

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.

MaW50 Participating Laboratories

Lab Code	Lab Name	Matrix Code
ADEM01	Alabama Department of Environmental Management	MaW
ADFC99	Abu Dhabi Quality and Conformity Council-Central Testing Lab	MaW
AFOH01	USAFSAM/OEA	MaW
ALIN01	Anatek Labs Inc.	MaW
AMEC99	Jacobs Clean Energy Limited - Analytical Services	MaW
ANLB01	Argonne National Laboratory	MaW
AREV01	Framatome - CMC	MaW
ARGO01	Idaho National Laboratory	MaW
ARPL01	Analytical Support Operations - Radiochemical Processing Lab	MaW
ARSL01	ARS	MaW
ASUK99	AWE (Aldermaston)	MaW
AY1201	Consolidated Nuclear Security, LLC, ACO Laboratory	MaW
BY1201	Consolidated Nuclear Security, LLC, ACO, Production Laboratory	MaW
CDHS01	California Department of Public Health	MaW
CESL01	Lawrence Livermore National Laboratory - EMRL	MaW
CMRC01	Carlsbad Environmental Monitoring and Research Center	MaW
COPS99	Health Canada Radiation Protection Bureau	MaW
DEHS01	Department of Environmental Health & Safety	MaW
DLEA01	DLE Associates	MaW
EFGS01	Eurofins Frontier Global Sciences, LLC.	MaW
ELIW01	Energy Laboratories, Inc.	MaW
ERAD01	Lawrence Livermore National Laboratory	MaW
ERCL01	Washington State Public Health Laboratories	MaW
ERHD99	National Monitoring Section, Radiation Protection Bureau, Health Canada	MaW
ESDE01	Region 5 EQC Tritium Lab	MaW
ETTP01	MCLinc	MaW
FDHE01	Florida Dept of Health Environmental Laboratory	MaW
FDOH01	Florida Dept. of Health, Mobile Environmental Radiological Lab	MaW
FERM01	Fernald Project	MaW
FNAL01	Fermi National Accelerator Laboratory (FermiLab)	MaW
GENE01	GEL Laboratories, LLC	MaW
GPCL01	Georgia Power Company Environmental Laboratory	MaW
HCAL01	Lawrence Livermore National Laboratory	MaW
HECR01	SC Dept. Health and Environmental Control Radiological Laboratory	MaW
HPAC99	UKHSA, RCE Glasgow	MaW
IAEA20	IAEA Marine Environment Laboratories, Radiometrics Laboratory	MaW
IAEA99	International Atomic Energy Agency	MaW
IEMA01	Illinois Emergency Management Agency Radiochemistry Laboratory	MaW
ISUE01	ISU Environmental Monitoring Laboratory	MaW
JLNN01	Jefferson Laboratory	MaW
LOCK03	Advanced Test Reactor (ATR) Complex Radioanalytical Laboratory	MaW
LZCA01	ACZ Laboratories, Inc	MaW
MART01	Fluor-BWXT Portsmouth LLC, Analytical Laboratory	MaW
MART03	Radioactive Material Analysis Laboratory	MaW

MDPH01	MDPH-Radiation Control Program	MaW
MNDH01	Minnesota Department of Health, Public Health Lab. Division	MaW
NARL01	National Analytical Radiation Environmental Laboratory	MaW
NESI01	BWXT-Radioisotope & Analytical Chemistry Laboratory	MaW
NJDH01	New Jersey Dept. of Health, ECLS	MaW
ODHL01	Ohio Department of Health Laboratory	MaW
OTLI01	Pace Analytical National Center for Testing & Innovation	MaW
QUAN01	Eurofins St. Louis	MaW
RJLG01	RJ Lee Group - Columbia Basin Analytical Laboratories (CBAL)	MaW
RPSC01	Radiation Protection Service	MaW
SANC99	RadioAnalysis, South Africa Nuclear Energy Corp.	MaW
SAVA01	Battelle Savannah River Alliance	MaW
SEML01	SRS Environmental Monitoring Laboratory	MaW
SLAC01	SLAC DOE National Accelerator Laboratory	MaW
SOUT01	Southwest Research Institute	MaW
SRPD01	Sandia National Laboratories, Radiation Protection Sample Diagnostics	MaW
STRL01	South Texas Project Radiological Laboratory	MaW
TDHL01	Texas Department of State Health Services Laboratory	MaW
TELE01	Teledyne Brown Engineering - Environmental Services	MaW
TELE02	Microbac Laboratories Inc. - Northbrook	MaW
TMAO01	EBERLINE Analytical Corporation	MaW
TNUT01	St. Louis USACE FUSRAP Laboratory	MaW
UNTE01	UniTech-235	MaW
WEST04	PACE ANALYTICAL SERVICES, PITTSBURGH	MaW
WIPH01	WI, DPH, Radiation Protection Section	MaW
WIPP01	WIPP Laboratories	MaW
WSHL01	Wisconsin State Laboratory of Hygiene	MaW
WVDP01	WVDP Environmental Laboratory	MaW
YPGA01	US Army Yuma Proving Ground / Material Analysis Lab	MaW

Laboratories Not Reporting

Lab Code	Lab Name	Matrix Code
ISUP01	ISU - Department of Physics/Health Physics/EAL	MaW

Study Reference Values

MAPEP-24-MaW50

Radiological Reference Date: 02/01/2024

Analyte	Ref Value	Ref Unc
Inorganic Units: (mg/L)		
Antimony	5.71	0.06
Arsenic	2.73	0.05
Barium	0.0561	0.0011
Beryllium	2.87	0.06
Cadmium	0.854	0.017
Chromium	1.09	0.02
Cobalt	8.99	0.18
Copper	7.47	0.15
Lead	1.25	0.03
Selenium	0.247	0.005
Technetium-99	1.18E-5	2E-07
Thallium	3.38	0.07
Uranium-235	6.04E-4	6E-06
Uranium-238	0.0827	0.0012
Uranium-Total	0.0833	0.0013
Vanadium	5.76	0.12
Zinc	7.40	0.15

Analyte	Ref Value	Ref Unc
Radiological Units: (Bq/L)		
Cesium-137	9.7	0.2
Cobalt-57	25.4	0.5
Cobalt-60	10.27	0.17
Hydrogen-3	637	15
Iron-55	19.7	0.4
Manganese-54	7.36	0.15
Nickel-63	0.8	0.2
Plutonium-238	0.745	0.011
Plutonium-239/240	0.769	0.012
Radium-226	0.310	0.007
Strontium-90	3.68	0.07
Technetium-99	7.47	0.15
Uranium-234	0.990	0.015
Uranium-238	1.028	0.015

Sample Statistical Summary

MAPEP-24-MaW50

Radiological Reference Date: 02/01/2024

Analyte	T(1)	A(2)	Grand(3) Mean	Std Dev	Ref Value	Ref Unc	Acceptance Range
							Units: (mg/L)
Inorganic							
Antimony	15	15	5.56	0.25	5.71	0.06	4.00 - 7.42
Arsenic	17	16	2.68	0.14	2.73	0.05	1.91 - 3.55
Barium	17	16	0.0566	0.0030	0.0561	0.0011	0.0393 - 0.0729
Beryllium	16	15	2.83	0.15	2.87	0.06	2.01 - 3.73
Cadmium	17	17	0.836	0.047	0.854	0.017	0.598 - 1.110
Chromium	17	17	1.07	0.06	1.09	0.02	0.76 - 1.42
Cobalt	17	16	9.00	0.83	8.99	0.18	6.29 - 11.69
Copper	17	17	7.32	0.35	7.47	0.15	5.23 - 9.71
Lead	17	17	1.25	0.06	1.25	0.03	0.88 - 1.63
Mercury	13	9					False Positive Test
Nickel	15	10					False Positive Test
Selenium	15	14	0.233	0.023	0.247	0.005	0.173 - 0.321
Technetium-99	3	3			1.18E-5	2E-07	8.30E-6 - 1.53E-5
Thallium	15	15	3.37	0.27	3.38	0.07	2.37 - 4.39
Uranium-235	15	15	5.90E-4	3.20E-5	6.04E-4	6E-06	4.23E-4 - 7.85E-4
Uranium-238	15	15	0.0824	0.0054	0.0827	0.0012	0.0579 - 0.1075
Uranium-Total	20	19	0.0842	0.0052	0.0833	0.0013	0.0583 - 0.1083
Vanadium	17	17	5.75	0.26	5.76	0.12	4.03 - 7.49
Zinc	17	17	7.34	0.81	7.40	0.15	5.18 - 9.62

Analyte	T(1)	A(2)	Grand(3) Mean	Std Dev	Ref Value	Ref Unc	Acceptance Range
							Units: (Bq/L)
Radiological							
Americium-241	32	29					False Positive Test
Cesium-134	49	44					False Positive Test
Cesium-137	56	54	10.1	0.7	9.7	0.2	6.8 - 12.6
Cobalt-57	56	54	24.7	1.7	25.4	0.5	17.8 - 33.0
Cobalt-60	56	53	10.19	0.51	10.27	0.17	7.19 - 13.35
Hydrogen-3	41	37	640	42	637	15	446 - 828
Iron-55	8	7	18.9	2.9	19.7	0.4	13.8 - 25.6
Manganese-54	56	53	7.42	0.43	7.36	0.15	5.15 - 9.57
Nickel-63	12	10	1.0	0.7	0.8	0.2	Sensitivity Evaluation
Plutonium-238	30	27	0.703	0.059	0.745	0.011	0.522 - 0.969
Plutonium-239/240	30	27	0.699	0.060	0.769	0.012	0.538 - 1.000
Potassium-40	49	40					False Positive Test
Radium-226	24	21	0.317	0.042	0.310	0.007	0.217 - 0.403
Strontium-90	33	30	3.63	0.32	3.68	0.07	2.58 - 4.78
Technetium-99	17	14	7.26	0.74	7.47	0.15	5.23 - 9.71
Uranium-234	30	26	0.986	0.075	0.990	0.015	0.693 - 1.287
Uranium-238	31	28	1.016	0.057	1.028	0.015	0.720 - 1.336
Zinc-65	48	46					False Positive Test

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".

Results 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%

Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Flag Summary Report

MAPEP-24-MaW50

Inorganic

Analyte	A	W	RW	N
Antimony	15			
Arsenic	16			1
Barium	16			1
Beryllium	15			1
Cadmium	17			
Chromium	17			
Cobalt	15	1		1
Copper	17			
Lead	17			
Mercury	9			4
Nickel	10			5
Selenium	12	2		1
Thallium	15			
Uranium-Total	19			1
Uranium-235	15			
Uranium-238	15			
Vanadium	17			
Zinc	15	2		
Technetium-99	3			

Radiological

Analyte	A	W	RW	N
Americium-241	29			5
Cesium-134	44			10
Cesium-137	53	1		2
Cobalt-57	52	2		2
Cobalt-60	53			3
Hydrogen-3	36	1		4
Iron-55	6	1		1
Manganese-54	53			3
Nickel-63	10			2
Plutonium-238	26	1		3
Plutonium-239/240	25	2		3
Potassium-40	40			15
Radium-226	16	5		3
Strontium-90	30			3
Technetium-99	12	2		3
Uranium-234	25	1		4
Uranium-238	28			3
Zinc-65	46			10



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

Laboratory Results For MAPEP-24-MaW50
 (ADEM01) Alabama Department of Environmental Management
 1350 Coliseum Blvd.
 Montgomery, AL 36110

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	NR		N	(11)		False Positive Test		
Cesium-137	10.400	9.7	A		7.2	6.8 - 12.6	0.419	A
Cobalt-57	25.900	25.4	A		2.0	17.8 - 33.0	0.793	A
Cobalt-60	10.600	10.27	A		3.2	7.19 - 13.35	0.254	A
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.600	7.36	A		3.3	5.15 - 9.57	0.280	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	2.040		N	(1)		False Positive Test	0.467	
Radium-226	2.080	0.310	N		571.0	0.217 - 0.403	1.220	N

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	NR		N	(11)		False Positive Test		

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (ADFC99) Abu Dhabi Quality and Conformity Council-Central Testing Lab
 Radiation Lab
 Abu Dhabi, Abu Dhabi 853

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	0.01		A			False Positive Test	0.01	
Cesium-137	11.20	9.7	A		15.5	6.8 - 12.6	0.69	A
Cobalt-57	26.60	25.4	A		4.7	17.8 - 33.0	1.92	A
Cobalt-60	9.94	10.27	A		-3.2	7.19 - 13.35	0.50	A
Hydrogen-3	662.34	637	A		4.0	446 - 828	19.00	A
Iron-55	18.80	19.7	A		-4.6	13.8 - 25.6	1.40	A
Manganese-54	7.91	7.36	A		7.5	5.15 - 9.57	0.43	A
Nickel-63	1.07	0.8	A			Sensitivity Evaluation	0.22	
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	-0.20		A			False Positive Test	0.50	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	3.77	3.68	A		2.4	2.58 - 4.78	0.20	A
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	0.01		A			False Positive Test	0.01	

Radiological Reference Date: February 1, 2024

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Uncertainty Flag

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 - ACCEPTABLE.....2% ≤ RP ≤ 15%
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- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (AFOH01) USAFSAM/OEA
 2510 Fifth Street, Area B
 Wright-Patterson AFB, OH 45433-7913

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	0.000596	6.04E-04	A		-1.3	4.23E-4 - 7.85E-4	0.000014	A
Uranium-238	0.0824	0.0827	A		-0.4	0.0579 - 0.1075	0.0020	A
Uranium-Total	0.0830	0.0833	A		-0.4	0.0583 - 0.1083	0.0020	A
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0013		A			False Positive Test	0.0006	
Cesium-134	-0.08		A			False Positive Test	0.08	
Cesium-137	9.53	9.7	A		-1.8	6.8 - 12.6	0.39	A
Cobalt-57	23.06	25.4	A		-9.2	17.8 - 33.0	0.79	A
Cobalt-60	9.66	10.27	A		-5.9	7.19 - 13.35	0.39	A
Hydrogen-3	627	637	A		-1.6	446 - 828	47	A
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	6.83	7.36	A		-7.2	5.15 - 9.57	0.21	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	0.642	0.745	A		-13.8	0.522 - 0.969	0.030	A
Plutonium-239/240	0.682	0.769	A		-11.3	0.538 - 1.000	0.032	A
Potassium-40	-0.14		A			False Positive Test	0.53	
Radium-226	0.333	0.310	A		7.4	0.217 - 0.403	0.039	A

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	3.17	3.68	A		-13.9	2.58 - 4.78	0.15	A
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	1.000	0.990	A		1.0	0.693 - 1.287	0.039	A
Uranium-238	1.032	1.028	A		0.4	0.720 - 1.336	0.040	A
Zinc-65	-0.3		A			False Positive Test	0.2	

Radiological Reference Date: February 1, 2024

Results Flags:

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- RW = Report Warning
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Uncertainty Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
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Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50

(ALIN01) Anatek Labs Inc.

504 E. Sprague Ave Ste D

Spokane, WA 99202

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	NR					False Positive Test		
Cesium-137	NR	9.7				6.8 - 12.6		
Cobalt-57	NR	25.4				17.8 - 33.0		
Cobalt-60	NR	10.27				7.19 - 13.35		
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	NR	7.36				5.15 - 9.57		
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	NR					False Positive Test		
Radium-226	0.3219	0.310	A		3.8	0.217 - 0.403	0.0267	A

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	NR					False Positive Test		

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (AMEC99) Jacobs Clean Energy Limited - Analytical Services
 612 Faraday Street
 Birchwood Park, Warrington WA3 6GN

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	5.74	5.71	A		0.5	4.00 - 7.42	0.06	N
Arsenic	2.89	2.73	A		5.9	1.91 - 3.55	0.02	N
Barium	0.06	0.0561	A		7.0	0.0393 - 0.0729	0.07	N
Beryllium	3.05	2.87	A		6.3	2.01 - 3.73	0.04	N
Cadmium	0.86	0.854	A		0.7	0.598 - 1.110	0.01	N
Chromium	1.09	1.09	A		0.0	0.76 - 1.42	0.01	N
Cobalt	9.17	8.99	A		2.0	6.29 - 11.69	0.10	N
Copper	7.83	7.47	A		4.8	5.23 - 9.71	0.06	N
Lead	1.29	1.25	A		3.2	0.88 - 1.63	0.01	N
Mercury	NR					False Positive Test		
Nickel	0.01		A			False Positive Test	0.02	
Selenium	0.25	0.247	A		1.2	0.173 - 0.321	0.02	A
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	0.12	0.0833	N		44.1	0.0583 - 0.1083	0.36	N
Vanadium	6.06	5.76	A		5.2	4.03 - 7.49	0.05	N
Zinc	7.67	7.40	A		3.6	5.18 - 9.62	0.09	N

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.006		A			False Positive Test	0.006	
Cesium-134	0.130		A			False Positive Test	0.067	
Cesium-137	10.31	9.7	A		6.3	6.8 - 12.6	0.28	A
Cobalt-57	24.54	25.4	A		-3.4	17.8 - 33.0	0.70	A
Cobalt-60	10.24	10.27	A		-0.3	7.19 - 13.35	0.25	A
Hydrogen-3	780	637	W		22.4	446 - 828	110	A
Iron-55	0.0159	19.7	N		-99.9	13.8 - 25.6	0.0011	A
Manganese-54	7.29	7.36	A		-1.0	5.15 - 9.57	0.24	A
Nickel-63	1.20	0.8	A			Sensitivity Evaluation	0.16	
Plutonium-238	0.773	0.745	A		3.8	0.522 - 0.969	0.017	A
Plutonium-239/240	8.695	0.769	N		1030.7	0.538 - 1.000	0.081	N
Potassium-40	21.33		N	(1)		False Positive Test	0.86	
Radium-226	0.331	0.310	A		6.8	0.217 - 0.403	0.046	A

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	3.76	3.68	A		2.2	2.58 - 4.78	0.72	W
Technetium-99	6.70	7.47	A		-10.3	5.23 - 9.71	9.3	N
Uranium-234	0.977	0.990	A		-1.3	0.693 - 1.287	0.038	A
Uranium-238	1.015	1.028	A		-1.3	0.720 - 1.336	0.039	A
Zinc-65	0.21		A			False Positive Test	0.19	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

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

Laboratory Results For MAPEP-24-MaW50
 (ANLB01) Argonne National Laboratory
 9700 S. Cass Ave
 Argonne, IL 60439

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.002		A			False Positive Test	0.001	
Cesium-134	0.22		A			False Positive Test	0.287	
Cesium-137	10.94	9.7	A		12.8	6.8 - 12.6	0.450	A
Cobalt-57	24.65	25.4	A		-3.0	17.8 - 33.0	0.393	N
Cobalt-60	10.71	10.27	A		4.3	7.19 - 13.35	0.5	A
Hydrogen-3	660.91	637	A		3.8	446 - 828	10.47	N
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.80	7.36	A		6.0	5.15 - 9.57	0.432	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	0.674	0.745	A		-9.5	0.522 - 0.969	0.061	A
Plutonium-239/240	0.696	0.769	A		-9.5	0.538 - 1.000	0.059	A
Potassium-40	NR			(6)		False Positive Test		
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	3.59	3.68	A		-2.4	2.58 - 4.78	0.108	A
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	0.965	0.990	A		-2.5	0.693 - 1.287	0.064	A
Uranium-238	0.983	1.028	A		-4.4	0.720 - 1.336	0.065	A
Zinc-65	0.42		A			False Positive Test	0.659	

Radiological Reference Date: February 1, 2024

Results Flags:

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- N = Result not acceptable.....|Bias| > 30%
- RW = Report Warning
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Uncertainty Flag

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 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
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Notes:

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

Laboratory Results For MAPEP-24-MaW50

(AREV01) Framatome - CMC

1724 Mount Athos Road

Lynchburg, VA 24504

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	5.47	5.71	A		-4.2	4.00 - 7.42	.547	A
Arsenic	2.88	2.73	A		5.5	1.91 - 3.55	0.288	A
Barium	0.06	0.0561	A		7.0	0.0393 - 0.0729	0.006	A
Beryllium	2.99	2.87	A		4.2	2.01 - 3.73	0.299	A
Cadmium	0.86	0.854	A		0.7	0.598 - 1.110	0.086	A
Chromium	1.10	1.09	A		0.9	0.76 - 1.42	0.11	A
Cobalt	11.91	8.99	N		32.5	6.29 - 11.69	1.191	A
Copper	7.75	7.47	A		3.7	5.23 - 9.71	0.775	A
Lead	1.31	1.25	A		4.8	0.88 - 1.63	0.131	A
Mercury	0.025		A			False Positive Test	0.025	
Nickel	0.05		A			False Positive Test	0.05	
Selenium	0.26	0.247	A		5.3	0.173 - 0.321	0.026	A
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	3.55	3.38	A		5.0	2.37 - 4.39	0.355	A
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	5.95	5.76	A		3.3	4.03 - 7.49	0.595	A
Zinc	7.31	7.40	A		-1.2	5.18 - 9.62	0.731	A

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	NR		N	(11)		False Positive Test		
Cesium-137	9.41	9.7	A		-3.0	6.8 - 12.6	0.31	A
Cobalt-57	22	25.4	A		-13.4	17.8 - 33.0	0.63	A
Cobalt-60	10.75	10.27	A		4.7	7.19 - 13.35	0.28	A
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	6.97	7.36	A		-5.3	5.15 - 9.57	0.34	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	NR		N	(11)		False Positive Test		
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	NR		N	(11)		False Positive Test		

Radiological Reference Date: February 1, 2024

Results Flags:

- A = Result acceptable.....|Bias| ≤ 20%
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- RW = Report Warning
- NR = Not Reported

Uncertainty Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

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

Laboratory Results For MAPEP-24-MaW50

(ARGO01) Idaho National Laboratory

INL, Materials and Fuels Complex

Idaho Falls, ID 83415

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	5.52	5.71	A		-3.3	4.00 - 7.42	0.28	A
Arsenic	2.75	2.73	A		0.7	1.91 - 3.55	0.14	A
Barium	0.0596	0.0561	A		6.2	0.0393 - 0.0729	0.0030	A
Beryllium	2.86	2.87	A		-0.3	2.01 - 3.73	0.14	A
Cadmium	0.843	0.854	A		-1.3	0.598 - 1.110	0.042	A
Chromium	1.09	1.09	A		0.0	0.76 - 1.42	0.054	A
Cobalt	9.25	8.99	A		2.9	6.29 - 11.69	0.46	A
Copper	7.65	7.47	A		2.4	5.23 - 9.71	0.38	A
Lead	1.22	1.25	A		-2.4	0.88 - 1.63	0.061	A
Mercury	0.000083		A			False Positive Test	0.000083	
Nickel	0.000886		N	(1)		False Positive Test	0.000089	
Selenium	0.216	0.247	A		-12.6	0.173 - 0.321	0.011	A
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	3.34	3.38	A		-1.2	2.37 - 4.39	0.17	A
Uranium-235	0.000605	6.04E-04	A		0.2	4.23E-4 - 7.85E-4	0.000030	A
Uranium-238	0.0847	0.0827	A		2.4	0.0579 - 0.1075	0.0042	A
Uranium-Total	0.0853	0.0833	A		2.4	0.0583 - 0.1083	0.0043	A
Vanadium	5.72	5.76	A		-0.7	4.03 - 7.49	0.29	A
Zinc	7.66	7.40	A		3.5	5.18 - 9.62	0.38	A

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.188		N	(1)		False Positive Test	0.014	
Cesium-134	2.22		A			False Positive Test	2.22	
Cesium-137	9.97	9.7	A		2.8	6.8 - 12.6	0.60	A
Cobalt-57	19.8	25.4	W		-22.0	17.8 - 33.0	0.99	A
Cobalt-60	10.5	10.27	A		2.2	7.19 - 13.35	0.63	A
Hydrogen-3	643	637	A		0.9	446 - 828	13	A
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.53	7.36	A		2.3	5.15 - 9.57	0.75	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	1.22	0.745	N		63.8	0.522 - 0.969	0.14	A
Plutonium-239/240	1.06	0.769	N		37.8	0.538 - 1.000	0.12	A
Potassium-40	18.5		A			False Positive Test	18.5	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	4.27	3.68	A		16.0	2.58 - 4.78	0.82	W
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	1.35	0.990	N		36.4	0.693 - 1.287	0.13	A
Uranium-238	1.09	1.028	A		6.0	0.720 - 1.336	0.15	A
Zinc-65	3.7		A			False Positive Test	3.7	

Radiological Reference Date: February 1, 2024

Results Flags:

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- N = Result not acceptable.....|Bias| > 30%
- RW = Report Warning
- NR = Not Reported

Uncertainty Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
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- (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-24-MaW50

(ARPL01) Analytical Support Operations - Radiochemical Processing Lab

PO Box 999

Richland, WA 99354

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR		N	(11)		False Positive Test		
Cesium-134	0.12		A			False Positive Test	0.50	
Cesium-137	10.26	9.7	A		5.8	6.8 - 12.6	0.24	A
Cobalt-57	25.3	25.4	A		-0.4	17.8 - 33.0	0.63	A
Cobalt-60	10.5	10.27	A		2.2	7.19 - 13.35	0.25	A
Hydrogen-3	1965	637	N		208.5	446 - 828	150	A
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.50	7.36	A		1.9	5.15 - 9.57	0.24	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	0.49	0.745	N		-34.2	0.522 - 0.969	0.04	A
Plutonium-239/240	0.55	0.769	W		-28.5	0.538 - 1.000	0.08	A
Potassium-40	3.25		A			False Positive Test	15.73	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	50.40	3.68	N		1269.6	2.58 - 4.78	1.3	A
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	0.51		A			False Positive Test	2.57	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (ARSL01) ARS
 2609 North River Road
 Port Allen, LA 70767

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	5.579431	5.71	A		-2.3	4.00 - 7.42	0.730983	A
Arsenic	2.77681	2.73	A		1.7	1.91 - 3.55	0.693167	W
Barium	0.125388	0.0561	N		123.5	0.0393 - 0.0729	0.025537	W
Beryllium	2.910635	2.87	A		1.4	2.01 - 3.73	0.429947	A
Cadmium	0.849775	0.854	A		-0.5	0.598 - 1.110	0.143093	W
Chromium	1.176277	1.09	A		7.9	0.76 - 1.42	0.284124	W
Cobalt	9.179299	8.99	A		2.1	6.29 - 11.69	1.364928	A
Copper	7.416958	7.47	A		-0.7	5.23 - 9.71	1.216144	W
Lead	1.365739	1.25	A		9.3	0.88 - 1.63	0.252958	W
Mercury	0.000022		N	(1)		False Positive Test	6.42682	
Nickel	0.046587		N	(1)		False Positive Test	0.007110	
Selenium	0.275416	0.247	A		11.5	0.173 - 0.321	0.062359	W
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	3.379935	3.38	A		0.0	2.37 - 4.39	0.544918	W
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	0.08516	0.0833	A		2.2	0.0583 - 0.1083	0.013231	W
Vanadium	6.125253	5.76	A		6.3	4.03 - 7.49	0.840981	A
Zinc	8.123151	7.40	A		9.8	5.18 - 9.62	1.345848	W

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.001		A			False Positive Test	0.006	
Cesium-134	-0.026		A			False Positive Test	0.079	
Cesium-137	10.179	9.7	A		4.9	6.8 - 12.6	0.242	A
Cobalt-57	24.508	25.4	A		-3.5	17.8 - 33.0	0.845	A
Cobalt-60	10.148	10.27	A		-1.2	7.19 - 13.35	0.233	A
Hydrogen-3	636.839	637	A		0.0	446 - 828	35.09	A
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.566	7.36	A		2.8	5.15 - 9.57	0.269	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	0.695	0.745	A		-6.7	0.522 - 0.969	0.053	A
Plutonium-239/240	0.639	0.769	A		-16.9	0.538 - 1.000	0.049	A
Potassium-40	2.226		N	(1)		False Positive Test	0.533	
Radium-226	0.339	0.310	A		9.4	0.217 - 0.403	0.035	A

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	3.949	3.68	A		7.3	2.58 - 4.78	0.325	A
Technetium-99	7.502	7.47	A		0.4	5.23 - 9.71	0.914	A
Uranium-234	0.903	0.990	A		-8.8	0.693 - 1.287	0.067	A
Uranium-238	0.943	1.028	A		-8.3	0.720 - 1.336	0.069	A
Zinc-65	-0.068		A			False Positive Test	0.185	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

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

Laboratory Results For MAPEP-24-MaW50

(ASUK99) AWE (Aldermaston)

A38.1 AWE

Reading, Berkshire RG7 4PR

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	NR					False Positive Test		
Cesium-137	NR	9.7				6.8 - 12.6		
Cobalt-57	NR	25.4				17.8 - 33.0		
Cobalt-60	NR	10.27				7.19 - 13.35		
Hydrogen-3	641.45	637	A		0.7	446 - 828	83.04	A
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	NR	7.36				5.15 - 9.57		
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	0.688	0.745	A		-7.7	0.522 - 0.969	0.044	A
Plutonium-239/240	0.682	0.769	A		-11.3	0.538 - 1.000	0.043	A
Potassium-40	NR					False Positive Test		
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	0.997	0.990	A		0.7	0.693 - 1.287	0.107	A
Uranium-238	1.030	1.028	A		0.2	0.720 - 1.336	0.110	A
Zinc-65	NR					False Positive Test		

Radiological Reference Date: February 1, 2024

Results Flags:

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

Uncertainty Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (AY1201) Consolidated Nuclear Security, LLC, ACO Laboratory
 Y12, NSC, Bldg. 9995, Rm 142
 Oak Ridge, TN 37831-8189

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	5.50	5.71	A		-3.7	4.00 - 7.42	0.290	A
Arsenic	2.68	2.73	A		-1.8	1.91 - 3.55	0.151	A
Barium	0.0562	0.0561	A		0.2	0.0393 - 0.0729	0.002	A
Beryllium	2.94	2.87	A		2.4	2.01 - 3.73	0.419	A
Cadmium	0.845	0.854	A		-1.1	0.598 - 1.110	0.051	A
Chromium	1.09	1.09	A		0.0	0.76 - 1.42	0.034	A
Cobalt	8.55	8.99	A		-4.9	6.29 - 11.69	0.428	A
Copper	7.28	7.47	A		-2.5	5.23 - 9.71	0.300	A
Lead	1.24	1.25	A		-0.8	0.88 - 1.63	0.1213	A
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	0.228	0.247	A		-7.7	0.173 - 0.321	0.012	A
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	3.23	3.38	A		-4.4	2.37 - 4.39	0.221	A
Uranium-235	0.000598	6.04E-04	A		-1.0	4.23E-4 - 7.85E-4	0.00006	A
Uranium-238	0.082	0.0827	A		-0.8	0.0579 - 0.1075	0.0082	A
Uranium-Total	0.083	0.0833	A		-0.4	0.0583 - 0.1083	0.0083	A
Vanadium	5.90	5.76	A		2.4	4.03 - 7.49	0.224	A
Zinc	7.37	7.40	A		-0.4	5.18 - 9.62	0.461	A

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.00141		A			False Positive Test	0.0057	
Cesium-134	NR			(6)		False Positive Test		
Cesium-137	10.4	9.7	A		7.2	6.8 - 12.6	0.36	A
Cobalt-57	25.9	25.4	A		2.0	17.8 - 33.0	0.61	A
Cobalt-60	10.6	10.27	A		3.2	7.19 - 13.35	0.29	A
Hydrogen-3	611	637	A		-4.1	446 - 828	12	N
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.67	7.36	A		4.2	5.15 - 9.57	2.3	W
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	0.712	0.745	A		-4.4	0.522 - 0.969	0.050	A
Plutonium-239/240	0.744	0.769	A		-3.3	0.538 - 1.000	0.052	A
Potassium-40	-1.16		A			False Positive Test	1.2	
Radium-226	0.270	0.310	A		-12.9	0.217 - 0.403	0.23	N

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	3.62	3.68	A		-1.6	2.58 - 4.78	0.18	A
Technetium-99	7.22	7.47	A		-3.3	5.23 - 9.71	0.39	A
Uranium-234	1.03	0.990	A		4.0	0.693 - 1.287	0.049	A
Uranium-238	1.05	1.028	A		2.1	0.720 - 1.336	0.049	A
Zinc-65	0.0907		A			False Positive Test	0.16	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50

(BY1201) Consolidated Nuclear Security, LLC, ACO, Production Laboratory

Y12, NSC, Bldg. 9995, Rm 142

Oak Ridge, TN 37831-8189

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0013		A			False Positive Test	.0055	
Cesium-134	NR			(6)		False Positive Test		
Cesium-137	9.73	9.7	A		0.3	6.8 - 12.6	.33	A
Cobalt-57	24.23	25.4	A		-4.6	17.8 - 33.0	.403	N
Cobalt-60	9.16	10.27	A		-10.8	7.19 - 13.35	.297	A
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	6.91	7.36	A		-6.1	5.15 - 9.57	.297	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	0.78	0.745	A		4.7	0.522 - 0.969	.061	A
Plutonium-239/240	0.78	0.769	A		1.4	0.538 - 1.000	.062	A
Potassium-40	-1.61		A			False Positive Test	1.31	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	3.07	3.68	A		-16.6	2.58 - 4.78	.241	A
Technetium-99	9.07	7.47	W		21.4	5.23 - 9.71	0.134	N
Uranium-234	3.79	0.990	N		282.8	0.693 - 1.287	.28	A
Uranium-238	3.75	1.028	N		264.8	0.720 - 1.336	.272	A
Zinc-65	0.04		A			False Positive Test	.19	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (CDHS01) California Department of Public Health
 Drinking Water & Radiation Lab.
 Richmond, CA 94804-6403

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	-0.00109		A			False Positive Test	0.00829	
Cesium-134	0.0286		A			False Positive Test	0.0493	
Cesium-137	10.7	9.7	A		10.3	6.8 - 12.6	0.286	A
Cobalt-57	25.9	25.4	A		2.0	17.8 - 33.0	0.472	N
Cobalt-60	10.6	10.27	A		3.2	7.19 - 13.35	0.188	N
Hydrogen-3	632	637	A		-0.8	446 - 828	6.85	N
Iron-55	22.7	19.7	A		15.2	13.8 - 25.6	1.58	A
Manganese-54	7.89	7.36	A		7.2	5.15 - 9.57	0.208	A
Nickel-63	1.03	0.8	A	(17)		Sensitivity Evaluation	1.17	
Plutonium-238	0.721	0.745	A		-3.2	0.522 - 0.969	0.0240	A
Plutonium-239/240	0.778	0.769	A		1.2	0.538 - 1.000	0.0250	A
Potassium-40	-0.0740		A			False Positive Test	0.879	
Radium-226	0.294	0.310	A		-5.2	0.217 - 0.403	0.0517	W

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	3.35	3.68	A		-9.0	2.58 - 4.78	0.140	A
Technetium-99	7.26	7.47	A		-2.8	5.23 - 9.71	0.435	A
Uranium-234	0.977	0.990	A		-1.3	0.693 - 1.287	0.0280	A
Uranium-238	0.995	1.028	A		-3.2	0.720 - 1.336	0.0281	A
Zinc-65	-0.0729		A			False Positive Test	0.105	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50

(CESL01) Lawrence Livermore National Laboratory - EMRL

7000 East Avenue

Livermore, CA 94551

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	4.14E-01		A			False Positive Test	5.36E-01	
Cesium-137	8.86E+00	9.7	A		-8.7	6.8 - 12.6	1.15	A
Cobalt-57	2.54E+01	25.4	A		0.0	17.8 - 33.0	1.18	A
Cobalt-60	1.11E+01	10.27	A		8.1	7.19 - 13.35	9.16E-01	A
Hydrogen-3	6.56E+02	637	A		3.0	446 - 828	6.53	N
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	6.54E+00	7.36	A		-11.1	5.15 - 9.57	1.25	W
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	7.16E-01	0.745	A		-3.9	0.522 - 0.969	1.10E-02	N
Plutonium-239/240	7.24E-01	0.769	A		-5.9	0.538 - 1.000	1.11E-02	N
Potassium-40	7.79E+00		A			False Positive Test	7.96	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	1.72E+00		A			False Positive Test	1.75	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (CMRC01) Carlsbad Environmental Monitoring and Research Center
 1400 University Dr.
 Carlsbad, NM 88220

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	5.35E-03		N	(1)		False Positive Test	1.15E-03	
Cesium-134	NR		N	(11)		False Positive Test		
Cesium-137	9.45E+00	9.7	A		-2.6	6.8 - 12.6	3.72E-01	A
Cobalt-57	NR	25.4	N	(25)		17.8 - 33.0		
Cobalt-60	9.46E+00	10.27	A		-7.9	7.19 - 13.35	3.52E-01	A
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	NR	7.36	N	(25)		5.15 - 9.57		
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	6.17E-01	0.745	A		-17.2	0.522 - 0.969	2.70E-02	A
Plutonium-239/240	6.24E-01	0.769	A		-18.9	0.538 - 1.000	2.73E-02	A
Potassium-40	NR		N	(11)		False Positive Test		
Radium-226	NR	0.310				0.217 - 0.403		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	2.49E+00	3.68	N		-32.3	2.58 - 4.78	2.38E-03	N
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	1.16E+00	0.990	A		17.2	0.693 - 1.287	5.11E-02	A
Uranium-238	1.15E+00	1.028	A		11.9	0.720 - 1.336	5.05E-02	A
Zinc-65	NR		N	(11)		False Positive Test		

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-24-MaW50
(COPS99) Health Canada Radiation Protection Bureau
775 Brookfield Road
Ottawa, Ontario K1A 1C1

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	0.019		N	(1)		False Positive Test	0.002	
Cesium-137	10.27	9.7	A		5.9	6.8 - 12.6	0.66	A
Cobalt-57	25.58	25.4	A		0.7	17.8 - 33.0	1.89	A
Cobalt-60	10.43	10.27	A		1.6	7.19 - 13.35	0.34	A
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.28	7.36	A		-1.1	5.15 - 9.57	0.49	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	-0.994		N	(29)		False Positive Test	0.248	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	0.027		N	(1)		False Positive Test	0.007	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (DEHS01) Department of Environmental Health & Safety
 North Carolina State Univ.
 Raleigh, NC 27695-8007

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	1.41		N	(1)		False Positive Test	0.169	
Cesium-137	10.716	9.7	A		10.5	6.8 - 12.6	1.234	A
Cobalt-57	25.01	25.4	A		-1.5	17.8 - 33.0	0.954	A
Cobalt-60	10.296	10.27	A		0.3	7.19 - 13.35	0.356	A
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.44	7.36	A		1.1	5.15 - 9.57	0.0115	N
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	NR		N	(11)		False Positive Test		
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	NR		N	(11)		False Positive Test		

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (DLEA01) DLE Associates
 730 Alfred Nobel Drive
 Hercules, CA 94547

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	NR					False Positive Test		
Cesium-137	NR	9.7				6.8 - 12.6		
Cobalt-57	NR	25.4				17.8 - 33.0		
Cobalt-60	NR	10.27				7.19 - 13.35		
Hydrogen-3	679	637	A		6.6	446 - 828	54	A
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	NR	7.36				5.15 - 9.57		
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	NR					False Positive Test		
Radium-226	0.29	0.310	A		-6.5	0.217 - 0.403	0.04	A

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	3.72	3.68	A		1.1	2.58 - 4.78	0.22	A
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	NR					False Positive Test		

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (EFGS01) Eurofins Frontier Global Sciences, LLC.
 5755 8th St. E
 Tacoma, WA 98424

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	0.0000015		A			False Positive Test	0.006149	
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	NR					False Positive Test		
Cesium-137	NR	9.7				6.8 - 12.6		
Cobalt-57	NR	25.4				17.8 - 33.0		
Cobalt-60	NR	10.27				7.19 - 13.35		
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	NR	7.36				5.15 - 9.57		
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	NR					False Positive Test		
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	NR					False Positive Test		

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (ELIW01) Energy Laboratories, Inc.
 2393 Salt Creek HWY
 Casper, Wy 82601

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	NR					False Positive Test		
Cesium-137	NR	9.7				6.8 - 12.6		
Cobalt-57	NR	25.4				17.8 - 33.0		
Cobalt-60	NR	10.27				7.19 - 13.35		
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	NR	7.36				5.15 - 9.57		
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	NR					False Positive Test		
Radium-226	0.3996	0.310	W		28.9	0.217 - 0.403	0.0426	A

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	0.9842	0.990	A		-0.6	0.693 - 1.287	0.0962	A
Uranium-238	1.0175	1.028	A		-1.0	0.720 - 1.336	0.0999	A
Zinc-65	NR					False Positive Test		

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (ERAD01) Lawrence Livermore National Laboratory
 7000 East Ave., L-231
 Livermore, CA 94551

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	0.0005892	6.04E-04	A		-2.5	4.23E-4 - 7.85E-4	0.000004	N
Uranium-238	0.08114	0.0827	A		-1.9	0.0579 - 0.1075	0.00034	N
Uranium-Total	0.08173	0.0833	A		-1.9	0.0583 - 0.1083	0.00039	N
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	NR					False Positive Test		
Cesium-137	NR	9.7				6.8 - 12.6		
Cobalt-57	NR	25.4				17.8 - 33.0		
Cobalt-60	NR	10.27				7.19 - 13.35		
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	NR	7.36				5.15 - 9.57		
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	NR					False Positive Test		
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	NR					False Positive Test		

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (ERCL01) Washington State Public Health Laboratories
 1610 N.E. 150th Street
 Shoreline, WA 98155-9701

