
Cobalt-57	0.6288	0.686	A		-8.3	0.480 - 0.892	0.0661	A
Cobalt-60	0.0529		A			False Positive Test	0.0601	
Manganese-54	0.3352	0.312	A		7.4	0.218 - 0.406	0.0618	W
Plutonium-238	0.030	0.0228	N		31.6	0.0160 - 0.0296	0.009	W
Plutonium-239/240	0.042	0.0453	A		-7.3	0.0317 - 0.0589	0.010	W
Strontium-90	0.655	0.749	A		-12.6	0.524 - 0.974	0.107	W
Uranium-234	0.051	0.06	A		-15.0	0.04 - 0.08	0.010	W
Uranium-238	0.060	0.063	A		-4.8	0.044 - 0.082	0.012	W
Zinc-65	0.3344	0.352	A		-5.0	0.246 - 0.458	0.117	N

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.016	0.037	N		-56.8	0.026 - 0.048	0.049	N
Cesium-134	1.525	2.14	W		-28.7	1.50 - 2.78	0.098	A
Cesium-137	-0.008		A			False Positive Test	0.010	
Cobalt-57	0.629	0.686	A		-8.3	0.480 - 0.892	0.0243	A
Cobalt-60	0.019		A			False Positive Test	0.009	
Manganese-54	0.275	0.312	A		-11.9	0.218 - 0.406	0.026	A
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	0.216	0.352	N		-38.6	0.246 - 0.458	0.059	W

Radiological Reference Date: February 1, 2021

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
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44

(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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	.0376	0.037	A		1.6	0.026 - 0.048	.00740	W
Cesium-134	2.11	2.14	A		-1.4	1.50 - 2.78	.0393	N
Cesium-137	-.00122		A			False Positive Test	.00744	
Cobalt-57	.734	0.686	A		7.0	0.480 - 0.892	.0202	A
Cobalt-60	.00528		A			False Positive Test	.00745	
Manganese-54	.336	0.312	A		7.7	0.218 - 0.406	.0178	A
Plutonium-238	.0232	0.0228	A		1.8	0.0160 - 0.0296	.00452	W
Plutonium-239/240	.0461	0.0453	A		1.8	0.0317 - 0.0589	.00866	W
Strontium-90	.728	0.749	A		-2.8	0.524 - 0.974	.0333	A
Uranium-234	.0626	0.06	A		4.3	0.04 - 0.08	.0102	W
Uranium-238	.0663	0.063	A		5.2	0.044 - 0.082	.0108	W
Zinc-65	.391	0.352	A		11.1	0.246 - 0.458	.0312	A

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.037				0.026 - 0.048		
Cesium-134	2.25	2.14	A		5.1	1.50 - 2.78	0.0522	A
Cesium-137	0.113		N	(1)		False Positive Test	0.019	
Cobalt-57	0.76	0.686	A		10.8	0.480 - 0.892	0.0223	A
Cobalt-60	0.0237		A			False Positive Test	0.0118	
Manganese-54	0.313	0.312	A		0.3	0.218 - 0.406	0.0171	A
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	0.365	0.352	A		3.7	0.246 - 0.458	0.033	A

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (WSTP99) Cavendish Nuclear Limited
 Greeson Court
 Cumbria, UK CA24 3HZ

Inorganic						Units: (ug/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Uranium-235	NR	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	4.78	5.07	A		-5.7	3.55 - 6.59	0.26	A

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0319	0.037	A		-13.8	0.026 - 0.048	0.0049	W
Cesium-134	2.16	2.14	A		0.9	1.50 - 2.78	0.15	A
Cesium-137	0.004		A			False Positive Test	0.016	
Cobalt-57	0.652	0.686	A		-5.0	0.480 - 0.892	0.029	A
Cobalt-60	-0.007		A			False Positive Test	0.013	
Manganese-54	0.328	0.312	A		5.1	0.218 - 0.406	0.028	A
Plutonium-238	0.0193	0.0228	A		-15.4	0.0160 - 0.0296	0.0034	W
Plutonium-239/240	0.0529	0.0453	A		16.8	0.0317 - 0.0589	0.0061	A
Strontium-90	NR	0.749	N	(28)		0.524 - 0.974		
Uranium-234	NR	0.06	N	(28)		0.04 - 0.08		
Uranium-238	NR	0.063	N	(28)		0.044 - 0.082		
Zinc-65	0.362	0.352	A		2.8	0.246 - 0.458	0.044	A

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (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	0.0353				0.0247 - 0.0459		
Uranium-238	NR	5.03				3.52 - 6.54		
Uranium-Total	NR	5.07				3.55 - 6.59		

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.037				0.026 - 0.048		
Cesium-134	1.94	2.14	A		-9.3	1.50 - 2.78	0.0799	A
Cesium-137	-0.00665		A			False Positive Test	0.0113	
Cobalt-57	0.668	0.686	A		-2.6	0.480 - 0.892	0.0412	A
Cobalt-60	0.00220		A			False Positive Test	0.0124	
Manganese-54	0.299	0.312	A		-4.2	0.218 - 0.406	0.0217	A
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	0.412	0.352	A		17.0	0.246 - 0.458	0.0586	A

Radiological Reference Date: February 1, 2021

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

(11) = False Positive Test, Result Not Reported

(28) = Not Reporting Previously Reported Analyte

(29) = Statistically significant negative value at 3 standard deviations



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

Laboratory Results For MAPEP-21-RdF44
 (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	0.038	0.0353	A		7.6	0.0247 - 0.0459	0.003	A
Uranium-238	5.31	5.03	A		5.6	3.52 - 6.54	0.3	A
Uranium-Total	5.35	5.07	A		5.5	3.55 - 6.59	0.3	A

Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR	0.037				0.026 - 0.048		
Cesium-134	NR	2.14				1.50 - 2.78		
Cesium-137	NR					False Positive Test		
Cobalt-57	NR	0.686				0.480 - 0.892		
Cobalt-60	NR					False Positive Test		
Manganese-54	NR	0.312				0.218 - 0.406		
Plutonium-238	NR	0.0228				0.0160 - 0.0296		
Plutonium-239/240	NR	0.0453				0.0317 - 0.0589		
Strontium-90	NR	0.749				0.524 - 0.974		
Uranium-234	NR	0.06				0.04 - 0.08		
Uranium-238	NR	0.063				0.044 - 0.082		
Zinc-65	NR	0.352				0.246 - 0.458		

Radiological Reference Date: February 1, 2021

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%

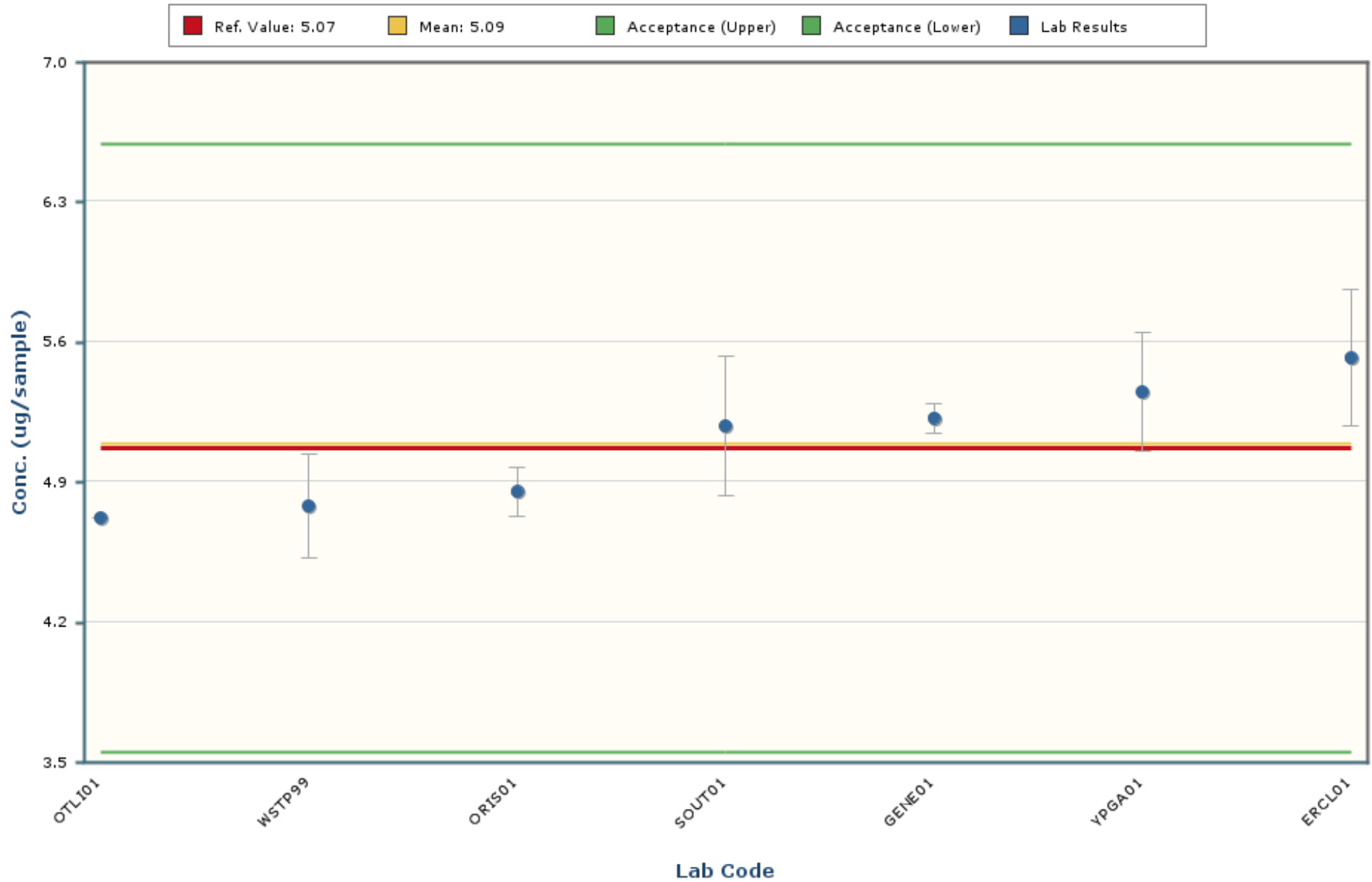
Radiological						Units: (Bq/sample)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
ACCEPTABLE WITH WARNING.....15% < RP <= 30%								
NOT ACCEPTABLE.....RP > 30%								

Notes:

- (1) = False Positive
- (11) = False Positive Test, Result Not Reported
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations

Uranium-Total

MAPEP-21-RdF44



Notes:

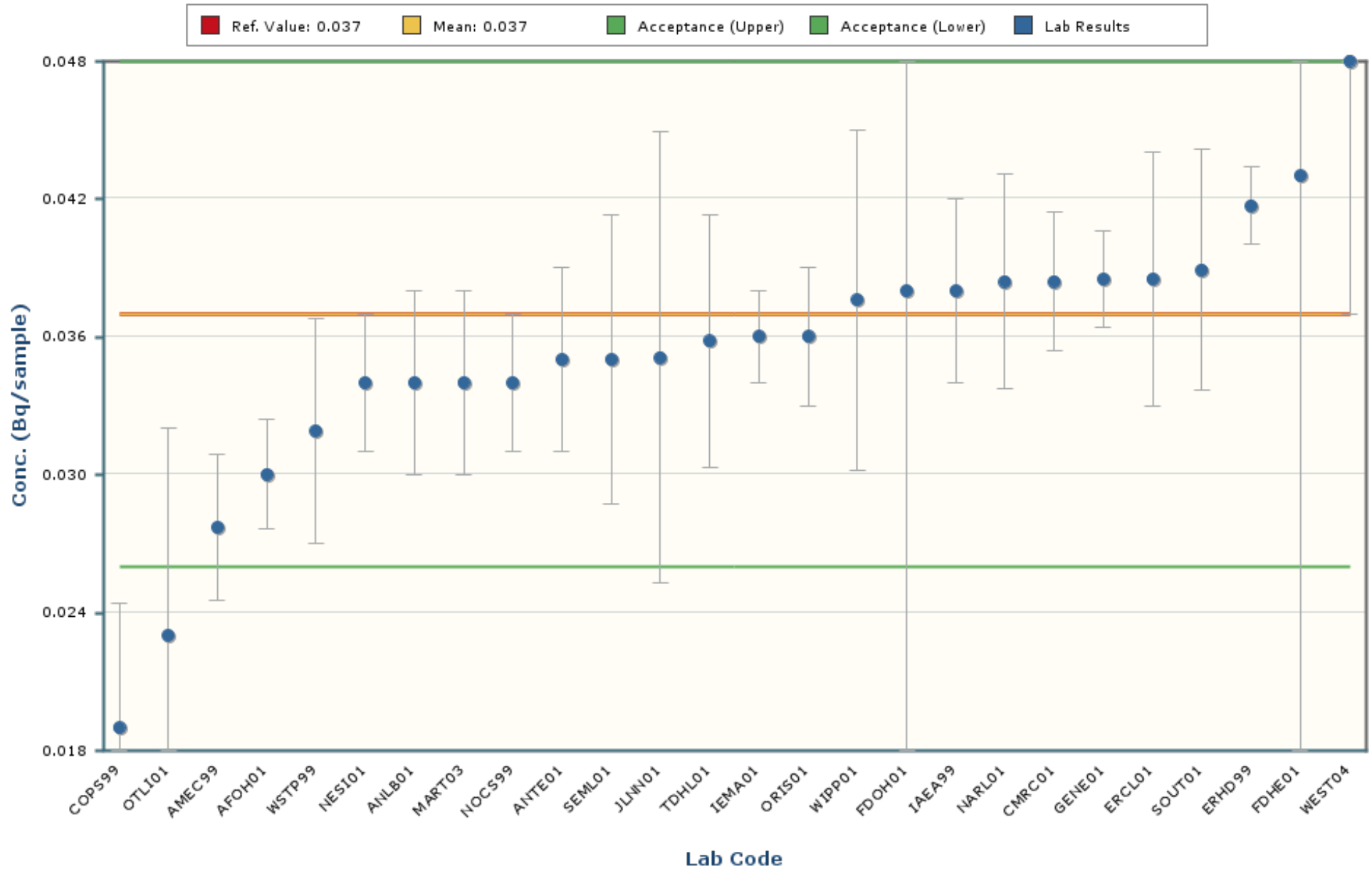
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 3.55 and 6.63 (± 5 Standard Deviations).

