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.

GrW53 Participating Laboratories

Lab Code	Lab Name	Matrix Code
ADEM01	Alabama Department of Environmental Management	GrW
AFOH01	USAFSAM/OEA	GrW
ARPL01	Analytical Support Operations - Radiochemical Processing Lab	GrW
ARSL01	ARS	GrW
AY1201	Consolidated Nuclear Security, LLC, ACO Laboratory	GrW
CESL01	Lawrence Livermore National Laboratory - EMRL	GrW
DEHS01	Department of Environmental Health & Safety	GrW
ELIW01	Energy Laboratories, Inc.	GrW
ERCL01	Washington State Public Health Laboratories	GrW
ERHD99	National Monitoring Section, Radiation Protection Bureau, Health Canada	GrW
FDHE01	Florida Dept of Health Environmental Laboratory	GrW
GENE01	GEL Laboratories, LLC	GrW
GPCL01	Georgia Power Company Environmental Laboratory	GrW
HCAL01	Lawrence Livermore National Laboratory	GrW
HECR01	SC Department of Environmental Services	GrW
HPAC99	UKHSA, RCE Glasgow	GrW
IDOH01	Indiana Department of Health	GrW
IEMA01	Illinois Emergency Management Agency Radiochemistry Laboratory	GrW
ISUE01	ISU Environmental Monitoring Laboratory	GrW
LZCA01	ACZ Laboratories, Inc	GrW
MART03	Radioactive Material Analysis Laboratory	GrW
MNDH01	Minnesota Department of Health, Public Health Lab. Division	GrW
NARL01	National Analytical Radiation Environmental Laboratory	GrW
NESI01	BWXT-Radioisotope & Analytical Chemistry Laboratory	GrW
NJDH01	New Jersey Dept. of Health, ECLS	GrW
NSPH01	Nevada State Public Health Laboratory	GrW
ODHL01	Ohio Department of Health Laboratory	GrW
RPSC01	Radiation Protection Service	GrW
SEML01	SRS Environmental Monitoring Laboratory	GrW
SLDA01	USACE SLDA FUSRAP Project	GrW
SMER01	State of Michigan EGLE Radiological Lab	GrW
TDHL01	Texas Department of State Health Services Laboratory	GrW
TELE02	Microbac Laboratories Inc. - Northbrook	GrW
TMAO01	EBERLINE Analytical Corporation	GrW
TNUT01	St. Louis USACE FUSRAP Laboratory	GrW
WSHL01	Wisconsin State Laboratory of Hygiene	GrW
WSTP99	Cavendish Nuclear Limited	GrW

Laboratories Not Reporting

Lab Code	Lab Name	Matrix Code
ASUK99	AWE (Aldermaston)	GrW
DLEA01	DLE Associates	GrW
SOUT01	Southwest Research Institute	GrW
STRL01	South Texas Project Radiological Laboratory	GrW

Study Reference Values

MAPEP-25-GrW53

Radiological Reference Date: 08/01/2025

Analyte	Ref Value	Ref Unc	Units
Radiological			
Gross alpha	0.96	0.02	(Bq/L)
Gross beta	1.90	0.03	(Bq/L)

Sample Statistical Summary

MAPEP-25-GrW53

Radiological Reference Date: 08/01/2025

Analyte	T(1)	A(2)	Grand(3) Mean	Std Dev	Ref Value	Ref Unc	Acceptance Range	Units
Radiological								
Gross alpha	37	35	0.94	0.25	0.96	0.02	0.29 - 1.63	(Bq/L)
Gross beta	37	35	1.95	0.24	1.90	0.03	0.95 - 2.85	(Bq/L)

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".