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	0.000580	6.04E-04	A		-4.0	4.23E-4 - 7.85E-4	0.000037	A
Uranium-238	0.0804	0.0827	A		-2.8	0.0579 - 0.1075	0.0043	A
Uranium-Total	0.0810	0.0833	A		-2.8	0.0583 - 0.1083	0.0043	A
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0037		A			False Positive Test	0.0038	
Cesium-134	-0.17		A			False Positive Test	0.13	
Cesium-137	9.99	9.7	A		3.0	6.8 - 12.6	0.42	A
Cobalt-57	25.8	25.4	A		1.6	17.8 - 33.0	0.42	N
Cobalt-60	10.9	10.27	A		6.1	7.19 - 13.35	0.3	A
Hydrogen-3	633	637	A		-0.6	446 - 828	17	A
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.14	7.36	A		-3.0	5.15 - 9.57	0.34	A
Nickel-63	0.89	0.8	A	(17)		Sensitivity Evaluation	0.34	
Plutonium-238	0.725	0.745	A		-2.7	0.522 - 0.969	0.032	A
Plutonium-239/240	0.722	0.769	A		-6.1	0.538 - 1.000	0.032	A
Potassium-40	-2.9		A			False Positive Test	1.8	
Radium-226	0.374	0.310	W		20.6	0.217 - 0.403	0.051	A

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	3.22	3.68	A		-12.5	2.58 - 4.78	0.19	A
Technetium-99	13.3	7.47	N		78.0	5.23 - 9.71	1.9	A
Uranium-234	NR	0.990	N	(28)		0.693 - 1.287		
Uranium-238	NR	1.028	N	(28)		0.720 - 1.336		
Zinc-65	-0.22		A			False Positive Test	0.32	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-24-MaW50

(ERHD99) National Monitoring Section, Radiation Protection Bureau, Health Canada

775 Brookfield Road AL6302D1

Ottawa, Ontario K1A 1C1

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	5.28	5.71	A		-7.5	4.00 - 7.42	0.133	A
Arsenic	2.49	2.73	A		-8.8	1.91 - 3.55	0.001	N
Barium	0.057	0.0561	A		1.6	0.0393 - 0.0729	0.009	W
Beryllium	2.84	2.87	A		-1.0	2.01 - 3.73	0.03	N
Cadmium	0.847	0.854	A		-0.8	0.598 - 1.110	0.005	N
Chromium	0.92	1.09	A		-15.6	0.76 - 1.42	0.04	A
Cobalt	7.41	8.99	A		-17.6	6.29 - 11.69	0.26	A
Copper	7.17	7.47	A		-4.0	5.23 - 9.71	0.22	A
Lead	1.372	1.25	A		9.8	0.88 - 1.63	0.018	N
Mercury	NR					False Positive Test		
Nickel	-0.001		A			False Positive Test	0.002	
Selenium	0.362	0.247	N		46.6	0.173 - 0.321	0.03	A
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	3.623	3.38	A		7.2	2.37 - 4.39	0.043	N
Uranium-235	0.0006	6.04E-04	A		-0.7	4.23E-4 - 7.85E-4	0.00004	A
Uranium-238	0.0866	0.0827	A		4.7	0.0579 - 0.1075	0.001	N
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	5.51	5.76	A		-4.3	4.03 - 7.49	0.08	N
Zinc	7.45	7.40	A		0.7	5.18 - 9.62	0.3	A

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.009		A			False Positive Test	0.01	
Cesium-134	0.43		A			False Positive Test	0.51	
Cesium-137	9.03	9.7	A		-6.9	6.8 - 12.6	0.67	A
Cobalt-57	23.8	25.4	A		-6.3	17.8 - 33.0	1.3	A
Cobalt-60	10.32	10.27	A		0.5	7.19 - 13.35	0.56	A
Hydrogen-3	671.25	637	A		5.4	446 - 828	6.32	N
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.05	7.36	A		-4.2	5.15 - 9.57	0.36	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	0.716	0.745	A		-3.9	0.522 - 0.969	0.021	A
Plutonium-239/240	0.757	0.769	A		-1.6	0.538 - 1.000	0.021	A
Potassium-40	-0.27		A			False Positive Test	0.32	
Radium-226	0.32	0.310	A		3.2	0.217 - 0.403	0.02	A

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	3.87	3.68	A		5.2	2.58 - 4.78	0.20	A
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	0.987	0.990	A		-0.3	0.693 - 1.287	0.026	A
Uranium-238	1.03	1.028	A		0.2	0.720 - 1.336	0.03	A
Zinc-65	0.55		A			False Positive Test	1.11	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (ESDE01) Region 5 EQC Tritium Lab
 206 Beaufort NE
 Aiken, SC 29801

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	NR					False Positive Test		
Cesium-137	NR	9.7				6.8 - 12.6		
Cobalt-57	NR	25.4				17.8 - 33.0		
Cobalt-60	NR	10.27				7.19 - 13.35		
Hydrogen-3	679.3	637	A		6.6	446 - 828	13.6	A
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	NR	7.36				5.15 - 9.57		
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	NR					False Positive Test		
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	NR					False Positive Test		

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50

(ETTP01) MCLinc

161 Mitchell Road

Oak Ridge, Tennessee 37830

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	5.88	5.71	A		3.0	4.00 - 7.42	0.19	A
Arsenic	3.55	2.73	N		30.0	1.91 - 3.55	0.17	A
Barium	0.053	0.0561	A		-5.5	0.0393 - 0.0729	0.001	N
Beryllium	3.98	2.87	N		38.7	2.01 - 3.73	0.28	A
Cadmium	0.865	0.854	A		1.3	0.598 - 1.110	0.02	A
Chromium	1.06	1.09	A		-2.8	0.76 - 1.42	0.11	A
Cobalt	11.2	8.99	W		24.6	6.29 - 11.69	0.98	A
Copper	7.41	7.47	A		-0.8	5.23 - 9.71	0.59	A
Lead	1.230	1.25	A		-1.6	0.88 - 1.63	0.08	A
Mercury	0.0012		A			False Positive Test	0.01	
Nickel	0.012		A			False Positive Test	0.05	
Selenium	0.244	0.247	A		-1.2	0.173 - 0.321	0.03	A
Technetium-99	0.0000121	1.18E-05	A		2.5	8.30E-6 - 1.53E-5	0.000000	A
Thallium	3.99	3.38	A		18.0	2.37 - 4.39	0.45	A
Uranium-235	0.000656	6.04E-04	A		8.6	4.23E-4 - 7.85E-4	0.00003	A
Uranium-238	0.096	0.0827	A		16.1	0.0579 - 0.1075	0.005	A
Uranium-Total	0.097	0.0833	A		16.4	0.0583 - 0.1083	0.005	A
Vanadium	5.65	5.76	A		-1.9	4.03 - 7.49	0.36	A
Zinc	9.52	7.40	W		28.6	5.18 - 9.62	0.47	A

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	NR					False Positive Test		
Cesium-137	NR	9.7				6.8 - 12.6		
Cobalt-57	NR	25.4				17.8 - 33.0		
Cobalt-60	NR	10.27				7.19 - 13.35		
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	NR	7.36				5.15 - 9.57		
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	NR					False Positive Test		
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	7.56	7.47	A		1.2	5.23 - 9.71	0.38	A
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	NR					False Positive Test		

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50

(FDHE01) Florida Dept of Health Environmental Laboratory
 2100 All Childrens Way
 Orlando, FL 32818-5271

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	-0.477		A			False Positive Test	0.704	
Cesium-134	-0.105		A			False Positive Test	0.192	
Cesium-137	10.227	9.7	A		5.4	6.8 - 12.6	0.216	A
Cobalt-57	23.771	25.4	A		-6.4	17.8 - 33.0	0.428	N
Cobalt-60	10.17	10.27	A		-1.0	7.19 - 13.35	0.17	N
Hydrogen-3	409.82	637	N		-35.7	446 - 828	15	A
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.505	7.36	A		2.0	5.15 - 9.57	0.236	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	0.81	0.745	A		8.7	0.522 - 0.969	0.32	N
Plutonium-239/240	0.678	0.769	A		-11.8	0.538 - 1.000	0.2	W
Potassium-40	0.351		A			False Positive Test	0.904	
Radium-226	0.483	0.310	N		55.8	0.217 - 0.403	0.07	A

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	4.16	3.68	A		13.0	2.58 - 4.78	0.6	A
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	0.92	0.990	A		-7.1	0.693 - 1.287	0.35	N
Uranium-238	0.93	1.028	A		-9.5	0.720 - 1.336	0.33	N
Zinc-65	-0.033		A			False Positive Test	0.392	

Radiological Reference Date: February 1, 2024

Results Flags:

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

Uncertainty Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

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

Laboratory Results For MAPEP-24-MaW50

(FDOH01) Florida Dept. of Health, Mobile Environmental Radiological Lab

2100 All Childrens Way

Orlando, FL 32818-5271

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	-0.184		A			False Positive Test	0.84	
Cesium-134	-0.107		A			False Positive Test	0.32	
Cesium-137	10.028	9.7	A		3.4	6.8 - 12.6	0.41	A
Cobalt-57	23.854	25.4	A		-6.1	17.8 - 33.0	0.395	N
Cobalt-60	10.242	10.27	A		-0.3	7.19 - 13.35	0.213	A
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.345	7.36	A		-0.2	5.15 - 9.57	0.324	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	1.864		A			False Positive Test	1.33	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	1.043	1.028	A		1.5	0.720 - 1.336	1.531	N
Zinc-65	0.231		A			False Positive Test	0.468	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
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Notes:

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

Laboratory Results For MAPEP-24-MaW50

(FERM01) Fernald Project

7400 Willey Road

Hamilton, OH 45013

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	0.0906	0.0833	A		8.8	0.0583 - 0.1083	0.010	A
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	NR					False Positive Test		
Cesium-137	NR	9.7				6.8 - 12.6		
Cobalt-57	NR	25.4				17.8 - 33.0		
Cobalt-60	NR	10.27				7.19 - 13.35		
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	NR	7.36				5.15 - 9.57		
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	NR					False Positive Test		
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	NR					False Positive Test		

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

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- (11) = False Positive Test, Result Not Reported
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- (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-24-MaW50

(FNAL01) Fermi National Accelerator Laboratory (FermiLab)

PO Box 500, MS325

Batavia, IL 60510

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	0.02		A			False Positive Test	0.03	
Cesium-137	10.2	9.7	A		5.2	6.8 - 12.6	0.5	A
Cobalt-57	24.3	25.4	A		-4.3	17.8 - 33.0	1.0	A
Cobalt-60	10.2	10.27	A		-0.7	7.19 - 13.35	0.5	A
Hydrogen-3	652	637	A		2.4	446 - 828	34	A
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.9	7.36	A		7.3	5.15 - 9.57	0.4	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	-0.4		A			False Positive Test	0.7	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	0.04		A			False Positive Test	0.17	

Radiological Reference Date: February 1, 2024

Results Flags:

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- RW = Report Warning
- NR = Not Reported

Uncertainty Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (GENE01) GEL Laboratories, LLC
 2040 Savage Road
 Charleston, SC 29407

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	5.47	5.71	A		-4.2	4.00 - 7.42	1.09	W
Arsenic	2.62	2.73	A		-4.0	1.91 - 3.55	0.524	W
Barium	0.0534	0.0561	A		-4.8	0.0393 - 0.0729	0.0107	W
Beryllium	2.77	2.87	A		-3.5	2.01 - 3.73	0.555	W
Cadmium	0.788	0.854	A		-7.7	0.598 - 1.110	0.158	W
Chromium	1.06	1.09	A		-2.8	0.76 - 1.42	0.212	W
Cobalt	9.40	8.99	A		4.6	6.29 - 11.69	1.88	W
Copper	7.12	7.47	A		-4.7	5.23 - 9.71	1.42	W
Lead	1.19	1.25	A		-4.8	0.88 - 1.63	0.238	W
Mercury	-0.000021		A			False Positive Test	0.000022	
Nickel	0.00618		N	(1)		False Positive Test	0.00133	
Selenium	0.197	0.247	W		-20.2	0.173 - 0.321	0.0395	W
Technetium-99	1.21E-5	1.18E-05	A		2.5	8.30E-6 - 1.53E-5	6.71E-7	A
Thallium	3.4	3.38	A		0.6	2.37 - 4.39	0.681	W
Uranium-235	0.000507	6.04E-04	A		-16.1	4.23E-4 - 7.85E-4	0.000101	W
Uranium-238	0.0701	0.0827	A		-15.2	0.0579 - 0.1075	0.0140	W
Uranium-Total	0.0706	0.0833	A		-15.2	0.0583 - 0.1083	0.0140	W
Vanadium	5.79	5.76	A		0.5	4.03 - 7.49	1.16	W
Zinc	6.79	7.40	A		-8.2	5.18 - 9.62	1.36	W

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	-0.0117		A			False Positive Test	0.00821	
Cesium-134	-0.00495		A			False Positive Test	0.0496	
Cesium-137	10.6	9.7	A		9.3	6.8 - 12.6	0.547	A
Cobalt-57	25.5	25.4	A		0.4	17.8 - 33.0	1.09	A
Cobalt-60	10.5	10.27	A		2.2	7.19 - 13.35	0.522	A
Hydrogen-3	574	637	A		-9.9	446 - 828	57.2	A
Iron-55	15.0	19.7	W		-23.9	13.8 - 25.6	2.97	W
Manganese-54	7.87	7.36	A		6.9	5.15 - 9.57	0.404	A
Nickel-63	1.03	0.8	A	(17)		Sensitivity Evaluation	0.701	
Plutonium-238	0.731	0.745	A		-1.9	0.522 - 0.969	0.0415	A
Plutonium-239/240	0.714	0.769	A		-7.2	0.538 - 1.000	0.0409	A
Potassium-40	-0.229		A			False Positive Test	0.683	
Radium-226	0.321	0.310	A		3.5	0.217 - 0.403	0.042	A

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	3.41	3.68	A		-7.3	2.58 - 4.78	0.281	A
Techneium-99	5.96	7.47	W		-20.2	5.23 - 9.71	0.722	A
Uranium-234	0.943	0.990	A		-4.7	0.693 - 1.287	0.0555	A
Uranium-238	1.02	1.028	A		-0.8	0.720 - 1.336	0.0589	A
Zinc-65	-0.079		A			False Positive Test	0.122	

Radiological Reference Date: February 1, 2024

Results Flags:

- A = Result acceptable.....|Bias| ≤ 20%
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- N = Result not acceptable.....|Bias| > 30%
- RW = Report Warning
- NR = Not Reported

Uncertainty Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

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- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
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- (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-24-MaW50

(GPCL01) Georgia Power Company Environmental Laboratory 2480

Maner Road

Atlanta, GA 30339

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	-0.02		A			False Positive Test	0.28	
Cesium-137	10.69	9.7	A		10.2	6.8 - 12.6	0.92	A
Cobalt-57	25.42	25.4	A		0.1	17.8 - 33.0	2.30	A
Cobalt-60	10.31	10.27	A		0.4	7.19 - 13.35	0.81	A
Hydrogen-3	625.3	637	A		-1.8	446 - 828	10.53	N
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.79	7.36	A		5.8	5.15 - 9.57	0.73	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	0.57		A			False Positive Test	2.06	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	3.8665	3.68	A		5.1	2.58 - 4.78	0.1652	A
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	-0.31		A			False Positive Test	0.69	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (HCAL01) Lawrence Livermore National Laboratory
 Analytical Services and Instrumentation Analytical Lab
 Livermore, CA 94550

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	NR					False Positive Test		
Cesium-137	NR	9.7				6.8 - 12.6		
Cobalt-57	NR	25.4				17.8 - 33.0		
Cobalt-60	NR	10.27				7.19 - 13.35		
Hydrogen-3	682	637	A		7.1	446 - 828	36	A
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	NR	7.36				5.15 - 9.57		
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	NR					False Positive Test		
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	NR					False Positive Test		

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50

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

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	-0.2409		A			False Positive Test	0.1244	
Cesium-137	10.12	9.7	A		4.3	6.8 - 12.6	1.091	A
Cobalt-57	25.44	25.4	A		0.2	17.8 - 33.0	1.457	A
Cobalt-60	9.952	10.27	A		-3.1	7.19 - 13.35	0.6540	A
Hydrogen-3	636.2	637	A		-0.1	446 - 828	12.87	A
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.789	7.36	A		5.8	5.15 - 9.57	0.7690	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	12.95		N	(1)		False Positive Test	1.733	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	-0.01756		A			False Positive Test	0.3428	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50

(HPAC99) UKHSA, RCE Glasgow

155 Hardgate Road

Glasgow, Scotland G51 4LS

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	2.68	2.73	A		-1.8	1.91 - 3.55	.11	A
Barium	.0582	0.0561	A		3.7	0.0393 - 0.0729	.0058	A
Beryllium	2.86	2.87	A		-0.3	2.01 - 3.73	.24	A
Cadmium	.848	0.854	A		-0.7	0.598 - 1.110	.038	A
Chromium	1.07	1.09	A		-1.8	0.76 - 1.42	.07	A
Cobalt	9.08	8.99	A		1.0	6.29 - 11.69	.59	A
Copper	7.48	7.47	A		0.1	5.23 - 9.71	.45	A
Lead	1.224	1.25	A		-2.1	0.88 - 1.63	.067	A
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	.00001265	1.18E-05	A		7.2	8.30E-6 - 1.53E-5	.	A
Thallium	3.43	3.38	A		1.5	2.37 - 4.39	.22	A
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	.0804	0.0833	A		-3.5	0.0583 - 0.1083	.0076	A
Vanadium	5.66	5.76	A		-1.7	4.03 - 7.49	.28	A
Zinc	7.31	7.40	A		-1.2	5.18 - 9.62	.48	A

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	.140		N	(1)		False Positive Test	.021	
Cesium-134	NR		N	(11)		False Positive Test		
Cesium-137	10.2	9.7	A		5.2	6.8 - 12.6	.52	A
Cobalt-57	24.7	25.4	A		-2.8	17.8 - 33.0	1.2	A
Cobalt-60	10.24	10.27	A		-0.3	7.19 - 13.35	.5	A
Hydrogen-3	672	637	A		5.5	446 - 828	26	A
Iron-55	22.13	19.7	A		12.3	13.8 - 25.6	1.93	A
Manganese-54	7.17	7.36	A		-2.6	5.15 - 9.57	.39	A
Nickel-63	2.62	0.8	N	(4)		Sensitivity Evaluation	.25	
Plutonium-238	.774	0.745	A		3.9	0.522 - 0.969	.067	A
Plutonium-239/240	.702	0.769	A		-8.7	0.538 - 1.000	.063	A
Potassium-40	NR		N	(11)		False Positive Test		
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	3.86	3.68	A		4.9	2.58 - 4.78	.39	A
Technetium-99	7.92	7.47	A		6.0	5.23 - 9.71	.59	A
Uranium-234	1.033	0.990	A		4.3	0.693 - 1.287	.077	A
Uranium-238	1.036	1.028	A		0.8	0.720 - 1.336	.077	A
Zinc-65	NR		N	(11)		False Positive Test		

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-24-MaW50

(IAEA20) IAEA Marine Environment Laboratories, Radiometrics Laboratory

4a, Quai Antoine 1er

Monaco, Monaco 98000

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	-0.01		N	(29)		False Positive Test	0.001	
Cesium-137	10.18	9.7	A		4.9	6.8 - 12.6	0.62	A
Cobalt-57	24.2	25.4	A		-4.7	17.8 - 33.0	2.3	A
Cobalt-60	9.23	10.27	A		-10.1	7.19 - 13.35	0.37	A
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.23	7.36	A		-1.8	5.15 - 9.57	0.44	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	-0.01		N	(29)		False Positive Test	0.001	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	-0.01		N	(29)		False Positive Test	0.001	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (IAEA99) International Atomic Energy Agency
 Agency's Laboratories Seibersdorf
 Seibersdorf, Austria A-2444

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	2.83	2.73	A		3.7	1.91 - 3.55	0.10	A
Barium	0.0576	0.0561	A		2.7	0.0393 - 0.0729	0.0026	A
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	0.859	0.854	A		0.6	0.598 - 1.110	0.023	A
Chromium	1.05	1.09	A		-3.7	0.76 - 1.42	0.04	A
Cobalt	9.12	8.99	A		1.4	6.29 - 11.69	0.26	A
Copper	7.31	7.47	A		-2.1	5.23 - 9.71	0.22	A
Lead	1.24	1.25	A		-0.8	0.88 - 1.63	0.04	A
Mercury	NR					False Positive Test		
Nickel	0.0005		A			False Positive Test	0.0041	
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	0.000607	6.04E-04	A		0.5	4.23E-4 - 7.85E-4	0.000022	A
Uranium-238	0.0852	0.0827	A		3.0	0.0579 - 0.1075	0.0017	N
Uranium-Total	0.0858	0.0833	A		3.0	0.0583 - 0.1083	0.0017	N
Vanadium	5.76	5.76	A		0.0	4.03 - 7.49	0.16	A
Zinc	7.37	7.40	A		-0.4	5.18 - 9.62	0.22	A

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	-0.03		A			False Positive Test	0.08	
Cesium-134	-0.06		A			False Positive Test	0.05	
Cesium-137	10.2	9.7	A		5.2	6.8 - 12.6	0.3	A
Cobalt-57	24.9	25.4	A		-2.0	17.8 - 33.0	0.7	A
Cobalt-60	10.3	10.27	A		0.3	7.19 - 13.35	0.4	A
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.35	7.36	A		-0.1	5.15 - 9.57	0.25	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	0.9		A			False Positive Test	0.8	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	0.13		A			False Positive Test	0.21	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50

(IEMA01) Illinois Emergency Management Agency Radiochemistry Laboratory

1301 Knotts St.

Springfield, IL 62703

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0074		A			False Positive Test	0.0037	
Cesium-134	0.03		A			False Positive Test	0.05	
Cesium-137	10.20	9.7	A		5.2	6.8 - 12.6	0.19	N
Cobalt-57	25.40	25.4	A		0.0	17.8 - 33.0	0.40	N
Cobalt-60	10.20	10.27	A		-0.7	7.19 - 13.35	0.14	N
Hydrogen-3	631	637	A		-0.9	446 - 828	5.33	N
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.54	7.36	A		2.4	5.15 - 9.57	0.15	N
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	0.752	0.745	A		0.9	0.522 - 0.969	0.033	A
Plutonium-239/240	0.783	0.769	A		1.8	0.538 - 1.000	0.034	A
Potassium-40	0.44		A			False Positive Test	0.37	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	3.42	3.68	A		-7.1	2.58 - 4.78	0.31	A
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	1.002	0.990	A		1.2	0.693 - 1.287	0.040	A
Uranium-238	1.035	1.028	A		0.7	0.720 - 1.336	0.041	A
Zinc-65	0.08		A			False Positive Test	0.12	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (ISUE01) ISU Environmental Monitoring Laboratory
 785 5th 8th Ave Rm B107
 Pocatello, Idaho 83209

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	0.35		A			False Positive Test	0.18	
Cesium-137	6.99	9.7	W		-27.9	6.8 - 12.6	0.24	A
Cobalt-57	17.85	25.4	W		-29.7	17.8 - 33.0	0.45	A
Cobalt-60	6.79	10.27	N		-33.9	7.19 - 13.35	0.16	A
Hydrogen-3	619.9	637	A		-2.7	446 - 828	5.26	N
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	5.01	7.36	N		-31.9	5.15 - 9.57	0.18	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	-0.31		A			False Positive Test	.71	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	0.16		A			False Positive Test	0.11	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50

(JLNN01) Jefferson Laboratory

111 Hadron Drive

Newport News, VA 23606

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.1062		A			False Positive Test	.0933	
Cesium-134	0.11195		A			False Positive Test	0.0836	
Cesium-137	10.3	9.7	A		6.2	6.8 - 12.6	0.305	A
Cobalt-57	25	25.4	A		-1.6	17.8 - 33.0	.555	A
Cobalt-60	55.92	10.27	N		444.5	7.19 - 13.35	.328	N
Hydrogen-3	621.78	637	A		-2.4	446 - 828	29.7	A
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.23	7.36	A		-1.8	5.15 - 9.57	0.265	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	0.5275		A			False Positive Test	1.47	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	0.07515		A			False Positive Test	.248	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50

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

INL/Battelle Energy Alliance, LLC

Idaho Falls, ID 83415-7111

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	5.389	5.71	A		-5.6	4.00 - 7.42	0.321	A
Arsenic	2.360	2.73	A		-13.6	1.91 - 3.55	0.249	A
Barium	0.056	0.0561	A		-0.2	0.0393 - 0.0729	0.004	A
Beryllium	2.519	2.87	A		-12.2	2.01 - 3.73	0.294	A
Cadmium	0.765	0.854	A		-10.4	0.598 - 1.110	0.075	A
Chromium	1.048	1.09	A		-3.9	0.76 - 1.42	0.048	A
Cobalt	8.333	8.99	A		-7.3	6.29 - 11.69	0.554	A
Copper	6.909	7.47	A		-7.5	5.23 - 9.71	0.645	A
Lead	1.214	1.25	A		-2.9	0.88 - 1.63	0.294	W
Mercury	0.00005		A			False Positive Test	0.00002	
Nickel	0.008		A			False Positive Test	0.004	
Selenium	0.194	0.247	W		-21.5	0.173 - 0.321	0.028	A
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	3.214	3.38	A		-4.9	2.37 - 4.39	0.294	A
Uranium-235	0.000548	6.04E-04	A		-9.3	4.23E-4 - 7.85E-4	0.000055	A
Uranium-238	0.0782	0.0827	A		-5.4	0.0579 - 0.1075	0.0039	A
Uranium-Total	0.082	0.0833	A		-1.6	0.0583 - 0.1083	0.004	A
Vanadium	5.438	5.76	A		-5.6	4.03 - 7.49	0.305	A
Zinc	6.239	7.40	A		-15.7	5.18 - 9.62	1.238	W

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	0.08		A			False Positive Test	0.06	
Cesium-137	10.06	9.7	A		3.7	6.8 - 12.6	0.2	N
Cobalt-57	25.65	25.4	A		1.0	17.8 - 33.0	0.43	N
Cobalt-60	10.17	10.27	A		-1.0	7.19 - 13.35	0.2	N
Hydrogen-3	624	637	A		-2.0	446 - 828	30.3	A
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.14	7.36	A		-3.0	5.15 - 9.57	0.17	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	0.62		A			False Positive Test	0.29	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	0.09		A			False Positive Test	0.06	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (LZCA01) ACZ Laboratories, Inc
 2273 Downhill Drive
 Steamboat Springs, CO 80487

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	NR					False Positive Test		
Cesium-137	NR	9.7				6.8 - 12.6		
Cobalt-57	NR	25.4				17.8 - 33.0		
Cobalt-60	NR	10.27				7.19 - 13.35		
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	NR	7.36				5.15 - 9.57		
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	NR					False Positive Test		
Radium-226	0.238	0.310	W		-23.2	0.217 - 0.403	0.03	A

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	NR					False Positive Test		

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50

(MART01) Fluor-BWXT Portsmouth LLC, Analytical Laboratory

COC, Bldg. X-705, Rm 106

Piketon, OH 45661

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	0.000600	6.04E-04	A		-0.7	4.23E-4 - 7.85E-4	0.000041	A
Uranium-238	0.0824	0.0827	A		-0.4	0.0579 - 0.1075	0.00852	A
Uranium-Total	0.0830	0.0833	A		-0.4	0.0583 - 0.1083	0.00468	A
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.01517		A			False Positive Test	0.01279	
Cesium-134	NR					False Positive Test		
Cesium-137	NR	9.7				6.8 - 12.6		
Cobalt-57	NR	25.4				17.8 - 33.0		
Cobalt-60	NR	10.27				7.19 - 13.35		
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	NR	7.36				5.15 - 9.57		
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	0.6957	0.745	A		-6.6	0.522 - 0.969	0.03667	A
Plutonium-239/240	0.7151	0.769	A		-7.0	0.538 - 1.000	0.03746	A
Potassium-40	NR					False Positive Test		
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	7.29	7.47	A		-2.4	5.23 - 9.71	0.293	A
Uranium-234	0.9285	0.990	A		-6.2	0.693 - 1.287	0.06035	A
Uranium-238	0.9725	1.028	A		-5.4	0.720 - 1.336	0.06266	A
Zinc-65	NR					False Positive Test		

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
(MART03) Radioactive Material Analysis Laboratory
ORNL
Oak Ridge, TN 37830

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	5.54	5.71	A		-3.0	4.00 - 7.42	0.554	A
Arsenic	2.57	2.73	A		-5.9	1.91 - 3.55	0.257	A
Barium	0.06	0.0561	A		7.0	0.0393 - 0.0729	0.006	A
Beryllium	3.02	2.87	A		5.2	2.01 - 3.73	0.302	A
Cadmium	0.818	0.854	A		-4.2	0.598 - 1.110	0.082	A
Chromium	1.18	1.09	A		8.3	0.76 - 1.42	0.118	A
Cobalt	8.84	8.99	A		-1.7	6.29 - 11.69	0.884	A
Copper	7.23	7.47	A		-3.2	5.23 - 9.71	0.723	A
Lead	1.24	1.25	A		-0.8	0.88 - 1.63	0.124	A
Mercury	0.000111		A			False Positive Test	0.000111	
Nickel	0.07		A			False Positive Test	0.07	
Selenium	0.230	0.247	A		-6.9	0.173 - 0.321	0.046	W
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	3.24	3.38	A		-4.1	2.37 - 4.39	0.324	A
Uranium-235	0.00058	6.04E-04	A		-4.0	4.23E-4 - 7.85E-4	0.00006	A
Uranium-238	0.0795	0.0827	A		-3.9	0.0579 - 0.1075	0.008	A
Uranium-Total	0.0801	0.0833	A		-3.8	0.0583 - 0.1083	0.008	A
Vanadium	5.77	5.76	A		0.2	4.03 - 7.49	0.577	A
Zinc	7.07	7.40	A		-4.5	5.18 - 9.62	1.410	W

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.005		A			False Positive Test	0.002	
Cesium-134	0.28		A			False Positive Test	0.28	
Cesium-137	10.16	9.7	A		4.7	6.8 - 12.6	0.26	A
Cobalt-57	24.62	25.4	A		-3.1	17.8 - 33.0	0.48	N
Cobalt-60	10.17	10.27	A		-1.0	7.19 - 13.35	0.20	N
Hydrogen-3	630.5	637	A		-1.0	446 - 828	15.9	A
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.37	7.36	A		0.1	5.15 - 9.57	0.22	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	0.688	0.745	A		-7.7	0.522 - 0.969	0.034	A
Plutonium-239/240	0.774	0.769	A		0.7	0.538 - 1.000	0.037	A
Potassium-40	2.8		A			False Positive Test	2.8	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	3.58	3.68	A		-2.7	2.58 - 4.78	0.18	A
Technetium-99	6.42	7.47	A		-14.1	5.23 - 9.71	0.32	A
Uranium-234	0.987	0.990	A		-0.3	0.693 - 1.287	0.052	A
Uranium-238	1.022	1.028	A		-0.6	0.720 - 1.336	0.053	A
Zinc-65	0.78		A			False Positive Test	0.78	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (MDPH01) MDPH-Radiation Control Program
 MERL-Room 0066
 Jamaica Plain, MA 02130-3597

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	NR		N	(11)		False Positive Test		
Cesium-137	10.70	9.7	A		10.3	6.8 - 12.6	0.31	A
Cobalt-57	26.24	25.4	A		3.3	17.8 - 33.0	1.00	A
Cobalt-60	10.66	10.27	A		3.8	7.19 - 13.35	0.37	A
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.90	7.36	A		7.3	5.15 - 9.57	0.26	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	NR		N	(11)		False Positive Test		
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	NR		N	(11)		False Positive Test		

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50

(MNDH01) Minnesota Department of Health, Public Health Lab. Division

601 Robert St. N.

St. Paul, MN 55155

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	-0.010613		A			False Positive Test	0.6896	
Cesium-134	-0.021924		A			False Positive Test	0.09264	
Cesium-137	11.552	9.7	A		19.1	6.8 - 12.6	0.1721	N
Cobalt-57	27.272	25.4	A		7.4	17.8 - 33.0	0.6179	A
Cobalt-60	10.937	10.27	A		6.5	7.19 - 13.35	0.1376	N
Hydrogen-3	421.12	637	N		-33.9	446 - 828	18.44	A
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	8.6956	7.36	A		18.1	5.15 - 9.57	0.1644	N
Nickel-63	0.94535	0.8	A	(17)		Sensitivity Evaluation	0.40256	
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	-0.48252		A			False Positive Test	1.001	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	-0.17380		A			False Positive Test	0.2001	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50

(NARL01) National Analytical Radiation Environmental Laboratory

540 S. Morris Ave.

Montgomery, AL 36115-2601

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.00424		A			False Positive Test	0.00187	
Cesium-134	-0.0322		A			False Positive Test	0.0619	
Cesium-137	10.4	9.7	A		7.2	6.8 - 12.6	0.578	A
Cobalt-57	25.6	25.4	A		0.8	17.8 - 33.0	1.42	A
Cobalt-60	10.4	10.27	A		1.3	7.19 - 13.35	0.568	A
Hydrogen-3	640	637	A		0.5	446 - 828	15	A
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.64	7.36	A		3.8	5.15 - 9.57	0.432	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	0.700	0.745	A		-6.0	0.522 - 0.969	0.0331	A
Plutonium-239/240	0.736	0.769	A		-4.3	0.538 - 1.000	0.0345	A
Potassium-40	-1.07		A			False Positive Test	0.594	
Radium-226	0.319	0.310	A		2.9	0.217 - 0.403	0.0179	A

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	3.48	3.68	A		-5.4	2.58 - 4.78	0.0936	A
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	1.01	0.990	A		2.0	0.693 - 1.287	0.0504	A
Uranium-238	1.07	1.028	A		4.1	0.720 - 1.336	0.0532	A
Zinc-65	0.0460		A			False Positive Test	0.123	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (NESI01) BWXT-Radioisotope & Analytical Chemistry Laboratory
 Lynchburg Technology Center
 Lynchburg, VA 24504-5447

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	4.96	5.71	A		-13.1	4.00 - 7.42	0.124	A
Arsenic	2.61	2.73	A		-4.4	1.91 - 3.55	0.077	A
Barium	0.054	0.0561	A		-3.7	0.0393 - 0.0729	0.001	N
Beryllium	2.72	2.87	A		-5.2	2.01 - 3.73	0.067	A
Cadmium	0.698	0.854	A		-18.3	0.598 - 1.110	0.017	A
Chromium	0.961	1.09	A		-11.8	0.76 - 1.42	0.024	A
Cobalt	7.89	8.99	A		-12.2	6.29 - 11.69	0.196	A
Copper	6.38	7.47	A		-14.6	5.23 - 9.71	0.159	A
Lead	1.19	1.25	A		-4.8	0.88 - 1.63	0.030	A
Mercury	0.000072		N	(1)		False Positive Test	0.000005	
Nickel	0.020		N	(1)		False Positive Test	0.0002	
Selenium	0.213	0.247	A		-13.8	0.173 - 0.321	0.006	A
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	3.03	3.38	A		-10.4	2.37 - 4.39	0.076	A
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	5.18	5.76	A		-10.1	4.03 - 7.49	0.128	A
Zinc	5.64	7.40	W		-23.8	5.18 - 9.62	0.140	A

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.007		A			False Positive Test	0.003	
Cesium-134	-0.186		A			False Positive Test	0.188	
Cesium-137	10.7	9.7	A		10.3	6.8 - 12.6	0.395	A
Cobalt-57	27.4	25.4	A		7.9	17.8 - 33.0	1.17	A
Cobalt-60	10.5	10.27	A		2.2	7.19 - 13.35	0.351	A
Hydrogen-3	627	637	A		-1.6	446 - 828	23.3	A
Iron-55	20.1	19.7	A		2.0	13.8 - 25.6	1.53	A
Manganese-54	7.72	7.36	A		4.9	5.15 - 9.57	0.322	A
Nickel-63	1.68	0.8	N	(4)		Sensitivity Evaluation	0.186	
Plutonium-238	0.671	0.745	A		-9.9	0.522 - 0.969	0.029	A
Plutonium-239/240	0.726	0.769	A		-5.6	0.538 - 1.000	0.031	A
Potassium-40	6.29		N	(1)		False Positive Test	1.53	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	3.28	3.68	A		-10.9	2.58 - 4.78	0.239	A
Techneium-99	10.8	7.47	N		44.6	5.23 - 9.71	0.284	A
Uranium-234	0.957	0.990	A		-3.3	0.693 - 1.287	0.040	A
Uranium-238	0.990	1.028	A		-3.7	0.720 - 1.336	0.041	A
Zinc-65	0.423		A			False Positive Test	0.530	

Radiological Reference Date: February 1, 2024

Results Flags:

- A = Result acceptable.....|Bias| ≤ 20%
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- N = Result not acceptable.....|Bias| > 30%
- RW = Report Warning
- NR = Not Reported

Uncertainty Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (NJDH01) New Jersey Dept. of Health, ECLS
 3 Schwarzkopf Drive
 Ewing, NJ 08628

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	-0.18		A			False Positive Test	0.20	
Cesium-137	10.1	9.7	A		4.1	6.8 - 12.6	0.537	A
Cobalt-57	23.9	25.4	A		-5.9	17.8 - 33.0	0.662	A
Cobalt-60	10.4	10.27	A		1.3	7.19 - 13.35	0.584	A
Hydrogen-3	723	637	A		13.5	446 - 828	32	A
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.42	7.36	A		0.8	5.15 - 9.57	0.544	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	2.76		A			False Positive Test	3.9	
Radium-226	0.35	0.310	A		12.9	0.217 - 0.403	0.2	N

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	4.1	3.68	A		11.4	2.58 - 4.78	0.30	A
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	0.08		A			False Positive Test	0.49	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (ODHL01) Ohio Department of Health Laboratory
 8995 E Main Street
 Reynoldsburg, OH 43068

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	0.0736		A			False Positive Test	0.0262	
Cesium-137	25.0	9.7	N		157.7	6.8 - 12.6	0.608	A
Cobalt-57	23.1	25.4	A		-9.1	17.8 - 33.0	1.60	A
Cobalt-60	10.1	10.27	A		-1.7	7.19 - 13.35	0.314	A
Hydrogen-3	561.70	637	A		-11.8	446 - 828	8.94	N
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.10	7.36	A		-3.5	5.15 - 9.57	0.453	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	0.254		A			False Positive Test	0.594	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	0.00409		A			False Positive Test	0.138	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (OTLI01) Pace Analytical National Center for Testing & Innovation
 12065 Lebanon Road
 Mt. Juliet, TN 37122

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	5.88	5.71	A		3.0	4.00 - 7.42	0.025	N
Arsenic	2.62	2.73	A		-4.0	1.91 - 3.55	.001	N
Barium	.0548	0.0561	A		-2.3	0.0393 - 0.0729	.005	A
Beryllium	2.54	2.87	A		-11.5	2.01 - 3.73	.001	N
Cadmium	.889	0.854	A		4.1	0.598 - 1.110	.001	N
Chromium	1.04	1.09	A		-4.6	0.76 - 1.42	.02	N
Cobalt	9.77	8.99	A		8.7	6.29 - 11.69	.002	N
Copper	7.05	7.47	A		-5.6	5.23 - 9.71	.025	N
Lead	1.13	1.25	A		-9.6	0.88 - 1.63	.002	N
Mercury	.0002		A			False Positive Test	.0002	
Nickel	.002		A			False Positive Test	.002	
Selenium	0.243	0.247	A		-1.6	0.173 - 0.321	0.002	N
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	2.78	3.38	A		-17.8	2.37 - 4.39	.001	N
Uranium-235	0.000586	6.04E-04	A		-3.0	4.23E-4 - 7.85E-4	.000001	N
Uranium-238	0.080	0.0827	A		-3.3	0.0579 - 0.1075	.001	N
Uranium-Total	.090	0.0833	A		8.0	0.0583 - 0.1083	.005	A
Vanadium	5.4	5.76	A		-6.3	4.03 - 7.49	.001	N
Zinc	6.83	7.40	A		-7.7	5.18 - 9.62	.02	N

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	-.008		A			False Positive Test	0.004	
Cesium-134	-.02		A			False Positive Test	0.16	
Cesium-137	9.86	9.7	A		1.6	6.8 - 12.6	0.84	A
Cobalt-57	23.7	25.4	A		-6.7	17.8 - 33.0	1.67	A
Cobalt-60	9.79	10.27	A		-4.7	7.19 - 13.35	0.75	A
Hydrogen-3	623	637	A		-2.2	446 - 828	30	A
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.3	7.36	A		-0.8	5.15 - 9.57	0.7	A
Nickel-63	2.6	0.8	A			Sensitivity Evaluation	0.7	
Plutonium-238	0.780	0.745	A		4.7	0.522 - 0.969	0.084	A
Plutonium-239/240	0.715	0.769	A		-7.0	0.538 - 1.000	0.080	A
Potassium-40	-0.49		A			False Positive Test	1.85	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	4.06	3.68	A		10.3	2.58 - 4.78	0.162	A
Technetium-99	7.39	7.47	A		-1.1	5.23 - 9.71	0.892	A
Uranium-234	1.05	0.990	A		6.1	0.693 - 1.287	0.115	A
Uranium-238	0.997	1.028	A		-3.0	0.720 - 1.336	0.112	A
Zinc-65	-0.8		A			False Positive Test	0.6	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
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- (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-24-MaW50

(QUAN01) Eurofins St. Louis
13715 Rider Trail North
Earth City, MO 63045-1205

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	NR					False Positive Test		
Cesium-137	NR	9.7				6.8 - 12.6		
Cobalt-57	NR	25.4				17.8 - 33.0		
Cobalt-60	NR	10.27				7.19 - 13.35		
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	NR	7.36				5.15 - 9.57		
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	NR					False Positive Test		
Radium-226	0.293	0.310	A		-5.5	0.217 - 0.403	0.0187	A

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	NR					False Positive Test		

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50

(RJLG01) RJ Lee Group - Columbia Basin Analytical Laboratories (CBAL)