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

Americium-241

MAPEP-21-RdF44



Notes:

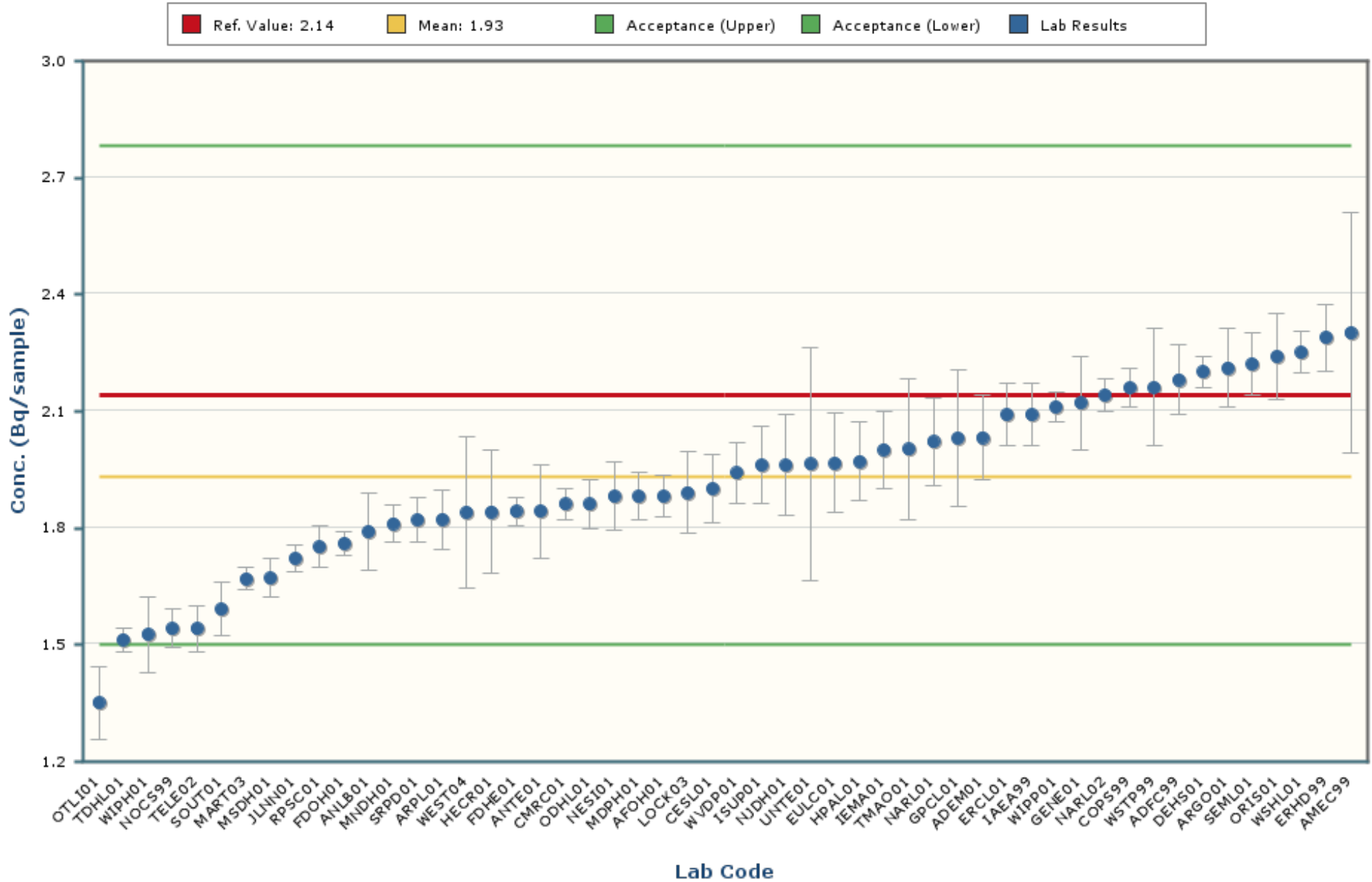
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.016 and 0.057 (± 5 Standard Deviations).

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

Cesium-134

MAPEP-21-RdF44



Notes:

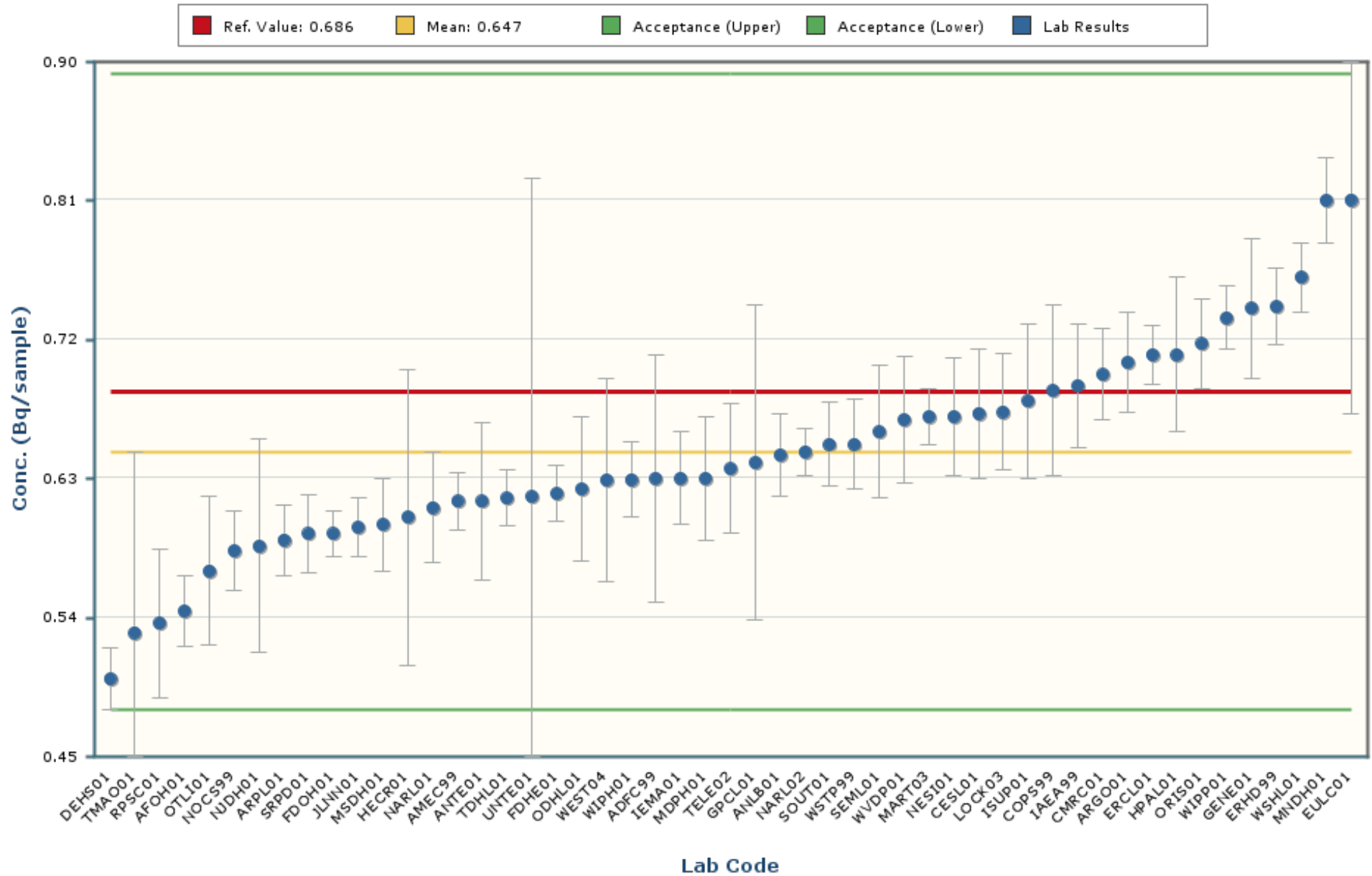
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.89 and 2.98 (± 5 Standard Deviations).

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

Cobalt-57

MAPEP-21-RdF44



Notes:

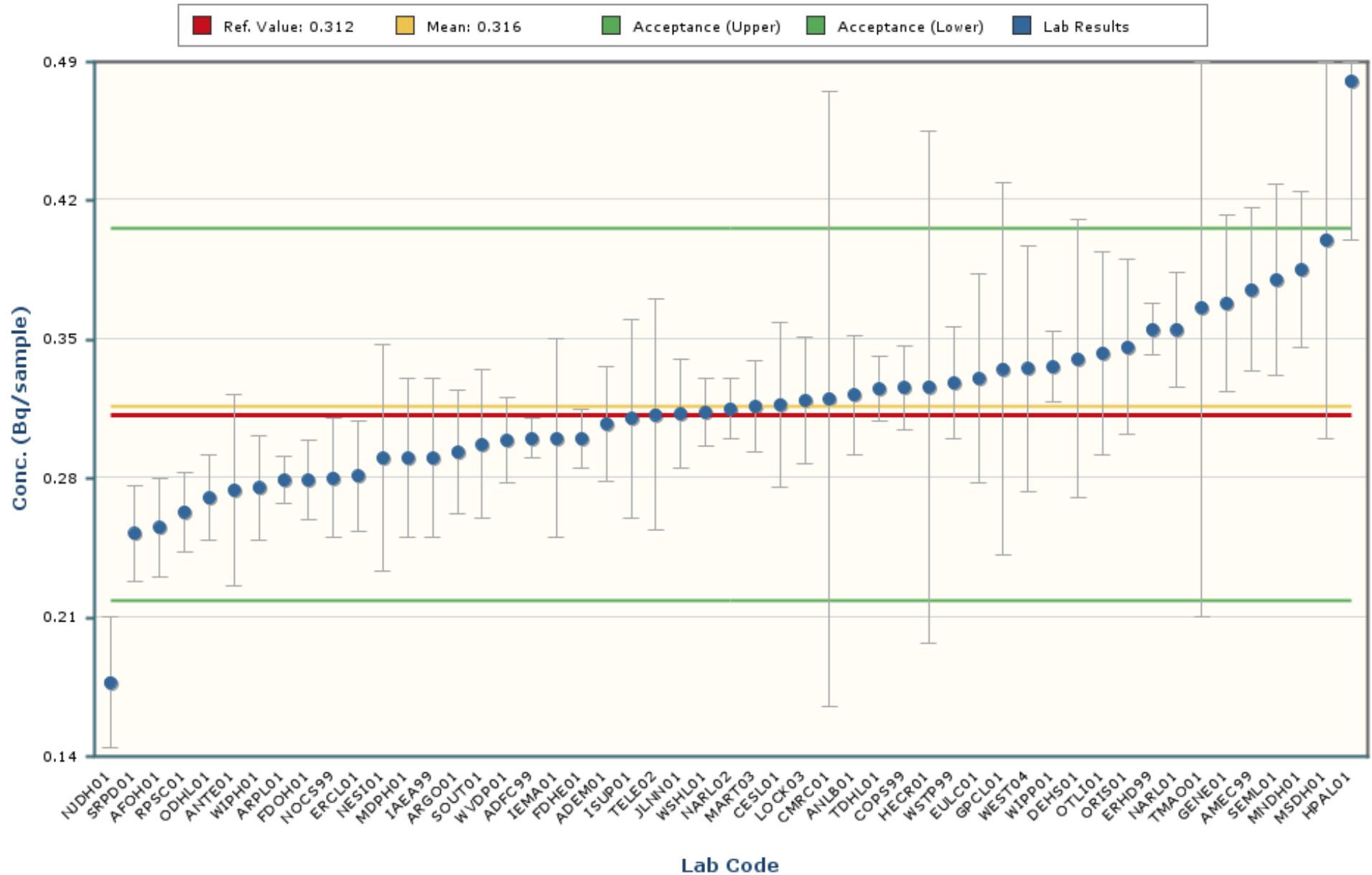
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.321 and 0.973 (± 5 Standard Deviations).

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

Manganese-54

MAPEP-21-RdF44



Notes:

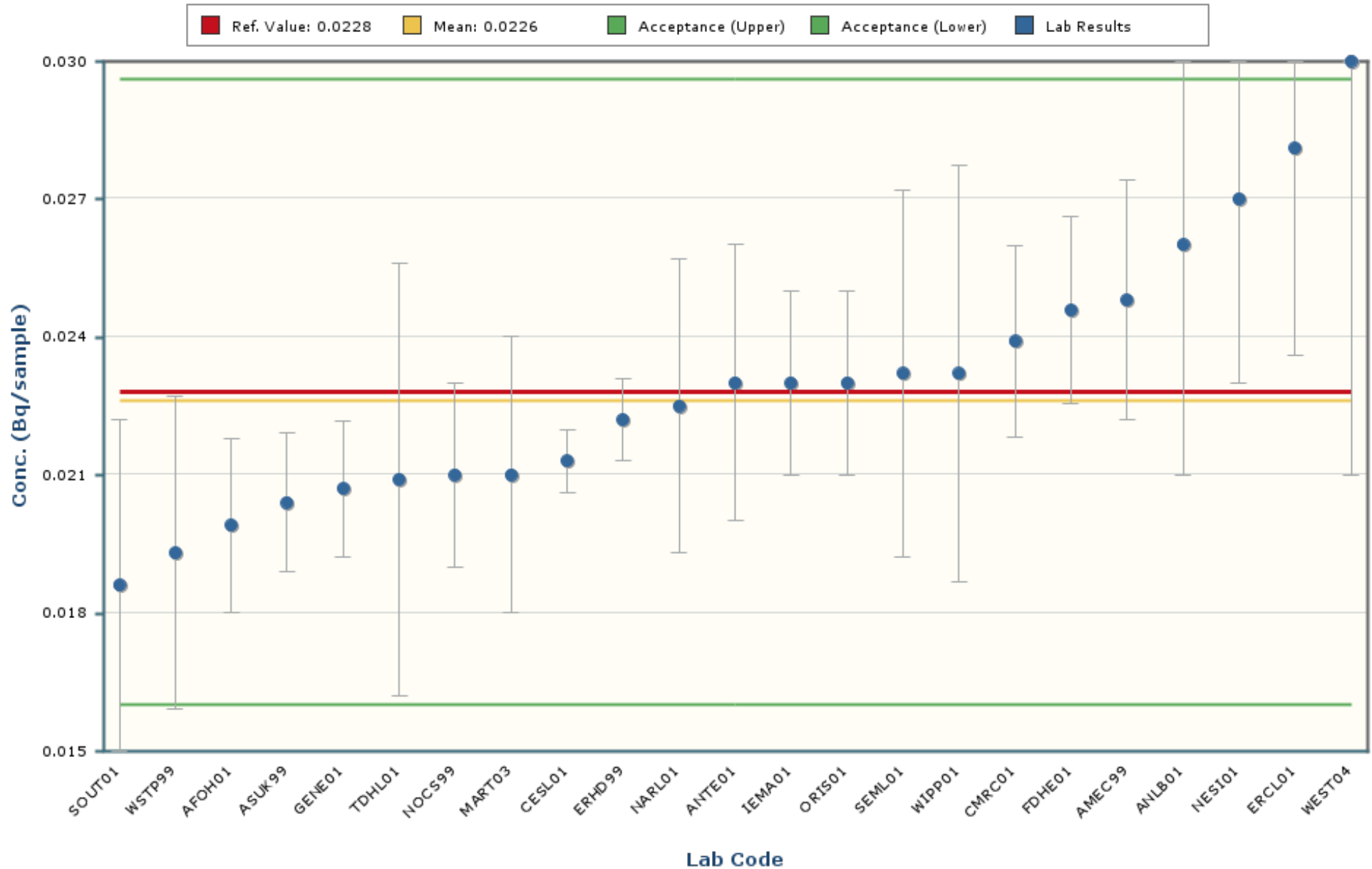
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.143 and 0.489 (± 5 Standard Deviations).