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Flag Summary Report

MAPEP-25-GrW53

Radiological				
Analyte	**A**	**W**	**RW**	**N**
Gross alpha	35			2
Gross beta	35			2

Mixed Analyte Performance Evaluation Program

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

Laboratory Results For MAPEP-25-GrW53

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

Radiological

Units: (Bq/L)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	2.1275	0.96	N		121.6	0.29 - 1.63	0.21201	A
Gross beta	4.625	1.90	N		143.4	0.95 - 2.85	0.20905	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Laboratory Results For MAPEP-25-GrW53
(AFOH01) USAFSAM/OEA
2510 Fifth Street, Area B
Wright-Patterson AFB, OH 45433-7913

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.11	0.96	A		15.6	0.29 - 1.63	0.17	W
Gross beta	1.94	1.90	A		2.1	0.95 - 2.85	0.11	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Laboratory Results For MAPEP-25-GrW53
(ARPL01) Analytical Support Operations - Radiochemical Processing Lab
PO Box 999
Richland, WA 99354

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	.624	0.96	A		-35.0	0.29 - 1.63	.0936	A
Gross beta	1.91	1.90	A		0.5	0.95 - 2.85	.115	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Laboratory Results For MAPEP-25-GrW53
(ARSL01) ARS
2609 North River Road
Port Allen, LA 70767

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.847	0.96	A		-11.8	0.29 - 1.63	0.114	A
Gross beta	2.044	1.90	A		7.6	0.95 - 2.85	0.246	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Mixed Analyte Performance Evaluation Program
Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-25-GrW53
(AY1201) Consolidated Nuclear Security, LLC, ACO Laboratory
Y12, NSC, Bldg. 9995, Rm 142
Oak Ridge, TN 37831-8189

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.79	0.96	A		-17.7	0.29 - 1.63	0.1	A
Gross beta	1.7	1.90	A		-10.5	0.95 - 2.85	0.13	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Mixed Analyte Performance Evaluation Program

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

Laboratory Results For MAPEP-25-GrW53

(CESL01) Lawrence Livermore National Laboratory - EMRL
7000 East Avenue
Livermore, CA 94551

Radiological

Units: (Bq/L)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.34E+00	0.96	A		39.6	0.29 - 1.63	6.25E-02	A
Gross beta	2.10E+00	1.90	A		10.5	0.95 - 2.85	3.39E-02	N

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Laboratory Results For MAPEP-25-GrW53
(DEHS01) Department of Environmental Health & Safety
North Carolina State Univ.
Raleigh, NC 27695-8007

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.87	0.96	A		-9.4	0.29 - 1.63	0.30	N
Gross beta	1.79	1.90	A		-5.8	0.95 - 2.85	0.29	W

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Laboratory Results For MAPEP-25-GrW53
(ELIW01) Energy Laboratories, Inc.
2393 Salt Creek HWY
Casper, Wy 82601

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.5217	0.96	A		-45.7	0.29 - 1.63	0.08325	W
Gross beta	1.887	1.90	A		-0.7	0.95 - 2.85	0.07585	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Laboratory Results For MAPEP-25-GrW53
(ERCL01) Washington State Public Health Laboratories
1610 N.E. 150th Street
Shoreline, WA 98155-9701

Radiological

Units: (Bq/L)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.11	0.96	A		15.6	0.29 - 1.63	0.08	A
Gross beta	2.22	1.90	A		16.8	0.95 - 2.85	0.10	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Laboratory Results For MAPEP-25-GrW53
(ERHD99) National Monitoring Section, Radiation Protection Bureau, Health Canada
775 Brookfield Road AL6302D1
Ottawa, Ontario K1A 1C1

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.912	0.96	A		-5.0	0.29 - 1.63	0.184	W
Gross beta	2.067	1.90	A		8.8	0.95 - 2.85	0.494	W

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Laboratory Results For MAPEP-25-GrW53
(FDHE01) Florida Dept of Health Environmental Laboratory
2100 All Childrens Way
Orlando, FL 32818-5271

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.83	0.96	A		-13.5	0.29 - 1.63	0.28	N
Gross beta	1.99	1.90	A		4.7	0.95 - 2.85	0.21	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Laboratory Results For MAPEP-25-GrW53
(GENE01) GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.831	0.96	A		-13.4	0.29 - 1.63	0.0935	A
Gross beta	1.75	1.90	A		-7.9	0.95 - 2.85	0.16	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Mixed Analyte Performance Evaluation Program