2710 North 20th Avenue

Pasco, WA 99301

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	5.89	5.71	A		3.2	4.00 - 7.42	0.543	A
Arsenic	2.61	2.73	A		-4.4	1.91 - 3.55	0.191	A
Barium	0.059	0.0561	A		5.2	0.0393 - 0.0729	0.007	A
Beryllium	2.85	2.87	A		-0.7	2.01 - 3.73	0.363	A
Cadmium	0.858	0.854	A		0.5	0.598 - 1.110	0.068	A
Chromium	1.11	1.09	A		1.8	0.76 - 1.42	0.093	A
Cobalt	9.05	8.99	A		0.7	6.29 - 11.69	0.992	A
Copper	7.58	7.47	A		1.5	5.23 - 9.71	0.713	A
Lead	1.25	1.25	A		0.0	0.88 - 1.63	0.101	A
Mercury	0.00002		N	(1)		False Positive Test	0.000001	
Nickel	0.001		N	(1)		False Positive Test	0.0001	
Selenium	0.228	0.247	A		-7.7	0.173 - 0.321	0.018	A
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	3.39	3.38	A		0.3	2.37 - 4.39	0.204	A
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	0.087	0.0833	A		4.4	0.0583 - 0.1083	0.006	A
Vanadium	6.00	5.76	A		4.2	4.03 - 7.49	0.658	A
Zinc	7.47	7.40	A		0.9	5.18 - 9.62	0.840	A

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	NR					False Positive Test		
Cesium-137	NR	9.7				6.8 - 12.6		
Cobalt-57	NR	25.4				17.8 - 33.0		
Cobalt-60	NR	10.27				7.19 - 13.35		
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	NR	7.36				5.15 - 9.57		
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	NR					False Positive Test		
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	NR					False Positive Test		

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations

Laboratory Results For MAPEP-24-MaW50

(RPSC01) Radiation Protection Service

O. Ministry of Labour, Immigration, Training & Skills Development

Mississauga, Ontario L4V 1W8

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	0.126		A			False Positive Test	0.221	
Cesium-137	10.4	9.7	A		7.2	6.8 - 12.6	0.426	A
Cobalt-57	26.0	25.4	A		2.4	17.8 - 33.0	0.929	A
Cobalt-60	10.4	10.27	A		1.3	7.19 - 13.35	0.44	A
Hydrogen-3	691.6	637	A		8.6	446 - 828	116.1	W
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.24	7.36	A		-1.6	5.15 - 9.57	0.348	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	-0.279		A			False Positive Test	0.639	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	0.0232		A			False Positive Test	0.473	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (SANC99) RadioAnalysis, South Africa Nuclear Energy Corp.
 Sample Receipt Gate 1
 Pretoria, Gauteng 0001

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.021		A			False Positive Test	0.021	
Cesium-134	1.58		A			False Positive Test	1.58	
Cesium-137	10.92	9.7	A		12.6	6.8 - 12.6	0.86	A
Cobalt-57	26.87	25.4	A		5.8	17.8 - 33.0	1.11	A
Cobalt-60	9.42	10.27	A		-8.3	7.19 - 13.35	0.85	A
Hydrogen-3	611	637	A		-4.1	446 - 828	20	A
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	6.61	7.36	A		-10.2	5.15 - 9.57	0.88	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	0.539	0.745	W		-27.7	0.522 - 0.969	0.045	A
Plutonium-239/240	0.579	0.769	W		-24.7	0.538 - 1.000	0.047	A
Potassium-40	20.3		A			False Positive Test	20.3	
Radium-226	0.377	0.310	W		21.6	0.217 - 0.403	0.047	A

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	3.33	3.68	A		-9.5	2.58 - 4.78	0.46	A
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	0.882	0.990	A		-10.9	0.693 - 1.287	0.059	A
Uranium-238	0.900	1.028	A		-12.5	0.720 - 1.336	0.060	A
Zinc-65	3.97		A			False Positive Test	3.97	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (SAVA01) Battelle Savannah River Alliance
 SRNL (non-purchased material receipt)
 AIKEN, SC 29808-0000

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	5.76	5.71	A		0.9	4.00 - 7.42	0.58	A
Arsenic	2.71	2.73	A		-0.7	1.91 - 3.55	0.27	A
Barium	0.0561	0.0561	A		0.0	0.0393 - 0.0729	0.0056	A
Beryllium	2.84	2.87	A		-1.0	2.01 - 3.73	0.15	A
Cadmium	0.855	0.854	A		0.1	0.598 - 1.110	0.086	A
Chromium	1.10	1.09	A		0.9	0.76 - 1.42	0.06	A
Cobalt	8.84	8.99	A		-1.7	6.29 - 11.69	0.45	A
Copper	7.32	7.47	A		-2.0	5.23 - 9.71	0.41	A
Lead	1.28	1.25	A		2.4	0.88 - 1.63	0.13	A
Mercury	0.000216		N	(1)		False Positive Test	0.00002	
Nickel	0.0088		A			False Positive Test	0.003	
Selenium	0.241	0.247	A		-2.4	0.173 - 0.321	0.024	A
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	3.48	3.38	A		3.0	2.37 - 4.39	0.35	A
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	0.0860	0.0833	A		3.2	0.0583 - 0.1083	0.0086	A
Vanadium	5.88	5.76	A		2.1	4.03 - 7.49	0.30	A
Zinc	7.66	7.40	A		3.5	5.18 - 9.62	0.39	A

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	0.896		A			False Positive Test	0.519	
Cesium-137	9.43	9.7	A		-2.8	6.8 - 12.6	0.750	A
Cobalt-57	24.5	25.4	A		-3.5	17.8 - 33.0	0.865	A
Cobalt-60	10.1	10.27	A		-1.7	7.19 - 13.35	0.450	A
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.30	7.36	A		-0.8	5.15 - 9.57	0.610	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	17.1		A			False Positive Test	8.37	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	3.09		A			False Positive Test	1.23	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (SEML01) SRS Environmental Monitoring Laboratory
 Bldg 735-B
 Aiken, SC 29808

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	5.61	5.71	A		-1.8	4.00 - 7.42	0.67	A
Arsenic	2.81	2.73	A		2.9	1.91 - 3.55	0.28	A
Barium	0.05	0.0561	A		-10.9	0.0393 - 0.0729	0.05	N
Beryllium	2.78	2.87	A		-3.1	2.01 - 3.73	0.22	A
Cadmium	0.87	0.854	A		1.9	0.598 - 1.110	0.10	A
Chromium	1.10	1.09	A		0.9	0.76 - 1.42	0.11	A
Cobalt	8.89	8.99	A		-1.1	6.29 - 11.69	0.80	A
Copper	7.58	7.47	A		1.5	5.23 - 9.71	0.76	A
Lead	1.25	1.25	A		0.0	0.88 - 1.63	0.12	A
Mercury	0.0002		A			False Positive Test	0.0002	
Nickel	0.003		A			False Positive Test	0.003	
Selenium	0.246	0.247	A		-0.4	0.173 - 0.321	0.032	A
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	3.45	3.38	A		2.1	2.37 - 4.39	0.35	A
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	5.96	5.76	A		3.5	4.03 - 7.49	0.54	A
Zinc	7.32	7.40	A		-1.1	5.18 - 9.62	0.73	A

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.009		A			False Positive Test	0.005	
Cesium-134	-0.0058		A			False Positive Test	0.7475	
Cesium-137	10.05	9.7	A		3.6	6.8 - 12.6	0.90	A
Cobalt-57	25.3	25.4	A		-0.4	17.8 - 33.0	3.5	A
Cobalt-60	10.3	10.27	A		0.3	7.19 - 13.35	1.5	A
Hydrogen-3	649	637	A		1.9	446 - 828	34	A
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.7	7.36	A		4.6	5.15 - 9.57	1.4	W
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	0.65	0.745	A		-12.8	0.522 - 0.969	0.078	A
Plutonium-239/240	0.668	0.769	A		-13.1	0.538 - 1.000	0.078	A
Potassium-40	3.95		A			False Positive Test	1.5	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	3.65	3.68	A		-0.8	2.58 - 4.78	0.37	A
Technetium-99	7.53	7.47	A		0.8	5.23 - 9.71	0.35	A
Uranium-234	0.97	0.990	A		-2.0	0.693 - 1.287	0.10	A
Uranium-238	1.02	1.028	A		-0.8	0.720 - 1.336	0.11	A
Zinc-65	1.3		A			False Positive Test	2.1	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (SLAC01) SLAC DOE National Accelerator Laboratory
 2575 Sand Hill Road
 Menlo Park, CA 94025

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	0.4		A			False Positive Test	0.4	
Cesium-137	10.71	9.7	A		10.4	6.8 - 12.6	1.07	A
Cobalt-57	23.17	25.4	A		-8.8	17.8 - 33.0	2.32	A
Cobalt-60	10.03	10.27	A		-2.3	7.19 - 13.35	1.0	A
Hydrogen-3	584	637	A		-8.3	446 - 828	58.4	A
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.41	7.36	A		0.7	5.15 - 9.57	0.74	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	0.1		A			False Positive Test	0.1	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	0.7		A			False Positive Test	0.7	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (SOUT01) Southwest Research Institute
 6220 Culebra Rd.
 San Antonio, TX 78238-5166

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	0.000585	6.04E-04	A		-3.1	4.23E-4 - 7.85E-4	0.000110	W
Uranium-238	0.0833	0.0827	A		0.7	0.0579 - 0.1075	0.0133	W
Uranium-Total	0.0839	0.0833	A		0.7	0.0583 - 0.1083	0.0134	W
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR		N	(11)		False Positive Test		
Cesium-134	NR		N	(11)		False Positive Test		
Cesium-137	NR	9.7	N	(28)		6.8 - 12.6		
Cobalt-57	NR	25.4	N	(28)		17.8 - 33.0		
Cobalt-60	NR	10.27	N	(28)		7.19 - 13.35		
Hydrogen-3	NR	637	N	(28)		446 - 828		
Iron-55	16.5	19.7	A		-16.2	13.8 - 25.6	1.49	A
Manganese-54	NR	7.36	N	(28)		5.15 - 9.57		
Nickel-63	1.07	0.8	A			Sensitivity Evaluation	0.158	
Plutonium-238	NR	0.745	N	(28)		0.522 - 0.969		
Plutonium-239/240	NR	0.769	N	(28)		0.538 - 1.000		
Potassium-40	NR		N	(11)		False Positive Test		
Radium-226	0.243	0.310	W		-21.6	0.217 - 0.403	0.0285	A

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68	N	(28)		2.58 - 4.78		
Technetium-99	7.30	7.47	A		-2.3	5.23 - 9.71	0.485	A
Uranium-234	NR	0.990	N	(28)		0.693 - 1.287		
Uranium-238	NR	1.028	N	(28)		0.720 - 1.336		
Zinc-65	NR		N	(11)		False Positive Test		

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50

(SRPD01) Sandia National Laboratories, Radiation Protection Sample Diagnostics

PO Box 5800, MS1103

Albuquerque, NM 87185-1103

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	-2.13E-01		A			False Positive Test	2.83E-01	
Cesium-137	9.11E+00	9.7	A		-6.1	6.8 - 12.6	6.42E-01	A
Cobalt-57	2.30E+01	25.4	A		-9.4	17.8 - 33.0	2.33	A
Cobalt-60	8.59E+00	10.27	A		-16.4	7.19 - 13.35	4.92E-01	A
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	6.64E+00	7.36	A		-9.8	5.15 - 9.57	4.39E-01	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	6.69E+00		N	(1)		False Positive Test	1.75	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	3.04E-02		A			False Positive Test	4.36E-01	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
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- (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-24-MaW50
 (STRL01) South Texas Project Radiological Laboratory
 12090 FM 521
 Wadsworth, Texas 77483

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	NR		N	(11)		False Positive Test		
Cesium-137	9.98	9.7	A		2.9	6.8 - 12.6	0.25	A
Cobalt-57	24.53	25.4	A		-3.4	17.8 - 33.0	0.55	A
Cobalt-60	10.31	10.27	A		0.4	7.19 - 13.35	0.18	N
Hydrogen-3	NR	637				446 - 828		
Iron-55	17.2	19.7	A		-12.7	13.8 - 25.6	0.41	A
Manganese-54	7.39	7.36	A		0.4	5.15 - 9.57	0.22	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	NR		N	(11)		False Positive Test		
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	3.89	3.68	A		5.7	2.58 - 4.78	0.22	A
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	NR		N	(11)		False Positive Test		

Radiological Reference Date: February 1, 2024

Results Flags:

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- RW = Report Warning
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Uncertainty Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
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Notes:

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- (4) = Sensitivity Evaluation
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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-24-MaW50
 (TDHL01) Texas Department of State Health Services Laboratory
 1100 W 49th Street
 Austin, TX 78756

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.026		A			False Positive Test	0.013	
Cesium-134	-0.06		A			False Positive Test	0.22	
Cesium-137	10.52	9.7	A		8.5	6.8 - 12.6	0.36	A
Cobalt-57	25.54	25.4	A		0.6	17.8 - 33.0	0.55	A
Cobalt-60	10.35	10.27	A		0.8	7.19 - 13.35	0.23	A
Hydrogen-3	634	637	A		-0.5	446 - 828	17	A
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.43	7.36	A		1.0	5.15 - 9.57	0.24	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	0.634	0.745	A		-14.9	0.522 - 0.969	0.040	A
Plutonium-239/240	0.631	0.769	A		-17.9	0.538 - 1.000	0.040	A
Potassium-40	-0.21		A			False Positive Test	0.61	
Radium-226	0.278	0.310	A		-10.3	0.217 - 0.403	0.016	A

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	3.50	3.68	A		-4.9	2.58 - 4.78	0.14	A
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	0.763	0.990	W		-22.9	0.693 - 1.287	0.071	A
Uranium-238	0.922	1.028	A		-10.3	0.720 - 1.336	0.083	A
Zinc-65	0.45		A			False Positive Test	0.23	

Radiological Reference Date: February 1, 2024

Results Flags:

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- N = Result not acceptable.....|Bias| > 30%
- RW = Report Warning
- NR = Not Reported

Uncertainty Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
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- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

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

Laboratory Results For MAPEP-24-MaW50
 (TELE01) Teledyne Brown Engineering - Environmental Services
 2508 Quality Lane
 Knoxville, TN 37931-6819

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	NR					False Positive Test		
Cesium-137	NR	9.7				6.8 - 12.6		
Cobalt-57	NR	25.4				17.8 - 33.0		
Cobalt-60	NR	10.27				7.19 - 13.35		
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	NR	7.36				5.15 - 9.57		
Nickel-63	0.338	0.8	A	(17)		Sensitivity Evaluation	0.769	
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	NR					False Positive Test		
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	9.95	7.47	N		33.2	5.23 - 9.71	1.01	A
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	NR					False Positive Test		

Radiological Reference Date: February 1, 2024

Results Flags:

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- N = Result not acceptable.....|Bias| > 30%
- RW = Report Warning
- NR = Not Reported

Uncertainty Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
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- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (TELE02) Microbac Laboratories Inc. - Northbrook
 700 Landwehr Road
 Northbrook, IL 60062-

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	0.09		A			False Positive Test	0.19	
Cesium-137	11.1	9.7	A		14.4	6.8 - 12.6	0.4	A
Cobalt-57	26.4	25.4	A		3.9	17.8 - 33.0	0.40	N
Cobalt-60	11.2	10.27	A		9.1	7.19 - 13.35	0.3	A
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	8.23	7.36	A		11.8	5.15 - 9.57	0.39	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	3.16		A			False Positive Test	2.49	
Radium-226	0.46	0.310	N		48.4	0.217 - 0.403	0.07	W

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	0.10		A			False Positive Test	0.30	

Radiological Reference Date: February 1, 2024

Results Flags:

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- RW = Report Warning
- NR = Not Reported

Uncertainty Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
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Notes:

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- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
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Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-24-MaW50
 (TMAO01) EBERLINE Analytical Corporation
 601 A SCARBORO RD
 OAK RIDGE, TN 37830-

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	.0024		A			False Positive Test	0.018	
Cesium-134	-0.224		A			False Positive Test	.586	
Cesium-137	8.64	9.7	A		-10.9	6.8 - 12.6	1.39	W
Cobalt-57	21.67	25.4	A		-14.7	17.8 - 33.0	1.51	A
Cobalt-60	9.065	10.27	A		-11.7	7.19 - 13.35	1.042	A
Hydrogen-3	582.2	637	A		-8.6	446 - 828	20.87	A
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	6.44	7.36	A		-12.5	5.15 - 9.57	1.37	W
Nickel-63	0.1291	0.8	A	(17)		Sensitivity Evaluation	0.279	
Plutonium-238	0.742	0.745	A		-0.4	0.522 - 0.969	.105	A
Plutonium-239/240	0.7336	0.769	A		-4.6	0.538 - 1.000	0.104	A
Potassium-40	2.0836		A			False Positive Test	5.023	
Radium-226	.3099	0.310	A		0.0	0.217 - 0.403	0.094	N

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	3.901	3.68	A		6.0	2.58 - 4.78	0.209	A
Technetium-99	6.55	7.47	A		-12.3	5.23 - 9.71	0.290	A
Uranium-234	1.011	0.990	A		2.1	0.693 - 1.287	0.116	A
Uranium-238	1.017	1.028	A		-1.1	0.720 - 1.336	0.116	A
Zinc-65	1.346		A			False Positive Test	1.821	

Radiological Reference Date: February 1, 2024

Results Flags:

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- RW = Report Warning
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Uncertainty Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
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Notes:

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

Laboratory Results For MAPEP-24-MaW50
 (TNUT01) St. Louis USACE FUSRAP Laboratory
 112 James S McDonnell Blvd
 HAZELWOOD, MO 63042

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	-0.008		A			False Positive Test	0.083	
Cesium-134	-0.015		A			False Positive Test	0.054	
Cesium-137	10.4	9.7	A		7.2	6.8 - 12.6	0.303	A
Cobalt-57	25.3	25.4	A		-0.4	17.8 - 33.0	0.480	N
Cobalt-60	10.2	10.27	A		-0.7	7.19 - 13.35	0.209	A
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.81	7.36	A		6.1	5.15 - 9.57	0.220	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	4.56		A			False Positive Test	1.64	
Radium-226	0.294	0.310	A		-5.2	0.217 - 0.403	0.0292	A

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	1.09	0.990	A		10.1	0.693 - 1.287	0.079	A
Uranium-238	1.10	1.028	A		7.0	0.720 - 1.336	0.079	A
Zinc-65	-0.257		A			False Positive Test	0.135	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50

(UNTE01) UniTech-235

178 Aldo Drive

Barnwell, SC 29812

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	0.01		A			False Positive Test	0.01	
Cesium-137	10.34	9.7	A		6.6	6.8 - 12.6	1.26	A
Cobalt-57	25.73	25.4	A		1.3	17.8 - 33.0	1.74	A
Cobalt-60	10.37	10.27	A		1.0	7.19 - 13.35	0.93	A
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.93	7.36	A		7.7	5.15 - 9.57	1.10	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	0.01		A			False Positive Test	0.03	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	0.02		A			False Positive Test	0.01	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
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- (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-24-MaW50
 (WEST04) PACE ANALYTICAL SERVICES, PITTSBURGH 1638
 Roseytown Road
 Greensburg, PA 15601

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	NR					False Positive Test		
Cesium-137	NR	9.7				6.8 - 12.6		
Cobalt-57	NR	25.4				17.8 - 33.0		
Cobalt-60	NR	10.27				7.19 - 13.35		
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	NR	7.36				5.15 - 9.57		
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	NR					False Positive Test		
Radium-226	0.3619	0.310	A		16.7	0.217 - 0.403	0.0714	W

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	NR					False Positive Test		

Radiological Reference Date: February 1, 2024

Results Flags:

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- N = Result not acceptable.....|Bias| > 30%
- RW = Report Warning
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Uncertainty Flag

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 - ACCEPTABLE.....2% ≤ RP ≤ 15%
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Notes:

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

Laboratory Results For MAPEP-24-MaW50
 (WIPH01) WI, DPH, Radiation Protection Section
 1 West Wilson Street
 Madison, WI 53703

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.0634		A			False Positive Test	0.542	
Cesium-134	0.036		A			False Positive Test	0.131	
Cesium-137	9.731	9.7	A		0.3	6.8 - 12.6	0.615	A
Cobalt-57	24.296	25.4	A		-4.3	17.8 - 33.0	1.768	A
Cobalt-60	9.537	10.27	A		-7.1	7.19 - 13.35	0.308	A
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	6.688	7.36	A		-9.1	5.15 - 9.57	0.398	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	1.378		A			False Positive Test	0.797	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	0.072		A			False Positive Test	0.155	

Radiological Reference Date: February 1, 2024

Results Flags:

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- N = Result not acceptable.....|Bias| > 30%
- RW = Report Warning
- NR = Not Reported

Uncertainty Flag

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 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

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- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
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- (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-24-MaW50

(WIPP01) WIPP Laboratories

1400 University Drive

Carlsbad, NM 88220

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	5.69E-004		A			False Positive Test	1.80E-	
Cesium-134	-4.36E-002		A			False Positive Test	4.49E-	
Cesium-137	1.06E+001	9.7	A		9.3	6.8 - 12.6	1.79E-	N
Cobalt-57	2.44E+001	25.4	A		-3.9	17.8 - 33.0	5.71E-	A
Cobalt-60	9.37E+000	10.27	A		-8.8	7.19 - 13.35	1.91E-	A
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.62E+000	7.36	A		3.5	5.15 - 9.57	1.55E-	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	6.36E-001	0.745	A		-14.6	0.522 - 0.969	5.68E-	A
Plutonium-239/240	6.39E-001	0.769	A		-16.9	0.538 - 1.000	5.70E-	A
Potassium-40	-2.66E-001		A			False Positive Test	6.53E-	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	3.19E+000	3.68	A		-13.3	2.58 - 4.78	1.81E-	A
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	1.01E+000	0.990	A		2.0	0.693 - 1.287	8.67E-	A
Uranium-238	9.37E-001	1.028	A		-8.9	0.720 - 1.336	8.11E-	A
Zinc-65	1.20E-001		A			False Positive Test	1.03E-	

Radiological Reference Date: February 1, 2024

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- RW = Report Warning
- NR = Not Reported

Uncertainty Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
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- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (WSHL01) Wisconsin State Laboratory of Hygiene
 2601 Agriculture Drive
 Madison, WI 53718

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	0.02345		A			False Positive Test	0.01499	
Cesium-134	0.0949		A			False Positive Test	0.061	
Cesium-137	10.1	9.7	A		4.1	6.8 - 12.6	0.334	A
Cobalt-57	24.6	25.4	A		-3.2	17.8 - 33.0	0.572	A
Cobalt-60	10.4	10.27	A		1.3	7.19 - 13.35	0.646	A
Hydrogen-3	558.7	637	A		-12.3	446 - 828	5.17	N
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.34	7.36	A		-0.3	5.15 - 9.57	0.338	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	0.7141	0.745	A		-4.1	0.522 - 0.969	0.05117	A
Plutonium-239/240	0.6937	0.769	A		-9.8	0.538 - 1.000	0.04833	A
Potassium-40	-0.45		A			False Positive Test	0.823	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	3.35	3.68	A		-9.0	2.58 - 4.78	0.059	N
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	1.090	0.990	A		10.1	0.693 - 1.287	0.0686	A
Uranium-238	1.091	1.028	A		6.1	0.720 - 1.336	0.0662	A
Zinc-65	0.0129		A			False Positive Test	0.158	

Radiological Reference Date: February 1, 2024

Results Flags:

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

Uncertainty Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50
 (WVDP01) WVDP Environmental Laboratory
 10282 Rock Springs Road
 West Valley, NY 14171

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	NR	6.04E-04				4.23E-4 - 7.85E-4		
Uranium-238	NR	0.0827				0.0579 - 0.1075		
Uranium-Total	NR	0.0833				0.0583 - 0.1083		
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	0.00389		A			False Positive Test	0.0657	
Cesium-137	9.99	9.7	A		3.0	6.8 - 12.6	0.322	A
Cobalt-57	24.5	25.4	A		-3.5	17.8 - 33.0	0.613	A
Cobalt-60	10.0	10.27	A		-2.6	7.19 - 13.35	0.259	A
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	7.55	7.36	A		2.6	5.15 - 9.57	0.278	A
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	0.993		A			False Positive Test	0.833	
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	3.48	3.68	A		-5.4	2.58 - 4.78	0.196	A
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	0.0289		A			False Positive Test	0.193	

Radiological Reference Date: February 1, 2024

Results 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 Flag

- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (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-24-MaW50

(YPGA01) US Army Yuma Proving Ground / Material Analysis Lab

301 C. Street

Yuma, AZ 85365

Inorganic							Units: (mg/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Antimony	NR	5.71				4.00 - 7.42		
Arsenic	NR	2.73				1.91 - 3.55		
Barium	NR	0.0561				0.0393 - 0.0729		
Beryllium	NR	2.87				2.01 - 3.73		
Cadmium	NR	0.854				0.598 - 1.110		
Chromium	NR	1.09				0.76 - 1.42		
Cobalt	NR	8.99				6.29 - 11.69		
Copper	NR	7.47				5.23 - 9.71		
Lead	NR	1.25				0.88 - 1.63		
Mercury	NR					False Positive Test		
Nickel	NR					False Positive Test		
Selenium	NR	0.247				0.173 - 0.321		
Technetium-99	NR	1.18E-05				8.30E-6 - 1.53E-5		
Thallium	NR	3.38				2.37 - 4.39		
Uranium-235	0.00061	6.04E-04	A		1.0	4.23E-4 - 7.85E-4	0.00002	A
Uranium-238	0.0836	0.0827	A		1.1	0.0579 - 0.1075	.002	A
Uranium-Total	0.084	0.0833	A		0.8	0.0583 - 0.1083	0.002	A
Vanadium	NR	5.76				4.03 - 7.49		
Zinc	NR	7.40				5.18 - 9.62		

Radiological							Units: (Bq/L)	
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Americium-241	NR					False Positive Test		
Cesium-134	NR					False Positive Test		
Cesium-137	NR	9.7				6.8 - 12.6		
Cobalt-57	NR	25.4				17.8 - 33.0		
Cobalt-60	NR	10.27				7.19 - 13.35		
Hydrogen-3	NR	637				446 - 828		
Iron-55	NR	19.7				13.8 - 25.6		
Manganese-54	NR	7.36				5.15 - 9.57		
Nickel-63	NR	0.8				Sensitivity Evaluation		
Plutonium-238	NR	0.745				0.522 - 0.969		
Plutonium-239/240	NR	0.769				0.538 - 1.000		
Potassium-40	NR					False Positive Test		
Radium-226	NR	0.310				0.217 - 0.403		

Radiological						Units: (Bq/L)		
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Strontium-90	NR	3.68				2.58 - 4.78		
Technetium-99	NR	7.47				5.23 - 9.71		
Uranium-234	NR	0.990				0.693 - 1.287		
Uranium-238	NR	1.028				0.720 - 1.336		
Zinc-65	NR					False Positive Test		

Radiological Reference Date: February 1, 2024

Results 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 Flag

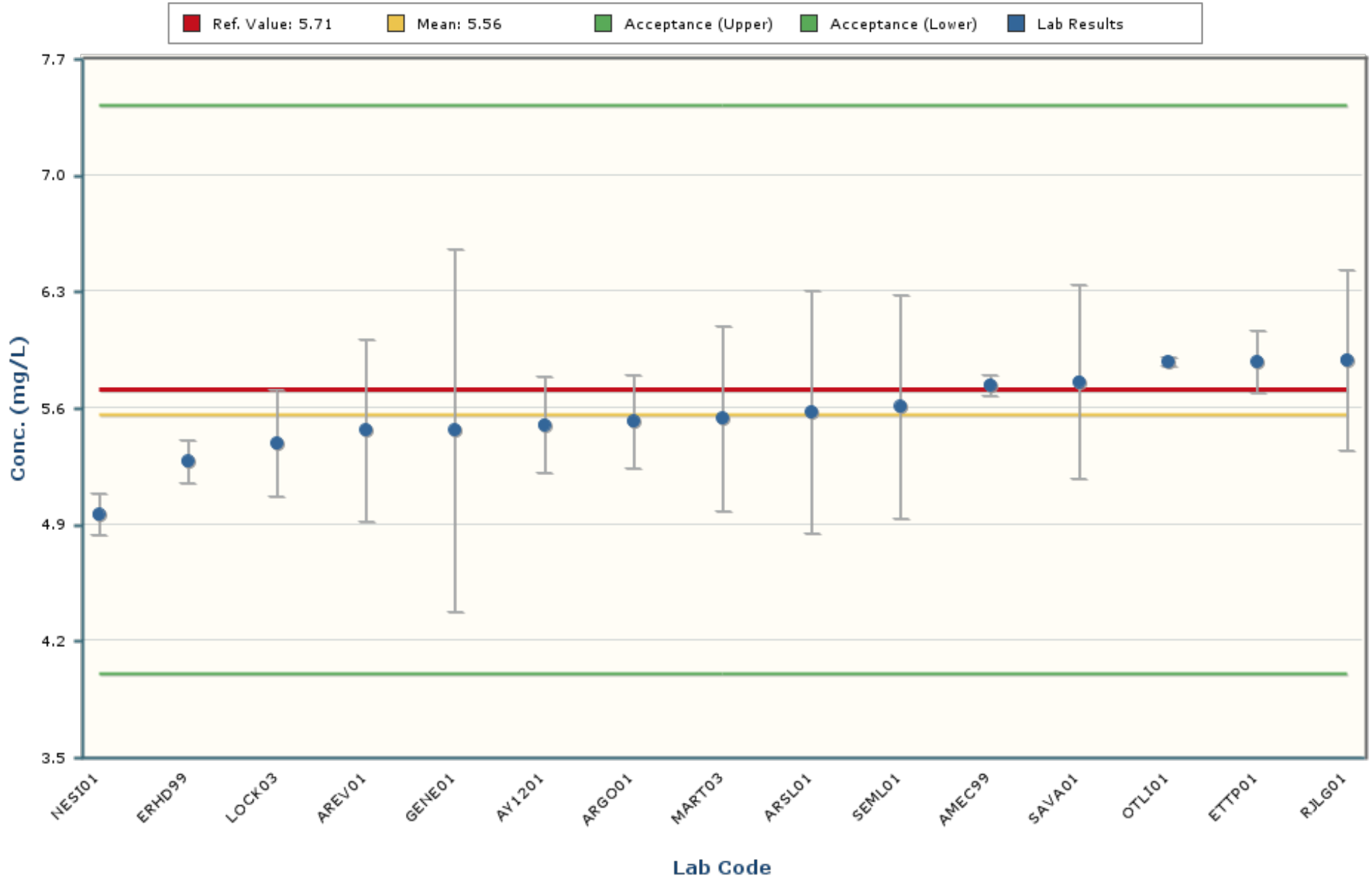
- NOT ACCEPTABLE.....RP < 2%
 - ACCEPTABLE.....2% ≤ RP ≤ 15%
 - ACCEPTABLE WITH WARNING.....15% < RP ≤ 30%
 - NOT ACCEPTABLE.....RP > 30%
- Relative Precision (RP) = (Reported Uncertainty / Reported Result) x 100

Notes:

- (1) = False Positive
- (4) = Sensitivity Evaluation
- (6) = Not Evaluated
- (11) = False Positive Test, Result Not Reported
- (17) = NOT DETECTED - reported a statistically zero result
- (25) = Result not reported with other gamma results
- (28) = Not Reporting Previously Reported Analyte
- (29) = Statistically significant negative value at 3 standard deviations

Antimony

MAPEP-24-MaW50



Notes:

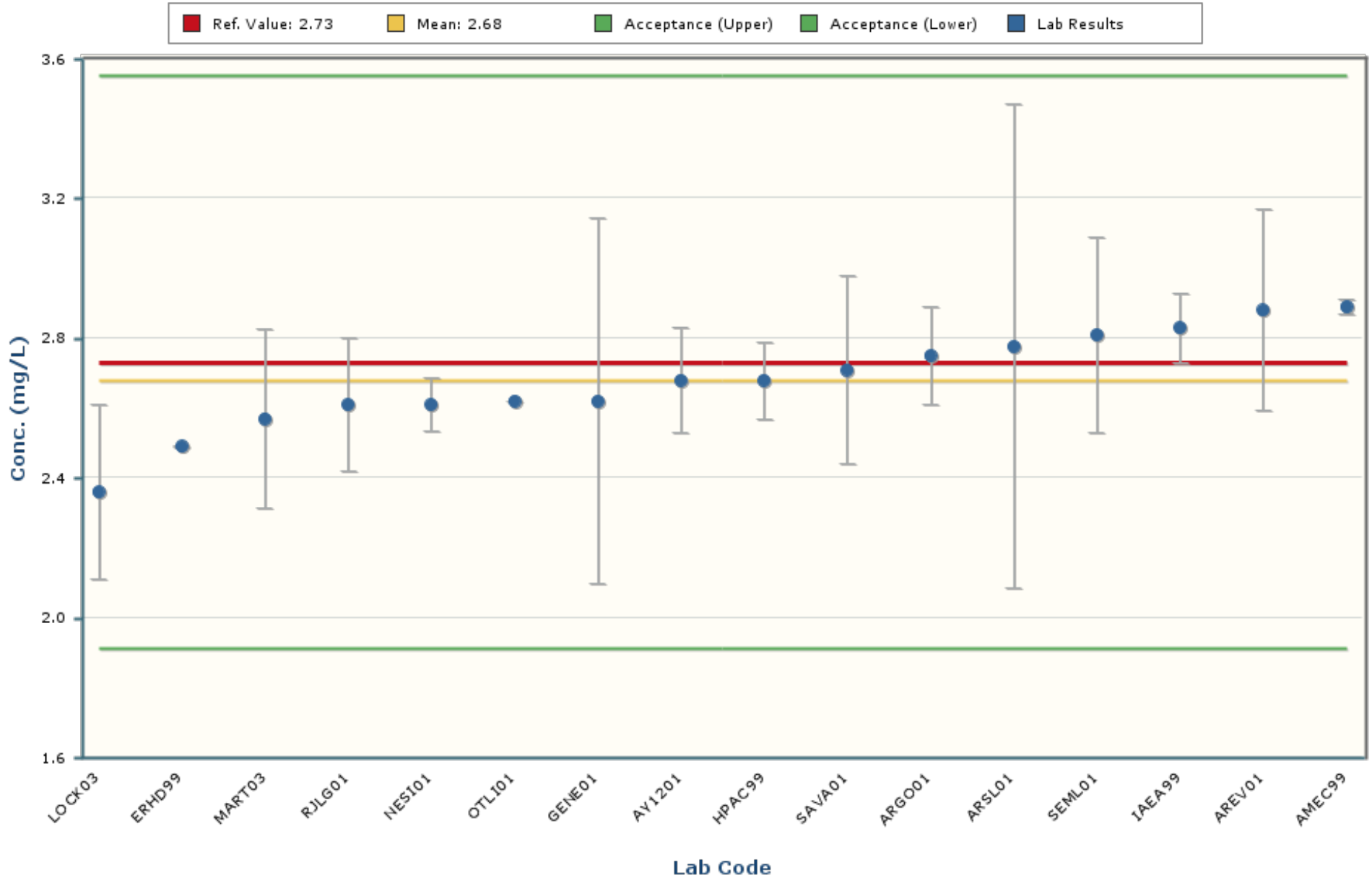
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 4.31 and 6.82 (± 5 Standard Deviations).

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

Arsenic

MAPEP-24-MaW50



Notes:

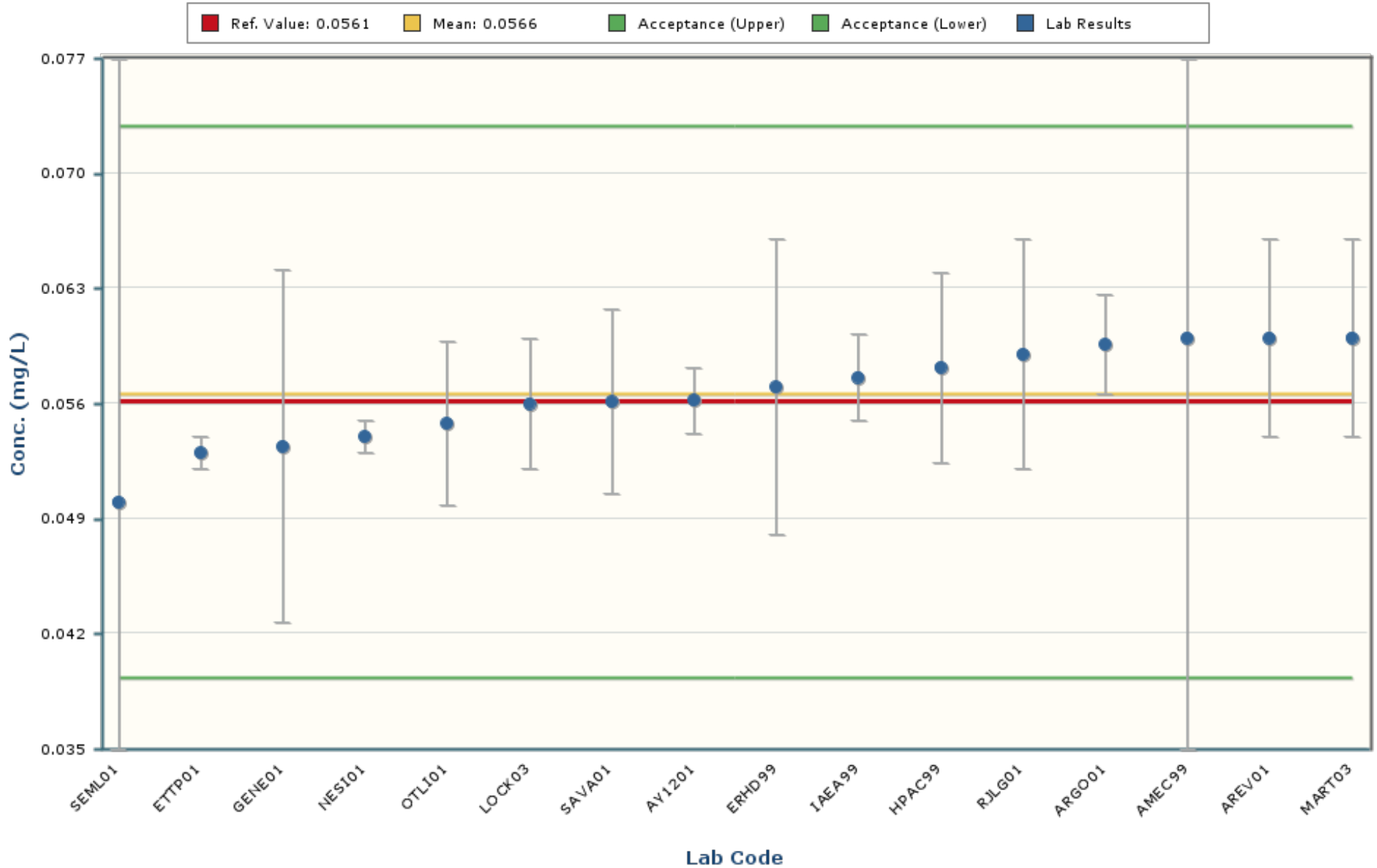
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 1.97 and 3.39 (± 5 Standard Deviations).

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

Barium

MAPEP-24-MaW50



Notes:

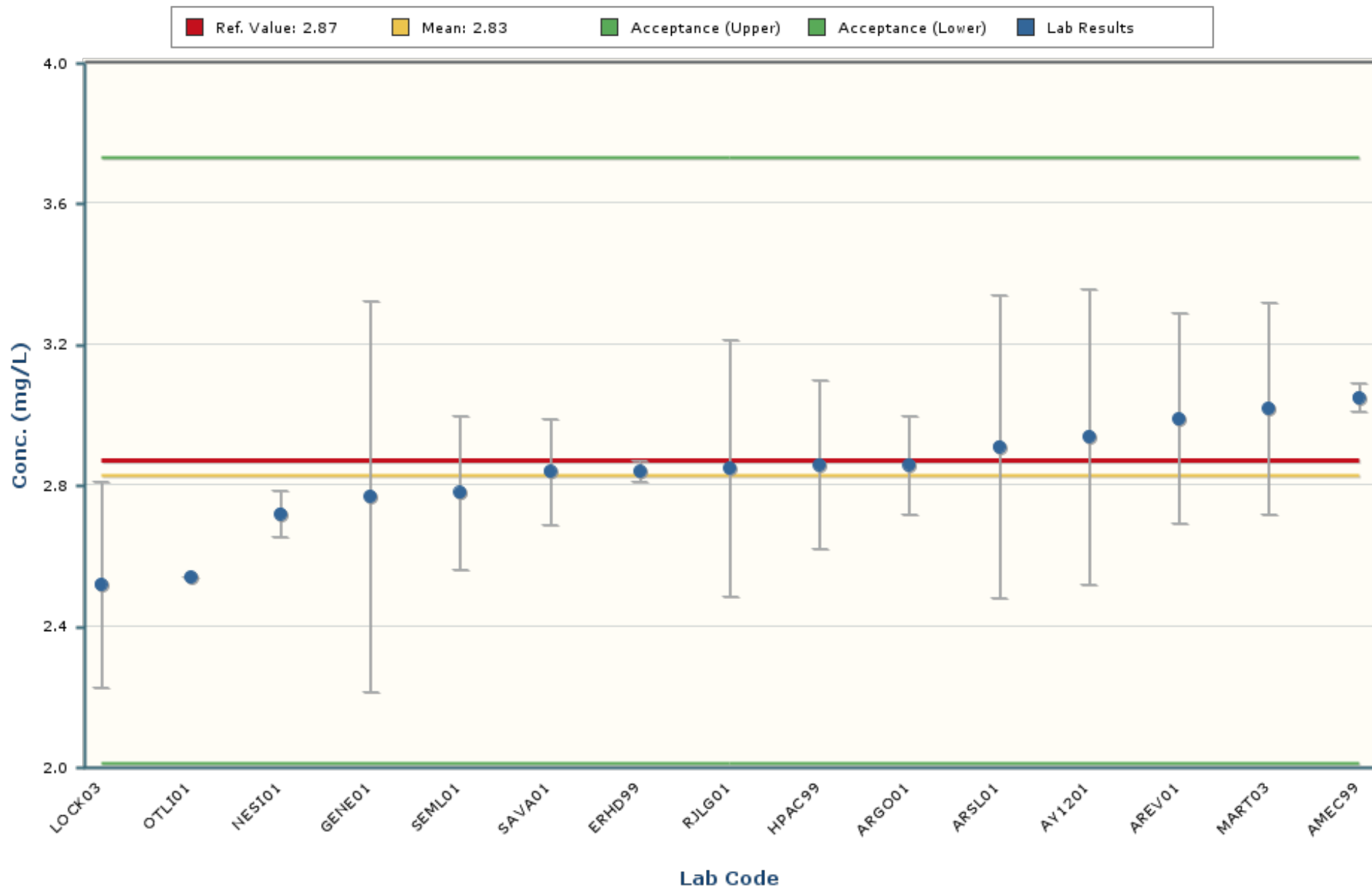
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.0418 and 0.0713 (± 5 Standard Deviations).