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

Plutonium-238

MAPEP-21-RdF44



Notes:

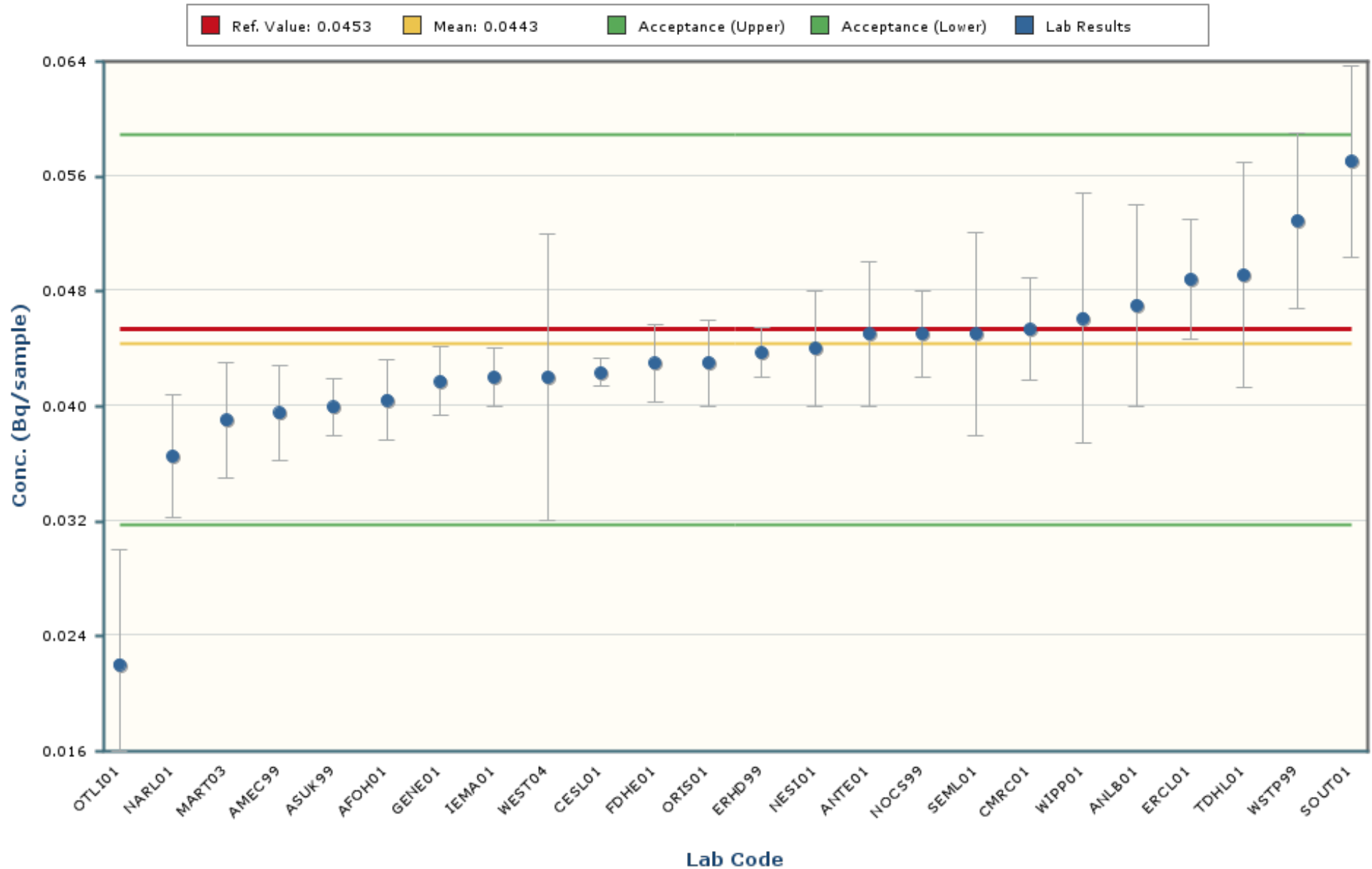
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.0104 and 0.0348 (± 5 Standard Deviations).

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

Plutonium-239/240

MAPEP-21-RdF44



Notes:

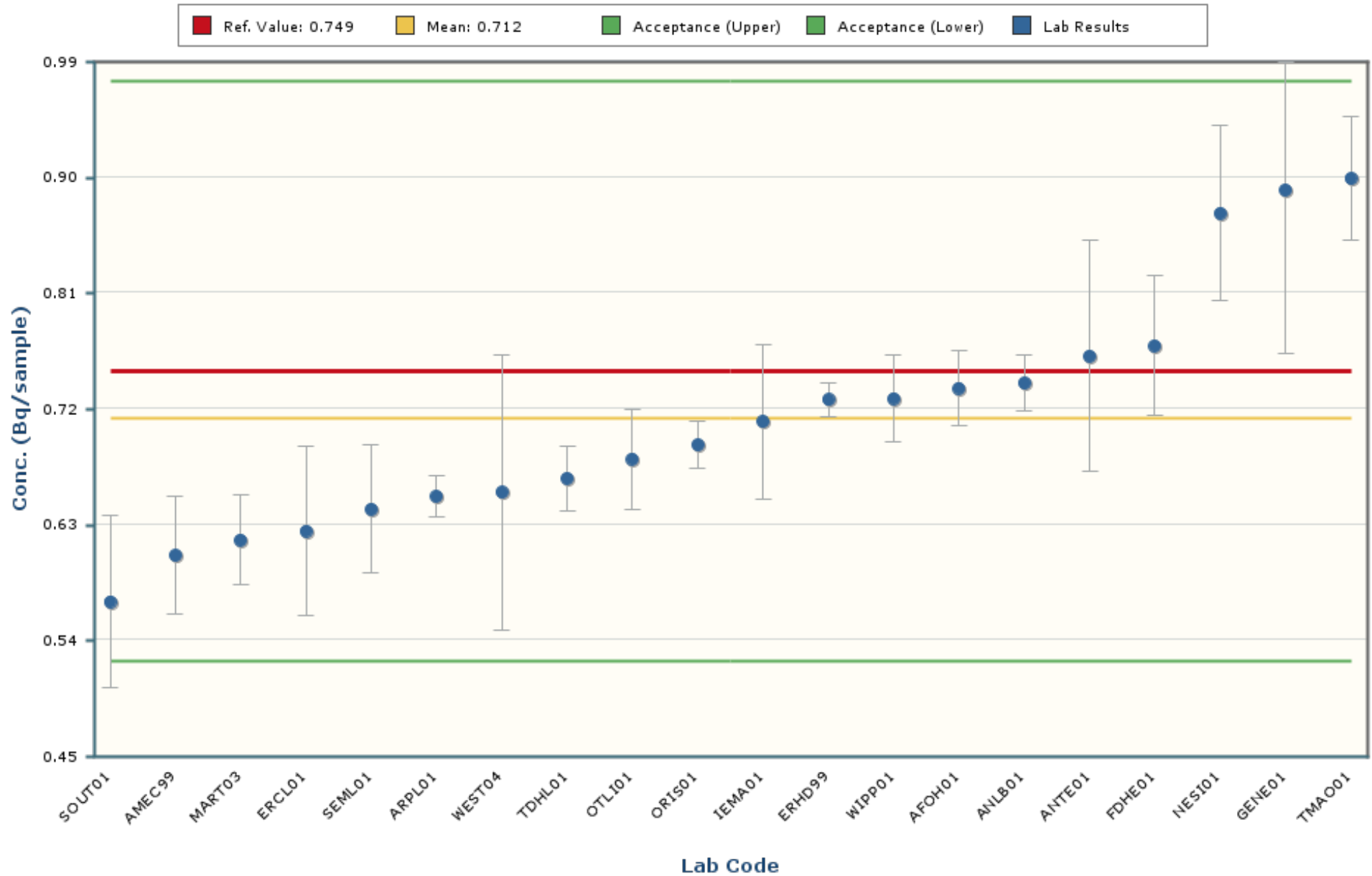
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.0213 and 0.0672 (± 5 Standard Deviations).

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

Strontium-90

MAPEP-21-RdF44



Notes:

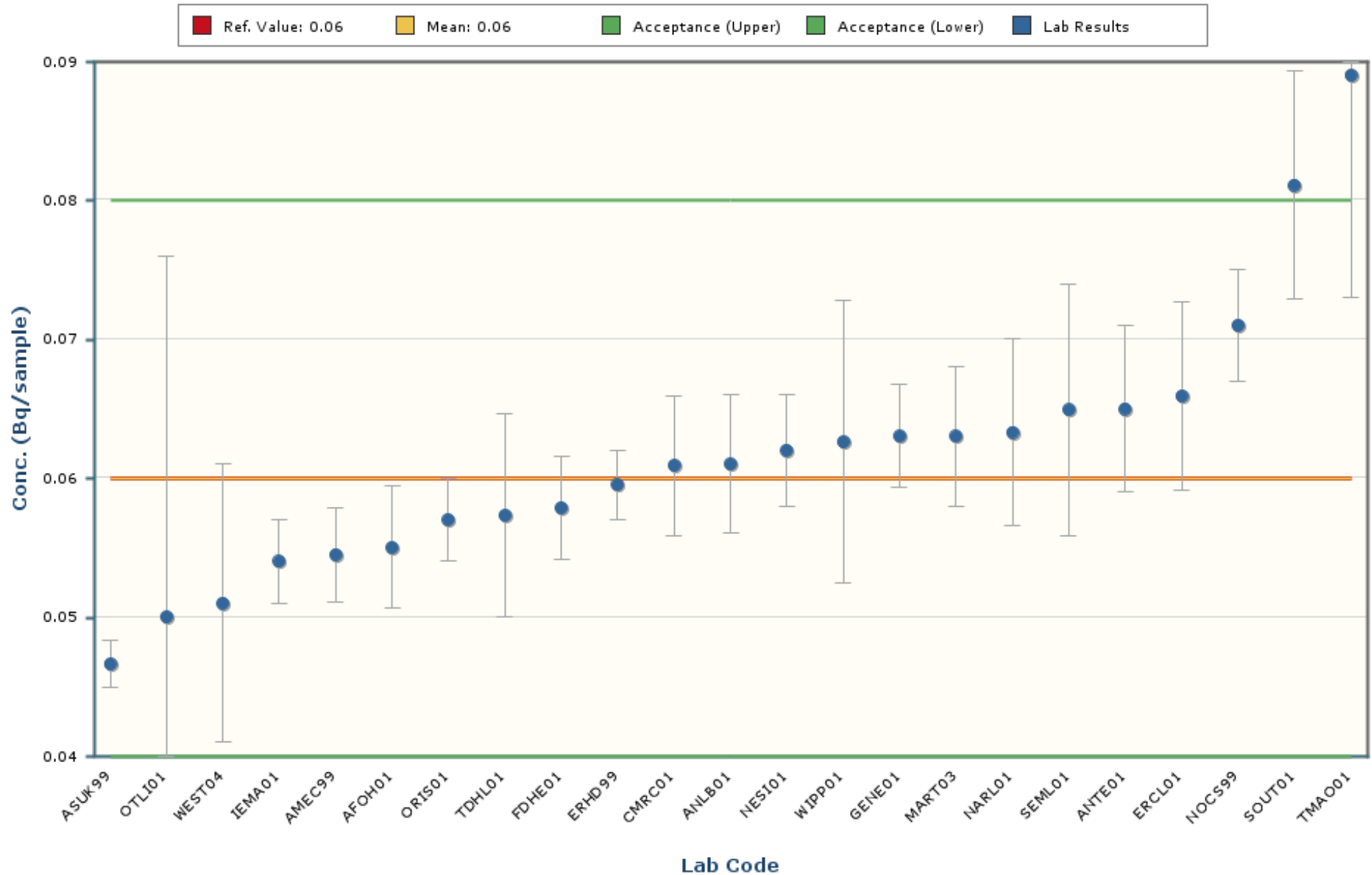
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.249 and 1.175 (± 5 Standard Deviations).