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

Laboratory Results For MAPEP-25-GrW53

(GPCL01) Georgia Power Company Environmental Laboratory
2480 Maner Road
Atlanta, GA 30339

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.88	0.96	A		-8.3	0.29 - 1.63	0.3	N
Gross beta	2.55	1.90	A		34.2	0.95 - 2.85	0.63	W

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Laboratory Results For MAPEP-25-GrW53
(HCAL01) Lawrence Livermore National Laboratory
Analytical Services and Instrumentation Analytical Lab
Livermore, CA 94550

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.94	0.96	A		-2.1	0.29 - 1.63	0.11	A
Gross beta	1.94	1.90	A		2.1	0.95 - 2.85	0.14	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Mixed Analyte Performance Evaluation Program
Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-25-GrW53
(HECR01) SC Department of Environmental Services
8231 Parklane Road
Columbia, SC 29223

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.62	0.96	A		68.8	0.29 - 1.63	0.382	W
Gross beta	1.83	1.90	A		-3.7	0.95 - 2.85	0.170	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Mixed Analyte Performance Evaluation Program
Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-25-GrW53
(HPAC99) UKHSA, RCE Glasgow
155 Hardgate Road
Glasgow, Scotland G51 4LS

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.95	0.96	A		-1.0	0.29 - 1.63	0.09	A
Gross beta	2.26	1.90	A		18.9	0.95 - 2.85	0.18	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Mixed Analyte Performance Evaluation Program
Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-25-GrW53
(IDOH01) Indiana Department of Health
550 W 16th St
Indianapolis, IN 46202

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.57202	0.96	A		-40.4	0.29 - 1.63	0.1517	W
Gross beta	1.9795	1.90	A		4.2	0.95 - 2.85	0.148	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Laboratory Results For MAPEP-25-GrW53
(IEMA01) Illinois Emergency Management Agency Radiochemistry Laboratory
1301 Knotts St.
Springfield, IL 62703

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.939	0.96	A		-2.2	0.29 - 1.63	0.079	A
Gross beta	1.960	1.90	A		3.2	0.95 - 2.85	0.075	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Mixed Analyte Performance Evaluation Program

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

Laboratory Results For MAPEP-25-GrW53

(ISUE01) ISU Environmental Monitoring Laboratory
785 5th 8th Ave Rm B107
Pocatello, Idaho 83209

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.1	0.96	A		14.6	0.29 - 1.63	0.07	A
Gross beta	2.2	1.90	A		15.8	0.95 - 2.85	0.04	N

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Laboratory Results For MAPEP-25-GrW53
(LZCA01) ACZ Laboratories, Inc
2773 Downhill Drive
Steamboat Springs, CO 80487

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.07	0.96	A		11.5	0.29 - 1.63	0.241	W
Gross beta	2.09	1.90	A		10.0	0.95 - 2.85	0.186	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Laboratory Results For MAPEP-25-GrW53
(MART03) Radioactive Material Analysis Laboratory
ORNL
Oak Ridge, TN 37830

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.766	0.96	A		-20.2	0.29 - 1.63	0.068	A
Gross beta	2.05	1.90	A		7.9	0.95 - 2.85	0.11	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Laboratory Results For MAPEP-25-GrW53
(MNDH01) Minnesota Department of Health, Public Health Lab. Division
601 Robert St. N.
St. Paul, MN 55155

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.2136	0.96	A		26.4	0.29 - 1.63	0.13838	A
Gross beta	1.76009	1.90	A		-7.4	0.95 - 2.85	0.06364	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Mixed Analyte Performance Evaluation Program

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

Laboratory Results For MAPEP-25-GrW53

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

Radiological — Units: (Bq/L)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.34	0.96	A		39.6	0.29 - 1.63	.258	W
Gross beta	2.03	1.90	A		6.8	0.95 - 2.85	.186	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Laboratory Results For MAPEP-25-GrW53
(NESI01) BWXT-Radioisotope & Analytical Chemistry Laboratory
Lynchburg Technology Center
Lynchburg, VA 24504-5447