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

Beryllium

MAPEP-24-MaW50



Notes:

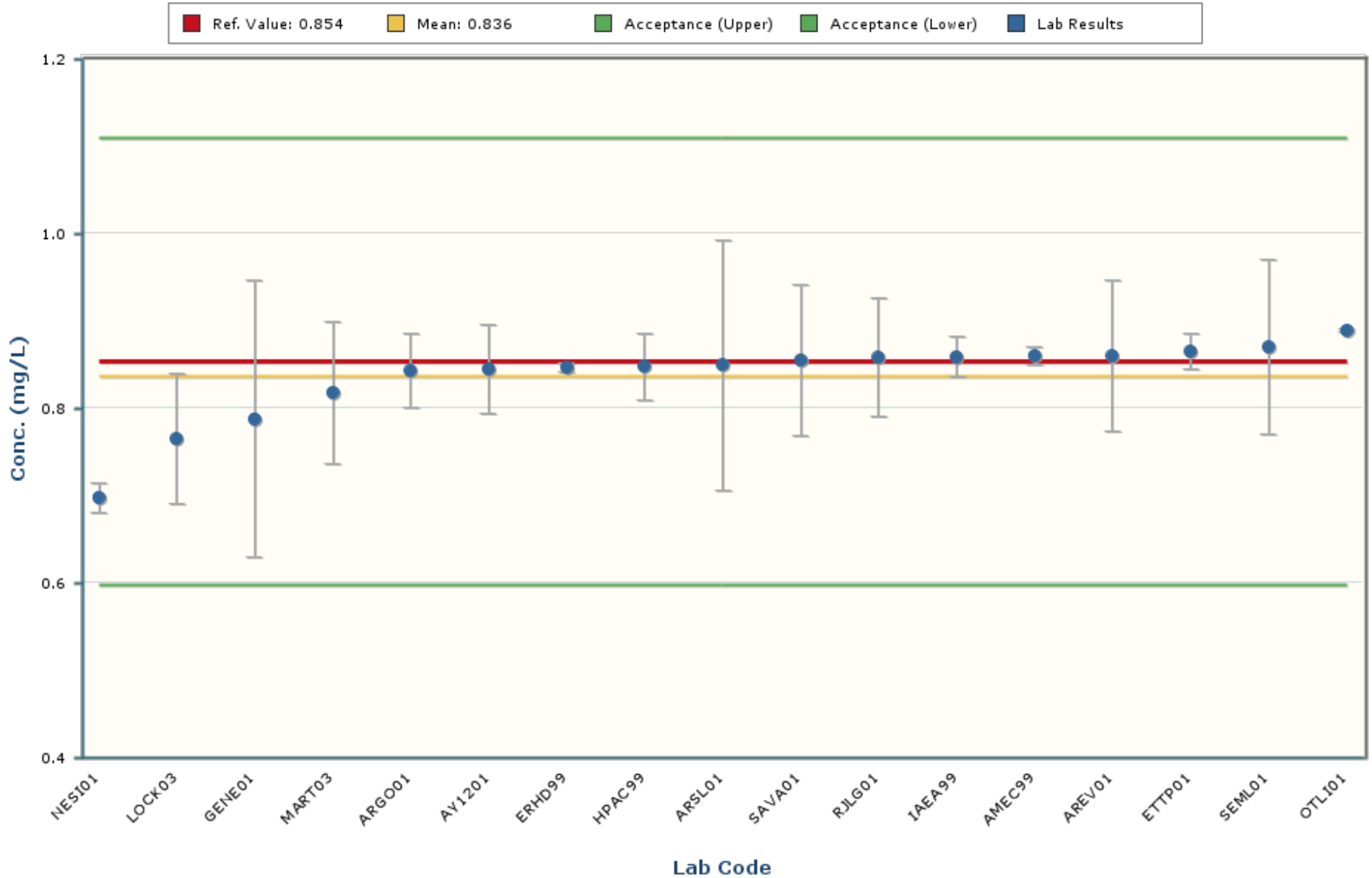
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 2.06 and 3.60 (± 5 Standard Deviations).

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

Cadmium

MAPEP-24-MaW50



Notes:

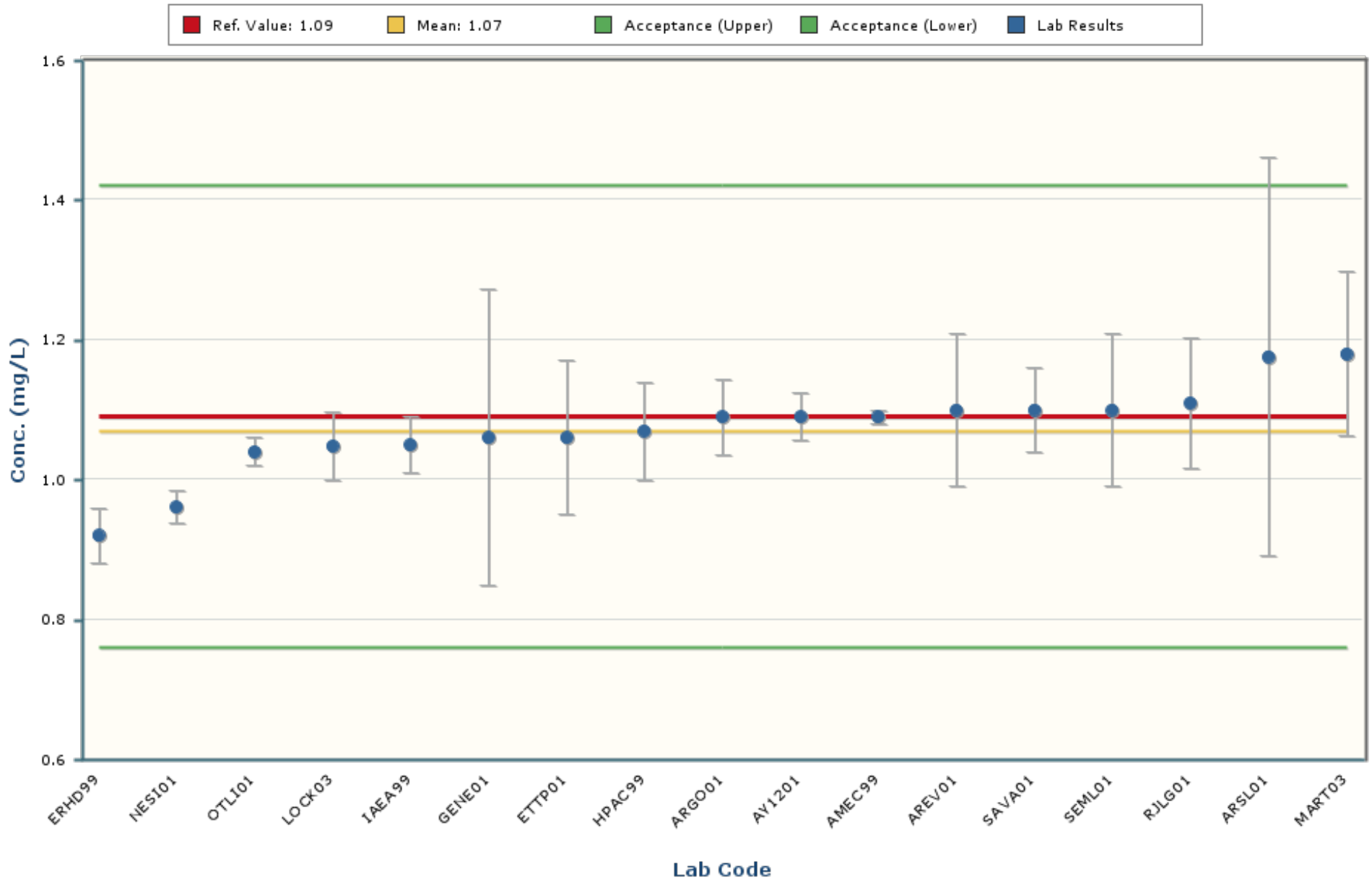
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.604 and 1.069 (± 5 Standard Deviations).

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

Chromium

MAPEP-24-MaW50



Notes:

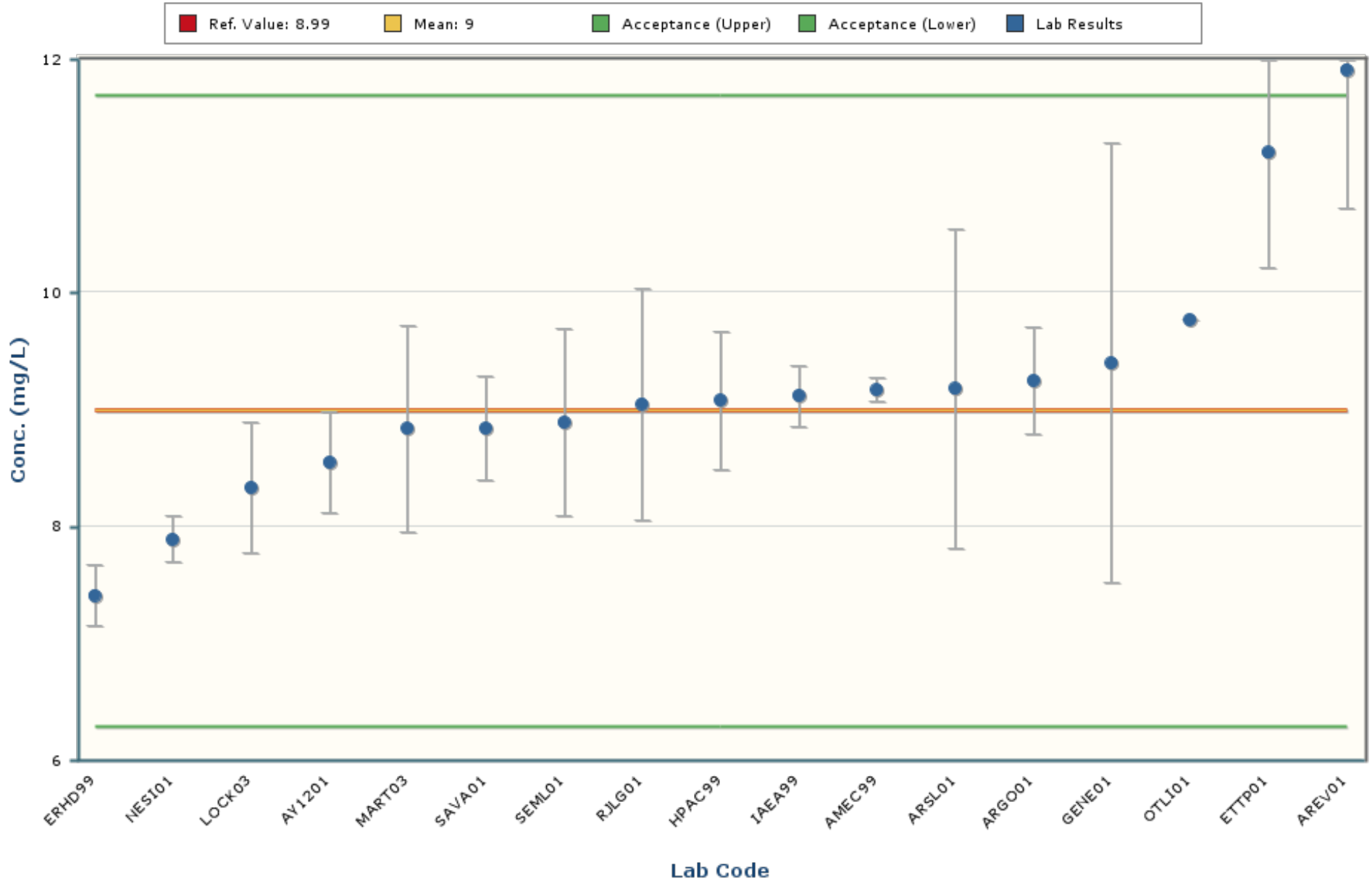
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.75 and 1.39 (± 5 Standard Deviations).

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

Cobalt

MAPEP-24-MaW50



Notes:

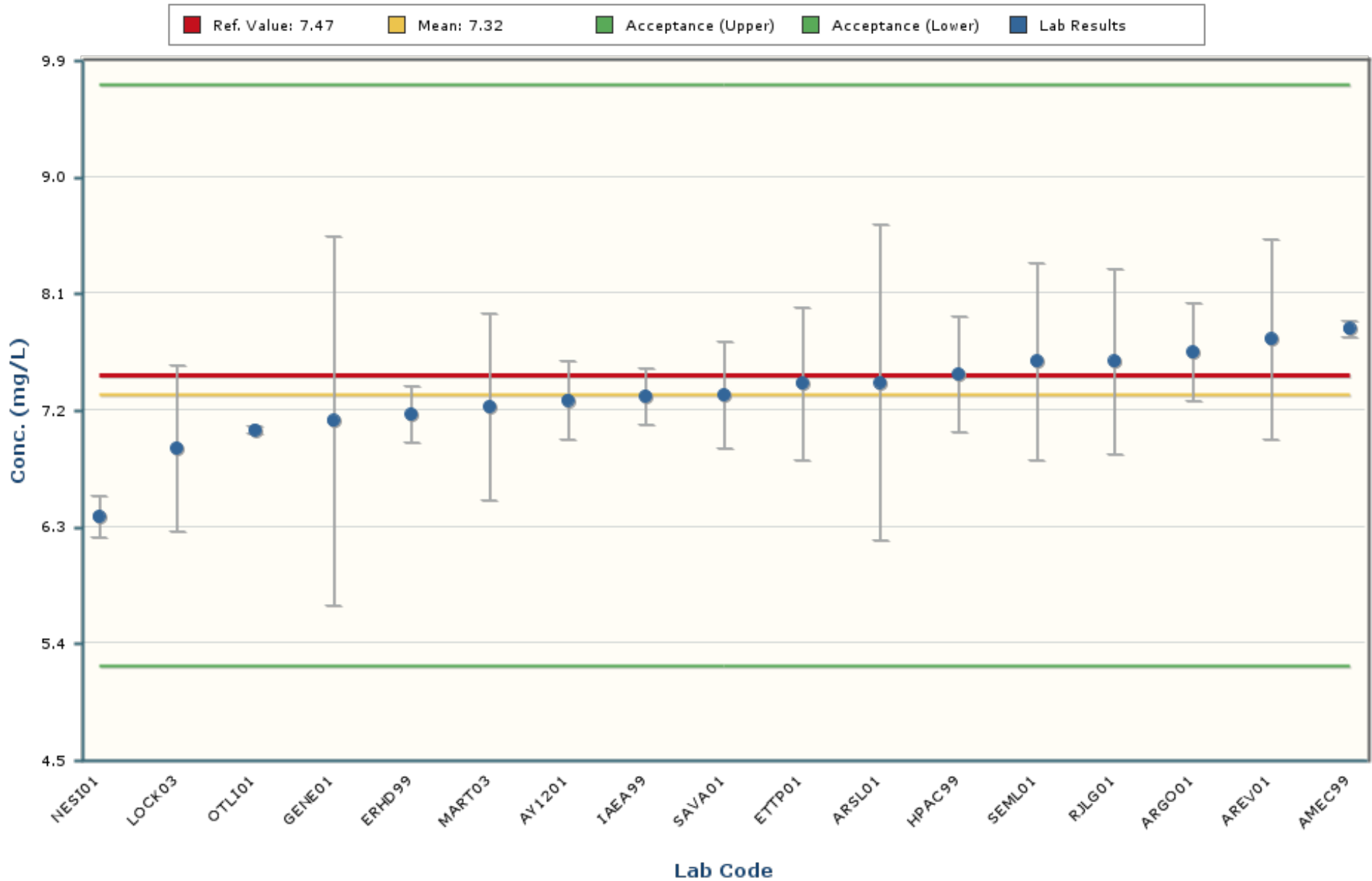
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 4.87 and 13.12 (± 5 Standard Deviations).

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

Copper

MAPEP-24-MaW50



Notes:

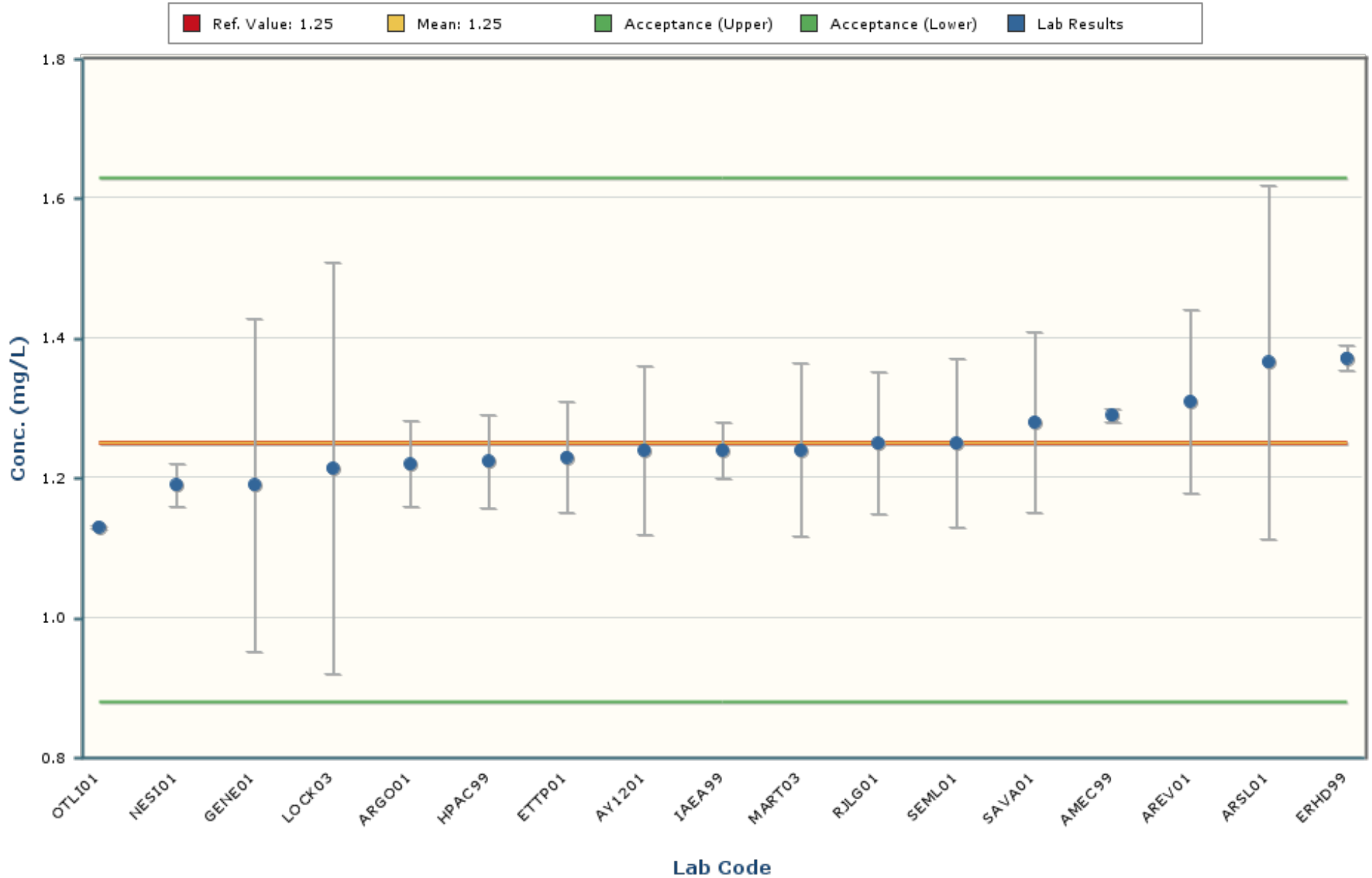
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 5.59 and 9.06 (± 5 Standard Deviations).

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

Lead

MAPEP-24-MaW50



Notes:

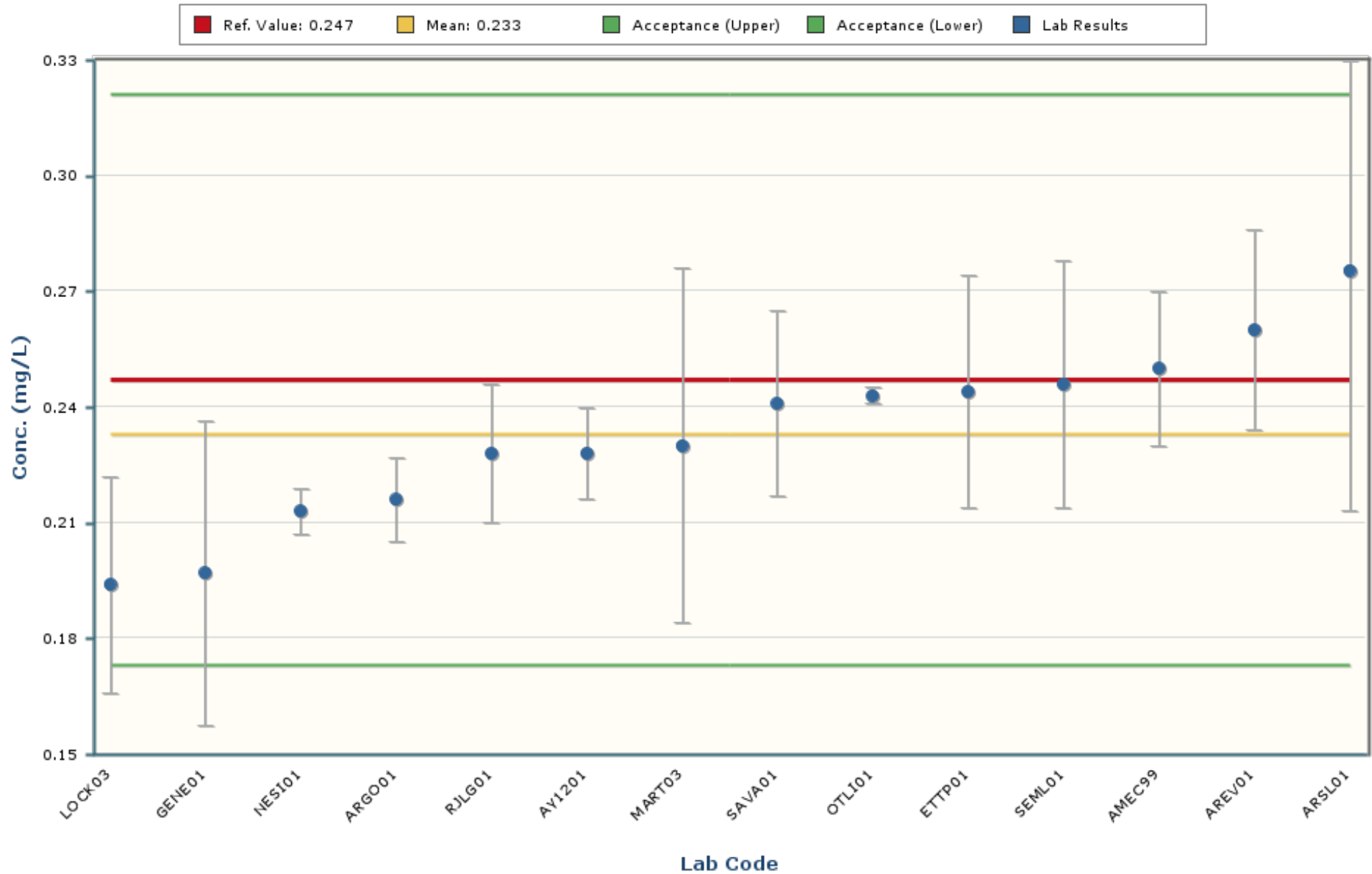
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.94 and 1.55 (± 5 Standard Deviations).

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

Selenium

MAPEP-24-MaW50



Notes:

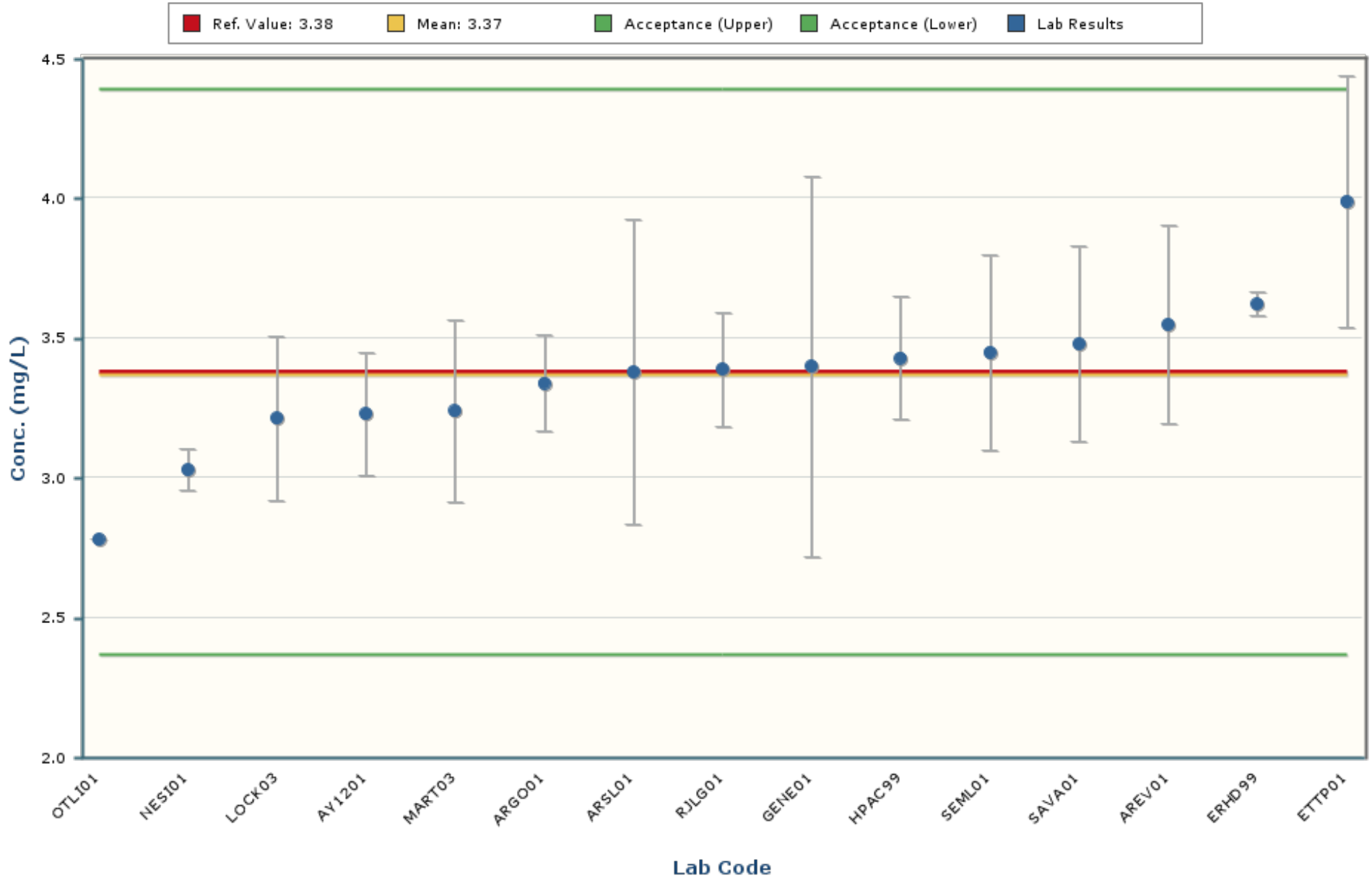
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.119 and 0.348 (± 5 Standard Deviations).

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

Thallium

MAPEP-24-MaW50



Notes:

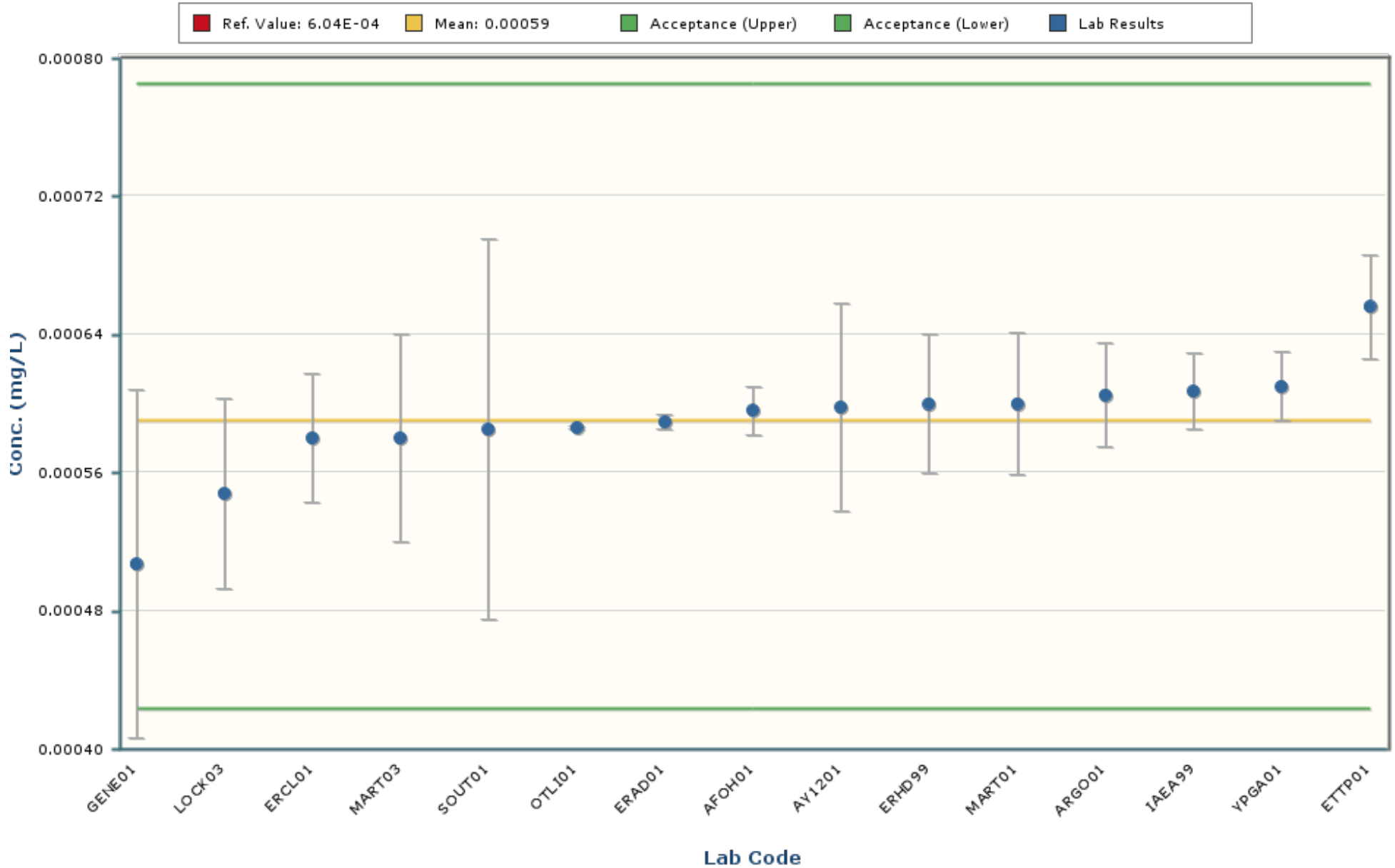
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 2.01 and 4.72 (± 5 Standard Deviations).

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

Uranium-235

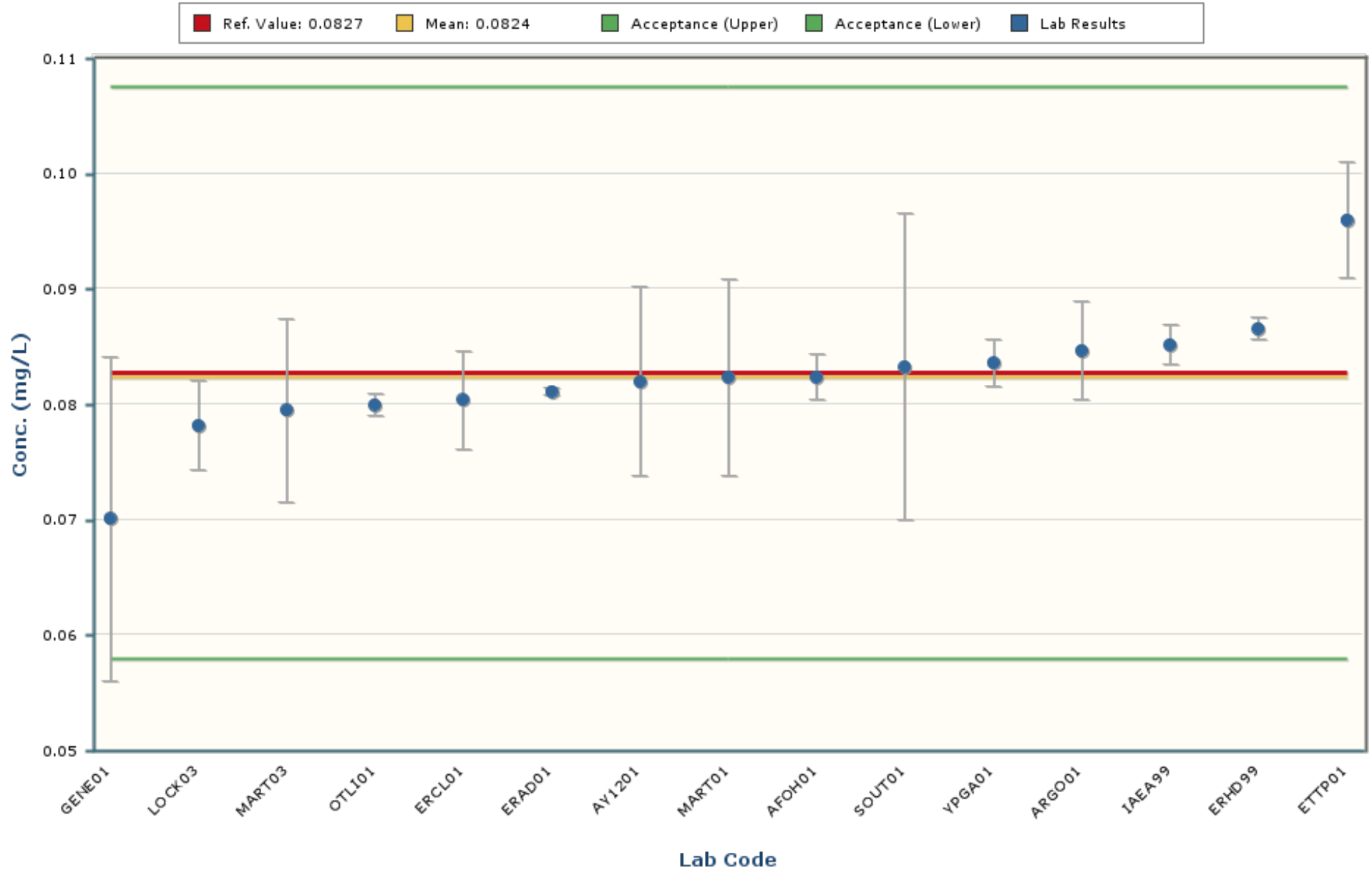
MAPEP-24-MaW50



Notes:
The chart mean excludes values outside of a bias range of $\pm 30\%$.
The chart shows only data points with values between 0.000429 and 0.000751 (± 5 Standard Deviations).
The error bars encompassing each result are plotted at \pm one standard deviation.

Uranium-238

MAPEP-24-MaW50



Notes:

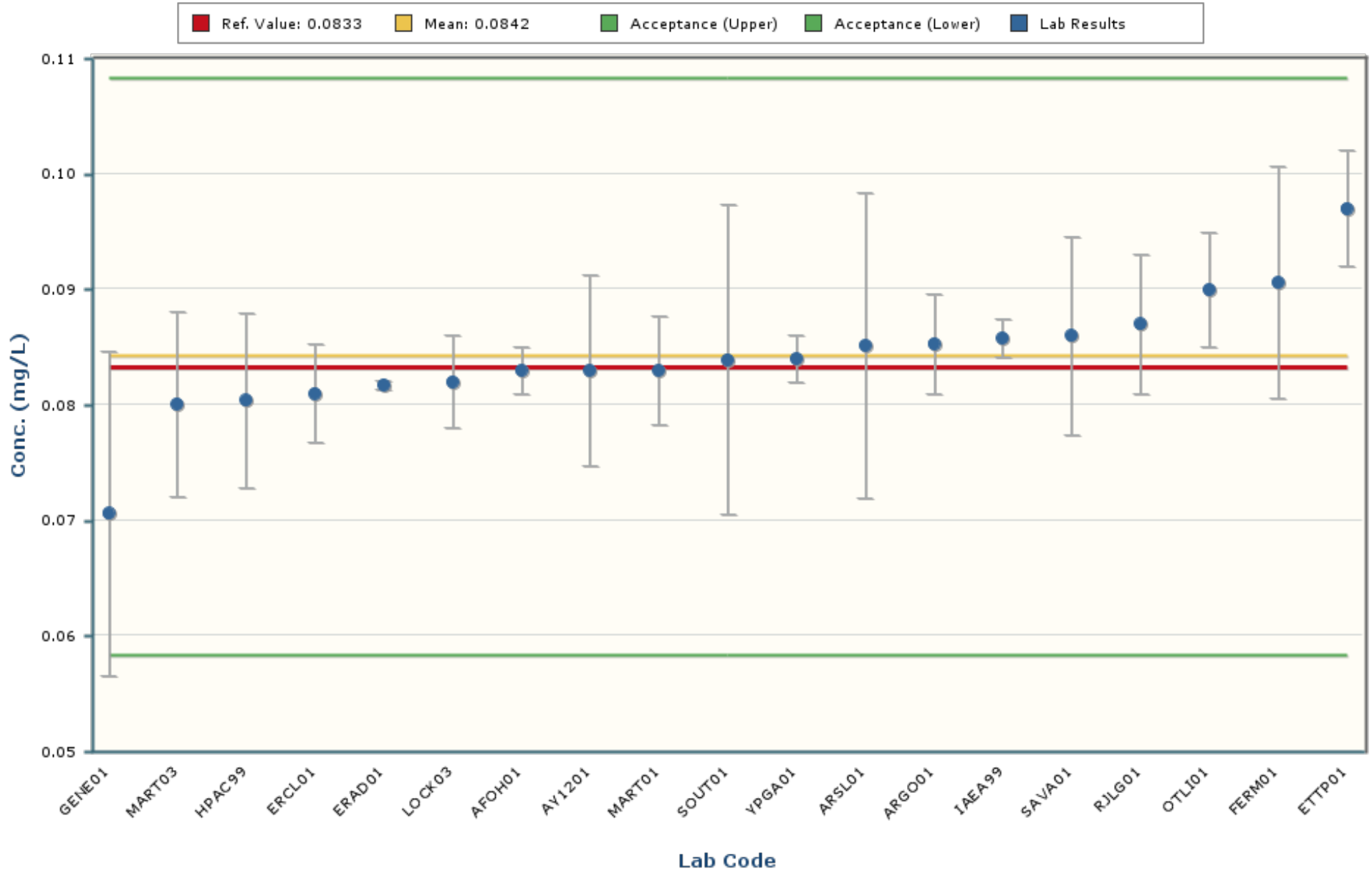
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.0554 and 0.1093 (± 5 Standard Deviations).