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

Uranium-234

MAPEP-21-RdF44



Notes:

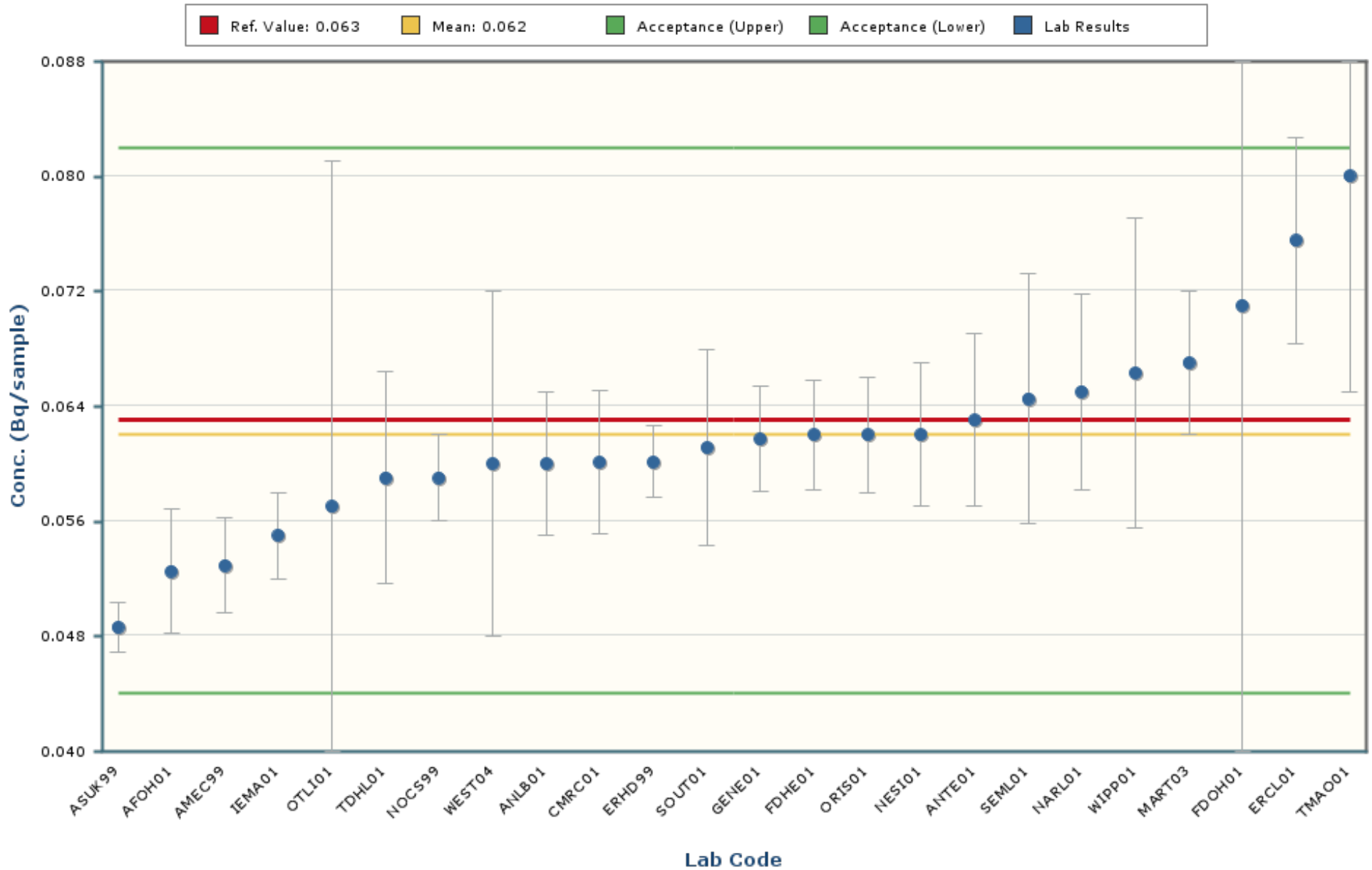
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.03 and 0.09 (± 5 Standard Deviations).

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

Uranium-238

MAPEP-21-RdF44



Notes:

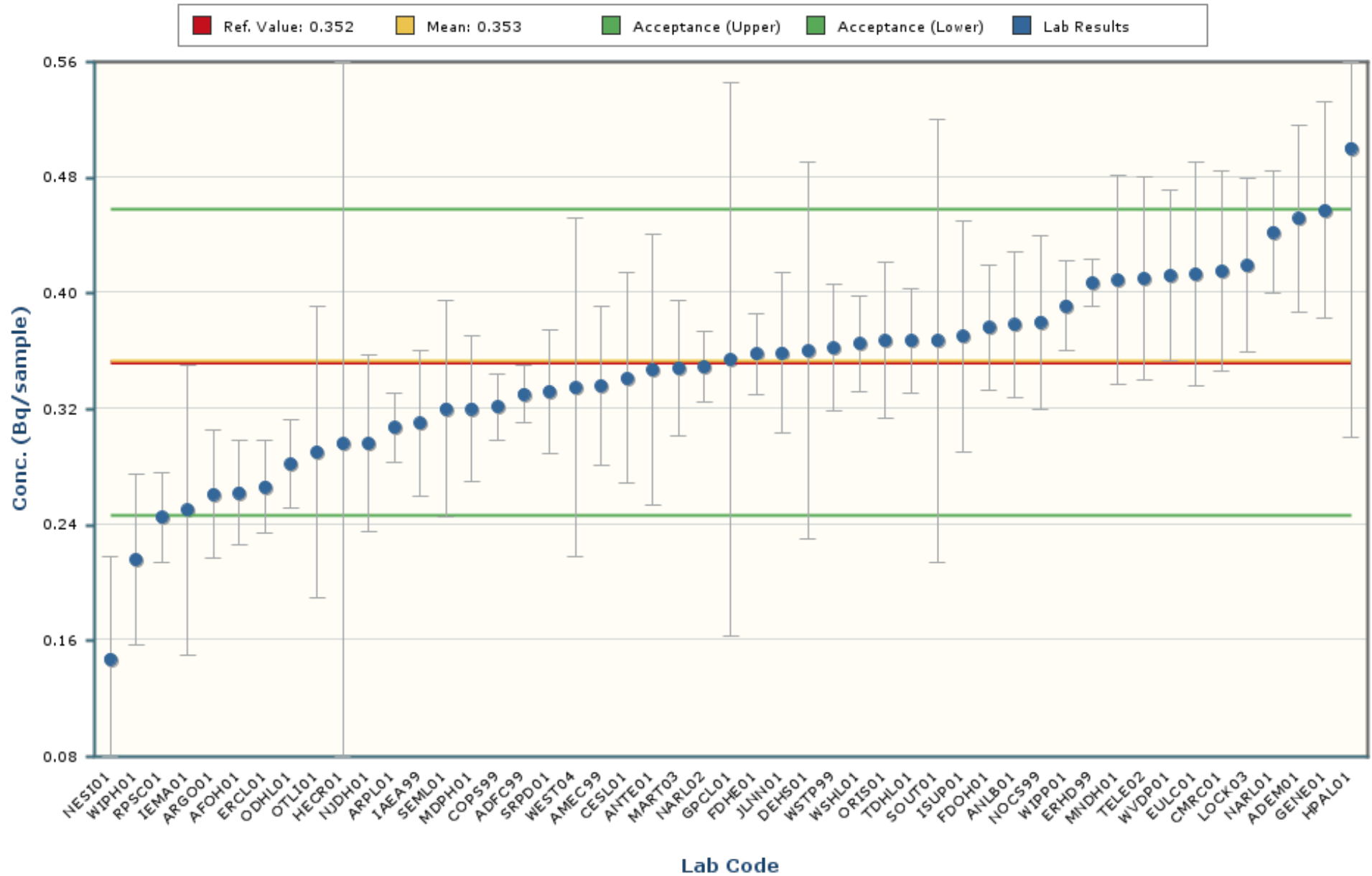
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.027 and 0.097 (± 5 Standard Deviations).

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

Zinc-65

MAPEP-21-RdF44



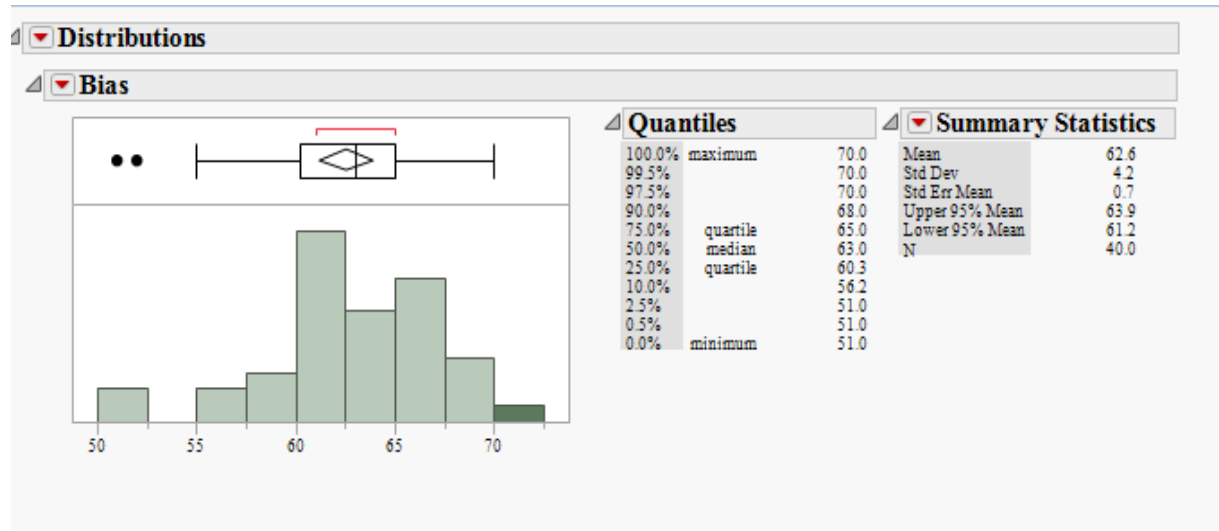
Notes:

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

The chart shows only data points with values between 0.095 and 0.611 (± 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.

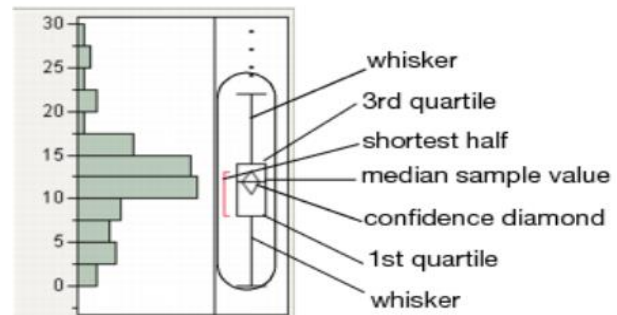


Outlier Box Plot

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)

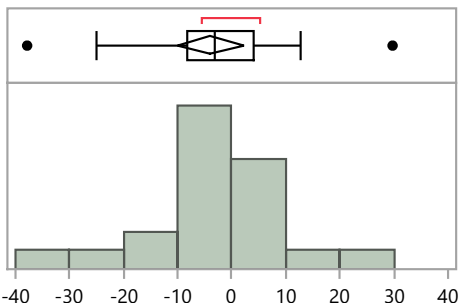


If the data points do not reach the computed ranges, then the whiskers are determined by the upper and lower data point values (not including outliers). The bracket outside of the box identifies the *shortest half*, which is the most dense 50% of the observations (Rousseuw and Leroy 1987).

RdF Distribution by Detection Method

Distributions Analyte_Detection=Americium-241 Alpha Spectrometry

Bias

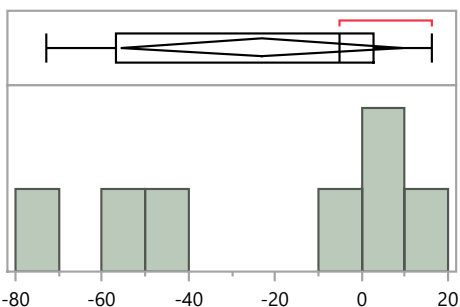


Quantiles		
100.0%	maximum	29.7
99.5%		29.7
97.5%		29.7
90.0%		11.2
75.0%	quartile	4.0
50.0%	median	-3.2
25.0%	quartile	-8.1
10.0%		-23.9
2.5%		-37.8
0.5%		-37.8
0.0%	minimum	-37.8

Summary Statistics	
Mean	-3.9
Std Dev	13.7
Std Err Mean	3.0
Upper 95% Mean	2.3
Lower 95% Mean	-10.2
N	21.0

Distributions Analyte_Detection=Americium-241 Gamma Spectrometry

Bias

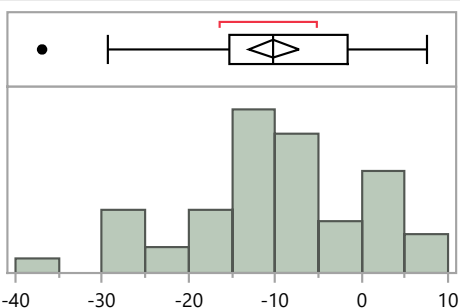


Quantiles		
100.0%	maximum	16.2
99.5%		16.2
97.5%		16.2
90.0%		16.2
75.0%	quartile	2.7
50.0%	median	-5.2
25.0%	quartile	-56.8
10.0%		-73.0
2.5%		-73.0
0.5%		-73.0
0.0%	minimum	-73.0

Summary Statistics	
Mean	-23.2
Std Dev	35.3
Std Err Mean	13.3
Upper 95% Mean	9.5
Lower 95% Mean	-55.8
N	7.0

Distributions Analyte_Detection=Cesium-134 Gamma Spectrometry

Bias



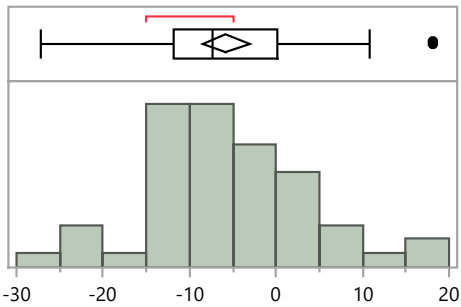
Quantiles		
100.0%	maximum	7.5
99.5%		7.5
97.5%		7.3
90.0%		3.6
75.0%	quartile	-1.6
50.0%	median	-10.3
25.0%	quartile	-15.3
10.0%		-27.3
2.5%		-34.4
0.5%		-36.9
0.0%	minimum	-36.9

Summary Statistics	
Mean	-10.2
Std Dev	10.4
Std Err Mean	1.4
Upper 95% Mean	-7.3
Lower 95% Mean	-13.0
N	52.0

RdF Distribution by Detection Method

Distributions Analyte_Detection=Cobalt-57 Gamma Spectrometry

Bias



Quantiles

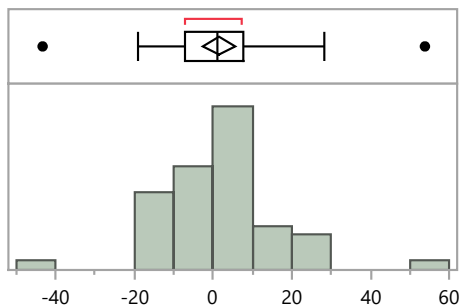
100.0%	maximum	18.1
99.5%		18.1
97.5%		18.1
90.0%		7.7
75.0%	quartile	0.1
50.0%	median	-7.3
25.0%	quartile	-11.8
10.0%		-16.5
2.5%		-25.8
0.5%		-27.1
0.0%	minimum	-27.1