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.863	0.96	A		-10.1	0.29 - 1.63	0.063	A
Gross beta	2.46	1.90	A		29.5	0.95 - 2.85	0.065	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Mixed Analyte Performance Evaluation Program
Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-25-GrW53
(NJDH01) New Jersey Dept. of Health, ECLS
3 Schwarzkopf Drive
Ewing, NJ 08628

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.236	0.96	A		28.8	0.29 - 1.63	0.083	A
Gross beta	1.783	1.90	A		-6.2	0.95 - 2.85	0.071	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Laboratory Results For MAPEP-25-GrW53
(NSPH01) Nevada State Public Health Laboratory
1664 North Virginia Street, MS 328
Reno, NV 89557

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.571	0.96	A		-40.5	0.29 - 1.63	0.048	A
Gross beta	1.353	1.90	A		-28.8	0.95 - 2.85	0.052	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Laboratory Results For MAPEP-25-GrW53
(ODHL01) Ohio Department of Health Laboratory
8995 E Main Street
Reynoldsburg, OH 43068

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.71	0.96	A		-26.0	0.29 - 1.63	0.09	A
Gross beta	1.75	1.90	A		-7.9	0.95 - 2.85	0.14	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Mixed Analyte Performance Evaluation Program
Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-25-GrW53
(RPSC01) Radiation Protection Service
O. Ministry of Labour, Immigration, Training & Skills Developmen
Mississauga, Ontario L4V 1W8

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.68	0.96	A		-29.2	0.29 - 1.63	0.29	N
Gross beta	1.40	1.90	A		-26.3	0.95 - 2.85	0.45	N

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Laboratory Results For MAPEP-25-GrW53
(SEML01) SRS Environmental Monitoring Laboratory
Bldg 735-B
Aiken, SC 29808

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.76	0.96	A		-20.8	0.29 - 1.63	0.11	A
Gross beta	1.90	1.90	A		0.0	0.95 - 2.85	0.12	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Mixed Analyte Performance Evaluation Program
Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-25-GrW53
(SLDA01) USACE SLDA FUSRAP Project
2992 River Road
Vandergrift, PA 15690

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.1240	0.96	A		17.1	0.29 - 1.63	0.0821	A
Gross beta	1.9650	1.90	A		3.4	0.95 - 2.85	0.1053	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Mixed Analyte Performance Evaluation Program

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

Laboratory Results For MAPEP-25-GrW53

(SMER01) State of Michigan EGLE Radiological Lab
815 Filley St.
Lansing, MI 48906

Radiological

Units: (Bq/L)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.98	0.96	N		106.3	0.29 - 1.63	0.41	W
Gross beta	4.55	1.90	N		139.5	0.95 - 2.85	0.46	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Laboratory Results For MAPEP-25-GrW53
(TDHL01) Texas Department of State Health Services Laboratory
1100 W 49th Street
Austin, TX 78756

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.158	0.96	A		20.6	0.29 - 1.63	0.092	A
Gross beta	1.828	1.90	A		-3.8	0.95 - 2.85	0.080	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Laboratory Results For MAPEP-25-GrW53
(TELE02) Microbac Laboratories Inc. - Northbrook
700 Landwehr Road
Northbrook, IL 60062-

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.78	0.96	A		-18.8	0.29 - 1.63	0.06	A
Gross beta	1.76	1.90	A		-7.4	0.95 - 2.85	0.05	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Mixed Analyte Performance Evaluation Program

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

Laboratory Results For MAPEP-25-GrW53

(TMAO01) EBERLINE Analytical Corporation
601 A SCARBORO RD
OAK RIDGE, TN 37830-

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.714	0.96	A		-25.6	0.29 - 1.63	0.241	N
Gross beta	1.975	1.90	A		3.9	0.95 - 2.85	0.073	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Mixed Analyte Performance Evaluation Program

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

Laboratory Results For MAPEP-25-GrW53

(TNUT01) St. Louis USACE FUSRAP Laboratory
112 James S McDonnell Blvd
HAZELWOOD, MO 63042

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	0.981	0.96	A		2.2	0.29 - 1.63	0.146	A
Gross beta	1.91	1.90	A		0.5	0.95 - 2.85	0.135	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Laboratory Results For MAPEP-25-GrW53
(WSHL01) Wisconsin State Laboratory of Hygiene
2601 Agriculture Drive
Madison, WI 53718