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

Uranium-Total

MAPEP-24-MaW50



Notes:

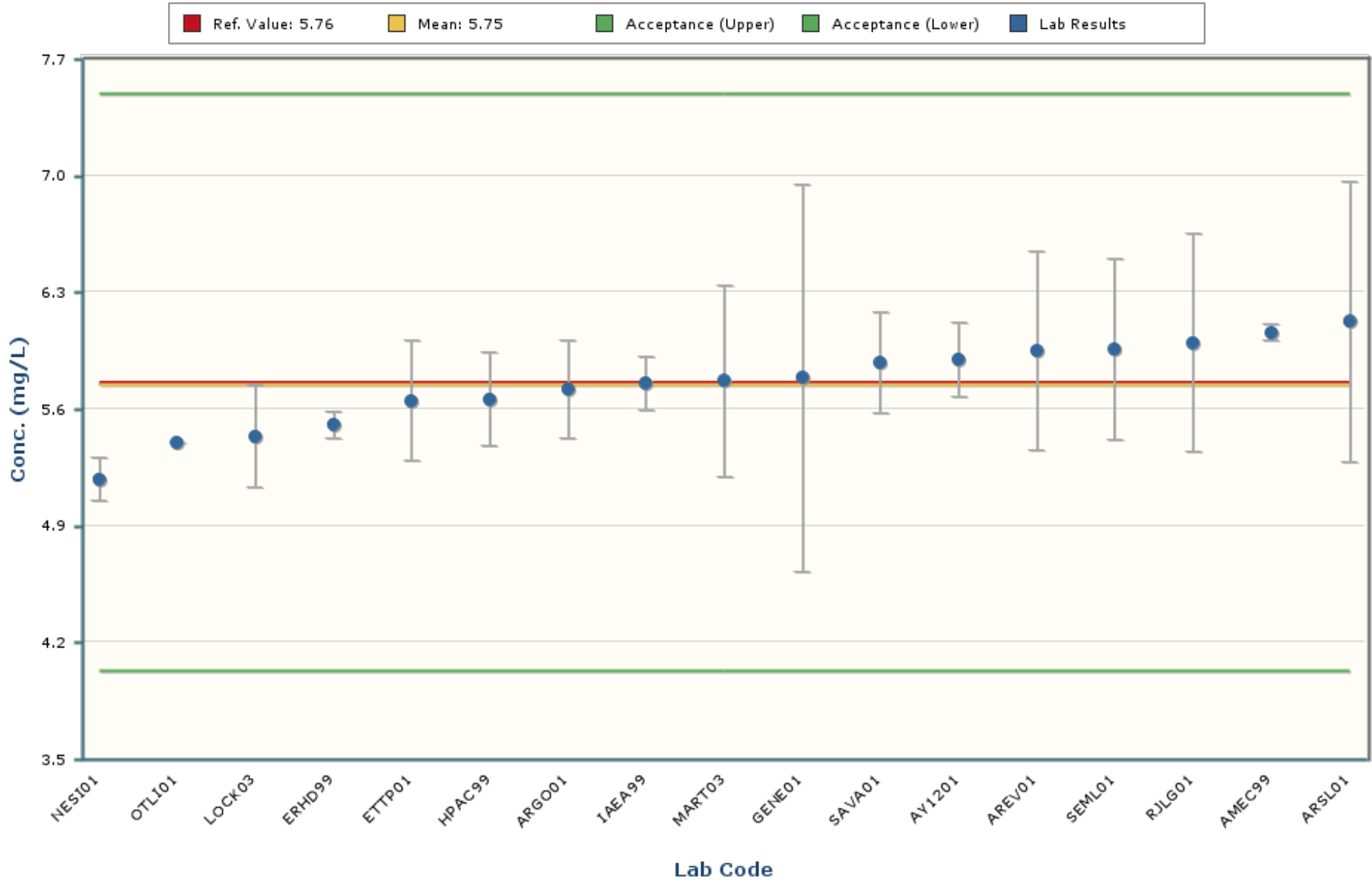
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.0579 and 0.1104 (± 5 Standard Deviations).

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

Vanadium

MAPEP-24-MaW50



Notes:

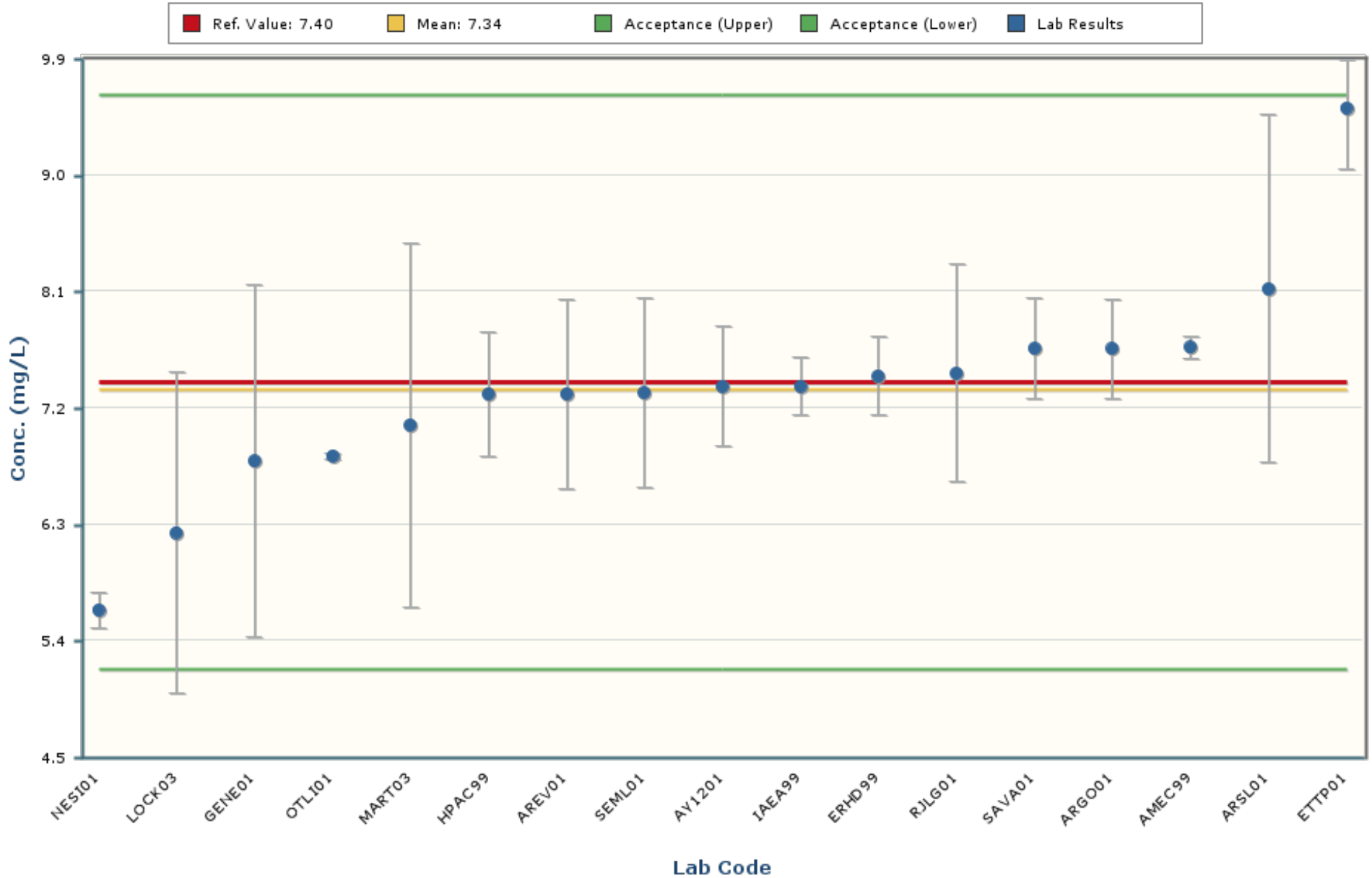
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 4.47 and 7.03 (± 5 Standard Deviations).

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

Zinc

MAPEP-24-MaW50



Notes:

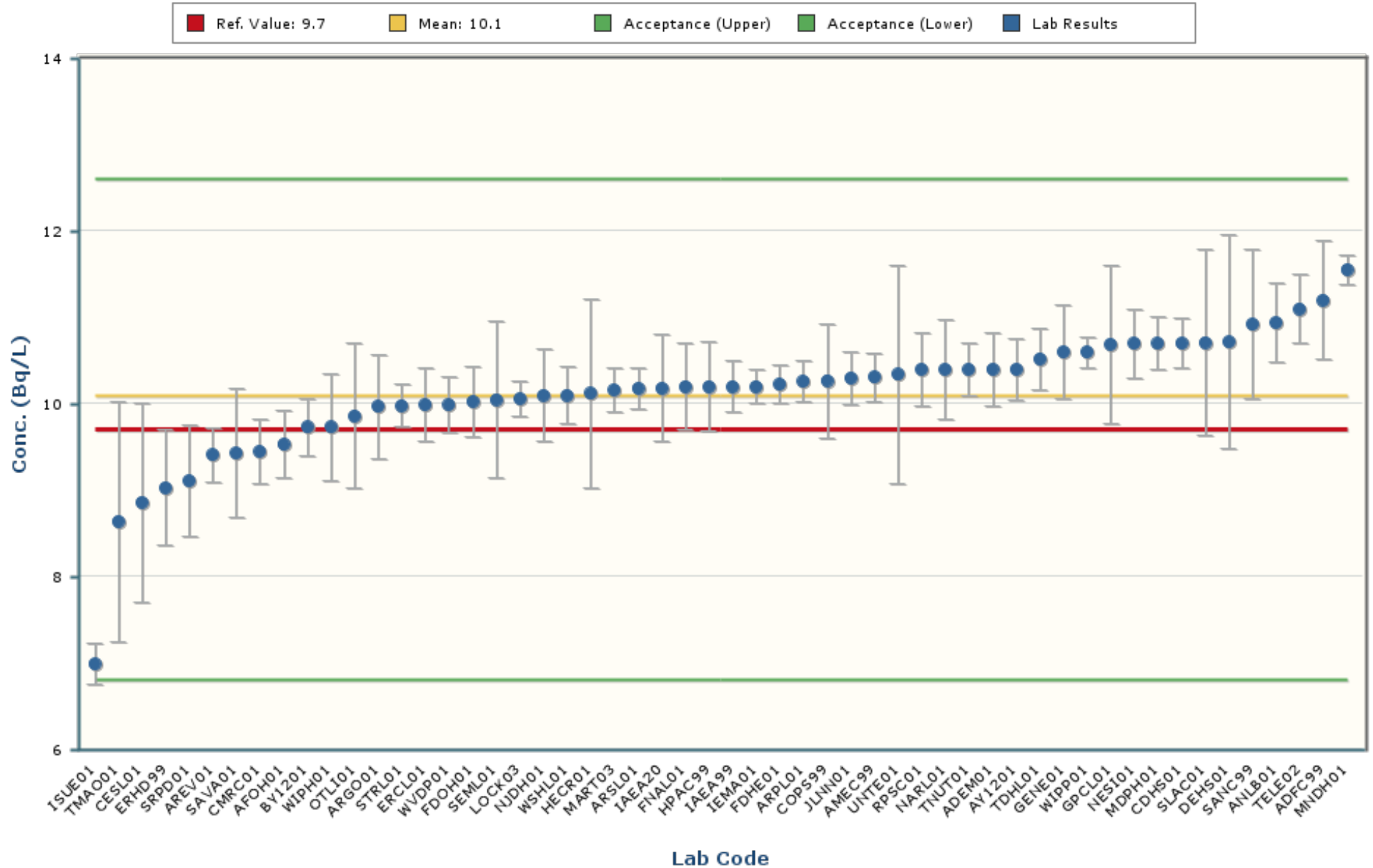
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 3.30 and 11.38 (± 5 Standard Deviations).

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

Cesium-137

MAPEP-24-MaW50



Notes:

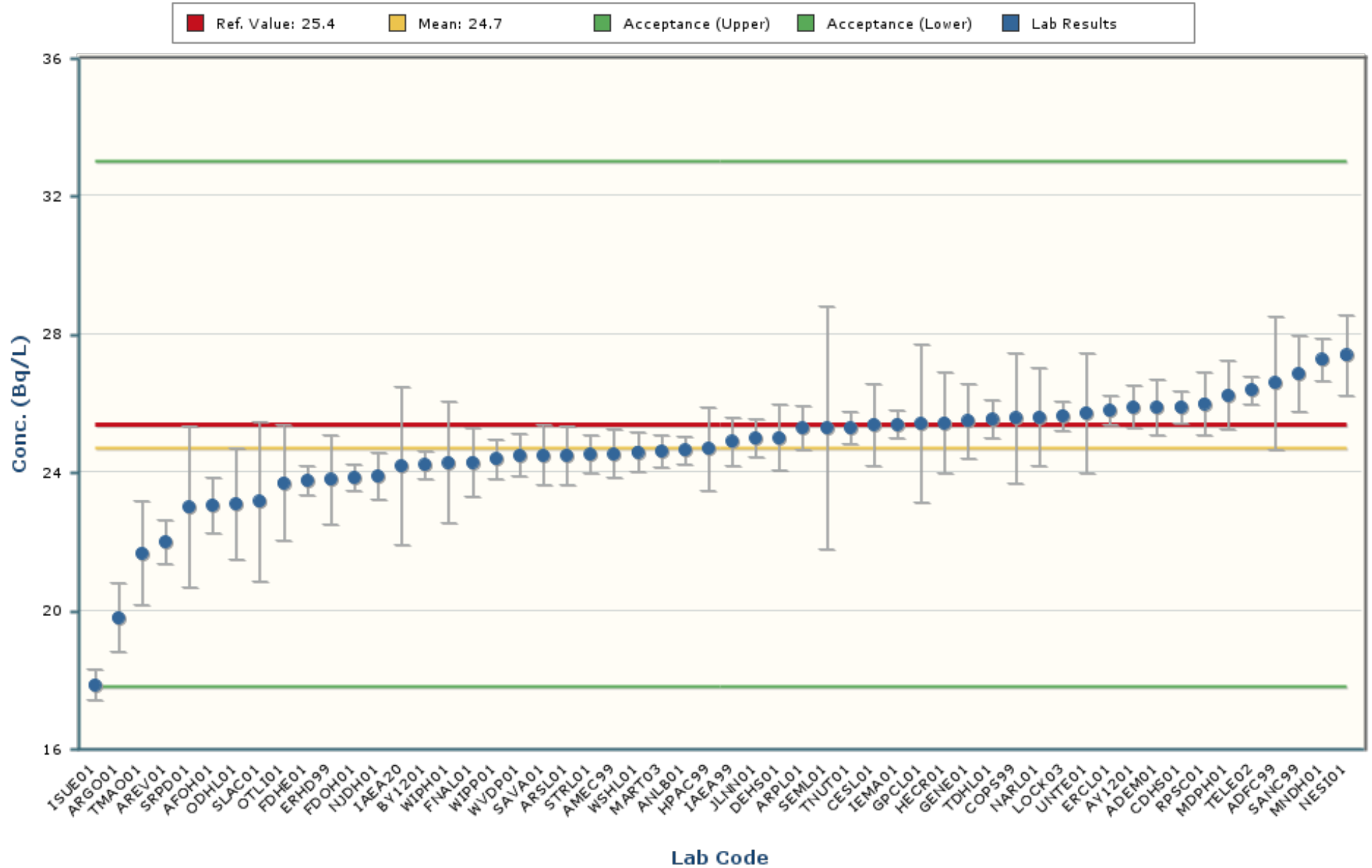
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 6.6 and 13.7 (± 5 Standard Deviations).

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

Cobalt-57

MAPEP-24-MaW50



Notes:

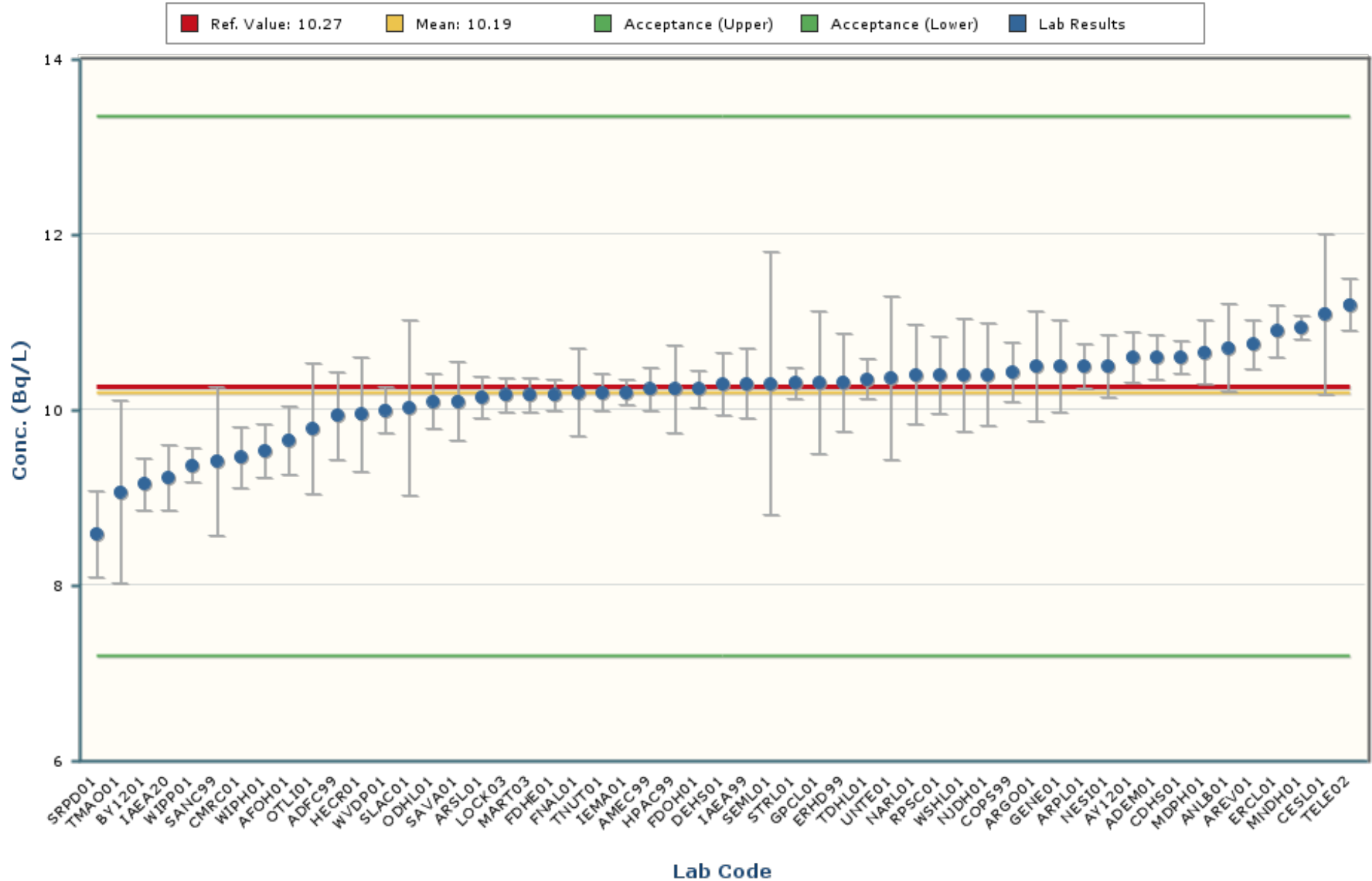
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 16.4 and 33.0 (± 5 Standard Deviations).

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

Cobalt-60

MAPEP-24-MaW50



Notes:

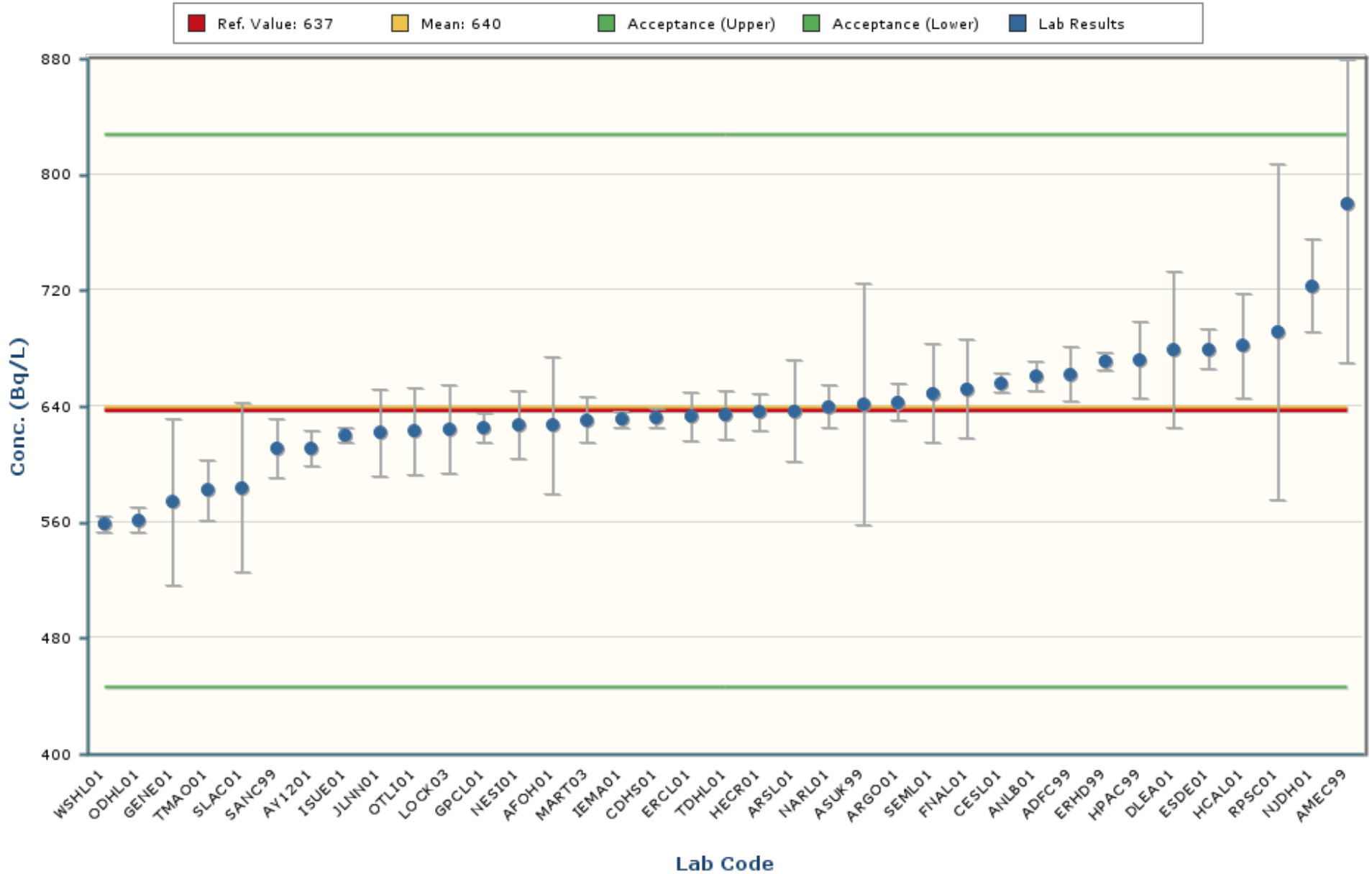
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 7.63 and 12.75 (± 5 Standard Deviations).

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

Hydrogen-3

MAPEP-24-MaW50



Notes:

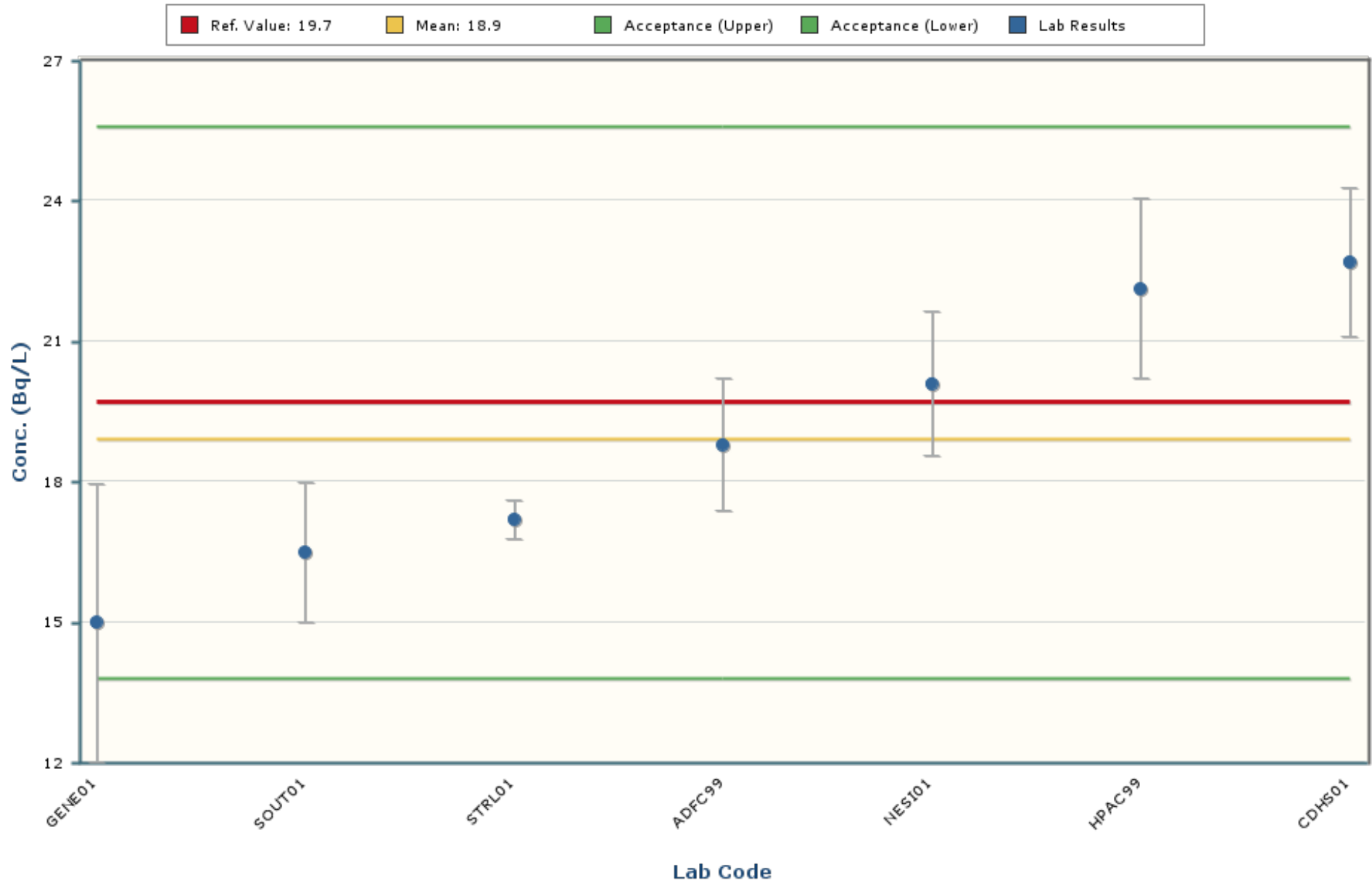
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 427 and 852 (± 5 Standard Deviations).

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

Iron-55

MAPEP-24-MaW50



Notes:

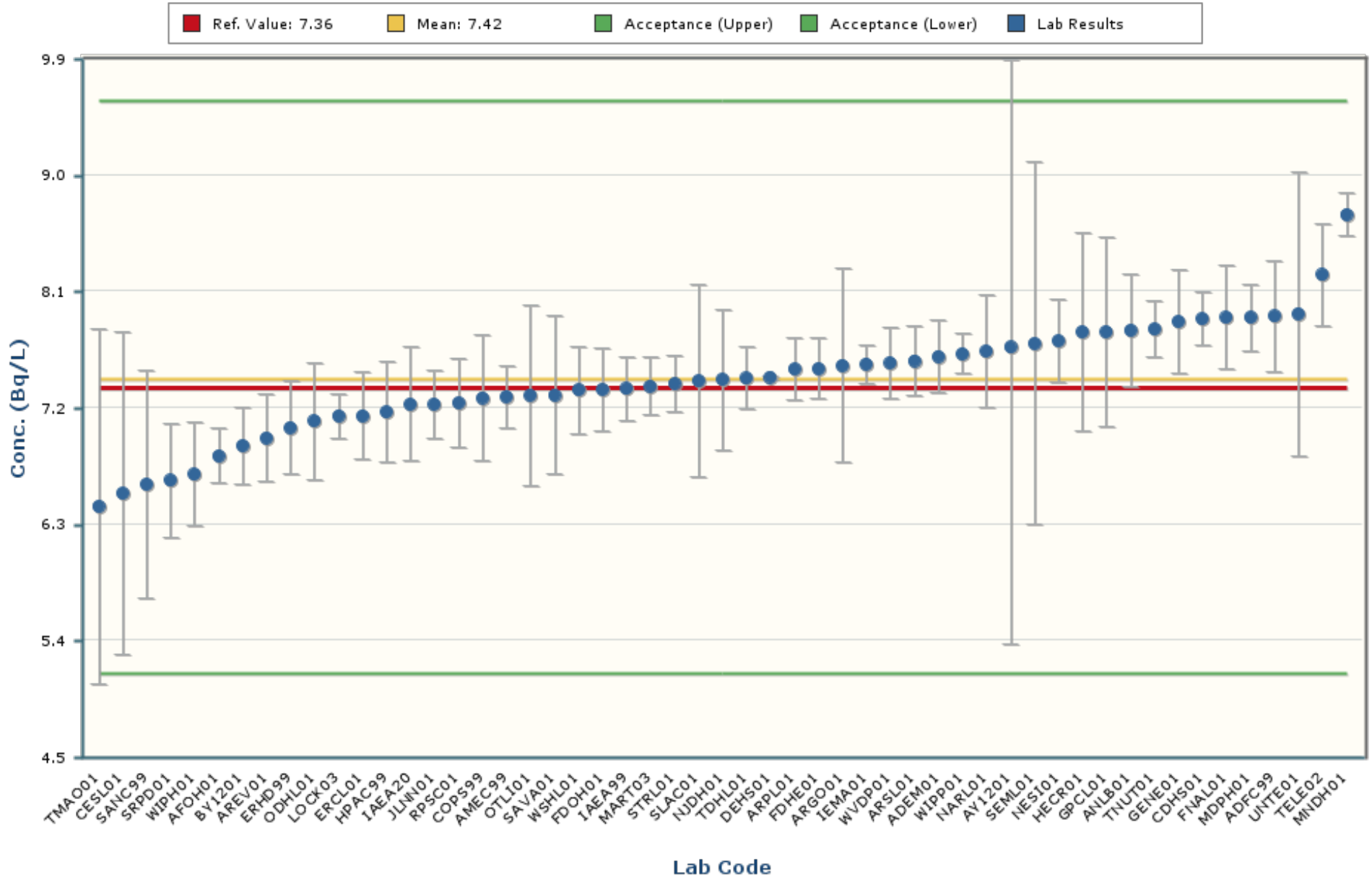
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 4.5 and 33.4 (± 5 Standard Deviations).

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

Manganese-54

MAPEP-24-MaW50



Notes:

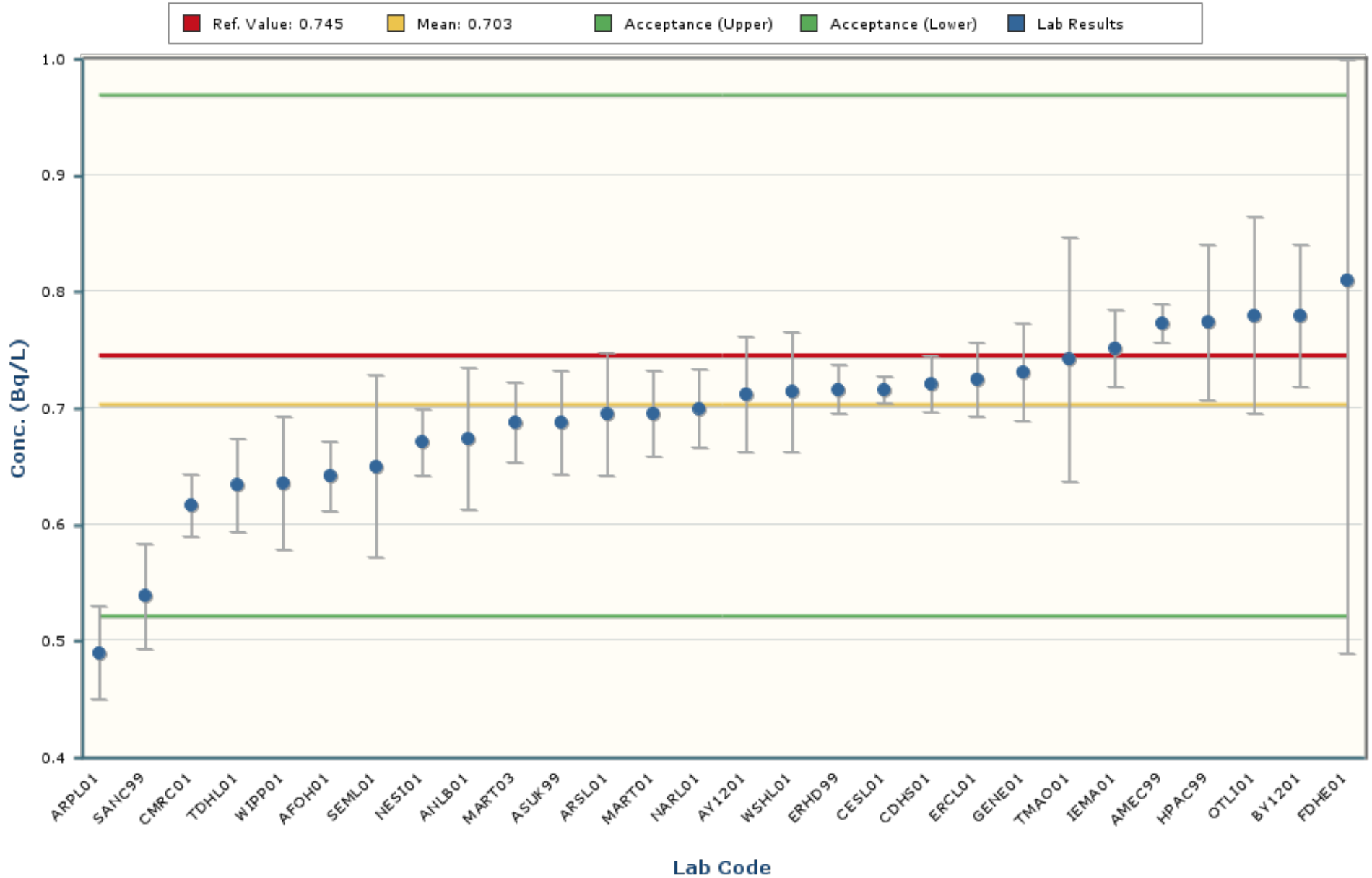
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 5.26 and 9.58 (± 5 Standard Deviations).

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

Plutonium-238

MAPEP-24-MaW50



Notes:

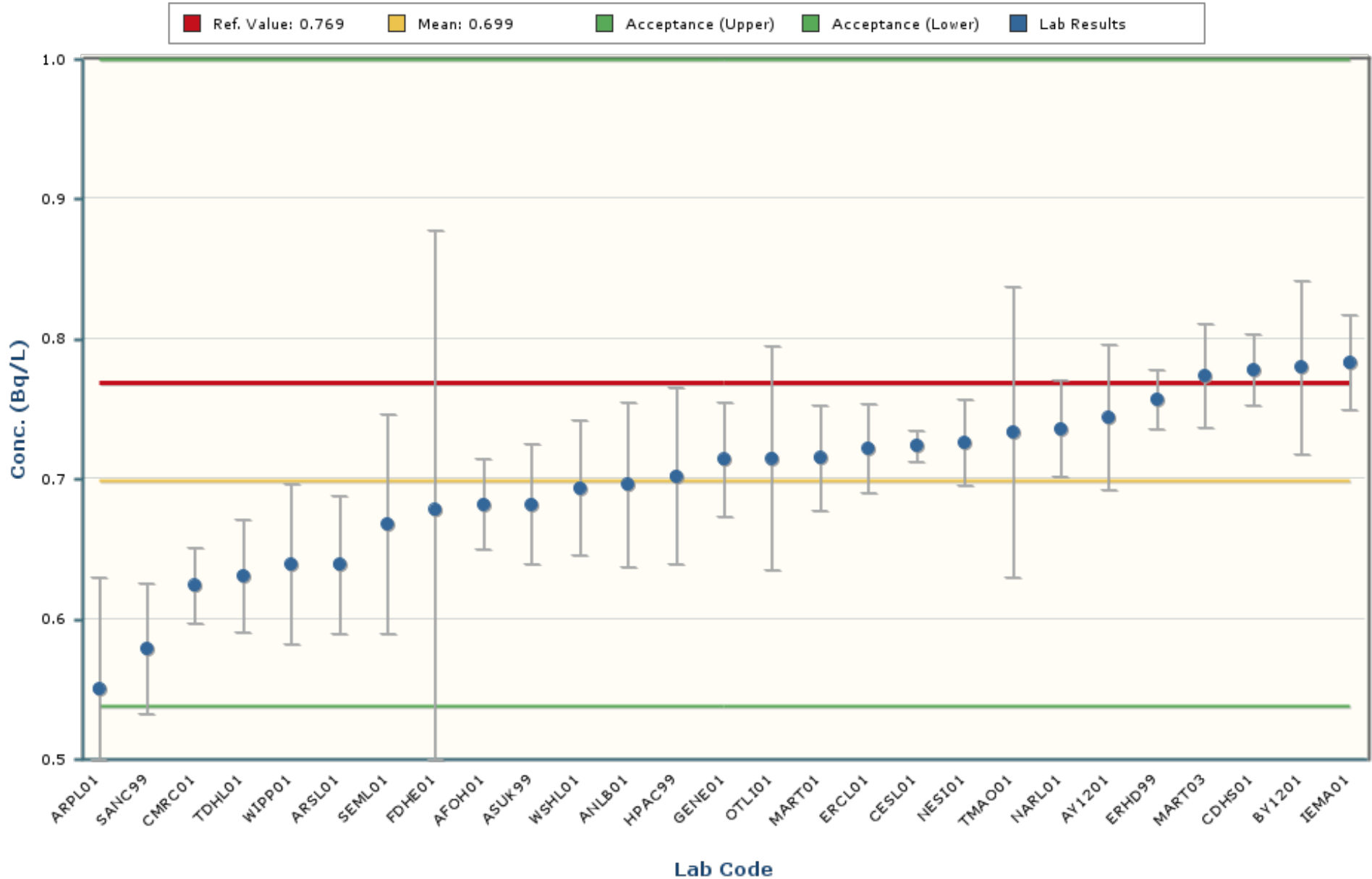
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.406 and 1.000 (± 5 Standard Deviations).

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

Plutonium-239/240

MAPEP-24-MaW50



Notes:

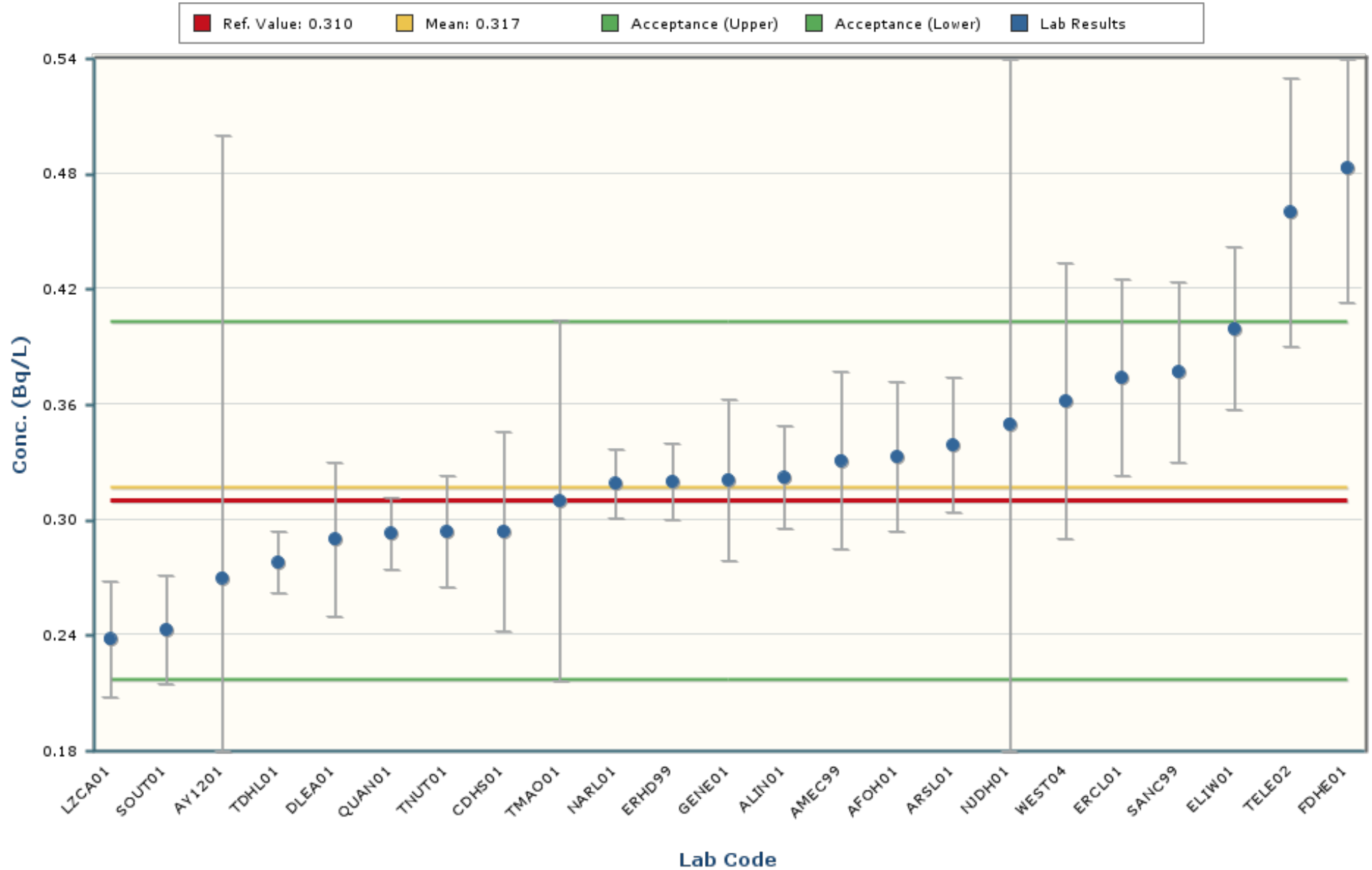
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.401 and 0.996 (± 5 Standard Deviations).