Summary Statistics

Mean	-5.8
Std Dev	9.5
Std Err Mean	1.3
Upper 95% Mean	-3.1
Lower 95% Mean	-8.4
N	51.0

Distributions Analyte_Detection=Manganese-54 Gamma Spectrometry

Bias



Quantiles

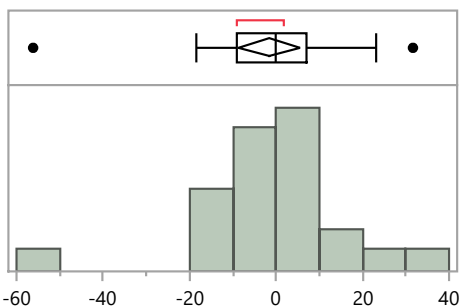
100.0%	maximum	53.8
99.5%		53.8
97.5%		46.1
90.0%		19.7
75.0%	quartile	7.7
50.0%	median	1.0
25.0%	quartile	-7.1
10.0%		-13.2
2.5%		-36.1
0.5%		-43.3
0.0%	minimum	-43.3

Summary Statistics

Mean	1.4
Std Dev	14.6
Std Err Mean	2.0
Upper 95% Mean	5.5
Lower 95% Mean	-2.7
N	51.0

Distributions Analyte_Detection=Plutonium-238 Alpha Spectrometry

Bias



Quantiles

100.0%	maximum	31.6
99.5%		31.6
97.5%		31.6
90.0%		20.8
75.0%	quartile	7.1
50.0%	median	-0.2
25.0%	quartile	-9.0
10.0%		-16.9
2.5%		-56.1
0.5%		-56.1
0.0%	minimum	-56.1

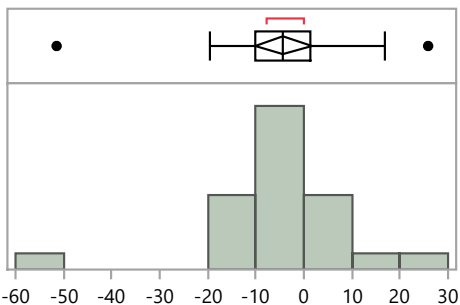
Summary Statistics

Mean	-1.8
Std Dev	16.8
Std Err Mean	3.4
Upper 95% Mean	5.3
Lower 95% Mean	-8.8
N	24.0

RdF Distribution by Detection Method

Distributions Analyte_Detection=Plutonium-239/240 Alpha Spectrometry

Bias

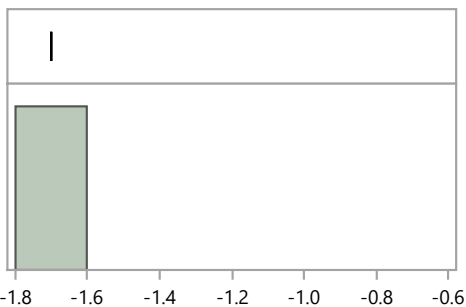


Quantiles		
100.0%	maximum	25.8
99.5%		25.8
97.5%		25.8
90.0%		12.6
75.0%	quartile	1.4
50.0%	median	-4.3
25.0%	quartile	-10.1
10.0%		-16.7
2.5%		-51.4
0.5%		-51.4
0.0%	minimum	-51.4

Summary Statistics	
Mean	-4.3
Std Dev	14.1
Std Err Mean	2.9
Upper 95% Mean	1.6
Lower 95% Mean	-10.3
N	24.0

Distributions Analyte_Detection=Strontium-90 Alpha Spectrometry

Bias

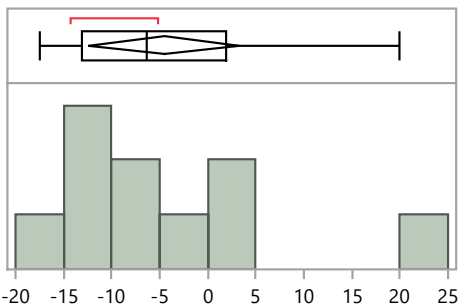


Quantiles		
100.0%	maximum	-1.7
99.5%		-1.7
97.5%		-1.7
90.0%		-1.7
75.0%	quartile	-1.7
50.0%	median	-1.7
25.0%	quartile	-1.7
10.0%		-1.7
2.5%		-1.7
0.5%		-1.7
0.0%	minimum	-1.7

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

Distributions Analyte_Detection=Strontium-90 Gas Flow Proportional Counter

Bias



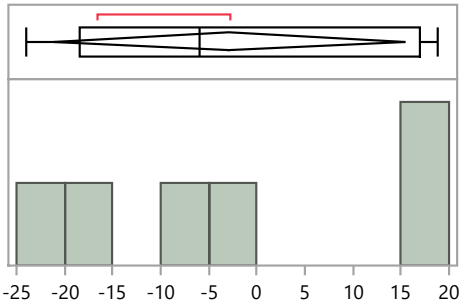
Quantiles		
100.0%	maximum	20.0
99.5%		20.0
97.5%		20.0
90.0%		18.3
75.0%	quartile	1.9
50.0%	median	-6.4
25.0%	quartile	-13.0
10.0%		-17.2
2.5%		-17.5
0.5%		-17.5
0.0%	minimum	-17.5

Summary Statistics	
Mean	-4.5
Std Dev	11.0
Std Err Mean	3.5
Upper 95% Mean	3.3
Lower 95% Mean	-12.4
N	10.0

RdF Distribution by Detection Method

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

Bias



Quantiles

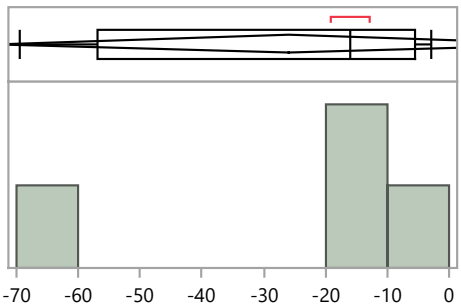
100.0%	maximum	18.8
99.5%		18.8
97.5%		18.8
90.0%		18.8
75.0%	quartile	17.0
50.0%	median	-6.0
25.0%	quartile	-18.4
10.0%		-23.9
2.5%		-23.9
0.5%		-23.9
0.0%	minimum	-23.9

Summary Statistics

Mean	-2.9
Std Dev	17.4
Std Err Mean	7.1
Upper 95% Mean	15.4
Lower 95% Mean	-21.1
N	6.0

Distributions Analyte_Detection=Strontium-90 Liquid Scintillation Counter

Bias



Quantiles

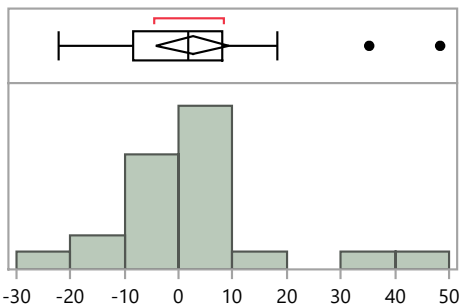
100.0%	maximum	-2.9
99.5%		-2.9
97.5%		-2.9
90.0%		-2.9
75.0%	quartile	-5.4
50.0%	median	-16.1
25.0%	quartile	-56.8
10.0%		-69.3
2.5%		-69.3
0.5%		-69.3
0.0%	minimum	-69.3

Summary Statistics

Mean	-26.1
Std Dev	29.6
Std Err Mean	14.8
Upper 95% Mean	21.0
Lower 95% Mean	-73.1
N	4.0

Distributions Analyte_Detection=Uranium-234 Alpha Spectrometry

Bias



Quantiles

100.0%	maximum	48.3
99.5%		48.3
97.5%		48.3
90.0%		28.4
75.0%	quartile	8.2
50.0%	median	1.7
25.0%	quartile	-8.3
10.0%		-16.0
2.5%		-22.3
0.5%		-22.3
0.0%	minimum	-22.3

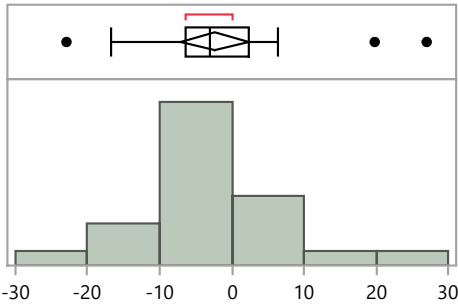
Summary Statistics

Mean	2.6
Std Dev	15.7
Std Err Mean	3.3
Upper 95% Mean	9.4
Lower 95% Mean	-4.2
N	23.0

RdF Distribution by Detection Method

Distributions Analyte_Detection=Uranium-238 Alpha Spectrometry

Bias



Quantiles

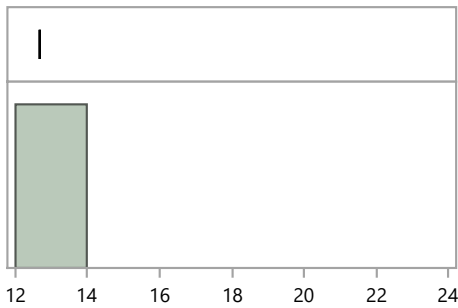
100.0%	maximum	27.0
99.5%		27.0
97.5%		27.0
90.0%		14.4
75.0%	quartile	2.4
50.0%	median	-3.0
25.0%	quartile	-6.3
10.0%		-16.4
2.5%		-22.9
0.5%		-22.9
0.0%	minimum	-22.9

Summary Statistics

Mean	-2.4
Std Dev	10.8
Std Err Mean	2.3
Upper 95% Mean	2.3
Lower 95% Mean	-7.1
N	23.0

Distributions Analyte_Detection=Uranium-238 Gamma Spectrometry

Bias



Quantiles

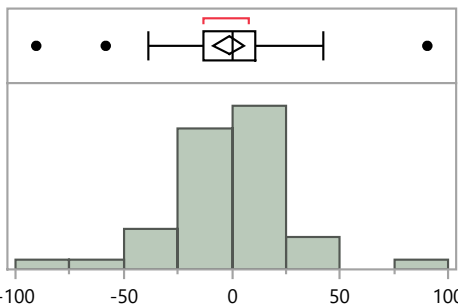
100.0%	maximum	12.7
99.5%		12.7
97.5%		12.7
90.0%		12.7
75.0%	quartile	12.7
50.0%	median	12.7
25.0%	quartile	12.7
10.0%		12.7
2.5%		12.7
0.5%		12.7
0.0%	minimum	12.7

Summary Statistics

Mean	12.7
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Detection=Zinc-65 Gamma Spectrometry

Bias



Quantiles

100.0%	maximum	90.3
99.5%		90.3
97.5%		75.8
90.0%		24.3
75.0%	quartile	11.1
50.0%	median	0.6
25.0%	quartile	-12.8
10.0%		-28.4
2.5%		-80.7
0.5%		-90.3
0.0%	minimum	-90.3

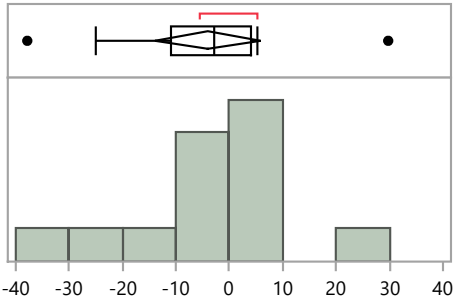
Summary Statistics

Mean	-1.4
Std Dev	25.8
Std Err Mean	3.6
Upper 95% Mean	5.8
Lower 95% Mean	-8.7
N	51.0

RdF Distribution by Prep Method

Distributions Analyte_Method=Americium-241 Acid dissolution with hydrofluoric acid

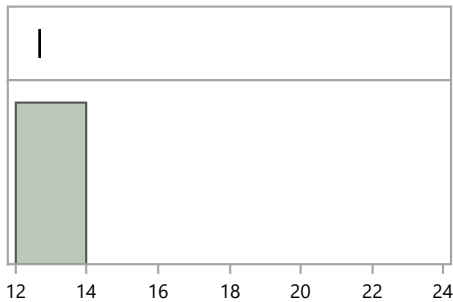
Bias



Quantiles			Summary Statistics	
100.0%	maximum	29.7	Mean	-4.1
99.5%		29.7	Std Dev	16.2
97.5%		29.7	Std Err Mean	4.5
90.0%		19.9	Upper 95% Mean	5.7
75.0%	quartile	4.0	Lower 95% Mean	-13.9
50.0%	median	-2.7	N	13.0
25.0%	quartile	-11.0		
10.0%		-32.7		
2.5%		-37.8		
0.5%		-37.8		
0.0%	minimum	-37.8		

Distributions Analyte_Method=Americium-241 Acid leaching without hydrofluoric acid

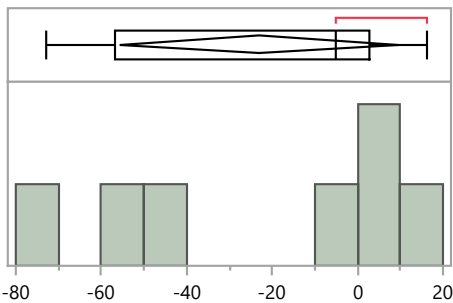
Bias



Quantiles			Summary Statistics	
100.0%	maximum	12.7	Mean	12.7
99.5%		12.7	Std Dev	.
97.5%		12.7	Std Err Mean	.
90.0%		12.7	Upper 95% Mean	.
75.0%	quartile	12.7	Lower 95% Mean	.
50.0%	median	12.7	N	1.0
25.0%	quartile	12.7		
10.0%		12.7		
2.5%		12.7		
0.5%		12.7		
0.0%	minimum	12.7		