Radiological								Units: (Bq/L)
Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.058	0.96	A		10.2	0.29 - 1.63	0.0799	A
Gross beta	2.046	1.90	A		7.7	0.95 - 2.85	0.0604	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

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

N = NOT ACCEPTABLE.....RP > 30%

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

Mixed Analyte Performance Evaluation Program
Department of Energy RESL - 1955 Fremont Ave, MS4149 - Idaho Falls, ID 83415

Laboratory Results For MAPEP-25-GrW53
(WSTP99) Cavendish Nuclear Limited
Greeson Court
Cumbria, UK CA24 3HZ

Radiological — Units: (Bq/L)

Analyte	Result	Ref Value	Flag	Notes	Bias (%)	Acceptance Range	Unc Value	Unc Flag
Gross alpha	1.21	0.96	A		26.0	0.29 - 1.63	0.14	A
Gross beta	2.07	1.90	A		8.9	0.95 - 2.85	0.25	A

Radiological Reference Date: August 1, 2025

Gross Alpha Flags:

A = Result acceptable, Bias <= ± 70% with a statistically positive result at two standard deviations (Result/Uncertainty > 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, does not include zero).

N = Result not acceptable, Bias > ± 70% or the reported result is not statistically positive at two standard deviations (Result/Uncertainty <= 2, i.e., the range encompassing the result, plus or minus the total uncertainty at two standard deviations, includes zero).

Gross Beta Flags:

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

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

Uncertainty Flags:

N = NOT ACCEPTABLE.....RP < 2%

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

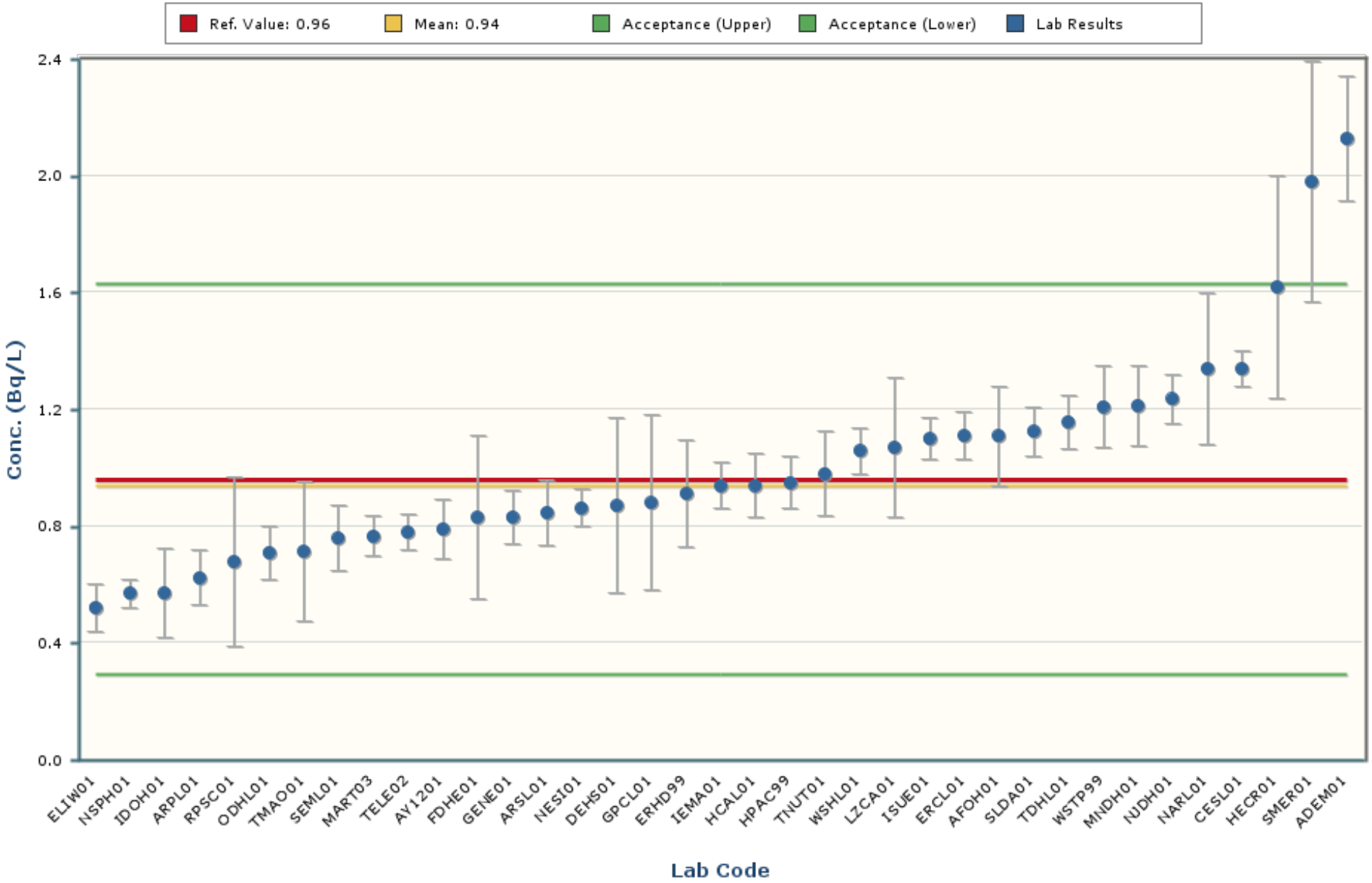
W = ACCEPTABLE WITH WARNING.....15% <= RP <= 30%