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

Radium-226

MAPEP-24-MaW50



Notes:

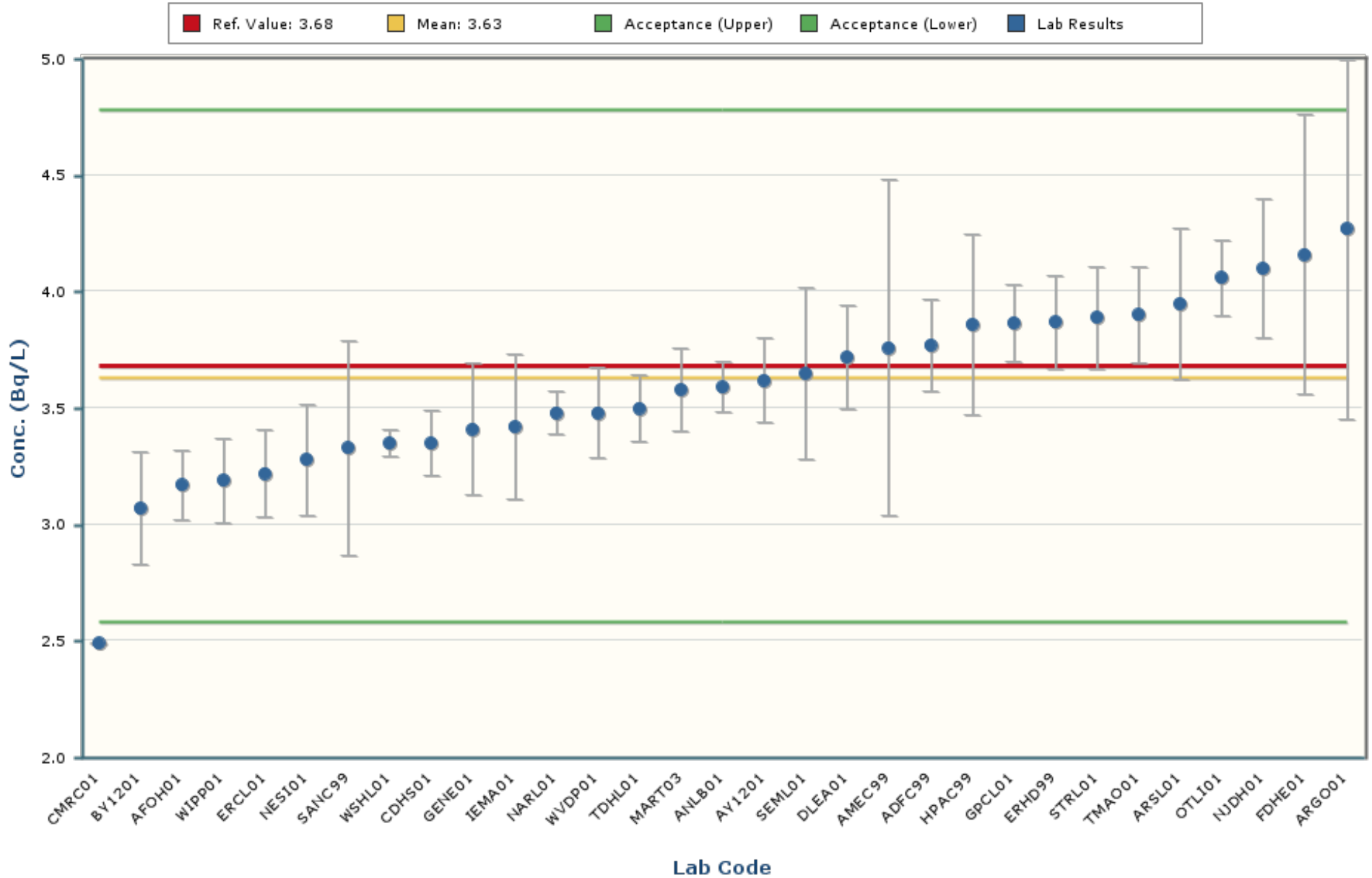
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.106 and 0.528 (± 5 Standard Deviations).

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

Strontium-90

MAPEP-24-MaW50



Notes:

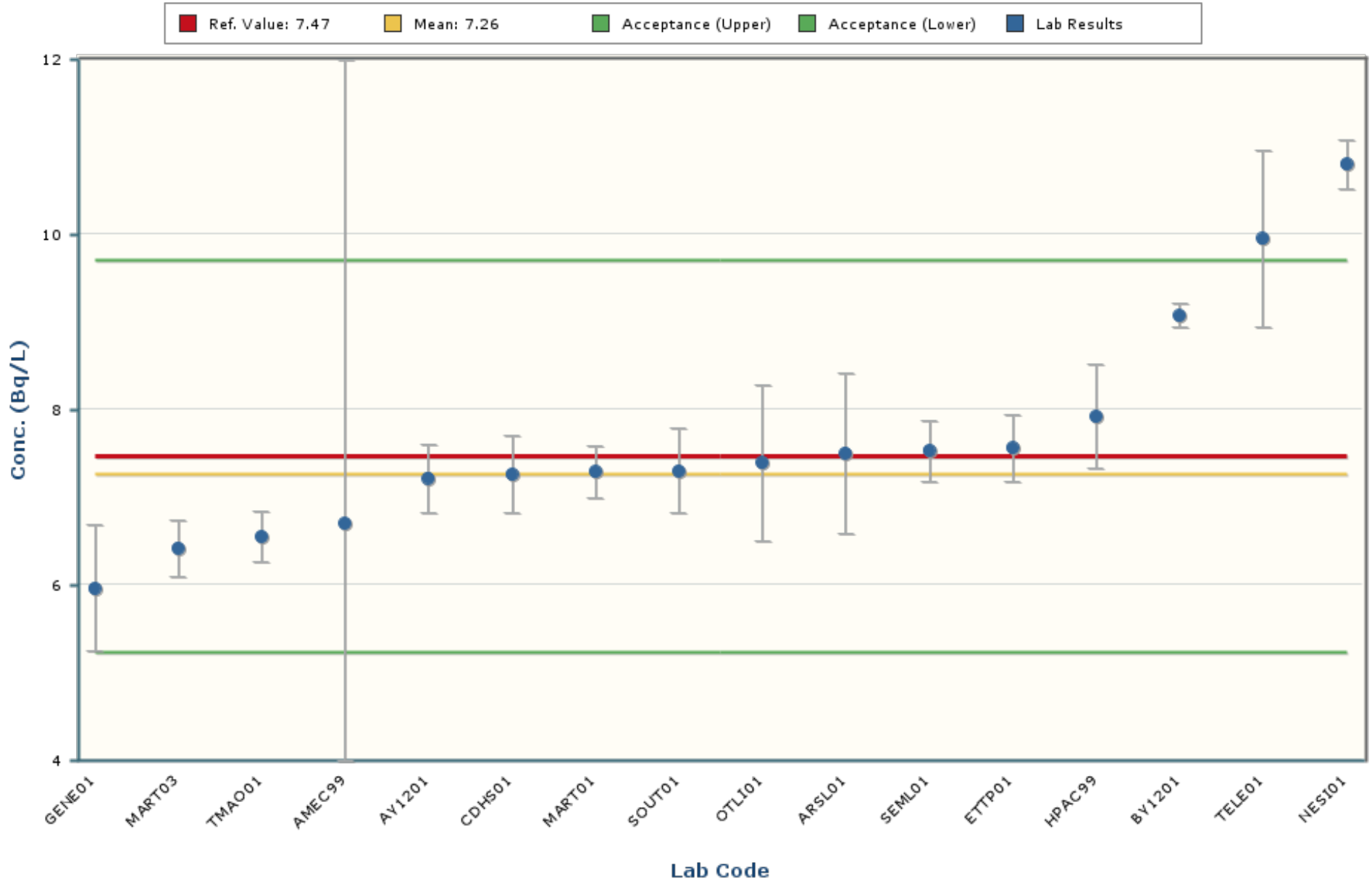
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 2.03 and 5.23 (± 5 Standard Deviations).

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

Technetium-99

MAPEP-24-MaW50



Notes:

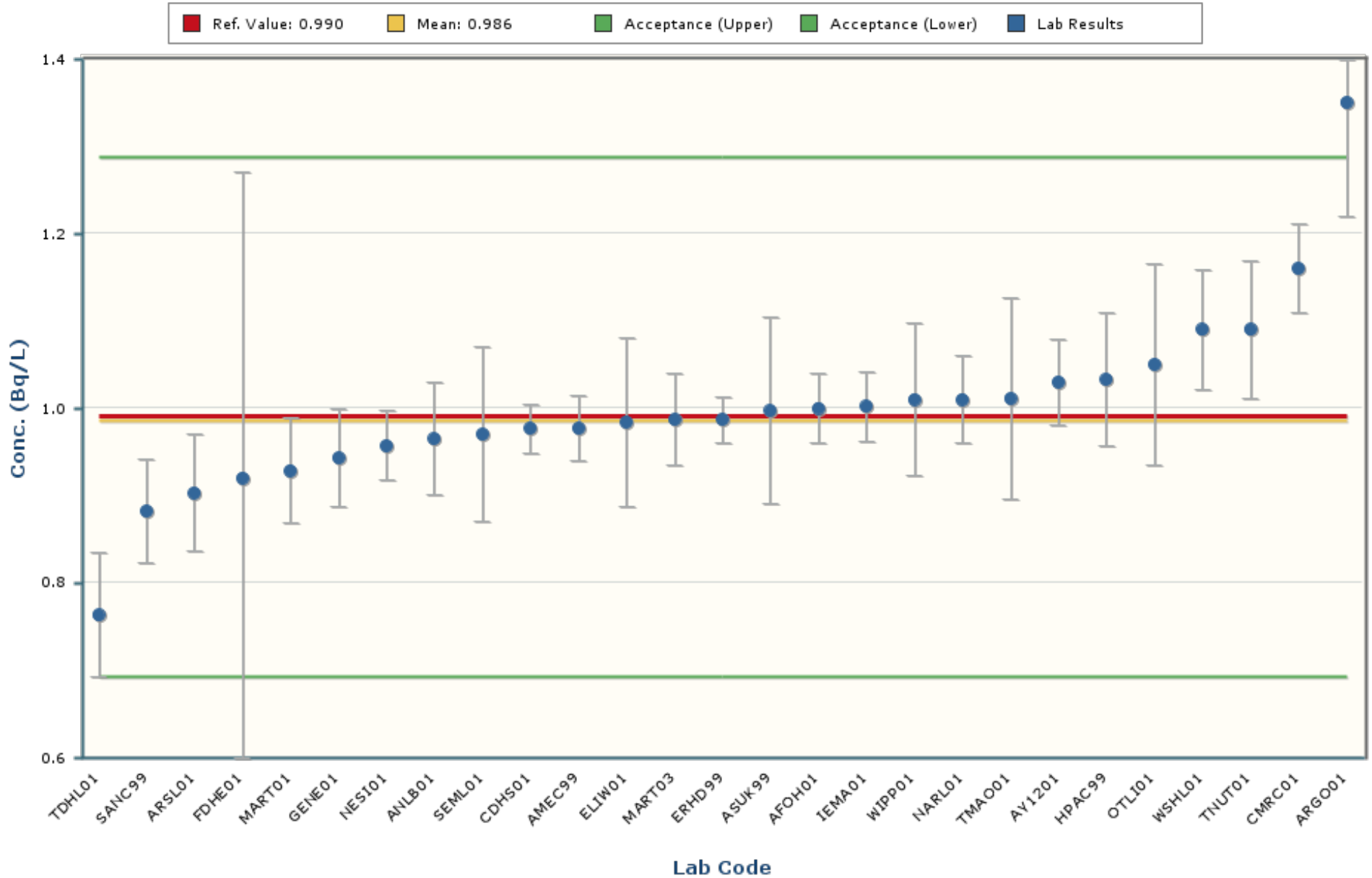
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 3.55 and 10.97 (± 5 Standard Deviations).

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

Uranium-234

MAPEP-24-MaW50



Notes:

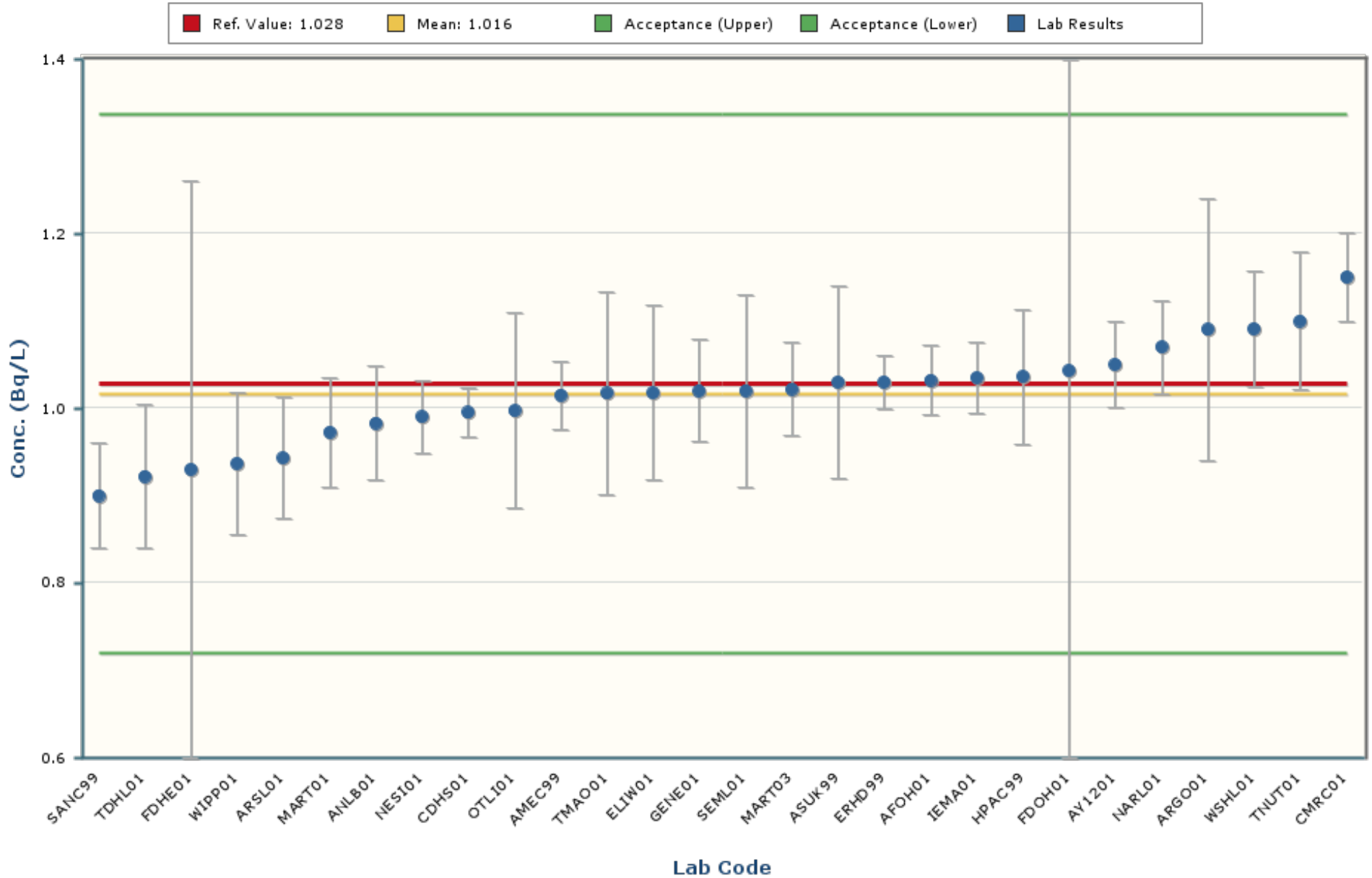
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.610 and 1.361 (± 5 Standard Deviations).

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

Uranium-238

MAPEP-24-MaW50



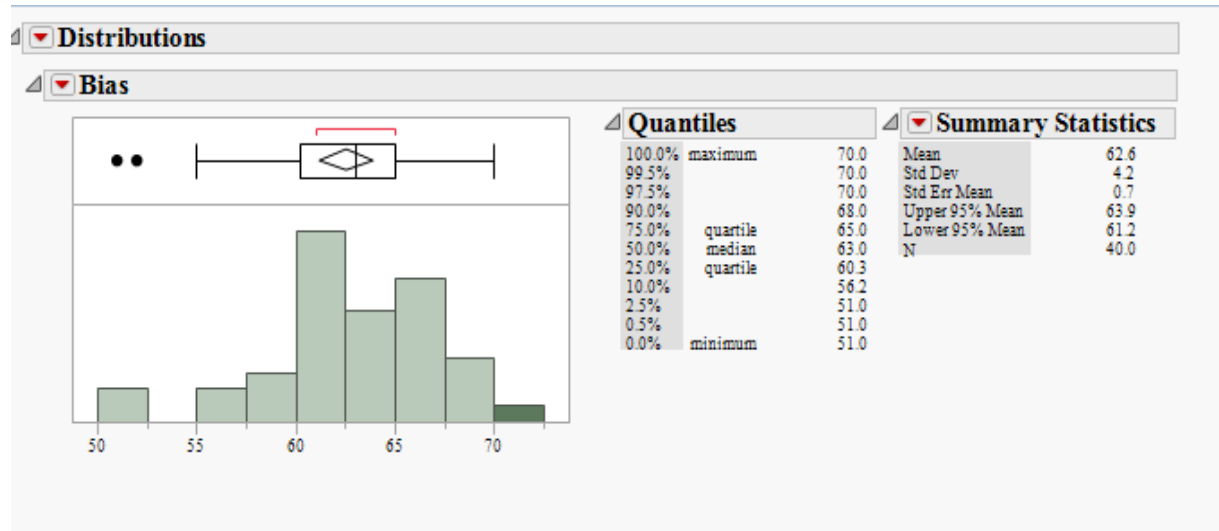
Notes:

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

The chart shows only data points with values between 0.730 and 1.301 (± 5 Standard Deviations).

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

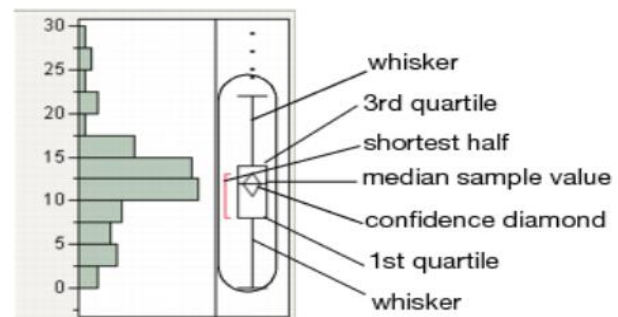


Outlier Box Plot

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)

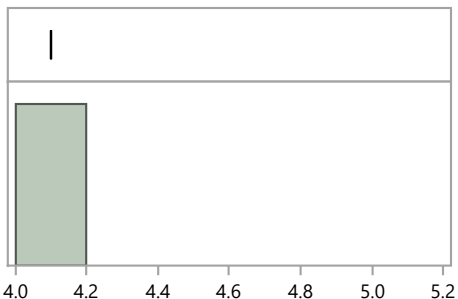


If the data points do not reach the computed ranges, then the whiskers are determined by the upper and lower data point values (not including outliers). The bracket outside of the box identifies the *shortest half*, which is the most dense 50% of the observations (Rousseuw and Leroy 1987).

MaW50 Distribution by Detection Method

Distributions Analyte_Detection=Cesium-137 Alpha Spectrometry

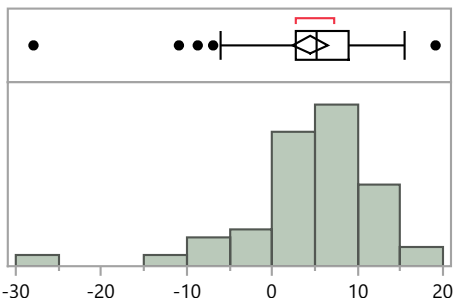
Bias



Quantiles			Summary Statistics	
100.0%	maximum	4.1	Mean	4.1
99.5%		4.1	Std Dev	.
97.5%		4.1	Std Err Mean	.
90.0%		4.1	Upper 95% Mean	.
75.0%	quartile	4.1	Lower 95% Mean	.
50.0%	median	4.1	N	1.0
25.0%	quartile	4.1		
10.0%		4.1		
2.5%		4.1		
0.5%		4.1		
0.0%	minimum	4.1		

Distributions Analyte_Detection=Cesium-137 Gamma Spectrometry

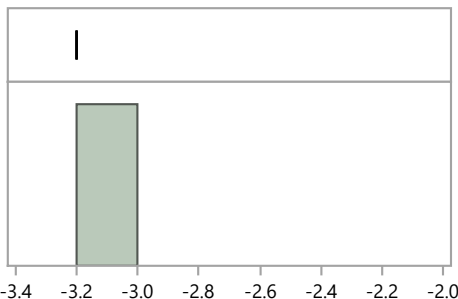
Bias



Quantiles			Summary Statistics	
100.0%	maximum	19.1	Mean	4.4
99.5%		19.1	Std Dev	7.4
97.5%		17.8	Std Err Mean	1.0
90.0%		11.8	Upper 95% Mean	6.4
75.0%	quartile	8.9	Lower 95% Mean	2.4
50.0%	median	5.2	N	53.0
25.0%	quartile	2.9		
10.0%		-4.9		
2.5%		-22.0		
0.5%		-27.9		
0.0%	minimum	-27.9		

Distributions Analyte_Detection=Cobalt-57 Alpha Spectrometry

Bias

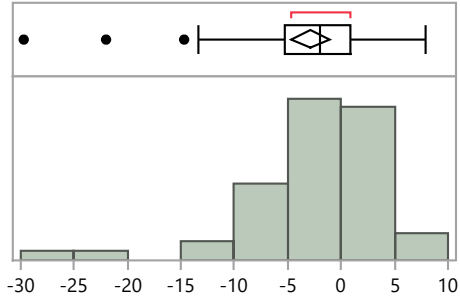


Quantiles			Summary Statistics	
100.0%	maximum	-3.2	Mean	-3.2
99.5%		-3.2	Std Dev	.
97.5%		-3.2	Std Err Mean	.
90.0%		-3.2	Upper 95% Mean	.
75.0%	quartile	-3.2	Lower 95% Mean	.
50.0%	median	-3.2	N	1.0
25.0%	quartile	-3.2		
10.0%		-3.2		
2.5%		-3.2		
0.5%		-3.2		
0.0%	minimum	-3.2		

MaW50 Distribution by Detection Method

Distributions Analyte_Detection=Cobalt-57 Gamma Spectrometry

Bias



Quantiles

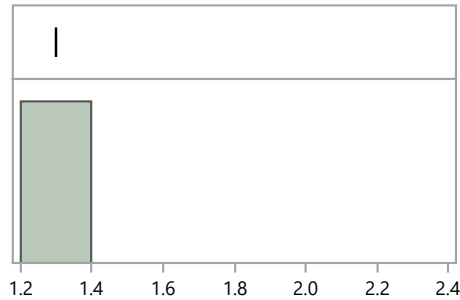
100.0%	maximum	7.9
99.5%		7.9
97.5%		7.7
90.0%		3.7
75.0%	quartile	0.9
50.0%	median	-2.0
25.0%	quartile	-5.3
10.0%		-9.3
2.5%		-27.0
0.5%		-29.7
0.0%	minimum	-29.7

Summary Statistics

Mean	-2.9
Std Dev	6.6
Std Err Mean	0.9
Upper 95% Mean	-1.1
Lower 95% Mean	-4.7
N	53.0

Distributions Analyte_Detection=Cobalt-60 Alpha Spectrometry

Bias



Quantiles

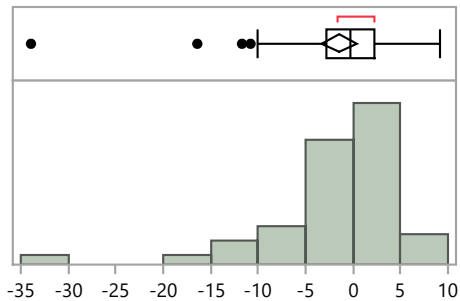
100.0%	maximum	1.3
99.5%		1.3
97.5%		1.3
90.0%		1.3
75.0%	quartile	1.3
50.0%	median	1.3
25.0%	quartile	1.3
10.0%		1.3
2.5%		1.3
0.5%		1.3
0.0%	minimum	1.3

Summary Statistics

Mean	1.3
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Detection=Cobalt-60 Gamma Spectrometry

Bias



Quantiles

100.0%	maximum	9.1
99.5%		9.1
97.5%		8.8
90.0%		4.5
75.0%	quartile	2.2
50.0%	median	-0.3
25.0%	quartile	-2.9
10.0%		-9.6
2.5%		-27.8
0.5%		-33.9
0.0%	minimum	-33.9

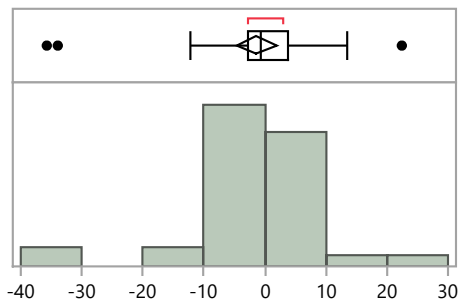
Summary Statistics

Mean	-1.5
Std Dev	6.7
Std Err Mean	0.9
Upper 95% Mean	0.4
Lower 95% Mean	-3.3
N	53.0

MaW50 Distribution by Detection Method

Distributions Analyte_Detection=Hydrogen-3 Liquid Scintillation Counter

Bias



Quantiles

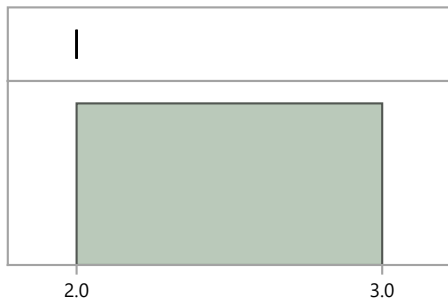
100.0%	maximum	22.4
99.5%		22.4
97.5%		22.4
90.0%		7.1
75.0%	quartile	3.8
50.0%	median	-0.6
25.0%	quartile	-2.7
10.0%		-11.8
2.5%		-35.7
0.5%		-35.7
0.0%	minimum	-35.7

Summary Statistics

Mean	-1.4
Std Dev	10.2
Std Err Mean	1.6
Upper 95% Mean	1.9
Lower 95% Mean	-4.7
N	39.0

Distributions Analyte_Detection=Iron-55 Gamma Spectrometry

Bias



Quantiles

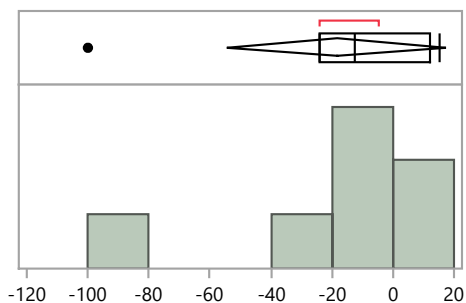
100.0%	maximum	2.0
99.5%		2.0
97.5%		2.0
90.0%		2.0
75.0%	quartile	2.0
50.0%	median	2.0
25.0%	quartile	2.0
10.0%		2.0
2.5%		2.0
0.5%		2.0
0.0%	minimum	2.0

Summary Statistics

Mean	2.0
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Detection=Iron-55 Liquid Scintillation Counter

Bias



Quantiles

100.0%	maximum	15.2
99.5%		15.2
97.5%		15.2
90.0%		15.2
75.0%	quartile	12.3
50.0%	median	-12.7
25.0%	quartile	-23.9
10.0%		-99.9
2.5%		-99.9
0.5%		-99.9
0.0%	minimum	-99.9

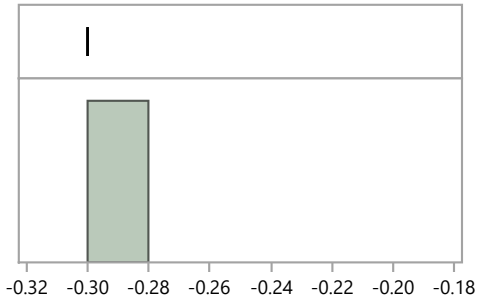
Summary Statistics

Mean	-18.5
Std Dev	38.7
Std Err Mean	14.6
Upper 95% Mean	17.2
Lower 95% Mean	-54.3
N	7.0

MaW50 Distribution by Detection Method

Distributions Analyte_Detection=Manganese-54 Alpha Spectrometry

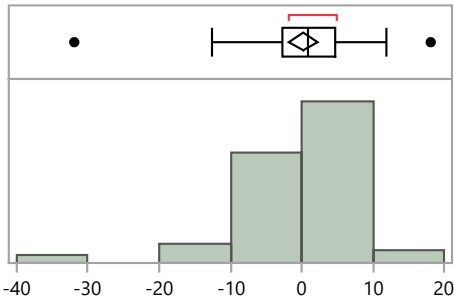
Bias



Quantiles		Summary Statistics		
100.0%	maximum	-0.3	Mean	-0.3
99.5%		-0.3	Std Dev	.
97.5%		-0.3	Std Err Mean	.
90.0%		-0.3	Upper 95% Mean	.
75.0%	quartile	-0.3	Lower 95% Mean	.
50.0%	median	-0.3	N	1.0
25.0%	quartile	-0.3		
10.0%		-0.3		
2.5%		-0.3		
0.5%		-0.3		
0.0%	minimum	-0.3		

Distributions Analyte_Detection=Manganese-54 Gamma Spectrometry

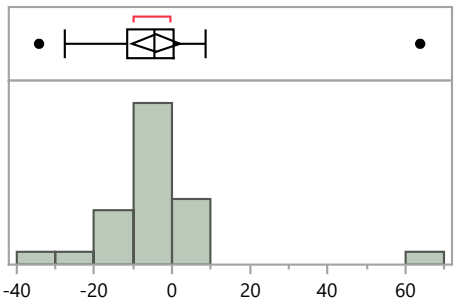
Bias



Quantiles		Summary Statistics		
100.0%	maximum	18.1	Mean	0.2
99.5%		18.1	Std Dev	7.4
97.5%		15.9	Std Err Mean	1.0
90.0%		7.3	Upper 95% Mean	2.2
75.0%	quartile	4.8	Lower 95% Mean	-1.8
50.0%	median	0.8	N	53.0
25.0%	quartile	-2.8		
10.0%		-9.5		
2.5%		-25.1		
0.5%		-31.9		
0.0%	minimum	-31.9		

Distributions Analyte_Detection=Plutonium-238 Alpha Spectrometry

Bias

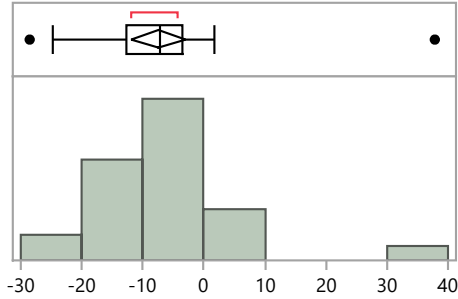


Quantiles		Summary Statistics		
100.0%	maximum	63.8	Mean	-4.3
99.5%		63.8	Std Dev	16.1
97.5%		63.8	Std Err Mean	3.0
90.0%		4.7	Upper 95% Mean	1.9
75.0%	quartile	0.3	Lower 95% Mean	-10.4
50.0%	median	-4.4	N	29.0
25.0%	quartile	-11.4		
10.0%		-17.2		
2.5%		-34.2		
0.5%		-34.2		
0.0%	minimum	-34.2		

MaW50 Distribution by Detection Method

Distributions Analyte_Detection=Plutonium-239/240 Alpha Spectrometry

Bias



Quantiles

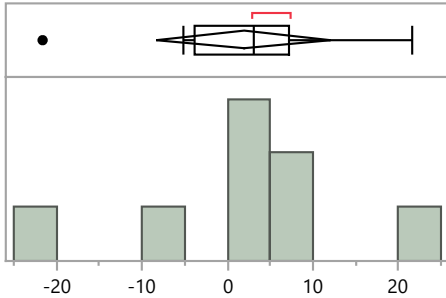
100.0%	maximum	37.8
99.5%		37.8
97.5%		37.8
90.0%		1.4
75.0%	quartile	-3.6
50.0%	median	-7.1
25.0%	quartile	-12.8
10.0%		-19.5
2.5%		-28.5
0.5%		-28.5
0.0%	minimum	-28.5

Summary Statistics

Mean	-7.5
Std Dev	11.7
Std Err Mean	2.2
Upper 95% Mean	-2.9
Lower 95% Mean	-12.0
N	28.0

Distributions Analyte_Detection=Radium-226 Alpha Spectrometry

Bias



Quantiles

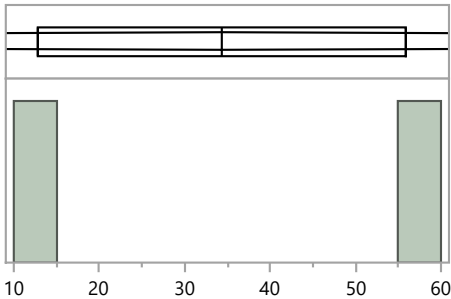
100.0%	maximum	21.6
99.5%		21.6
97.5%		21.6
90.0%		21.6
75.0%	quartile	7.3
50.0%	median	3.1
25.0%	quartile	-3.9
10.0%		-21.6
2.5%		-21.6
0.5%		-21.6
0.0%	minimum	-21.6

Summary Statistics

Mean	1.9
Std Dev	12.3
Std Err Mean	4.3
Upper 95% Mean	12.1
Lower 95% Mean	-8.4
N	8.0

Distributions Analyte_Detection=Radium-226 Gamma Spectrometry

Bias



Quantiles

100.0%	maximum	55.8
99.5%		55.8
97.5%		55.8
90.0%		55.8
75.0%	quartile	55.8
50.0%	median	34.4
25.0%	quartile	12.9
10.0%		12.9
2.5%		12.9
0.5%		12.9
0.0%	minimum	12.9

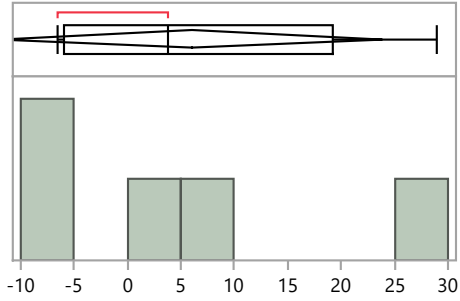
Summary Statistics

Mean	34.4
Std Dev	30.3
Std Err Mean	21.5
Upper 95% Mean	306.9
Lower 95% Mean	-238.2
N	2.0

MaW50 Distribution by Detection Method

Distributions Analyte_Detection=Radium-226 Gas Flow Proportional Counter

Bias



Quantiles

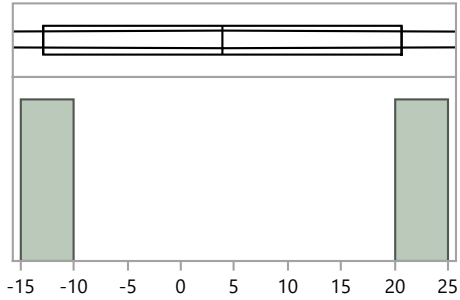
100.0%	maximum	28.9
99.5%		28.9
97.5%		28.9
90.0%		28.9
75.0%	quartile	19.2
50.0%	median	3.8
25.0%	quartile	-6.0
10.0%		-6.5
2.5%		-6.5
0.5%		-6.5
0.0%	minimum	-6.5

Summary Statistics

Mean	6.0
Std Dev	14.4
Std Err Mean	6.4
Upper 95% Mean	23.9
Lower 95% Mean	-11.9
N	5.0

Distributions Analyte_Detection=Radium-226 Gross Alpha/Beta - 2 pi gas flow proportional counter

Bias



Quantiles

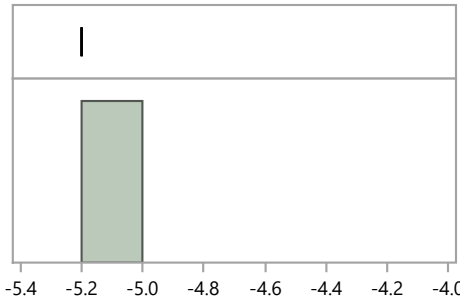
100.0%	maximum	20.6
99.5%		20.6
97.5%		20.6
90.0%		20.6
75.0%	quartile	20.6
50.0%	median	3.9
25.0%	quartile	-12.9
10.0%		-12.9
2.5%		-12.9
0.5%		-12.9
0.0%	minimum	-12.9

Summary Statistics

Mean	3.9
Std Dev	23.7
Std Err Mean	16.8
Upper 95% Mean	216.7
Lower 95% Mean	-209.0
N	2.0

Distributions Analyte_Detection=Radium-226 Liquid Scintillation Counter

Bias



Quantiles

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

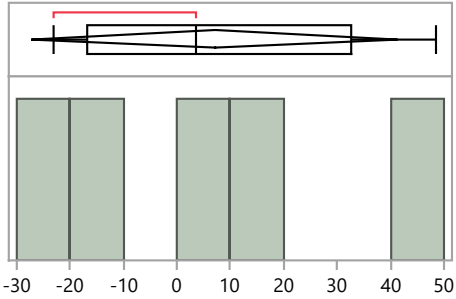
Summary Statistics

Mean	-5.2
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

MaW50 Distribution by Detection Method

Distributions Analyte_Detection=Radium-226 Other

Bias



Quantiles

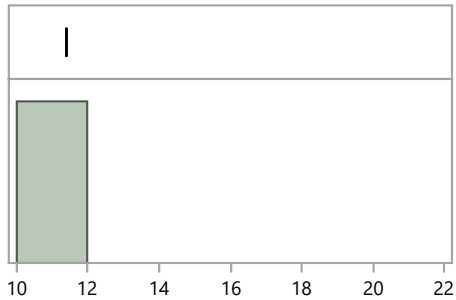
100.0%	maximum	48.4
99.5%		48.4
97.5%		48.4
90.0%		48.4
75.0%	quartile	32.6
50.0%	median	3.5
25.0%	quartile	-16.8
10.0%		-23.2
2.5%		-23.2
0.5%		-23.2
0.0%	minimum	-23.2

Summary Statistics

Mean	7.0
Std Dev	27.5
Std Err Mean	12.3
Upper 95% Mean	41.2
Lower 95% Mean	-27.2
N	5.0

Distributions Analyte_Detection=Strontium-90 Gamma Spectrometry

Bias



Quantiles

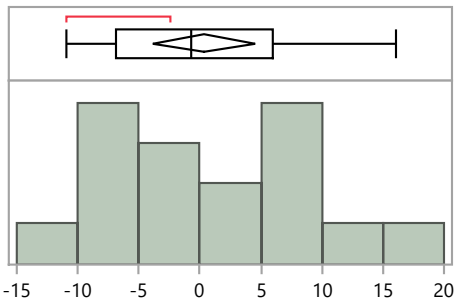
100.0%	maximum	11.4
99.5%		11.4
97.5%		11.4
90.0%		11.4
75.0%	quartile	11.4
50.0%	median	11.4
25.0%	quartile	11.4
10.0%		11.4
2.5%		11.4
0.5%		11.4
0.0%	minimum	11.4

Summary Statistics

Mean	11.4
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	16.0
99.5%		16.0
97.5%		16.0
90.0%		12.0
75.0%	quartile	5.9
50.0%	median	-0.7
25.0%	quartile	-6.8
10.0%		-9.6
2.5%		-10.9
0.5%		-10.9
0.0%	minimum	-10.9

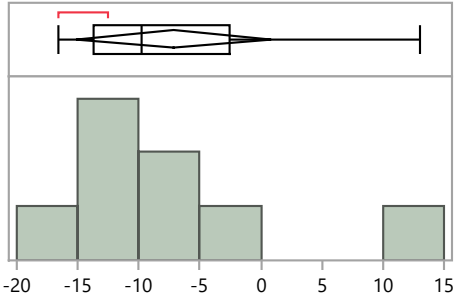
Summary Statistics

Mean	0.3
Std Dev	7.9
Std Err Mean	2.0
Upper 95% Mean	4.5
Lower 95% Mean	-3.9
N	16.0

MaW50 Distribution by Detection Method

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

Bias



Quantiles

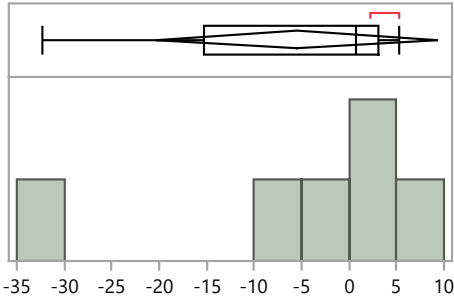
100.0%	maximum	13.0
99.5%		13.0
97.5%		13.0
90.0%		13.0
75.0%	quartile	-2.6
50.0%	median	-9.8
25.0%	quartile	-13.8
10.0%		-16.6
2.5%		-16.6
0.5%		-16.6
0.0%	minimum	-16.6

Summary Statistics

Mean	-7.2
Std Dev	9.6
Std Err Mean	3.4
Upper 95% Mean	0.8
Lower 95% Mean	-15.2
N	8.0

Distributions Analyte_Detection=Strontium-90 Liquid Scintillation Counter

Bias



Quantiles

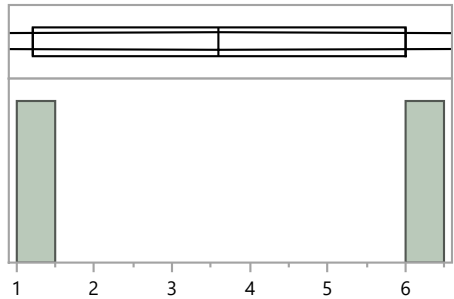
100.0%	maximum	5.2
99.5%		5.2
97.5%		5.2
90.0%		5.2
75.0%	quartile	3.1
50.0%	median	0.7
25.0%	quartile	-15.2
10.0%		-32.3
2.5%		-32.3
0.5%		-32.3
0.0%	minimum	-32.3