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

Bias

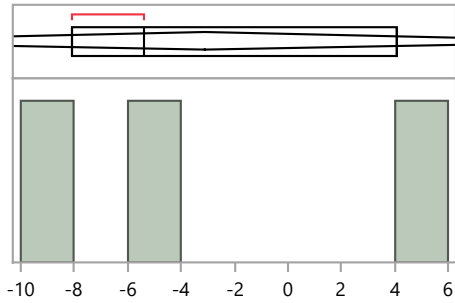


Quantiles			Summary Statistics	
100.0%	maximum	16.2	Mean	-23.2
99.5%		16.2	Std Dev	35.3
97.5%		16.2	Std Err Mean	13.3
90.0%		16.2	Upper 95% Mean	9.5
75.0%	quartile	2.7	Lower 95% Mean	-55.8
50.0%	median	-5.2	N	7.0
25.0%	quartile	-56.8		
10.0%		-73.0		
2.5%		-73.0		
0.5%		-73.0		
0.0%	minimum	-73.0		

RdF Distribution by Prep Method

Distributions Analyte_Method=Americium-241 Other

Bias



Quantiles

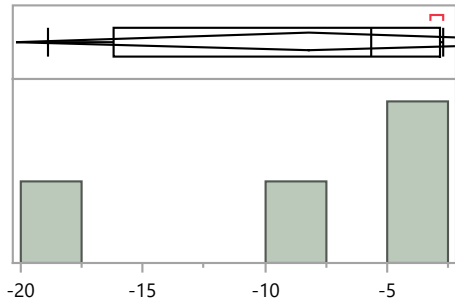
100.0%	maximum	4.1
99.5%		4.1
97.5%		4.1
90.0%		4.1
75.0%	quartile	4.1
50.0%	median	-5.4
25.0%	quartile	-8.1
10.0%		-8.1
2.5%		-8.1
0.5%		-8.1
0.0%	minimum	-8.1

Summary Statistics

Mean	-3.1
Std Dev	6.4
Std Err Mean	3.7
Upper 95% Mean	12.8
Lower 95% Mean	-19.1
N	3.0

Distributions Analyte_Method=Americium-241 Total dissolution by fusion

Bias



Quantiles

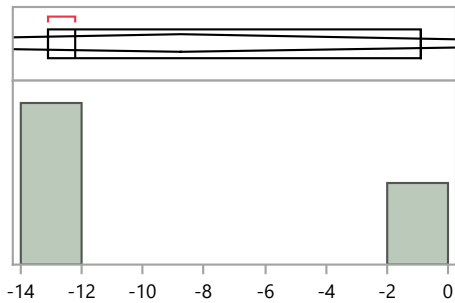
100.0%	maximum	-2.7
99.5%		-2.7
97.5%		-2.7
90.0%		-2.7
75.0%	quartile	-2.8
50.0%	median	-5.7
25.0%	quartile	-16.2
10.0%		-18.9
2.5%		-18.9
0.5%		-18.9
0.0%	minimum	-18.9

Summary Statistics

Mean	-8.2
Std Dev	7.5
Std Err Mean	3.8
Upper 95% Mean	3.7
Lower 95% Mean	-20.2
N	4.0

Distributions Analyte_Method=Cesium-134 Acid dissolution with hydrofluoric acid

Bias



Quantiles

100.0%	maximum	-0.9
99.5%		-0.9
97.5%		-0.9
90.0%		-0.9
75.0%	quartile	-0.9
50.0%	median	-12.2
25.0%	quartile	-13.1
10.0%		-13.1
2.5%		-13.1
0.5%		-13.1
0.0%	minimum	-13.1

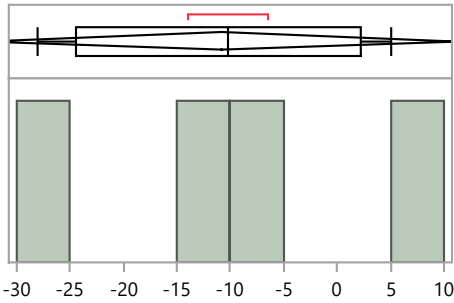
Summary Statistics

Mean	-8.7
Std Dev	6.8
Std Err Mean	3.9
Upper 95% Mean	8.2
Lower 95% Mean	-25.6
N	3.0

RdF Distribution by Prep Method

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

Bias



Quantiles

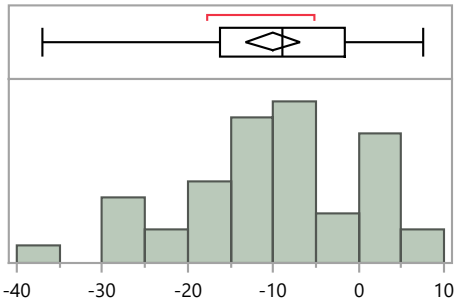
100.0%	maximum	5.1
99.5%		5.1
97.5%		5.1
90.0%		5.1
75.0%	quartile	2.2
50.0%	median	-10.3
25.0%	quartile	-24.5
10.0%		-28.0
2.5%		-28.0
0.5%		-28.0
0.0%	minimum	-28.0

Summary Statistics

Mean	-10.9
Std Dev	13.9
Std Err Mean	6.9
Upper 95% Mean	11.2
Lower 95% Mean	-32.9
N	4.0

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

Bias



Quantiles

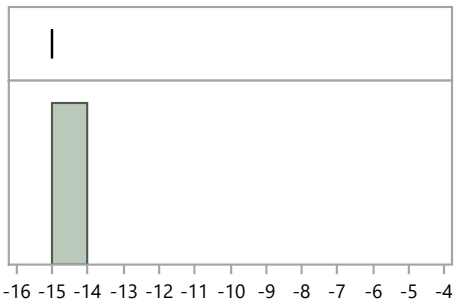
100.0%	maximum	7.5
99.5%		7.5
97.5%		7.4
90.0%		3.5
75.0%	quartile	-1.6
50.0%	median	-8.9
25.0%	quartile	-16.2
10.0%		-26.9
2.5%		-36.0
0.5%		-36.9
0.0%	minimum	-36.9

Summary Statistics

Mean	-10.1
Std Dev	10.6
Std Err Mean	1.6
Upper 95% Mean	-6.9
Lower 95% Mean	-13.3
N	44.0

Distributions Analyte_Method=Cesium-134 Other

Bias



Quantiles

100.0%	maximum	-15.0
99.5%		-15.0
97.5%		-15.0
90.0%		-15.0
75.0%	quartile	-15.0
50.0%	median	-15.0
25.0%	quartile	-15.0
10.0%		-15.0
2.5%		-15.0
0.5%		-15.0
0.0%	minimum	-15.0

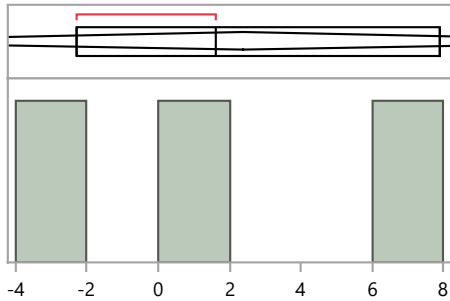
Summary Statistics

Mean	-15.0
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

RdF Distribution by Prep Method

Distributions Analyte_Method=Cobalt-57 Acid dissolution with hydrofluoric acid

Bias



Quantiles

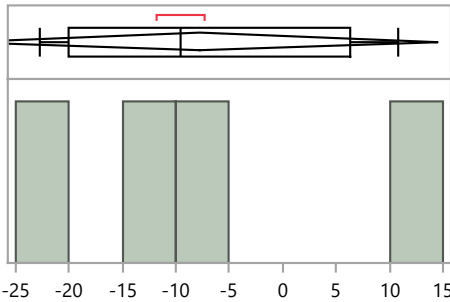
100.0%	maximum	7.9
99.5%		7.9
97.5%		7.9
90.0%		7.9
75.0%	quartile	7.9
50.0%	median	1.6
25.0%	quartile	-2.3
10.0%		-2.3
2.5%		-2.3
0.5%		-2.3
0.0%	minimum	-2.3

Summary Statistics

Mean	2.4
Std Dev	5.1
Std Err Mean	3.0
Upper 95% Mean	15.2
Lower 95% Mean	-10.4
N	3.0

Distributions Analyte_Method=Cobalt-57 EPA 901.1, Gamma Emitting, 600/4-80-032

Bias



Quantiles

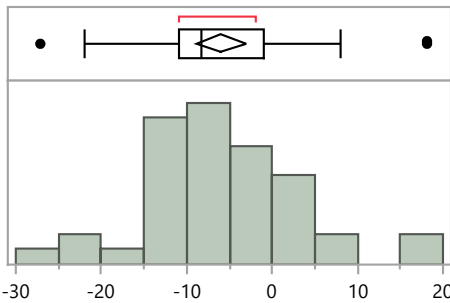
100.0%	maximum	10.8
99.5%		10.8
97.5%		10.8
90.0%		10.8
75.0%	quartile	6.3
50.0%	median	-9.6
25.0%	quartile	-20.0
10.0%		-22.7
2.5%		-22.7
0.5%		-22.7
0.0%	minimum	-22.7

Summary Statistics

Mean	-7.8
Std Dev	14.0
Std Err Mean	7.0
Upper 95% Mean	14.5
Lower 95% Mean	-30.0
N	4.0

Distributions Analyte_Method=Cobalt-57 No preparation - analyzed as received

Bias



Quantiles

100.0%	maximum	18.1
99.5%		18.1
97.5%		18.1
90.0%		6.0
75.0%	quartile	-0.9
50.0%	median	-8.2
25.0%	quartile	-10.9
10.0%		-16.1
2.5%		-26.6
0.5%		-27.1
0.0%	minimum	-27.1

Summary Statistics

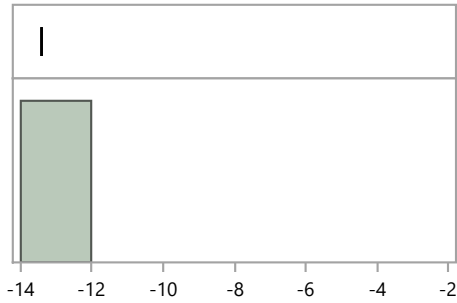
Mean	-6.0
Std Dev	9.3
Std Err Mean	1.4
Upper 95% Mean	-3.1
Lower 95% Mean	-8.8
N	43.0

RdF44 Distribution by Preparation Method

RdF Distribution by Prep Method

Distributions Analyte_Method=Cobalt-57 Other

Bias



Quantiles

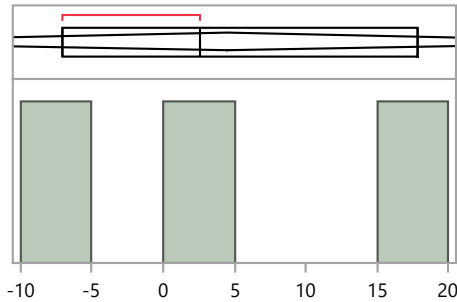
100.0%	maximum	-13.4
99.5%		-13.4
97.5%		-13.4
90.0%		-13.4
75.0%	quartile	-13.4
50.0%	median	-13.4
25.0%	quartile	-13.4
10.0%		-13.4
2.5%		-13.4
0.5%		-13.4
0.0%	minimum	-13.4

Summary Statistics

Mean	-13.4
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Manganese-54 Acid dissolution with hydrofluoric acid

Bias



Quantiles

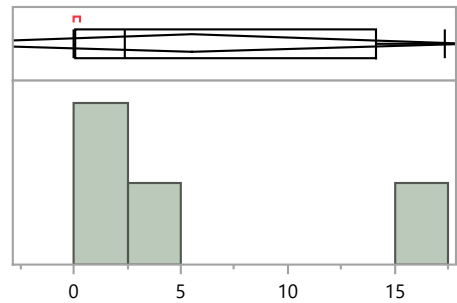
100.0%	maximum	17.9
99.5%		17.9
97.5%		17.9
90.0%		17.9
75.0%	quartile	17.9
50.0%	median	2.6
25.0%	quartile	-7.1
10.0%		-7.1
2.5%		-7.1
0.5%		-7.1
0.0%	minimum	-7.1

Summary Statistics

Mean	4.5
Std Dev	12.6
Std Err Mean	7.3
Upper 95% Mean	35.8
Lower 95% Mean	-26.8
N	3.0

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

Bias



Quantiles

100.0%	maximum	17.3
99.5%		17.3
97.5%		17.3
90.0%		17.3
75.0%	quartile	14.1
50.0%	median	2.4
25.0%	quartile	0.1
10.0%		0.0
2.5%		0.0
0.5%		0.0
0.0%	minimum	0.0

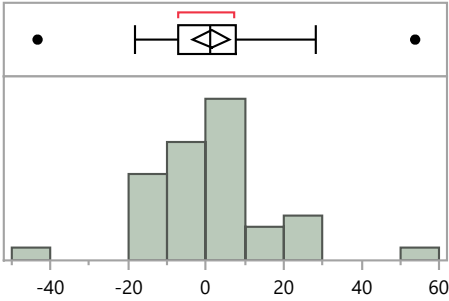
Summary Statistics

Mean	5.5
Std Dev	8.1
Std Err Mean	4.1
Upper 95% Mean	18.4
Lower 95% Mean	-7.4
N	4.0

RdF Distribution by Prep Method

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

Bias



Quantiles

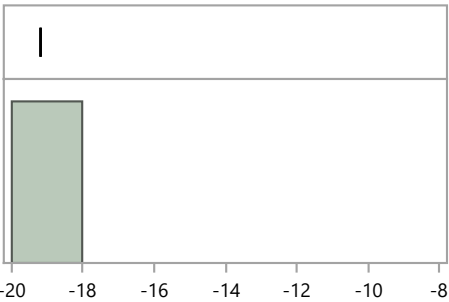
100.0%	maximum	53.8
99.5%		53.8
97.5%		51.2
90.0%		21.2
75.0%	quartile	7.7
50.0%	median	1.0
25.0%	quartile	-7.1
10.0%		-13.0
2.5%		-40.8
0.5%		-43.3
0.0%	minimum	-43.3

Summary Statistics

Mean	1.3
Std Dev	15.1
Std Err Mean	2.3
Upper 95% Mean	6.0
Lower 95% Mean	-3.3
N	43.0

Distributions Analyte_Method=Manganese-54 Other

Bias



Quantiles

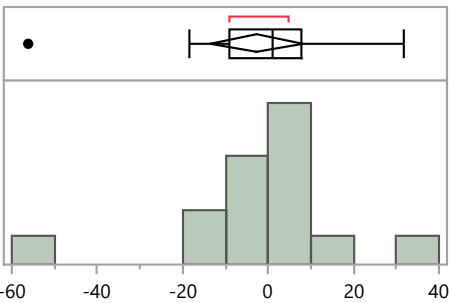
100.0%	maximum	-19.2
99.5%		-19.2
97.5%		-19.2
90.0%		-19.2
75.0%	quartile	-19.2
50.0%	median	-19.2
25.0%	quartile	-19.2
10.0%		-19.2
2.5%		-19.2
0.5%		-19.2
0.0%	minimum	-19.2