N = NOT ACCEPTABLE.....RP > 30%

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

Gross alpha

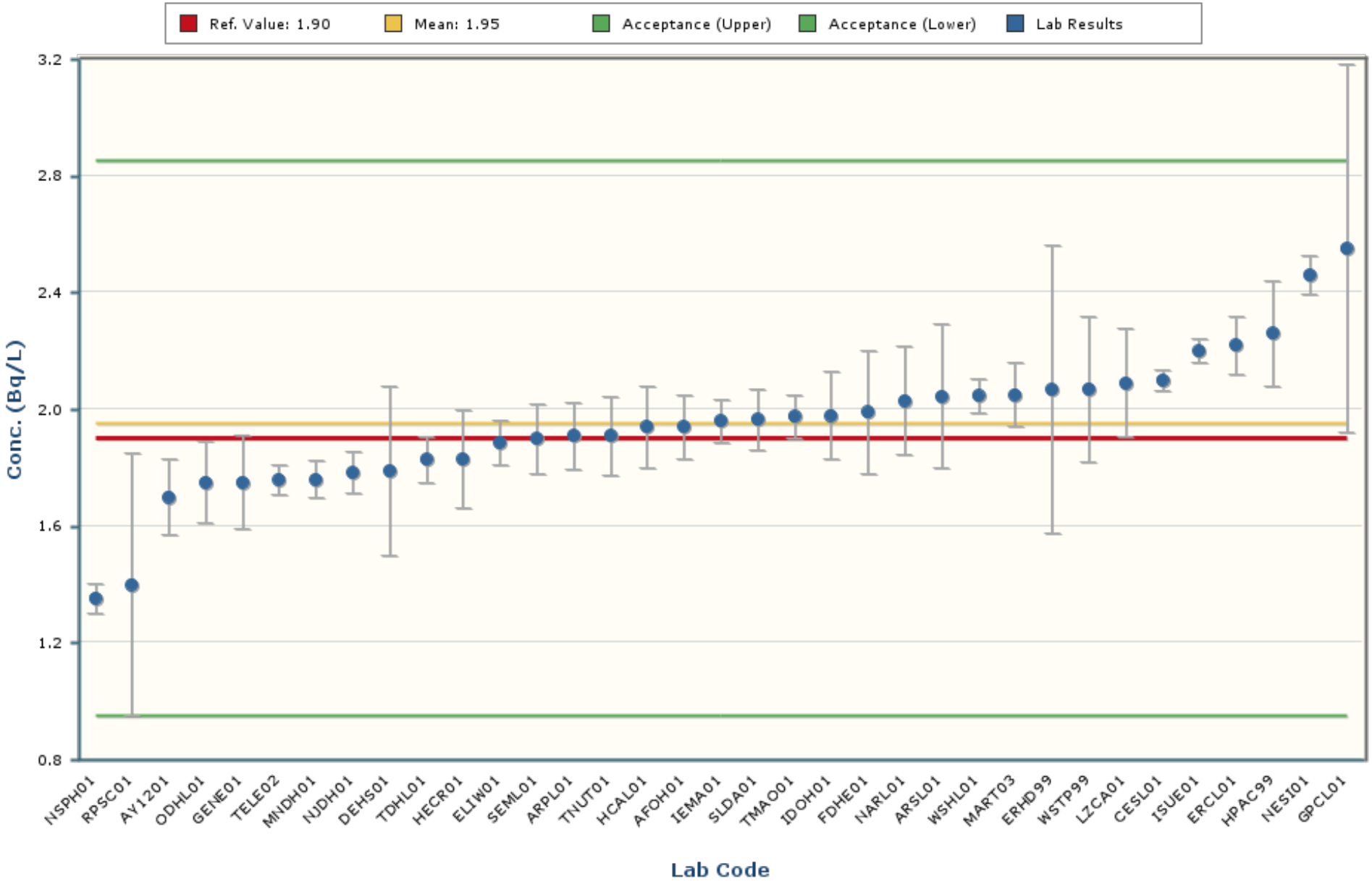
MAPEP-25-GrW53



Notes:
The chart shows only data points with values between -0.30 and 2.18 (± 5 Standard Deviations).