Summary Statistics

Mean	-5.5
Std Dev	14.1
Std Err Mean	5.8
Upper 95% Mean	9.3
Lower 95% Mean	-20.3
N	6.0

Distributions Analyte_Detection=Technetium-99 Inductively Coupled Plasma Mass Spectrometry

Bias



Quantiles

100.0%	maximum	6.0
99.5%		6.0
97.5%		6.0
90.0%		6.0
75.0%	quartile	6.0
50.0%	median	3.6
25.0%	quartile	1.2
10.0%		1.2
2.5%		1.2
0.5%		1.2
0.0%	minimum	1.2

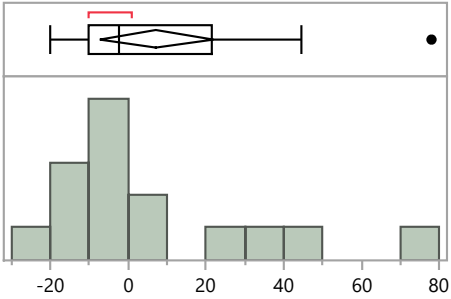
Summary Statistics

Mean	3.6
Std Dev	3.4
Std Err Mean	2.4
Upper 95% Mean	34.1
Lower 95% Mean	-26.9
N	2.0

MaW50 Distribution by Detection Method

Distributions Analyte_Detection=Technetium-99 Liquid Scintillation Counter

Bias



Quantiles

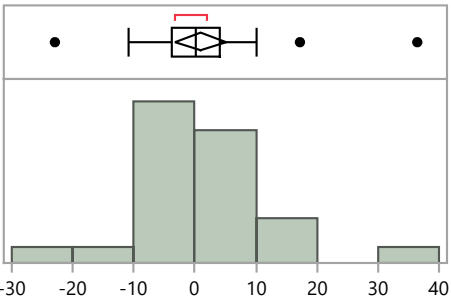
100.0%	maximum	78.0
99.5%		78.0
97.5%		78.0
90.0%		58.0
75.0%	quartile	21.4
50.0%	median	-2.3
25.0%	quartile	-10.3
10.0%		-16.5
2.5%		-20.2
0.5%		-20.2
0.0%	minimum	-20.2

Summary Statistics

Mean	7.3
Std Dev	26.4
Std Err Mean	6.8
Upper 95% Mean	21.9
Lower 95% Mean	-7.3
N	15.0

Distributions Analyte_Detection=Uranium-234 Alpha Spectrometry

Bias



Quantiles

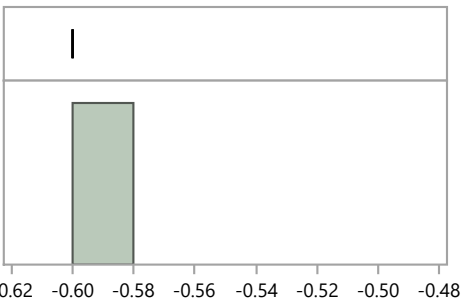
100.0%	maximum	36.4
99.5%		36.4
97.5%		36.4
90.0%		12.2
75.0%	quartile	4.1
50.0%	median	0.2
25.0%	quartile	-3.7
10.0%		-9.4
2.5%		-22.9
0.5%		-22.9
0.0%	minimum	-22.9

Summary Statistics

Mean	1.0
Std Dev	10.5
Std Err Mean	2.1
Upper 95% Mean	5.2
Lower 95% Mean	-3.2
N	26.0

Distributions Analyte_Detection=Uranium-234 Gas Flow Proportional Counter

Bias



Quantiles

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

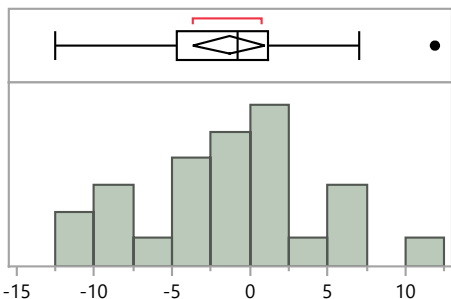
Summary Statistics

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

MaW50 Distribution by Detection Method

Distributions Analyte_Detection=Uranium-238 Alpha Spectrometry

Bias



Quantiles

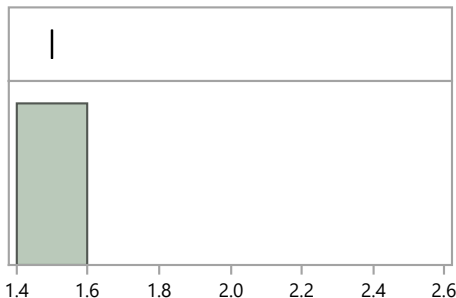
100.0%	maximum	11.9
99.5%		11.9
97.5%		11.9
90.0%		6.4
75.0%	quartile	1.1
50.0%	median	-0.8
25.0%	quartile	-4.7
10.0%		-9.7
2.5%		-12.5
0.5%		-12.5
0.0%	minimum	-12.5

Summary Statistics

Mean	-1.3
Std Dev	5.8
Std Err Mean	1.1
Upper 95% Mean	1.0
Lower 95% Mean	-3.6
N	26.0

Distributions Analyte_Detection=Uranium-238 Gamma Spectrometry

Bias



Quantiles

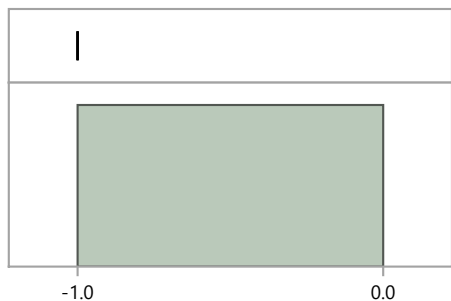
100.0%	maximum	1.5
99.5%		1.5
97.5%		1.5
90.0%		1.5
75.0%	quartile	1.5
50.0%	median	1.5
25.0%	quartile	1.5
10.0%		1.5
2.5%		1.5
0.5%		1.5
0.0%	minimum	1.5

Summary Statistics

Mean	1.5
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Detection=Uranium-238 Gas Flow Proportional Counter

Bias



Quantiles

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

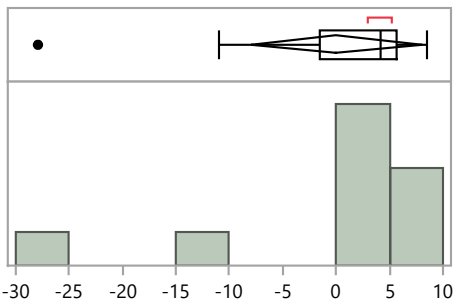
Summary Statistics

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

MaW50 Distribution by Preparation Method

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

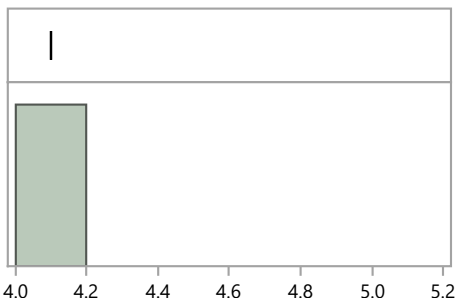
Bias



Quantiles		Summary Statistics		
100.0%	maximum	8.5	Mean	0.0
99.5%		8.5	Std Dev	11.2
97.5%		8.5	Std Err Mean	3.5
90.0%		8.4	Upper 95% Mean	8.0
75.0%	quartile	5.7	Lower 95% Mean	-8.0
50.0%	median	4.2	N	10.0
25.0%	quartile	-1.5		
10.0%		-26.2		
2.5%		-27.9		
0.5%		-27.9		
0.0%	minimum	-27.9		

Distributions Analyte_Method=Cesium-137 Evaporation, acidified

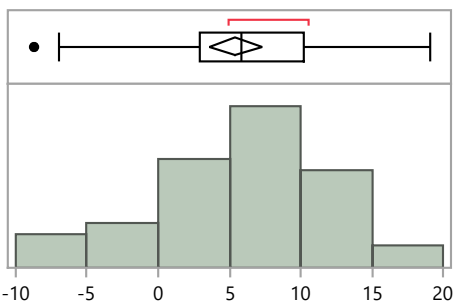
Bias



Quantiles		Summary Statistics		
100.0%	maximum	4.1	Mean	4.1
99.5%		4.1	Std Dev	.
97.5%		4.1	Std Err Mean	.
90.0%		4.1	Upper 95% Mean	.
75.0%	quartile	4.1	Lower 95% Mean	.
50.0%	median	4.1	N	1.0
25.0%	quartile	4.1		
10.0%		4.1		
2.5%		4.1		
0.5%		4.1		
0.0%	minimum	4.1		

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

Bias

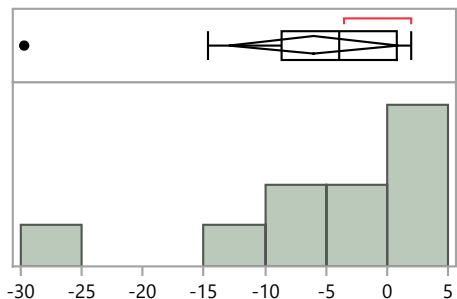


Quantiles		Summary Statistics		
100.0%	maximum	19.1	Mean	5.4
99.5%		19.1	Std Dev	6.0
97.5%		18.7	Std Err Mean	0.9
90.0%		12.7	Upper 95% Mean	7.3
75.0%	quartile	10.2	Lower 95% Mean	3.6
50.0%	median	5.8	N	43.0
25.0%	quartile	2.9		
10.0%		-2.9		
2.5%		-8.5		
0.5%		-8.7		
0.0%	minimum	-8.7		

MaW50 Distribution by Preparation Method

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

Bias



Quantiles

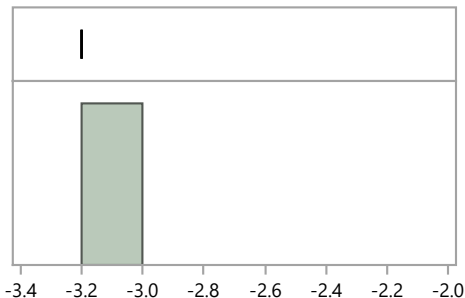
100.0%	maximum	2.0
99.5%		2.0
97.5%		2.0
90.0%		2.0
75.0%	quartile	0.9
50.0%	median	-3.9
25.0%	quartile	-8.7
10.0%		-28.2
2.5%		-29.7
0.5%		-29.7
0.0%	minimum	-29.7

Summary Statistics

Mean	-6.0
Std Dev	9.7
Std Err Mean	3.1
Upper 95% Mean	0.9
Lower 95% Mean	-13.0
N	10.0

Distributions Analyte_Method=Cobalt-57 Evaporation, acidified

Bias



Quantiles

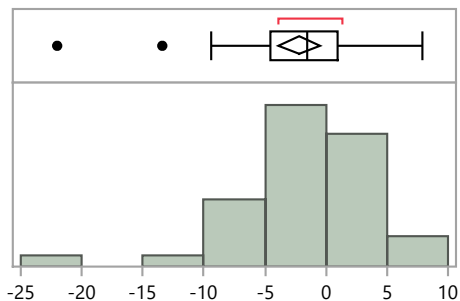
100.0%	maximum	-3.2
99.5%		-3.2
97.5%		-3.2
90.0%		-3.2
75.0%	quartile	-3.2
50.0%	median	-3.2
25.0%	quartile	-3.2
10.0%		-3.2
2.5%		-3.2
0.5%		-3.2
0.0%	minimum	-3.2

Summary Statistics

Mean	-3.2
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

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

Bias



Quantiles

100.0%	maximum	7.9
99.5%		7.9
97.5%		7.9
90.0%		4.4
75.0%	quartile	1.0
50.0%	median	-1.6
25.0%	quartile	-4.6
10.0%		-9.2
2.5%		-21.1
0.5%		-22.0
0.0%	minimum	-22.0

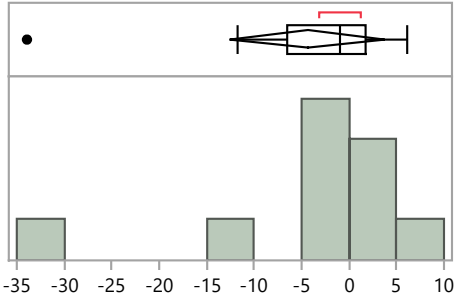
Summary Statistics

Mean	-2.2
Std Dev	5.5
Std Err Mean	0.8
Upper 95% Mean	-0.5
Lower 95% Mean	-3.9
N	43.0

MaW50 Distribution by Preparation Method

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

Bias



Quantiles

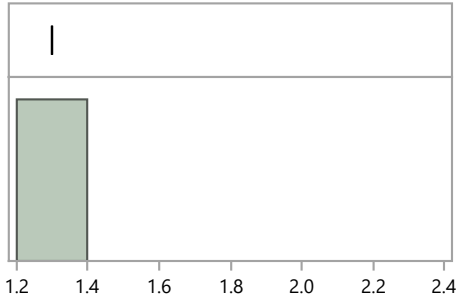
100.0%	maximum	6.1
99.5%		6.1
97.5%		6.1
90.0%		5.8
75.0%	quartile	1.8
50.0%	median	-1.0
25.0%	quartile	-6.5
10.0%		-31.7
2.5%		-33.9
0.5%		-33.9
0.0%	minimum	-33.9

Summary Statistics

Mean	-4.4
Std Dev	11.4
Std Err Mean	3.6
Upper 95% Mean	3.8
Lower 95% Mean	-12.6
N	10.0

Distributions Analyte_Method=Cobalt-60 Evaporation, acidified

Bias



Quantiles

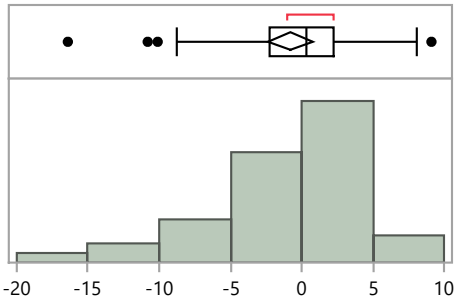
100.0%	maximum	1.3
99.5%		1.3
97.5%		1.3
90.0%		1.3
75.0%	quartile	1.3
50.0%	median	1.3
25.0%	quartile	1.3
10.0%		1.3
2.5%		1.3
0.5%		1.3
0.0%	minimum	1.3

Summary Statistics

Mean	1.3
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

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

Bias



Quantiles

100.0%	maximum	9.1
99.5%		9.1
97.5%		9.0
90.0%		4.5
75.0%	quartile	2.2
50.0%	median	0.3
25.0%	quartile	-2.3
10.0%		-8.6
2.5%		-15.8
0.5%		-16.4
0.0%	minimum	-16.4

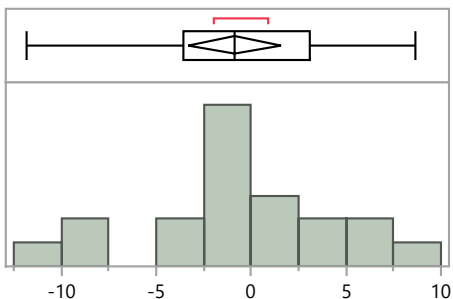
Summary Statistics

Mean	-0.8
Std Dev	5.1
Std Err Mean	0.8
Upper 95% Mean	0.8
Lower 95% Mean	-2.3
N	43.0

MaW50 Distribution by Preparation Method

Distributions Analyte_Method=Hydrogen-3 Distillation

Bias



Quantiles

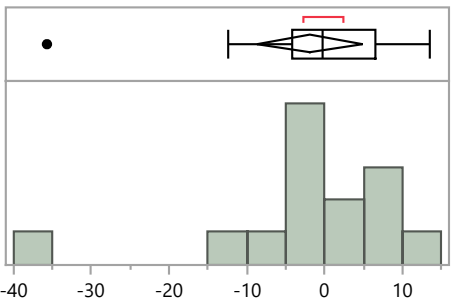
100.0%	maximum	8.6
99.5%		8.6
97.5%		8.6
90.0%		5.5
75.0%	quartile	3.1
50.0%	median	-0.9
25.0%	quartile	-3.6
10.0%		-9.7
2.5%		-11.8
0.5%		-11.8
0.0%	minimum	-11.8

Summary Statistics

Mean	-0.9
Std Dev	5.1
Std Err Mean	1.1
Upper 95% Mean	1.5
Lower 95% Mean	-3.3
N	20.0

Distributions Analyte_Method=Hydrogen-3 EPA 906, Tritium, 600/4/80-032

Bias



Quantiles

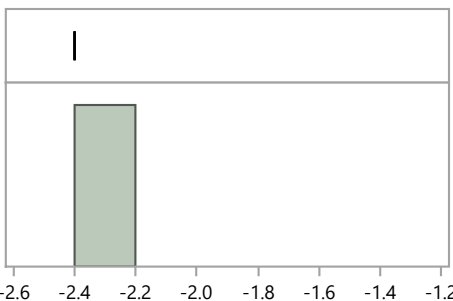
100.0%	maximum	13.5
99.5%		13.5
97.5%		13.5
90.0%		10.3
75.0%	quartile	6.6
50.0%	median	-0.3
25.0%	quartile	-4.2
10.0%		-24.0
2.5%		-35.7
0.5%		-35.7
0.0%	minimum	-35.7

Summary Statistics

Mean	-2.0
Std Dev	11.7
Std Err Mean	3.1
Upper 95% Mean	4.8
Lower 95% Mean	-8.7
N	14.0

Distributions Analyte_Method=Hydrogen-3 Evaporation, straight

Bias



Quantiles

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

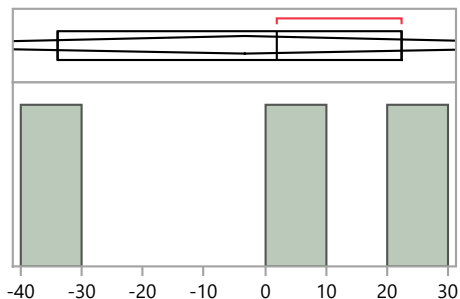
Summary Statistics

Mean	-2.4
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

MaW50 Distribution by Preparation Method

Distributions Analyte_Method=Hydrogen-3 No preparation - analyzed as received

Bias



Quantiles

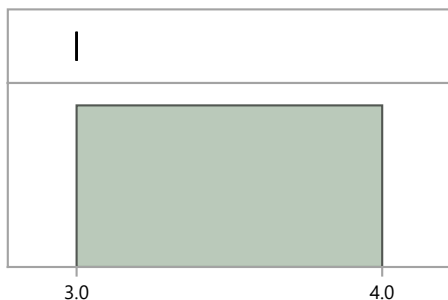
100.0%	maximum	22.4
99.5%		22.4
97.5%		22.4
90.0%		22.4
75.0%	quartile	22.4
50.0%	median	1.9
25.0%	quartile	-33.9
10.0%		-33.9
2.5%		-33.9
0.5%		-33.9
0.0%	minimum	-33.9

Summary Statistics

Mean	-3.2
Std Dev	28.5
Std Err Mean	16.5
Upper 95% Mean	67.6
Lower 95% Mean	-74.0
N	3.0

Distributions Analyte_Method=Hydrogen-3 Other

Bias



Quantiles

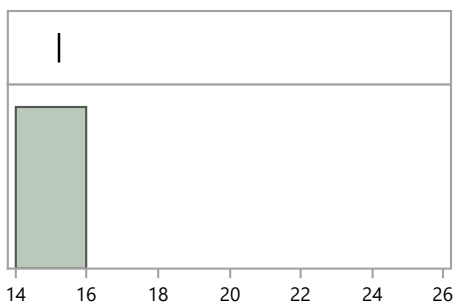
100.0%	maximum	3.0
99.5%		3.0
97.5%		3.0
90.0%		3.0
75.0%	quartile	3.0
50.0%	median	3.0
25.0%	quartile	3.0
10.0%		3.0
2.5%		3.0
0.5%		3.0
0.0%	minimum	3.0

Summary Statistics

Mean	3.0
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Iron-55 Coprecipitation, acidified

Bias



Quantiles

100.0%	maximum	15.2
99.5%		15.2
97.5%		15.2
90.0%		15.2
75.0%	quartile	15.2
50.0%	median	15.2
25.0%	quartile	15.2
10.0%		15.2
2.5%		15.2
0.5%		15.2
0.0%	minimum	15.2

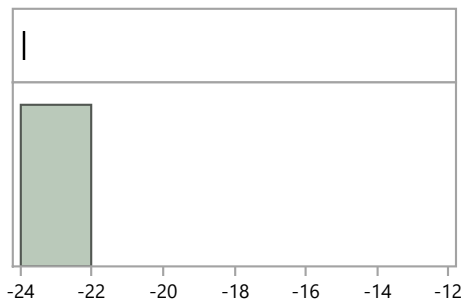
Summary Statistics

Mean	15.2
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

MaW50 Distribution by Preparation Method

Distributions Analyte_Method=Iron-55 Coprecipitation, straight

Bias



Quantiles

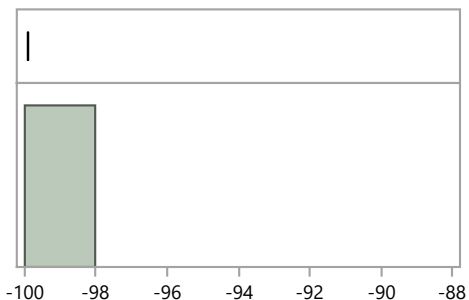
Quantile	Value
100.0% maximum	-23.9
99.5%	-23.9
97.5%	-23.9
90.0%	-23.9
75.0% quartile	-23.9
50.0% median	-23.9
25.0% quartile	-23.9
10.0%	-23.9
2.5%	-23.9
0.5%	-23.9
0.0% minimum	-23.9

Summary Statistics

Mean	-23.9
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Iron-55 Evaporation, acidified

Bias



Quantiles

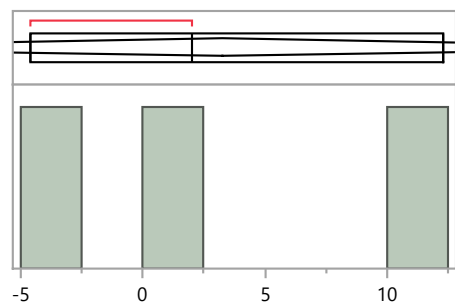
Quantile	Value
100.0% maximum	-99.9
99.5%	-99.9
97.5%	-99.9
90.0%	-99.9
75.0% quartile	-99.9
50.0% median	-99.9
25.0% quartile	-99.9
10.0%	-99.9
2.5%	-99.9
0.5%	-99.9
0.0% minimum	-99.9

Summary Statistics

Mean	-99.9
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Iron-55 Ion Exchange Chromatography / Ion Chromatography

Bias



Quantiles

Quantile	Value
100.0% maximum	12.3
99.5%	12.3
97.5%	12.3
90.0%	12.3
75.0% quartile	12.3
50.0% median	2.0
25.0% quartile	-4.6
10.0%	-4.6
2.5%	-4.6
0.5%	-4.6
0.0% minimum	-4.6

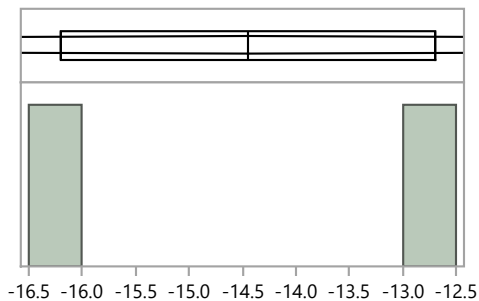
Summary Statistics

Mean	3.2
Std Dev	8.5
Std Err Mean	4.9
Upper 95% Mean	24.4
Lower 95% Mean	-17.9
N	3.0

MaW50 Distribution by Preparation Method

Distributions Analyte_Method=Iron-55 Other

Bias



Quantiles

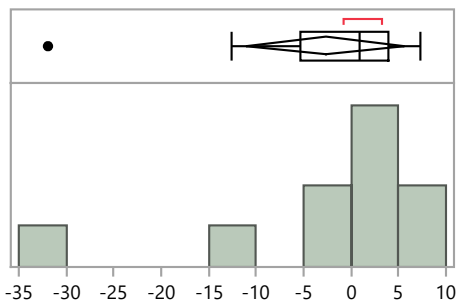
100.0%	maximum	-12.7
99.5%		-12.7
97.5%		-12.7
90.0%		-12.7
75.0%	quartile	-12.7
50.0%	median	-14.5
25.0%	quartile	-16.2
10.0%		-16.2
2.5%		-16.2
0.5%		-16.2
0.0%	minimum	-16.2

Summary Statistics

Mean	-14.5
Std Dev	2.5
Std Err Mean	1.8
Upper 95% Mean	7.8
Lower 95% Mean	-36.7
N	2.0

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

Bias



Quantiles

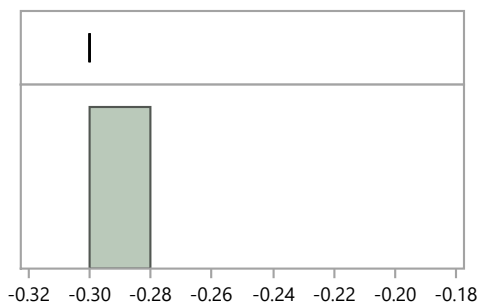
100.0%	maximum	7.3
99.5%		7.3
97.5%		7.3
90.0%		7.2
75.0%	quartile	3.9
50.0%	median	0.9
25.0%	quartile	-5.4
10.0%		-30.0
2.5%		-31.9
0.5%		-31.9
0.0%	minimum	-31.9

Summary Statistics

Mean	-2.7
Std Dev	11.6
Std Err Mean	3.7
Upper 95% Mean	5.6
Lower 95% Mean	-11.0
N	10.0

Distributions Analyte_Method=Manganese-54 Evaporation, acidified

Bias



Quantiles

100.0%	maximum	-0.3
99.5%		-0.3
97.5%		-0.3
90.0%		-0.3
75.0%	quartile	-0.3
50.0%	median	-0.3
25.0%	quartile	-0.3
10.0%		-0.3
2.5%		-0.3
0.5%		-0.3
0.0%	minimum	-0.3

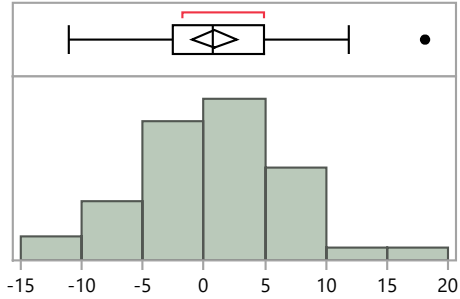
Summary Statistics

Mean	-0.3
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

MaW50 Distribution by Preparation Method

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

Bias



Quantiles

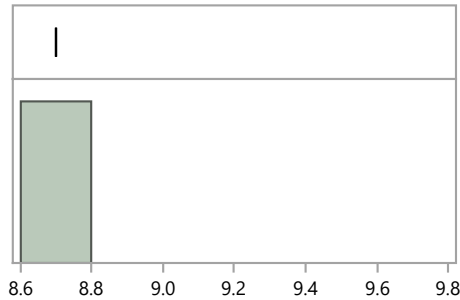
100.0%	maximum	18.1
99.5%		18.1
97.5%		17.5
90.0%		7.4
75.0%	quartile	4.9
50.0%	median	0.7
25.0%	quartile	-2.6
10.0%		-8.3
2.5%		-11.0
0.5%		-11.1
0.0%	minimum	-11.1

Summary Statistics

Mean	0.9
Std Dev	6.0
Std Err Mean	0.9
Upper 95% Mean	2.7
Lower 95% Mean	-0.9
N	43.0

Distributions Analyte_Method=Plutonium-238 Acid leaching without hydrofluoric acid

Bias



Quantiles

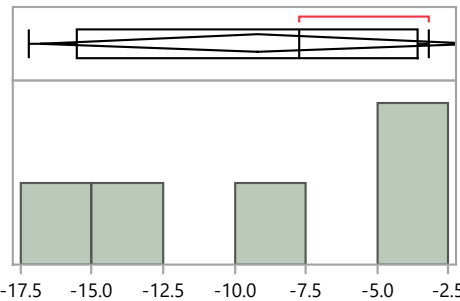
100.0%	maximum	8.7
99.5%		8.7
97.5%		8.7
90.0%		8.7
75.0%	quartile	8.7
50.0%	median	8.7
25.0%	quartile	8.7
10.0%		8.7
2.5%		8.7
0.5%		8.7
0.0%	minimum	8.7

Summary Statistics

Mean	8.7
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Plutonium-238 Coprecipitation, acidified

Bias



Quantiles

100.0%	maximum	-3.2
99.5%		-3.2
97.5%		-3.2
90.0%		-3.2
75.0%	quartile	-3.6
50.0%	median	-7.7
25.0%	quartile	-15.5
10.0%		-17.2
2.5%		-17.2
0.5%		-17.2
0.0%	minimum	-17.2

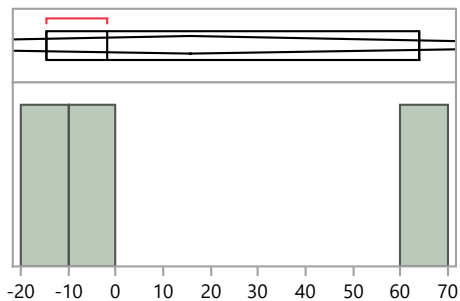
Summary Statistics

Mean	-9.2
Std Dev	6.2
Std Err Mean	2.8
Upper 95% Mean	-1.5
Lower 95% Mean	-16.8
N	5.0

MaW50 Distribution by Preparation Method

Distributions Analyte_Method=Plutonium-238 Coprecipitation, straight

Bias



Quantiles

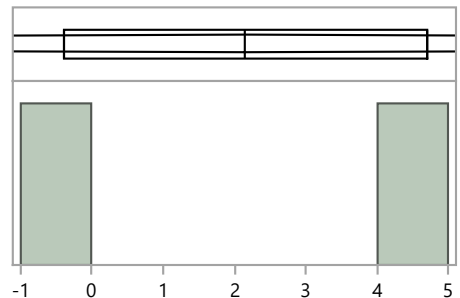
100.0%	maximum	63.8
99.5%		63.8
97.5%		63.8
90.0%		63.8
75.0%	quartile	63.8
50.0%	median	-1.9
25.0%	quartile	-14.6
10.0%		-14.6
2.5%		-14.6
0.5%		-14.6
0.0%	minimum	-14.6

Summary Statistics

Mean	15.8
Std Dev	42.1
Std Err Mean	24.3
Upper 95% Mean	120.3
Lower 95% Mean	-88.8
N	3.0

Distributions Analyte_Method=Plutonium-238 EPA 907, Actinide Elements, 600/4/80-032

Bias



Quantiles

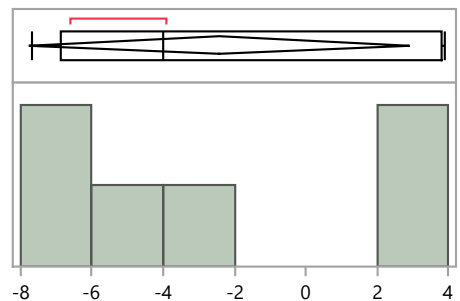
100.0%	maximum	4.7
99.5%		4.7
97.5%		4.7
90.0%		4.7
75.0%	quartile	4.7
50.0%	median	2.2
25.0%	quartile	-0.4
10.0%		-0.4
2.5%		-0.4
0.5%		-0.4
0.0%	minimum	-0.4

Summary Statistics

Mean	2.2
Std Dev	3.6
Std Err Mean	2.6
Upper 95% Mean	34.6
Lower 95% Mean	-30.3
N	2.0

Distributions Analyte_Method=Plutonium-238 Evaporation, acidified

Bias



Quantiles

100.0%	maximum	3.9
99.5%		3.9
97.5%		3.9
90.0%		3.9
75.0%	quartile	3.8
50.0%	median	-4.0
25.0%	quartile	-6.9
10.0%		-7.7
2.5%		-7.7
0.5%		-7.7
0.0%	minimum	-7.7

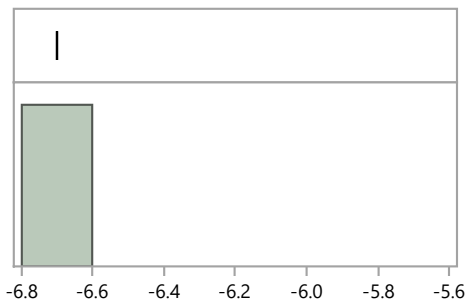
Summary Statistics

Mean	-2.4
Std Dev	5.1
Std Err Mean	2.1
Upper 95% Mean	2.9
Lower 95% Mean	-7.8
N	6.0

MaW50 Distribution by Preparation Method

Distributions Analyte_Method=Plutonium-238 Evaporation, straight

Bias



Quantiles

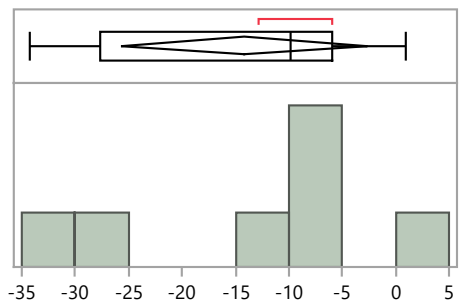
100.0%	maximum	-6.7
99.5%		-6.7
97.5%		-6.7
90.0%		-6.7
75.0%	quartile	-6.7
50.0%	median	-6.7
25.0%	quartile	-6.7
10.0%		-6.7
2.5%		-6.7
0.5%		-6.7
0.0%	minimum	-6.7

Summary Statistics

Mean	-6.7
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Plutonium-238 Ion Exchange Chromatography / Ion Chromatography

Bias



Quantiles

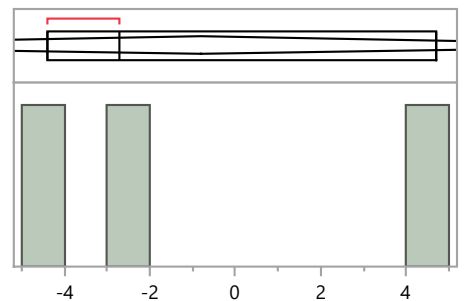
100.0%	maximum	0.9
99.5%		0.9
97.5%		0.9
90.0%		0.9
75.0%	quartile	-6.0
50.0%	median	-9.9
25.0%	quartile	-27.7
10.0%		-34.2
2.5%		-34.2
0.5%		-34.2
0.0%	minimum	-34.2

Summary Statistics

Mean	-14.2
Std Dev	12.4
Std Err Mean	4.7
Upper 95% Mean	-2.7
Lower 95% Mean	-25.6
N	7.0

Distributions Analyte_Method=Plutonium-238 Other

Bias



Quantiles

100.0%	maximum	4.7
99.5%		4.7
97.5%		4.7
90.0%		4.7
75.0%	quartile	4.7
50.0%	median	-2.7
25.0%	quartile	-4.4
10.0%		-4.4
2.5%		-4.4
0.5%		-4.4
0.0%	minimum	-4.4

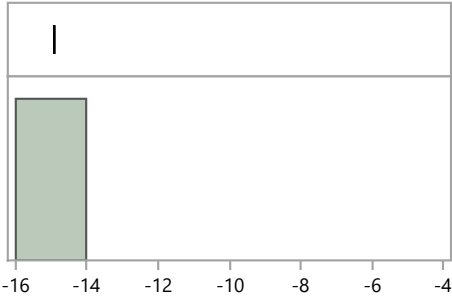
Summary Statistics

Mean	-0.8
Std Dev	4.8
Std Err Mean	2.8
Upper 95% Mean	11.2
Lower 95% Mean	-12.8
N	3.0

MaW50 Distribution by Preparation Method

Distributions Analyte_Method=Plutonium-238 Total dissolution by fusion

Bias



Quantiles

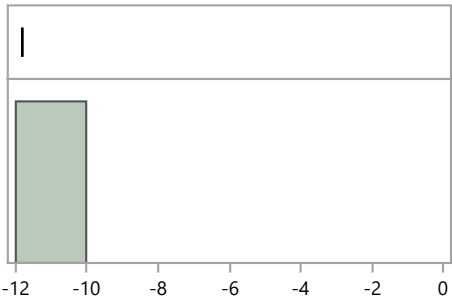
100.0%	maximum	-14.9
99.5%		-14.9
97.5%		-14.9
90.0%		-14.9
75.0%	quartile	-14.9
50.0%	median	-14.9
25.0%	quartile	-14.9
10.0%		-14.9
2.5%		-14.9
0.5%		-14.9
0.0%	minimum	-14.9

Summary Statistics

Mean	-14.9
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

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

Bias



Quantiles

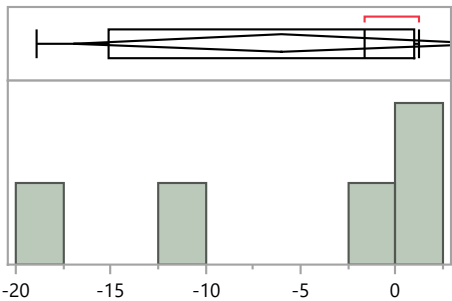
100.0%	maximum	-11.8
99.5%		-11.8
97.5%		-11.8
90.0%		-11.8
75.0%	quartile	-11.8
50.0%	median	-11.8
25.0%	quartile	-11.8
10.0%		-11.8
2.5%		-11.8
0.5%		-11.8
0.0%	minimum	-11.8

Summary Statistics

Mean	-11.8
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Plutonium-239/240 Coprecipitation, acidified

Bias



Quantiles

100.0%	maximum	1.2
99.5%		1.2
97.5%		1.2
90.0%		1.2
75.0%	quartile	1.0
50.0%	median	-1.6
25.0%	quartile	-15.1
10.0%		-18.9
2.5%		-18.9
0.5%		-18.9
0.0%	minimum	-18.9

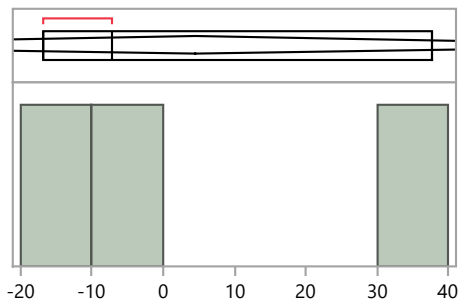
Summary Statistics

Mean	-6.0
Std Dev	8.8
Std Err Mean	3.9
Upper 95% Mean	5.0
Lower 95% Mean	-16.9
N	5.0

MaW50 Distribution by Preparation Method

Distributions Analyte_Method=Plutonium-239/240 Coprecipitation, straight

Bias



Quantiles

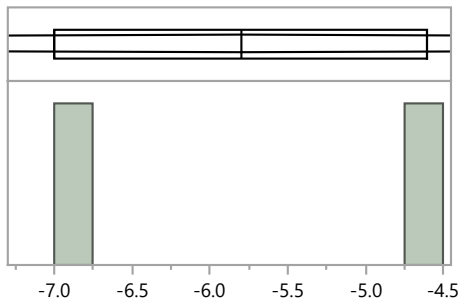
100.0%	maximum	37.8
99.5%		37.8
97.5%		37.8
90.0%		37.8
75.0%	quartile	37.8
50.0%	median	-7.2
25.0%	quartile	-16.9
10.0%		-16.9
2.5%		-16.9
0.5%		-16.9
0.0%	minimum	-16.9

Summary Statistics

Mean	4.6
Std Dev	29.2
Std Err Mean	16.9
Upper 95% Mean	77.1
Lower 95% Mean	-67.9
N	3.0

Distributions Analyte_Method=Plutonium-239/240 EPA 907, Actinide Elements, 600/4/80-032

Bias



Quantiles

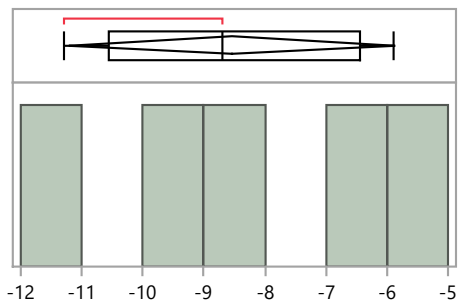
100.0%	maximum	-4.6
99.5%		-4.6
97.5%		-4.6
90.0%		-4.6
75.0%	quartile	-4.6
50.0%	median	-5.8
25.0%	quartile	-7.0
10.0%		-7.0
2.5%		-7.0
0.5%		-7.0
0.0%	minimum	-7.0

Summary Statistics

Mean	-5.8
Std Dev	1.7
Std Err Mean	1.2
Upper 95% Mean	9.4
Lower 95% Mean	-21.0
N	2.0

Distributions Analyte_Method=Plutonium-239/240 Evaporation, acidified

Bias



Quantiles

100.0%	maximum	-5.9
99.5%		-5.9
97.5%		-5.9
90.0%		-5.9
75.0%	quartile	-6.5
50.0%	median	-8.7
25.0%	quartile	-10.6
10.0%		-11.3
2.5%		-11.3
0.5%		-11.3
0.0%	minimum	-11.3

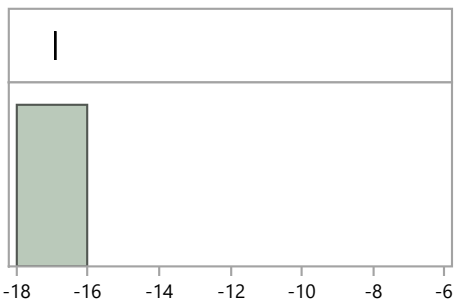
Summary Statistics

Mean	-8.5
Std Dev	2.2
Std Err Mean	1.0
Upper 95% Mean	-5.9
Lower 95% Mean	-11.2
N	5.0