Summary Statistics

Mean	-19.2
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	31.6
99.5%		31.6
97.5%		31.6
90.0%		23.7
75.0%	quartile	7.8
50.0%	median	0.9
25.0%	quartile	-9.2
10.0%		-33.5
2.5%		-56.1
0.5%		-56.1
0.0%	minimum	-56.1

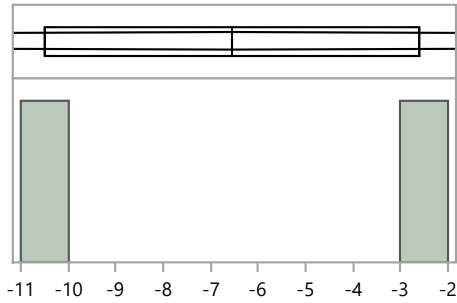
Summary Statistics

Mean	-2.6
Std Dev	19.5
Std Err Mean	5.0
Upper 95% Mean	8.2
Lower 95% Mean	-13.4
N	15.0

RdF Distribution by Prep Method

Distributions Analyte_Method=Plutonium-238 Acid leaching without hydrofluoric acid

Bias



Quantiles

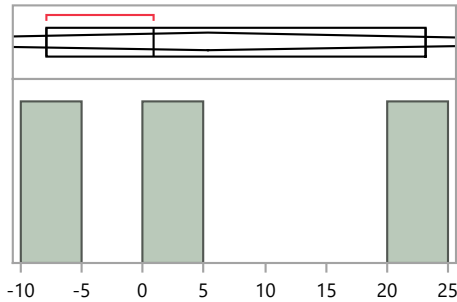
100.0%	maximum	-2.6
99.5%		-2.6
97.5%		-2.6
90.0%		-2.6
75.0%	quartile	-2.6
50.0%	median	-6.6
25.0%	quartile	-10.5
10.0%		-10.5
2.5%		-10.5
0.5%		-10.5
0.0%	minimum	-10.5

Summary Statistics

Mean	-6.6
Std Dev	5.6
Std Err Mean	4.0
Upper 95% Mean	43.6
Lower 95% Mean	-56.7
N	2.0

Distributions Analyte_Method=Plutonium-238 Other

Bias



Quantiles

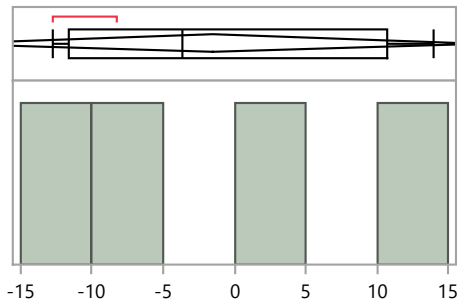
100.0%	maximum	23.2
99.5%		23.2
97.5%		23.2
90.0%		23.2
75.0%	quartile	23.2
50.0%	median	0.9
25.0%	quartile	-7.9
10.0%		-7.9
2.5%		-7.9
0.5%		-7.9
0.0%	minimum	-7.9

Summary Statistics

Mean	5.4
Std Dev	16.0
Std Err Mean	9.3
Upper 95% Mean	45.2
Lower 95% Mean	-34.4
N	3.0

Distributions Analyte_Method=Plutonium-238 Total dissolution by fusion

Bias



Quantiles

100.0%	maximum	14.0
99.5%		14.0
97.5%		14.0
90.0%		14.0
75.0%	quartile	10.7
50.0%	median	-3.7
25.0%	quartile	-11.6
10.0%		-12.7
2.5%		-12.7
0.5%		-12.7
0.0%	minimum	-12.7

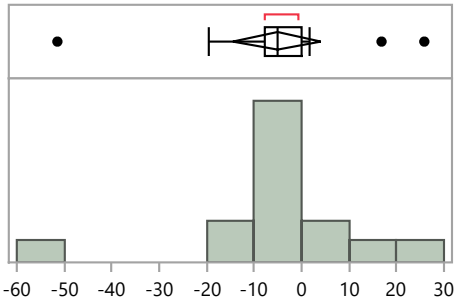
Summary Statistics

Mean	-1.5
Std Dev	11.8
Std Err Mean	5.9
Upper 95% Mean	17.3
Lower 95% Mean	-20.3
N	4.0

RdF Distribution by Prep Method

Distributions Analyte_Method=Plutonium-239/240 Acid dissolution with hydrofluoric acid

Bias



Quantiles

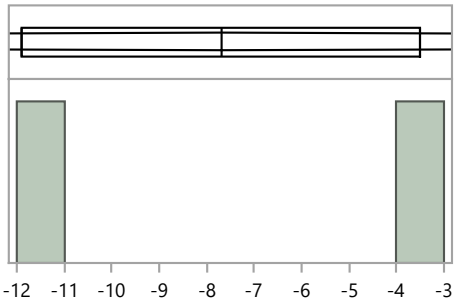
100.0%	maximum	25.8
99.5%		25.8
97.5%		25.8
90.0%		20.4
75.0%	quartile	0.0
50.0%	median	-5.2
25.0%	quartile	-7.9
10.0%		-32.2
2.5%		-51.4
0.5%		-51.4
0.0%	minimum	-51.4

Summary Statistics

Mean	-5.2
Std Dev	16.9
Std Err Mean	4.4
Upper 95% Mean	4.1
Lower 95% Mean	-14.5
N	15.0

Distributions Analyte_Method=Plutonium-239/240 Acid leaching without hydrofluoric acid

Bias



Quantiles

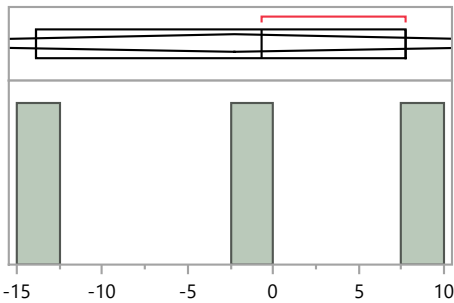
100.0%	maximum	-3.5
99.5%		-3.5
97.5%		-3.5
90.0%		-3.5
75.0%	quartile	-3.5
50.0%	median	-7.7
25.0%	quartile	-11.9
10.0%		-11.9
2.5%		-11.9
0.5%		-11.9
0.0%	minimum	-11.9

Summary Statistics

Mean	-7.7
Std Dev	5.9
Std Err Mean	4.2
Upper 95% Mean	45.7
Lower 95% Mean	-61.1
N	2.0

Distributions Analyte_Method=Plutonium-239/240 Other

Bias



Quantiles

100.0%	maximum	7.7
99.5%		7.7
97.5%		7.7
90.0%		7.7
75.0%	quartile	7.7
50.0%	median	-0.7
25.0%	quartile	-13.9
10.0%		-13.9
2.5%		-13.9
0.5%		-13.9
0.0%	minimum	-13.9

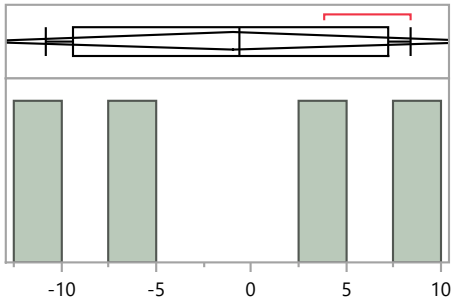
Summary Statistics

Mean	-2.3
Std Dev	10.9
Std Err Mean	6.3
Upper 95% Mean	24.7
Lower 95% Mean	-29.3
N	3.0

RdF Distribution by Prep Method

Distributions Analyte_Method=Plutonium-239/240 Total dissolution by fusion

Bias



Quantiles

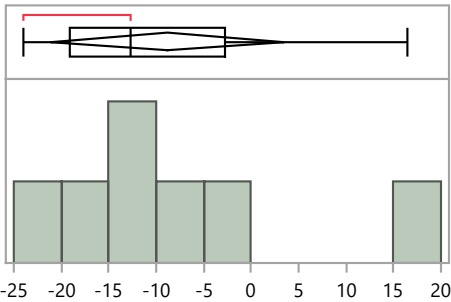
100.0%	maximum	8.4
99.5%		8.4
97.5%		8.4
90.0%		8.4
75.0%	quartile	7.3
50.0%	median	-0.7
25.0%	quartile	-9.4
10.0%		-10.8
2.5%		-10.8
0.5%		-10.8
0.0%	minimum	-10.8

Summary Statistics

Mean	-0.9
Std Dev	8.6
Std Err Mean	4.3
Upper 95% Mean	12.8
Lower 95% Mean	-14.7
N	4.0

Distributions Analyte_Method=Strontium-90 Acid dissolution with hydrofluoric acid

Bias



Quantiles

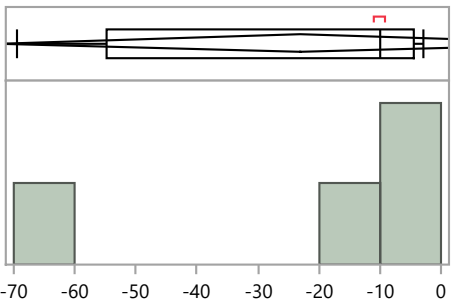
100.0%	maximum	16.4
99.5%		16.4
97.5%		16.4
90.0%		16.4
75.0%	quartile	-2.8
50.0%	median	-12.6
25.0%	quartile	-19.1
10.0%		-23.9
2.5%		-23.9
0.5%		-23.9
0.0%	minimum	-23.9

Summary Statistics

Mean	-8.8
Std Dev	13.3
Std Err Mean	5.0
Upper 95% Mean	3.5
Lower 95% Mean	-21.1
N	7.0

Distributions Analyte_Method=Strontium-90 Acid leaching without hydrofluoric acid

Bias



Quantiles

100.0%	maximum	-2.9
99.5%		-2.9
97.5%		-2.9
90.0%		-2.9
75.0%	quartile	-4.5
50.0%	median	-10.1
25.0%	quartile	-54.8
10.0%		-69.3
2.5%		-69.3
0.5%		-69.3
0.0%	minimum	-69.3

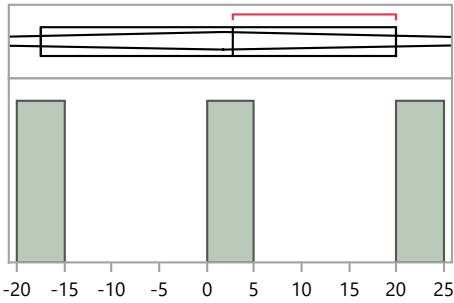
Summary Statistics

Mean	-23.1
Std Dev	31.0
Std Err Mean	15.5
Upper 95% Mean	26.2
Lower 95% Mean	-72.4
N	4.0

RdF Distribution by Prep Method

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

Bias



Quantiles

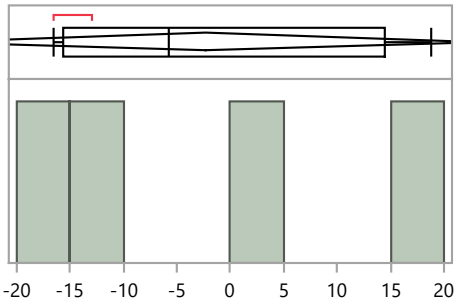
100.0%	maximum	20.0
99.5%		20.0
97.5%		20.0
90.0%		20.0
75.0%	quartile	20.0
50.0%	median	2.7
25.0%	quartile	-17.5
10.0%		-17.5
2.5%		-17.5
0.5%		-17.5
0.0%	minimum	-17.5

Summary Statistics

Mean	1.7
Std Dev	18.8
Std Err Mean	10.8
Upper 95% Mean	48.4
Lower 95% Mean	-44.9
N	3.0

Distributions Analyte_Method=Strontium-90 Other

Bias



Quantiles

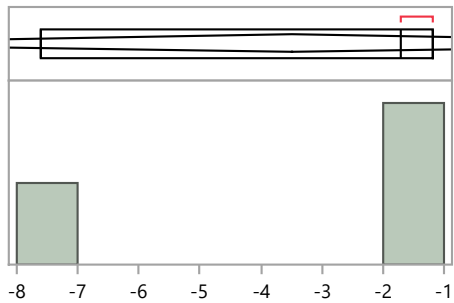
100.0%	maximum	18.8
99.5%		18.8
97.5%		18.8
90.0%		18.8
75.0%	quartile	14.5
50.0%	median	-5.7
25.0%	quartile	-15.7
10.0%		-16.6
2.5%		-16.6
0.5%		-16.6
0.0%	minimum	-16.6

Summary Statistics

Mean	-2.3
Std Dev	16.1
Std Err Mean	8.1
Upper 95% Mean	23.3
Lower 95% Mean	-27.9
N	4.0

Distributions Analyte_Method=Strontium-90 Total dissolution by fusion

Bias



Quantiles

100.0%	maximum	-1.2
99.5%		-1.2
97.5%		-1.2
90.0%		-1.2
75.0%	quartile	-1.2
50.0%	median	-1.7
25.0%	quartile	-7.6
10.0%		-7.6
2.5%		-7.6
0.5%		-7.6
0.0%	minimum	-7.6

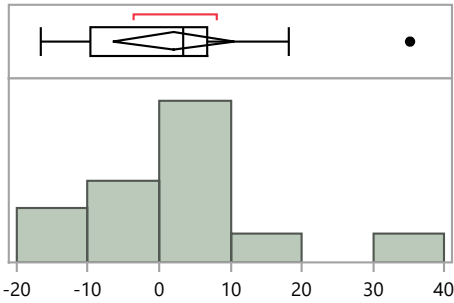
Summary Statistics

Mean	-3.5
Std Dev	3.6
Std Err Mean	2.1
Upper 95% Mean	5.3
Lower 95% Mean	-12.3
N	3.0