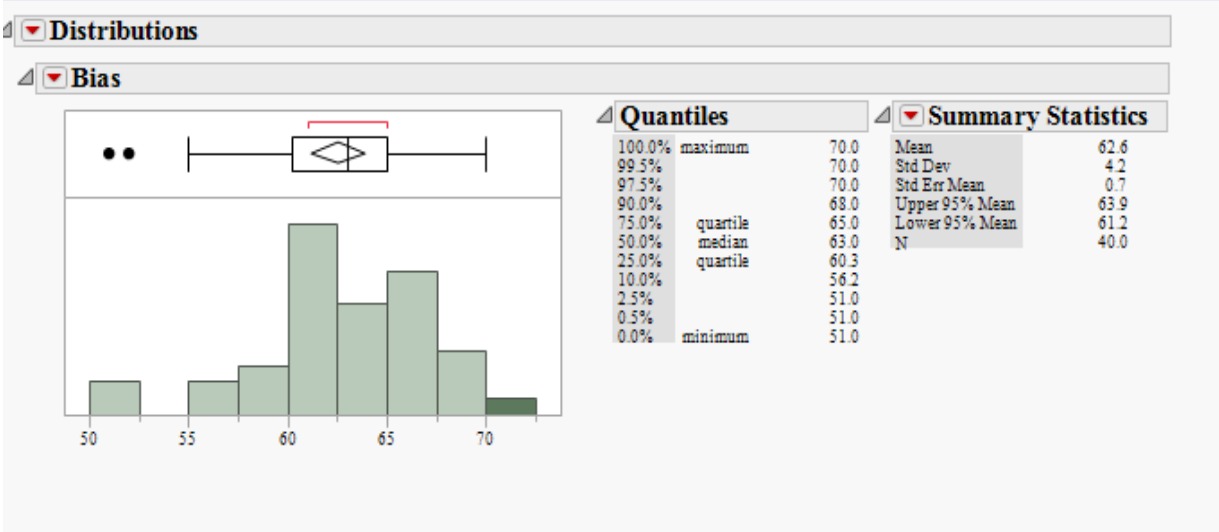
Gross beta

MAPEP-25-GrW53



Notes:
The chart shows only data points with values between 0.76 and 3.14 (± 5 Standard Deviations).

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.