MaW50 Distribution by Preparation Method

Distributions Analyte_Method=Plutonium-239/240 Evaporation, straight

Bias



Quantiles

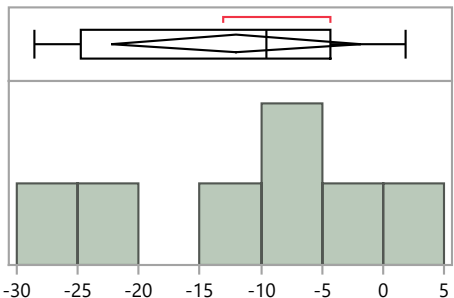
100.0%	maximum	-16.9
99.5%		-16.9
97.5%		-16.9
90.0%		-16.9
75.0%	quartile	-16.9
50.0%	median	-16.9
25.0%	quartile	-16.9
10.0%		-16.9
2.5%		-16.9
0.5%		-16.9
0.0%	minimum	-16.9

Summary Statistics

Mean	-16.9
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Plutonium-239/240 Ion Exchange Chromatography / Ion Chromatography

Bias



Quantiles

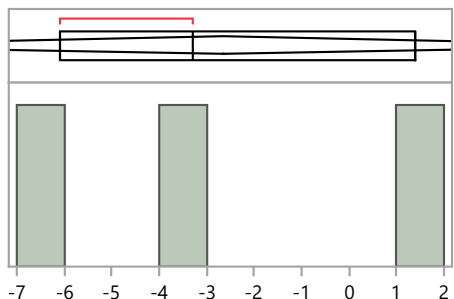
100.0%	maximum	1.8
99.5%		1.8
97.5%		1.8
90.0%		1.8
75.0%	quartile	-4.3
50.0%	median	-9.5
25.0%	quartile	-24.7
10.0%		-28.5
2.5%		-28.5
0.5%		-28.5
0.0%	minimum	-28.5

Summary Statistics

Mean	-12.0
Std Dev	11.0
Std Err Mean	4.2
Upper 95% Mean	-1.8
Lower 95% Mean	-22.2
N	7.0

Distributions Analyte_Method=Plutonium-239/240 Other

Bias



Quantiles

100.0%	maximum	1.4
99.5%		1.4
97.5%		1.4
90.0%		1.4
75.0%	quartile	1.4
50.0%	median	-3.3
25.0%	quartile	-6.1
10.0%		-6.1
2.5%		-6.1
0.5%		-6.1
0.0%	minimum	-6.1

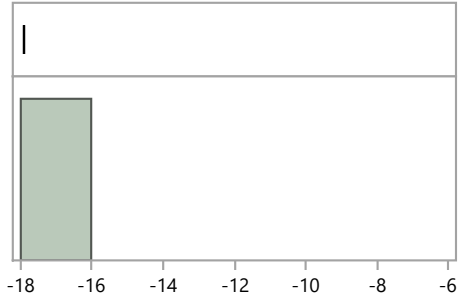
Summary Statistics

Mean	-2.7
Std Dev	3.8
Std Err Mean	2.2
Upper 95% Mean	6.7
Lower 95% Mean	-12.1
N	3.0

MaW50 Distribution by Preparation Method

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

Bias



Quantiles

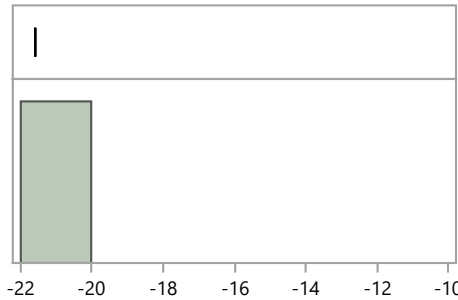
100.0%	maximum	-17.9
99.5%		-17.9
97.5%		-17.9
90.0%		-17.9
75.0%	quartile	-17.9
50.0%	median	-17.9
25.0%	quartile	-17.9
10.0%		-17.9
2.5%		-17.9
0.5%		-17.9
0.0%	minimum	-17.9

Summary Statistics

Mean	-17.9
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Radium-226 Acid leaching without hydrofluoric acid

Bias



Quantiles

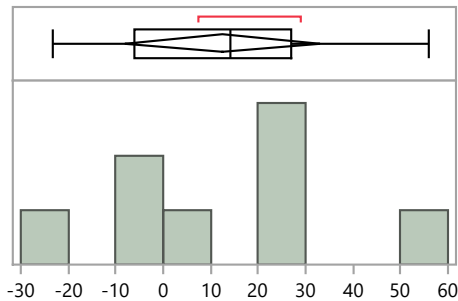
100.0%	maximum	-21.6
99.5%		-21.6
97.5%		-21.6
90.0%		-21.6
75.0%	quartile	-21.6
50.0%	median	-21.6
25.0%	quartile	-21.6
10.0%		-21.6
2.5%		-21.6
0.5%		-21.6
0.0%	minimum	-21.6

Summary Statistics

Mean	-21.6
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Radium-226 Coprecipitation, acidified

Bias



Quantiles

100.0%	maximum	55.8
99.5%		55.8
97.5%		55.8
90.0%		55.8
75.0%	quartile	27.1
50.0%	median	14.0
25.0%	quartile	-6.2
10.0%		-23.2
2.5%		-23.2
0.5%		-23.2
0.0%	minimum	-23.2

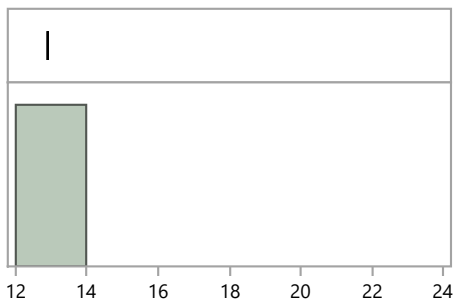
Summary Statistics

Mean	12.4
Std Dev	24.7
Std Err Mean	8.7
Upper 95% Mean	33.1
Lower 95% Mean	-8.2
N	8.0

MaW50 Distribution by Preparation Method

Distributions Analyte_Method=Radium-226 EPA 901.1, Gamma Emitting, 600/4-80-032

Bias



Quantiles

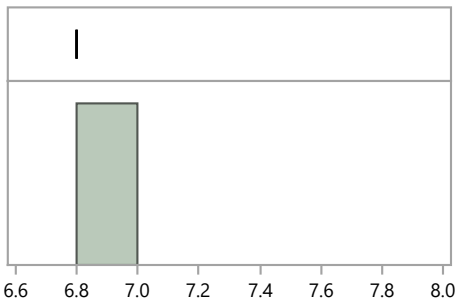
100.0%	maximum	12.9
99.5%		12.9
97.5%		12.9
90.0%		12.9
75.0%	quartile	12.9
50.0%	median	12.9
25.0%	quartile	12.9
10.0%		12.9
2.5%		12.9
0.5%		12.9
0.0%	minimum	12.9

Summary Statistics

Mean	12.9
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Radium-226 Evaporation, acidified

Bias



Quantiles

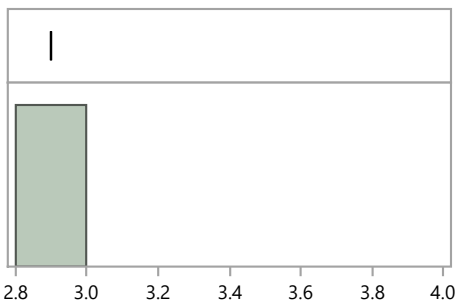
100.0%	maximum	6.8
99.5%		6.8
97.5%		6.8
90.0%		6.8
75.0%	quartile	6.8
50.0%	median	6.8
25.0%	quartile	6.8
10.0%		6.8
2.5%		6.8
0.5%		6.8
0.0%	minimum	6.8

Summary Statistics

Mean	6.8
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Radium-226 Ion Exchange Chromatography / Ion Chromatography

Bias



Quantiles

100.0%	maximum	2.9
99.5%		2.9
97.5%		2.9
90.0%		2.9
75.0%	quartile	2.9
50.0%	median	2.9
25.0%	quartile	2.9
10.0%		2.9
2.5%		2.9
0.5%		2.9
0.0%	minimum	2.9

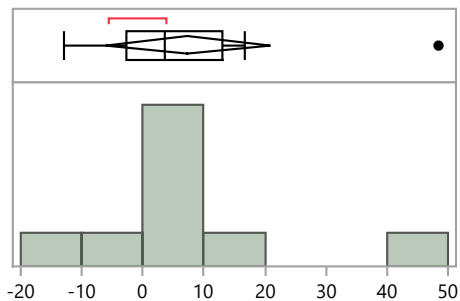
Summary Statistics

Mean	2.9
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

MaW50 Distribution by Preparation Method

Distributions Analyte_Method=Radium-226 Other

Bias



Quantiles

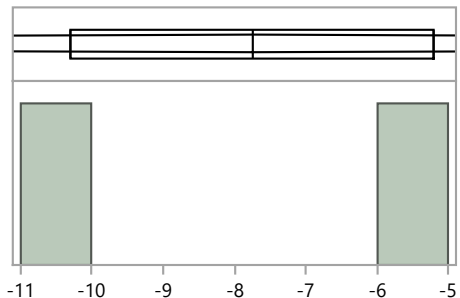
100.0%	maximum	48.4
99.5%		48.4
97.5%		48.4
90.0%		48.4
75.0%	quartile	13.1
50.0%	median	3.5
25.0%	quartile	-2.8
10.0%		-12.9
2.5%		-12.9
0.5%		-12.9
0.0%	minimum	-12.9

Summary Statistics

Mean	7.4
Std Dev	17.5
Std Err Mean	5.8
Upper 95% Mean	20.9
Lower 95% Mean	-6.1
N	9.0

Distributions Analyte_Method=Radium-226 Total dissolution by fusion

Bias



Quantiles

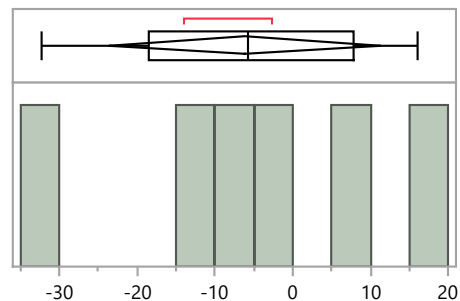
100.0%	maximum	-5.2
99.5%		-5.2
97.5%		-5.2
90.0%		-5.2
75.0%	quartile	-5.2
50.0%	median	-7.8
25.0%	quartile	-10.3
10.0%		-10.3
2.5%		-10.3
0.5%		-10.3
0.0%	minimum	-10.3

Summary Statistics

Mean	-7.8
Std Dev	3.6
Std Err Mean	2.6
Upper 95% Mean	24.7
Lower 95% Mean	-40.2
N	2.0

Distributions Analyte_Method=Strontium-90 Coprecipitation, acidified

Bias



Quantiles

100.0%	maximum	16.0
99.5%		16.0
97.5%		16.0
90.0%		16.0
75.0%	quartile	7.9
50.0%	median	-5.9
25.0%	quartile	-18.5
10.0%		-32.3
2.5%		-32.3
0.5%		-32.3
0.0%	minimum	-32.3

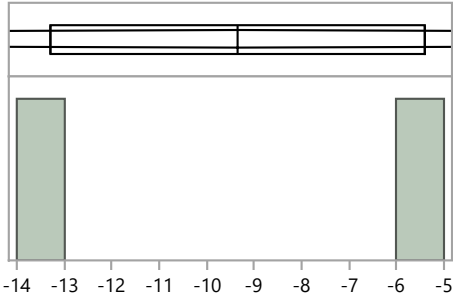
Summary Statistics

Mean	-6.1
Std Dev	16.6
Std Err Mean	6.8
Upper 95% Mean	11.3
Lower 95% Mean	-23.6
N	6.0

MaW50 Distribution by Preparation Method

Distributions Analyte_Method=Strontium-90 Coprecipitation, straight

Bias



Quantiles

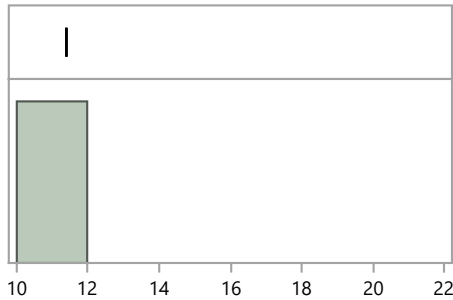
100.0%	maximum	-5.4
99.5%		-5.4
97.5%		-5.4
90.0%		-5.4
75.0%	quartile	-5.4
50.0%	median	-9.4
25.0%	quartile	-13.3
10.0%		-13.3
2.5%		-13.3
0.5%		-13.3
0.0%	minimum	-13.3

Summary Statistics

Mean	-9.4
Std Dev	5.6
Std Err Mean	4.0
Upper 95% Mean	40.8
Lower 95% Mean	-59.5
N	2.0

Distributions Analyte_Method=Strontium-90 EPA 901.1, Gamma Emitting, 600/4-80-032

Bias



Quantiles

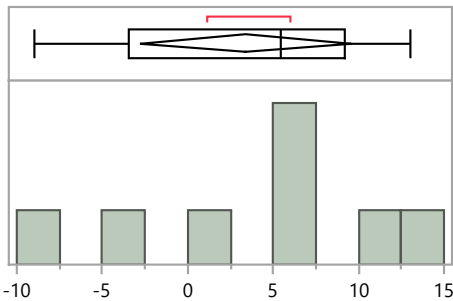
100.0%	maximum	11.4
99.5%		11.4
97.5%		11.4
90.0%		11.4
75.0%	quartile	11.4
50.0%	median	11.4
25.0%	quartile	11.4
10.0%		11.4
2.5%		11.4
0.5%		11.4
0.0%	minimum	11.4

Summary Statistics

Mean	11.4
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

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

Bias



Quantiles

100.0%	maximum	13.0
99.5%		13.0
97.5%		13.0
90.0%		13.0
75.0%	quartile	9.2
50.0%	median	5.4
25.0%	quartile	-3.4
10.0%		-9.0
2.5%		-9.0
0.5%		-9.0
0.0%	minimum	-9.0

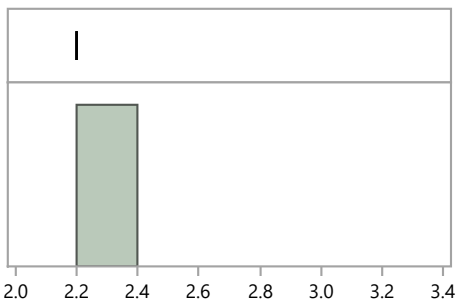
Summary Statistics

Mean	3.4
Std Dev	7.4
Std Err Mean	2.6
Upper 95% Mean	9.6
Lower 95% Mean	-2.8
N	8.0

MaW50 Distribution by Preparation Method

Distributions Analyte_Method=Strontium-90 Evaporation, acidified

Bias



Quantiles

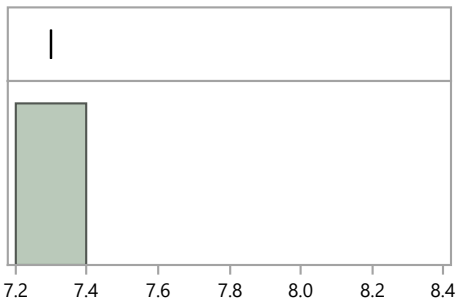
100.0%	maximum	2.2
99.5%		2.2
97.5%		2.2
90.0%		2.2
75.0%	quartile	2.2
50.0%	median	2.2
25.0%	quartile	2.2
10.0%		2.2
2.5%		2.2
0.5%		2.2
0.0%	minimum	2.2

Summary Statistics

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

Distributions Analyte_Method=Strontium-90 Evaporation, straight

Bias



Quantiles

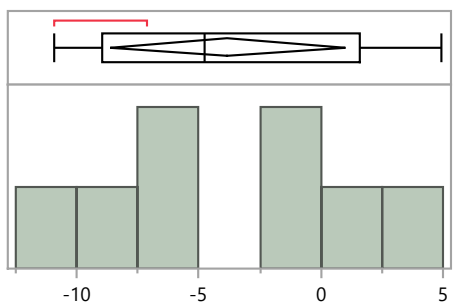
100.0%	maximum	7.3
99.5%		7.3
97.5%		7.3
90.0%		7.3
75.0%	quartile	7.3
50.0%	median	7.3
25.0%	quartile	7.3
10.0%		7.3
2.5%		7.3
0.5%		7.3
0.0%	minimum	7.3

Summary Statistics

Mean	7.3
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Strontium-90 Ion Exchange Chromatography / Ion Chromatography

Bias



Quantiles

100.0%	maximum	4.9
99.5%		4.9
97.5%		4.9
90.0%		4.9
75.0%	quartile	1.6
50.0%	median	-4.8
25.0%	quartile	-9.0
10.0%		-10.9
2.5%		-10.9
0.5%		-10.9
0.0%	minimum	-10.9

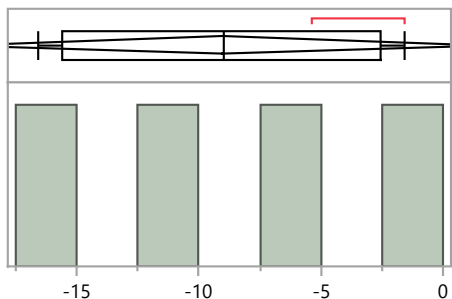
Summary Statistics

Mean	-3.8
Std Dev	5.7
Std Err Mean	2.0
Upper 95% Mean	1.0
Lower 95% Mean	-8.6
N	8.0

MaW50 Distribution by Preparation Method

Distributions Analyte_Method=Strontium-90 Other

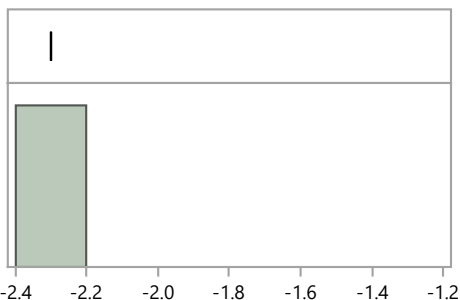
Bias



Quantiles			Summary Statistics	
100.0%	maximum	-1.6	Mean	-9.0
99.5%		-1.6	Std Dev	6.8
97.5%		-1.6	Std Err Mean	3.4
90.0%		-1.6	Upper 95% Mean	1.8
75.0%	quartile	-2.6	Lower 95% Mean	-19.8
50.0%	median	-9.0	N	4.0
25.0%	quartile	-15.6		
10.0%		-16.6		
2.5%		-16.6		
0.5%		-16.6		
0.0%	minimum	-16.6		

Distributions Analyte_Method=Technetium-99 Acid leaching without hydrofluoric acid

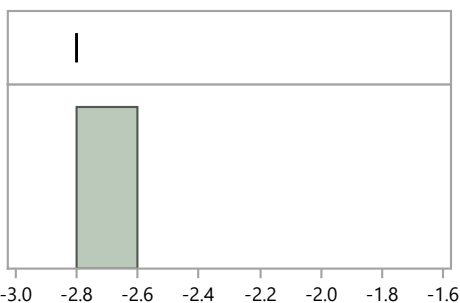
Bias



Quantiles			Summary Statistics	
100.0%	maximum	-2.3	Mean	-2.3
99.5%		-2.3	Std Dev	.
97.5%		-2.3	Std Err Mean	.
90.0%		-2.3	Upper 95% Mean	.
75.0%	quartile	-2.3	Lower 95% Mean	.
50.0%	median	-2.3	N	1.0
25.0%	quartile	-2.3		
10.0%		-2.3		
2.5%		-2.3		
0.5%		-2.3		
0.0%	minimum	-2.3		

Distributions Analyte_Method=Technetium-99 Coprecipitation, acidified

Bias

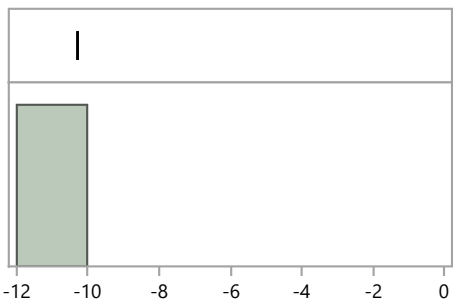


Quantiles			Summary Statistics	
100.0%	maximum	-2.8	Mean	-2.8
99.5%		-2.8	Std Dev	.
97.5%		-2.8	Std Err Mean	.
90.0%		-2.8	Upper 95% Mean	.
75.0%	quartile	-2.8	Lower 95% Mean	.
50.0%	median	-2.8	N	1.0
25.0%	quartile	-2.8		
10.0%		-2.8		
2.5%		-2.8		
0.5%		-2.8		
0.0%	minimum	-2.8		

MaW50 Distribution by Preparation Method

Distributions Analyte_Method=Technetium-99 Evaporation, acidified

Bias



Quantiles

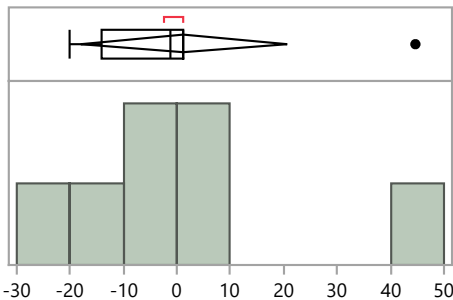
100.0%	maximum	-10.3
99.5%		-10.3
97.5%		-10.3
90.0%		-10.3
75.0%	quartile	-10.3
50.0%	median	-10.3
25.0%	quartile	-10.3
10.0%		-10.3
2.5%		-10.3
0.5%		-10.3
0.0%	minimum	-10.3

Summary Statistics

Mean	-10.3
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Technetium-99 Ion Exchange Chromatography / Ion Chromatography

Bias



Quantiles

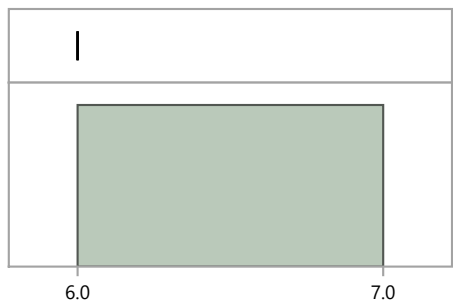
100.0%	maximum	44.6
99.5%		44.6
97.5%		44.6
90.0%		44.6
75.0%	quartile	1.2
50.0%	median	-1.1
25.0%	quartile	-14.1
10.0%		-20.2
2.5%		-20.2
0.5%		-20.2
0.0%	minimum	-20.2

Summary Statistics

Mean	1.3
Std Dev	20.8
Std Err Mean	7.9
Upper 95% Mean	20.5
Lower 95% Mean	-18.0
N	7.0

Distributions Analyte_Method=Technetium-99 No preparation - analyzed as received

Bias



Quantiles

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

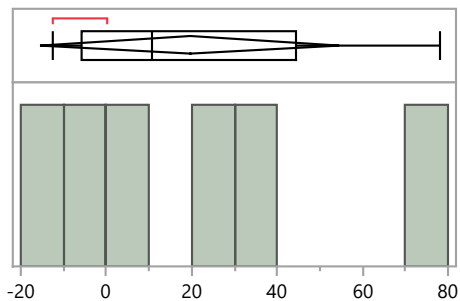
Summary Statistics

Mean	6.0
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

MaW50 Distribution by Preparation Method

Distributions Analyte_Method=Technetium-99 Other

Bias



Quantiles

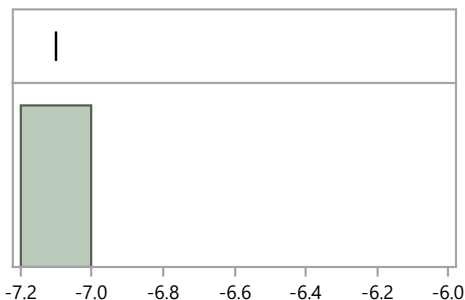
100.0%	maximum	78.0
99.5%		78.0
97.5%		78.0
90.0%		78.0
75.0%	quartile	44.4
50.0%	median	10.9
25.0%	quartile	-5.6
10.0%		-12.3
2.5%		-12.3
0.5%		-12.3
0.0%	minimum	-12.3

Summary Statistics

Mean	19.6
Std Dev	33.2
Std Err Mean	13.6
Upper 95% Mean	54.4
Lower 95% Mean	-15.3
N	6.0

Distributions Analyte_Method=Uranium-234 Acid leaching without hydrofluoric acid

Bias



Quantiles

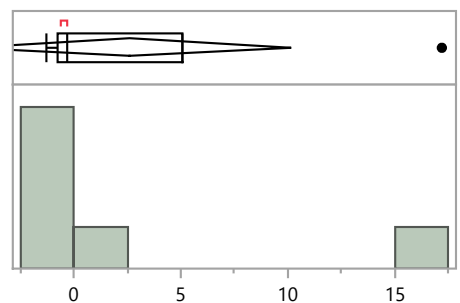
100.0%	maximum	-7.1
99.5%		-7.1
97.5%		-7.1
90.0%		-7.1
75.0%	quartile	-7.1
50.0%	median	-7.1
25.0%	quartile	-7.1
10.0%		-7.1
2.5%		-7.1
0.5%		-7.1
0.0%	minimum	-7.1

Summary Statistics

Mean	-7.1
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Uranium-234 Coprecipitation, acidified

Bias



Quantiles

100.0%	maximum	17.2
99.5%		17.2
97.5%		17.2
90.0%		17.2
75.0%	quartile	5.1
50.0%	median	-0.3
25.0%	quartile	-0.8
10.0%		-1.3
2.5%		-1.3
0.5%		-1.3
0.0%	minimum	-1.3

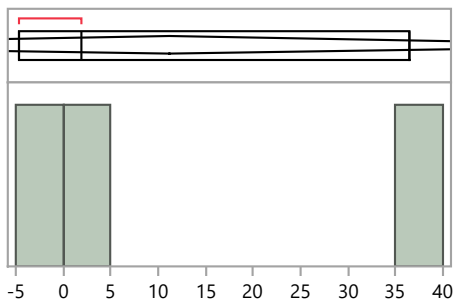
Summary Statistics

Mean	2.6
Std Dev	7.2
Std Err Mean	2.9
Upper 95% Mean	10.2
Lower 95% Mean	-4.9
N	6.0

MaW50 Distribution by Preparation Method

Distributions Analyte_Method=Uranium-234 Coprecipitation, straight

Bias



Quantiles

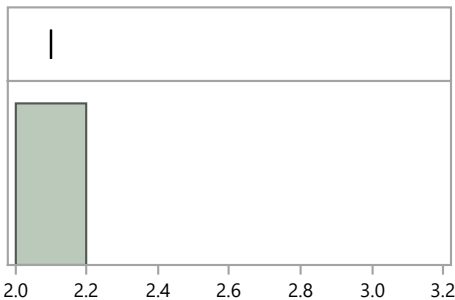
100.0%	maximum	36.4
99.5%		36.4
97.5%		36.4
90.0%		36.4
75.0%	quartile	36.4
50.0%	median	2.0
25.0%	quartile	-4.7
10.0%		-4.7
2.5%		-4.7
0.5%		-4.7
0.0%	minimum	-4.7

Summary Statistics

Mean	11.2
Std Dev	22.1
Std Err Mean	12.7
Upper 95% Mean	66.0
Lower 95% Mean	-43.5
N	3.0

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

Bias



Quantiles

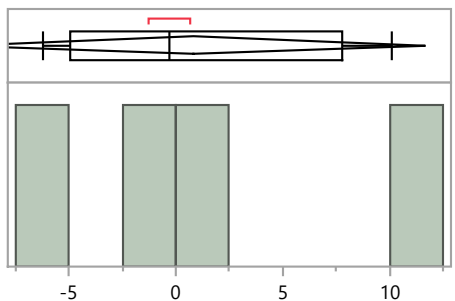
100.0%	maximum	2.1
99.5%		2.1
97.5%		2.1
90.0%		2.1
75.0%	quartile	2.1
50.0%	median	2.1
25.0%	quartile	2.1
10.0%		2.1
2.5%		2.1
0.5%		2.1
0.0%	minimum	2.1

Summary Statistics

Mean	2.1
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Uranium-234 Evaporation, acidified

Bias



Quantiles

100.0%	maximum	10.1
99.5%		10.1
97.5%		10.1
90.0%		10.1
75.0%	quartile	7.8
50.0%	median	-0.3
25.0%	quartile	-5.0
10.0%		-6.2
2.5%		-6.2
0.5%		-6.2
0.0%	minimum	-6.2

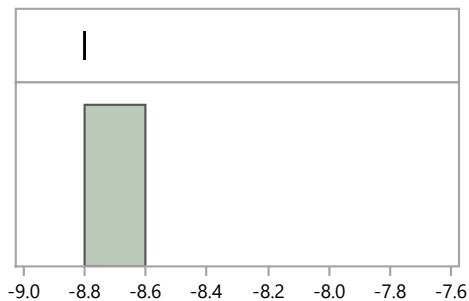
Summary Statistics

Mean	0.8
Std Dev	6.8
Std Err Mean	3.4
Upper 95% Mean	11.7
Lower 95% Mean	-10.0
N	4.0

MaW50 Distribution by Preparation Method

Distributions Analyte_Method=Uranium-234 Evaporation, straight

Bias



Quantiles

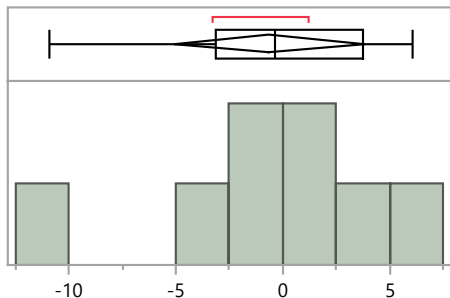
100.0%	maximum	-8.8
99.5%		-8.8
97.5%		-8.8
90.0%		-8.8
75.0%	quartile	-8.8
50.0%	median	-8.8
25.0%	quartile	-8.8
10.0%		-8.8
2.5%		-8.8
0.5%		-8.8
0.0%	minimum	-8.8

Summary Statistics

Mean	-8.8
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Uranium-234 Ion Exchange Chromatography / Ion Chromatography

Bias



Quantiles

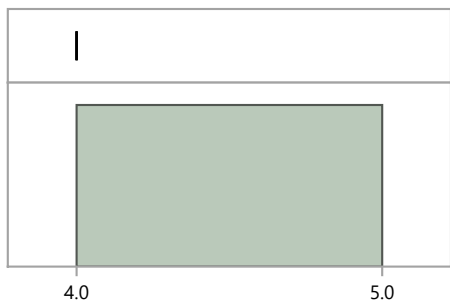
100.0%	maximum	6.1
99.5%		6.1
97.5%		6.1
90.0%		6.1
75.0%	quartile	3.7
50.0%	median	-0.4
25.0%	quartile	-3.1
10.0%		-10.9
2.5%		-10.9
0.5%		-10.9
0.0%	minimum	-10.9

Summary Statistics

Mean	-0.6
Std Dev	5.3
Std Err Mean	1.9
Upper 95% Mean	3.8
Lower 95% Mean	-5.1
N	8.0

Distributions Analyte_Method=Uranium-234 Other

Bias



Quantiles

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

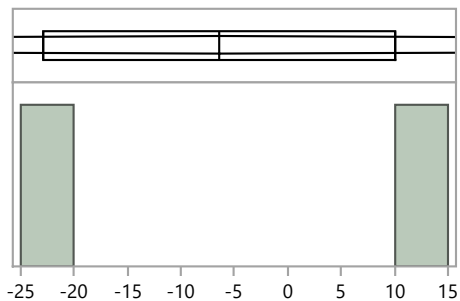
Summary Statistics

Mean	4.0
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

MaW50 Distribution by Preparation Method

Distributions Analyte_Method=Uranium-234 Total dissolution by fusion

Bias



Quantiles

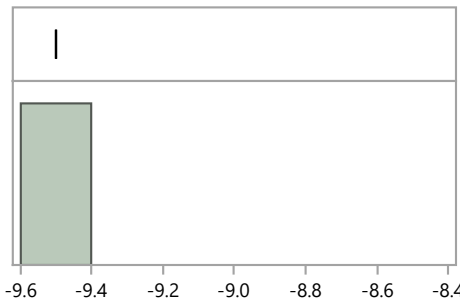
100.0%	maximum	10.1
99.5%		10.1
97.5%		10.1
90.0%		10.1
75.0%	quartile	10.1
50.0%	median	-6.4
25.0%	quartile	-22.9
10.0%		-22.9
2.5%		-22.9
0.5%		-22.9
0.0%	minimum	-22.9

Summary Statistics

Mean	-6.4
Std Dev	23.3
Std Err Mean	16.5
Upper 95% Mean	203.3
Lower 95% Mean	-216.1
N	2.0

Distributions Analyte_Method=Uranium-238 Acid leaching without hydrofluoric acid

Bias



Quantiles

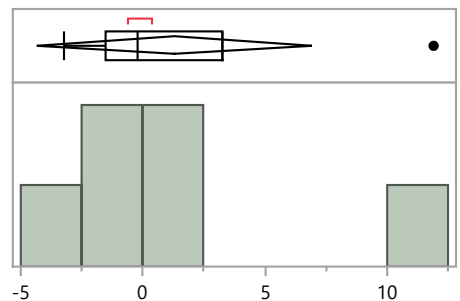
100.0%	maximum	-9.5
99.5%		-9.5
97.5%		-9.5
90.0%		-9.5
75.0%	quartile	-9.5
50.0%	median	-9.5
25.0%	quartile	-9.5
10.0%		-9.5
2.5%		-9.5
0.5%		-9.5
0.0%	minimum	-9.5

Summary Statistics

Mean	-9.5
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Uranium-238 Coprecipitation, acidified

Bias



Quantiles

100.0%	maximum	11.9
99.5%		11.9
97.5%		11.9
90.0%		11.9
75.0%	quartile	3.3
50.0%	median	-0.2
25.0%	quartile	-1.6
10.0%		-3.2
2.5%		-3.2
0.5%		-3.2
0.0%	minimum	-3.2

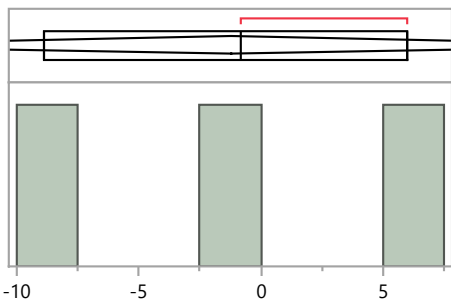
Summary Statistics

Mean	1.3
Std Dev	5.4
Std Err Mean	2.2
Upper 95% Mean	6.9
Lower 95% Mean	-4.3
N	6.0

MaW50 Distribution by Preparation Method

Distributions Analyte_Method=Uranium-238 Coprecipitation, straight

Bias



Quantiles

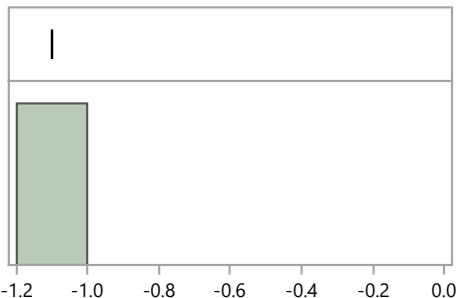
100.0%	maximum	6.0
99.5%		6.0
97.5%		6.0
90.0%		6.0
75.0%	quartile	6.0
50.0%	median	-0.8
25.0%	quartile	-8.9
10.0%		-8.9
2.5%		-8.9
0.5%		-8.9
0.0%	minimum	-8.9

Summary Statistics

Mean	-1.2
Std Dev	7.5
Std Err Mean	4.3
Upper 95% Mean	17.3
Lower 95% Mean	-19.8
N	3.0

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

Bias



Quantiles

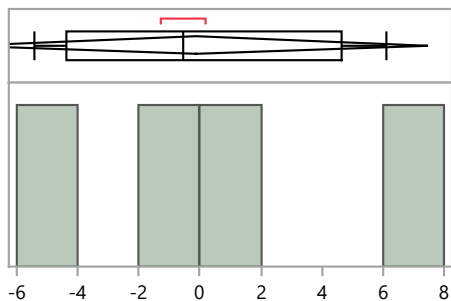
100.0%	maximum	-1.1
99.5%		-1.1
97.5%		-1.1
90.0%		-1.1
75.0%	quartile	-1.1
50.0%	median	-1.1
25.0%	quartile	-1.1
10.0%		-1.1
2.5%		-1.1
0.5%		-1.1
0.0%	minimum	-1.1

Summary Statistics

Mean	-1.1
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Uranium-238 Evaporation, acidified

Bias



Quantiles

100.0%	maximum	6.1
99.5%		6.1
97.5%		6.1
90.0%		6.1
75.0%	quartile	4.6
50.0%	median	-0.6
25.0%	quartile	-4.4
10.0%		-5.4
2.5%		-5.4
0.5%		-5.4
0.0%	minimum	-5.4

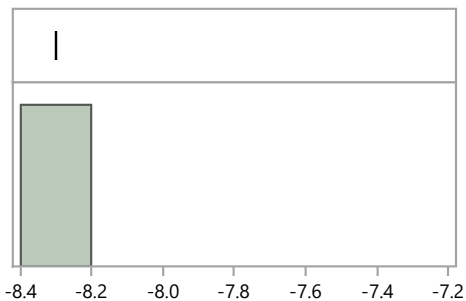
Summary Statistics

Mean	-0.1
Std Dev	4.8
Std Err Mean	2.4
Upper 95% Mean	7.5
Lower 95% Mean	-7.7
N	4.0

MaW50 Distribution by Preparation Method

Distributions Analyte_Method=Uranium-238 Evaporation, straight

Bias



Quantiles

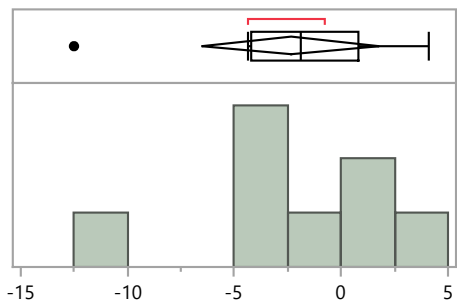
100.0%	maximum	-8.3
99.5%		-8.3
97.5%		-8.3
90.0%		-8.3
75.0%	quartile	-8.3
50.0%	median	-8.3
25.0%	quartile	-8.3
10.0%		-8.3
2.5%		-8.3
0.5%		-8.3
0.0%	minimum	-8.3

Summary Statistics

Mean	-8.3
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Uranium-238 Ion Exchange Chromatography / Ion Chromatography

Bias



Quantiles

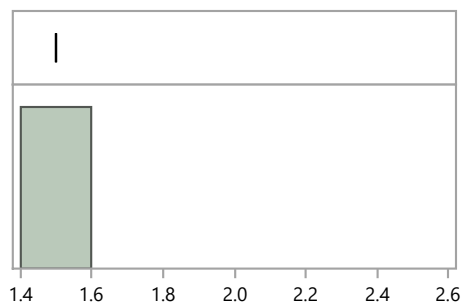
100.0%	maximum	4.1
99.5%		4.1
97.5%		4.1
90.0%		4.1
75.0%	quartile	0.8
50.0%	median	-1.9
25.0%	quartile	-4.2
10.0%		-12.5
2.5%		-12.5
0.5%		-12.5
0.0%	minimum	-12.5

Summary Statistics

Mean	-2.4
Std Dev	5.0
Std Err Mean	1.8
Upper 95% Mean	1.8
Lower 95% Mean	-6.5
N	8.0

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

Bias



Quantiles

100.0%	maximum	1.5
99.5%		1.5
97.5%		1.5
90.0%		1.5
75.0%	quartile	1.5
50.0%	median	1.5
25.0%	quartile	1.5
10.0%		1.5
2.5%		1.5
0.5%		1.5
0.0%	minimum	1.5

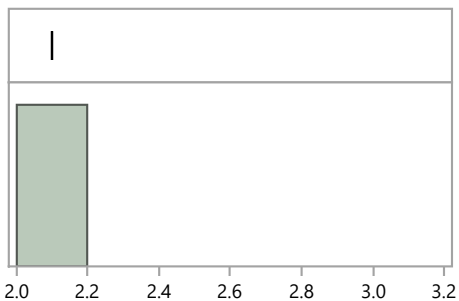
Summary Statistics

Mean	1.5
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

MaW50 Distribution by Preparation Method

Distributions Analyte_Method=Uranium-238 Other

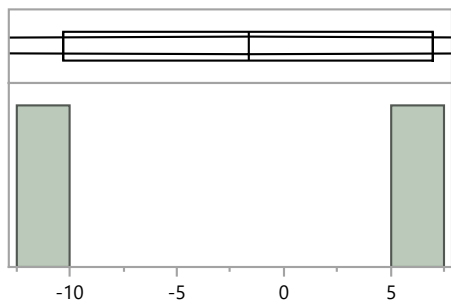
Bias



Quantiles			Summary Statistics	
100.0%	maximum	2.1	Mean	2.1
99.5%		2.1	Std Dev	.
97.5%		2.1	Std Err Mean	.
90.0%		2.1	Upper 95% Mean	.
75.0%	quartile	2.1	Lower 95% Mean	.
50.0%	median	2.1	N	1.0
25.0%	quartile	2.1		
10.0%		2.1		
2.5%		2.1		
0.5%		2.1		
0.0%	minimum	2.1		

Distributions Analyte_Method=Uranium-238 Total dissolution by fusion

Bias



Quantiles			Summary Statistics	
100.0%	maximum	7.0	Mean	-1.7
99.5%		7.0	Std Dev	12.2
97.5%		7.0	Std Err Mean	8.7
90.0%		7.0	Upper 95% Mean	108.3
75.0%	quartile	7.0	Lower 95% Mean	-111.6
50.0%	median	-1.7	N	2.0
25.0%	quartile	-10.3		
10.0%		-10.3		
2.5%		-10.3		
0.5%		-10.3		
0.0%	minimum	-10.3		