RdF Distribution by Prep Method

Distributions Analyte_Method=Uranium-234 Acid dissolution with hydrofluoric acid

Bias



Quantiles

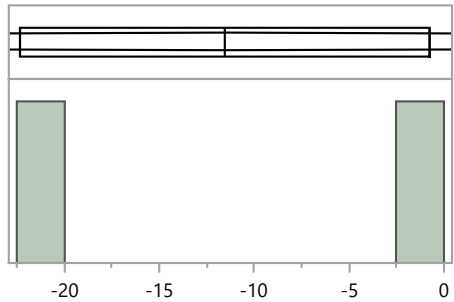
100.0%	maximum	35.2
99.5%		35.2
97.5%		35.2
90.0%		28.4
75.0%	quartile	6.9
50.0%	median	3.3
25.0%	quartile	-9.6
10.0%		-16.0
2.5%		-16.7
0.5%		-16.7
0.0%	minimum	-16.7

Summary Statistics

Mean	2.1
Std Dev	14.1
Std Err Mean	3.9
Upper 95% Mean	10.6
Lower 95% Mean	-6.4
N	13.0

Distributions Analyte_Method=Uranium-234 Acid leaching without hydrofluoric acid

Bias



Quantiles

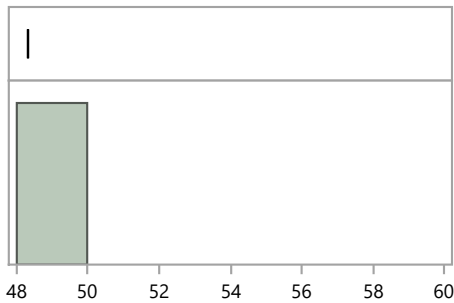
100.0%	maximum	-0.8
99.5%		-0.8
97.5%		-0.8
90.0%		-0.8
75.0%	quartile	-0.8
50.0%	median	-11.6
25.0%	quartile	-22.3
10.0%		-22.3
2.5%		-22.3
0.5%		-22.3
0.0%	minimum	-22.3

Summary Statistics

Mean	-11.6
Std Dev	15.2
Std Err Mean	10.8
Upper 95% Mean	125.0
Lower 95% Mean	-148.1
N	2.0

Distributions Analyte_Method=Uranium-234 EPA 908, Uranium-Radiochemical Method, 600/4/80-032

Bias



Quantiles

100.0%	maximum	48.3
99.5%		48.3
97.5%		48.3
90.0%		48.3
75.0%	quartile	48.3
50.0%	median	48.3
25.0%	quartile	48.3
10.0%		48.3
2.5%		48.3
0.5%		48.3
0.0%	minimum	48.3

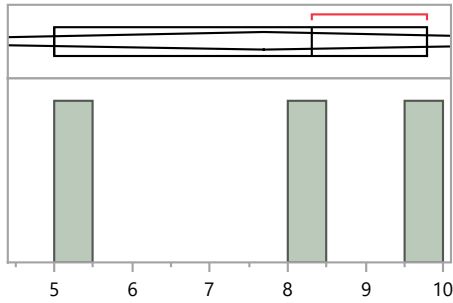
Summary Statistics

Mean	48.3
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

RdF Distribution by Prep Method

Distributions Analyte_Method=Uranium-234 Other

Bias



Quantiles

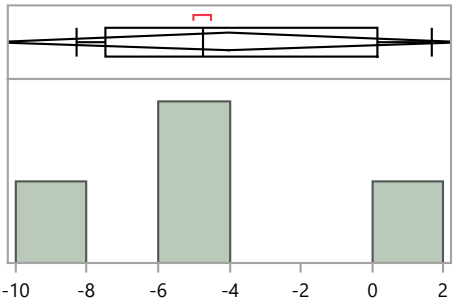
100.0%	maximum	9.8
99.5%		9.8
97.5%		9.8
90.0%		9.8
75.0%	quartile	9.8
50.0%	median	8.3
25.0%	quartile	5.0
10.0%		5.0
2.5%		5.0
0.5%		5.0
0.0%	minimum	5.0

Summary Statistics

Mean	7.7
Std Dev	2.5
Std Err Mean	1.4
Upper 95% Mean	13.8
Lower 95% Mean	1.6
N	3.0

Distributions Analyte_Method=Uranium-234 Total dissolution by fusion

Bias



Quantiles

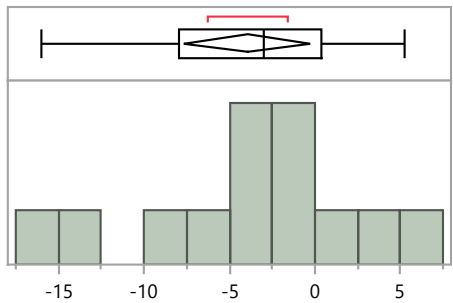
100.0%	maximum	1.7
99.5%		1.7
97.5%		1.7
90.0%		1.7
75.0%	quartile	0.1
50.0%	median	-4.8
25.0%	quartile	-7.5
10.0%		-8.3
2.5%		-8.3
0.5%		-8.3
0.0%	minimum	-8.3

Summary Statistics

Mean	-4.0
Std Dev	4.2
Std Err Mean	2.1
Upper 95% Mean	2.6
Lower 95% Mean	-10.7
N	4.0

Distributions Analyte_Method=Uranium-238 Acid dissolution with hydrofluoric acid

Bias



Quantiles

100.0%	maximum	5.2
99.5%		5.2
97.5%		5.2
90.0%		4.4
75.0%	quartile	0.4
50.0%	median	-3.0
25.0%	quartile	-7.9
10.0%		-14.7
2.5%		-16.0
0.5%		-16.0
0.0%	minimum	-16.0

Summary Statistics

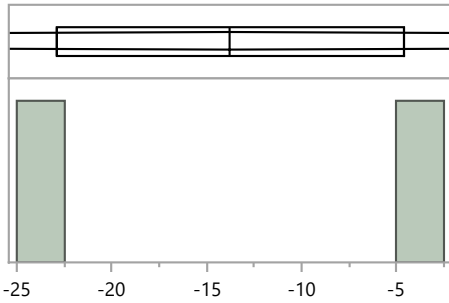
Mean	-4.0
Std Dev	6.1
Std Err Mean	1.7
Upper 95% Mean	-0.3
Lower 95% Mean	-7.7
N	13.0

RdF44 Distribution by Preparation Method

RdF Distribution by Prep Method

Distributions Analyte_Method=Uranium-238 Acid leaching without hydrofluoric acid

Bias



Quantiles

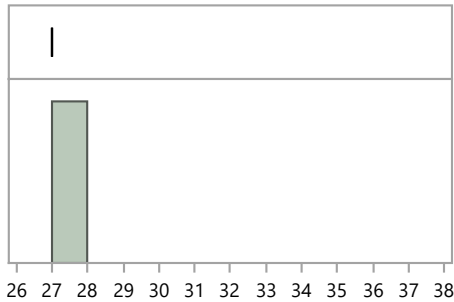
100.0%	maximum	-4.6
99.5%		-4.6
97.5%		-4.6
90.0%		-4.6
75.0%	quartile	-4.6
50.0%	median	-13.8
25.0%	quartile	-22.9
10.0%		-22.9
2.5%		-22.9
0.5%		-22.9
0.0%	minimum	-22.9

Summary Statistics

Mean	-13.8
Std Dev	12.9
Std Err Mean	9.2
Upper 95% Mean	102.5
Lower 95% Mean	-130.0
N	2.0

Distributions Analyte_Method=Uranium-238 EPA 908, Uranium-Radiochemical Method, 600/4/80-032

Bias



Quantiles

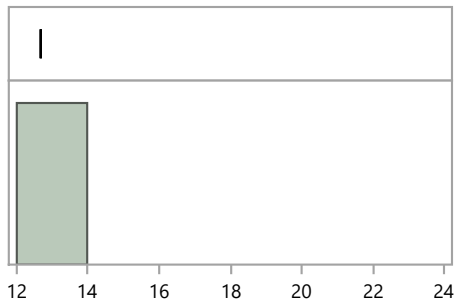
100.0%	maximum	27.0
99.5%		27.0
97.5%		27.0
90.0%		27.0
75.0%	quartile	27.0
50.0%	median	27.0
25.0%	quartile	27.0
10.0%		27.0
2.5%		27.0
0.5%		27.0
0.0%	minimum	27.0

Summary Statistics

Mean	27.0
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

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

Bias



Quantiles

100.0%	maximum	12.7
99.5%		12.7
97.5%		12.7
90.0%		12.7
75.0%	quartile	12.7
50.0%	median	12.7
25.0%	quartile	12.7
10.0%		12.7
2.5%		12.7
0.5%		12.7
0.0%	minimum	12.7

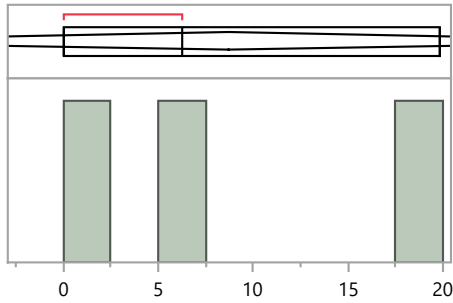
Summary Statistics

Mean	12.7
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

RdF Distribution by Prep Method

Distributions Analyte_Method=Uranium-238 Other

Bias



Quantiles

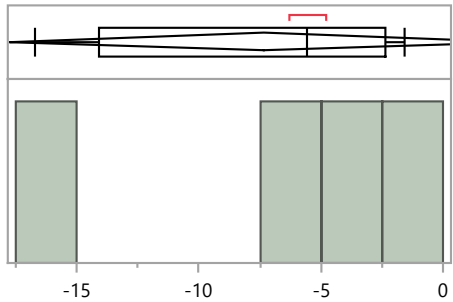
100.0%	maximum	19.8
99.5%		19.8
97.5%		19.8
90.0%		19.8
75.0%	quartile	19.8
50.0%	median	6.3
25.0%	quartile	0.0
10.0%		0.0
2.5%		0.0
0.5%		0.0
0.0%	minimum	0.0

Summary Statistics

Mean	8.7
Std Dev	10.1
Std Err Mean	5.8
Upper 95% Mean	33.8
Lower 95% Mean	-16.4
N	3.0

Distributions Analyte_Method=Uranium-238 Total dissolution by fusion

Bias



Quantiles

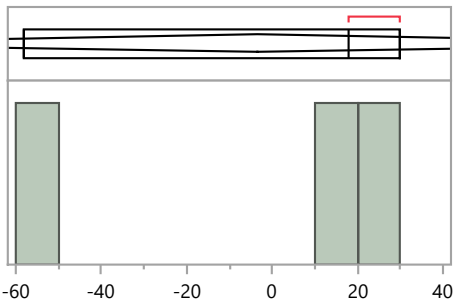
100.0%	maximum	-1.6
99.5%		-1.6
97.5%		-1.6
90.0%		-1.6
75.0%	quartile	-2.4
50.0%	median	-5.6
25.0%	quartile	-14.1
10.0%		-16.7
2.5%		-16.7
0.5%		-16.7
0.0%	minimum	-16.7

Summary Statistics

Mean	-7.4
Std Dev	6.5
Std Err Mean	3.3
Upper 95% Mean	3.0
Lower 95% Mean	-17.7
N	4.0

Distributions Analyte_Method=Zinc-65 Acid dissolution with hydrofluoric acid

Bias



Quantiles

100.0%	maximum	29.8
99.5%		29.8
97.5%		29.8
90.0%		29.8
75.0%	quartile	29.8
50.0%	median	17.9
25.0%	quartile	-58.2
10.0%		-58.2
2.5%		-58.2
0.5%		-58.2
0.0%	minimum	-58.2

Summary Statistics

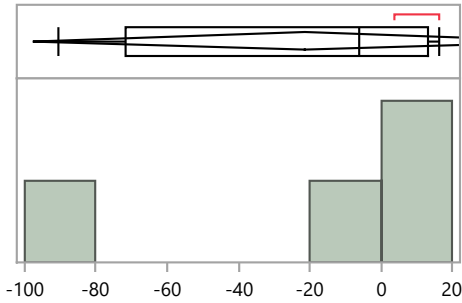
Mean	-3.5
Std Dev	47.7
Std Err Mean	27.6
Upper 95% Mean	115.1
Lower 95% Mean	-122.1
N	3.0

RdF44 Distribution by Preparation Method

RdF Distribution by Prep Method

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

Bias



Quantiles

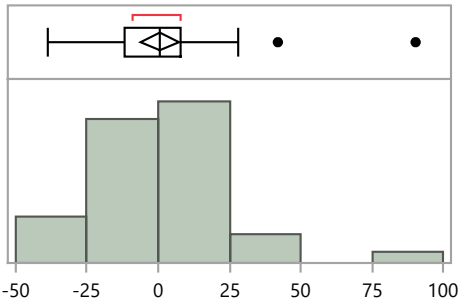
100.0%	maximum	16.5
99.5%		16.5
97.5%		16.5
90.0%		16.5
75.0%	quartile	13.3
50.0%	median	-6.1
25.0%	quartile	-71.7
10.0%		-90.3
2.5%		-90.3
0.5%		-90.3
0.0%	minimum	-90.3

Summary Statistics

Mean	-21.5
Std Dev	47.8
Std Err Mean	23.9
Upper 95% Mean	54.5
Lower 95% Mean	-97.5
N	4.0

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

Bias



Quantiles

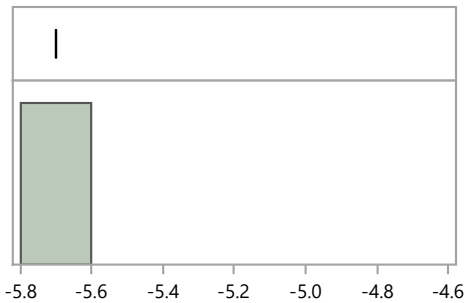
100.0%	maximum	90.3
99.5%		90.3
97.5%		85.5
90.0%		23.0
75.0%	quartile	8.0
50.0%	median	0.6
25.0%	quartile	-11.9
10.0%		-25.8
2.5%		-37.8
0.5%		-38.6
0.0%	minimum	-38.6

Summary Statistics

Mean	0.7
Std Dev	21.8
Std Err Mean	3.3
Upper 95% Mean	7.4
Lower 95% Mean	-6.0
N	43.0

Distributions Analyte_Method=Zinc-65 Other

Bias



Quantiles

100.0%	maximum	-5.7
99.5%		-5.7
97.5%		-5.7
90.0%		-5.7
75.0%	quartile	-5.7
50.0%	median	-5.7
25.0%	quartile	-5.7
10.0%		-5.7
2.5%		-5.7
0.5%		-5.7
0.0%	minimum	-5.7

Summary Statistics

Mean	-5.7
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0