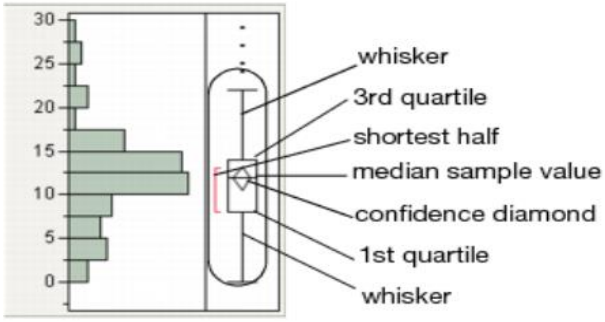


Outlier Box Plot

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)



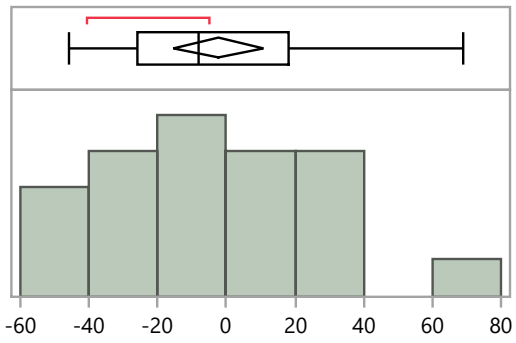
If the data points do not reach the computed ranges, then the whiskers are determined by the upper and lower data point values (not including outliers). The bracket outside of the box identifies the *shortest half*, which is the most dense 50% of the observations (Rousseuw and Leroy 1987).

Ref. "SAS Institute Inc. 2016. JMP® 13 Basic Analysis. Cary, NC: SAS Institute Inc."

GrW53 Distribution by Detection Method

Distributions Analyte_Detection=Gross alpha Gas Flow Proportional Counter

Bias

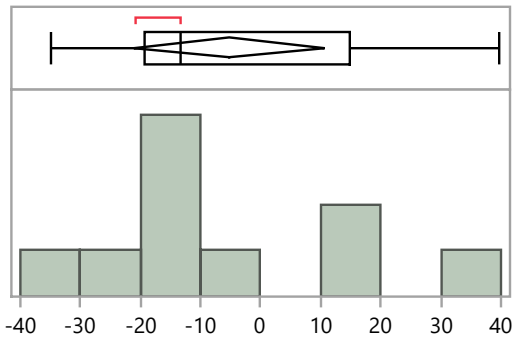


Quantiles		
100.0%	maximum	68.8
99.5%		68.8
97.5%		68.8
90.0%		37.4
75.0%	quartile	18.1
50.0%	median	-8.3
25.0%	quartile	-25.8
10.0%		-40.5
2.5%		-45.7
0.5%		-45.7
0.0%	minimum	-45.7

Summary Statistics	
Mean	-2.3
Std Dev	29.2
Std Err Mean	6.4
Upper 95% Mean	11.0
Lower 95% Mean	-15.6
N	21.0

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

Bias

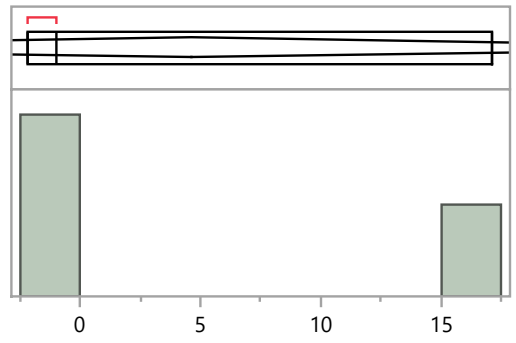


Quantiles		
100.0%	maximum	39.6
99.5%		39.6
97.5%		39.6
90.0%		37.2
75.0%	quartile	14.9
50.0%	median	-13.5
25.0%	quartile	-19.3
10.0%		-33.6
2.5%		-35.0
0.5%		-35.0
0.0%	minimum	-35.0

Summary Statistics	
Mean	-5.2
Std Dev	22.2
Std Err Mean	7.0
Upper 95% Mean	10.8
Lower 95% Mean	-21.1
N	10.0

Distributions Analyte_Detection=Gross alpha Liquid Scintillation Counter

Bias



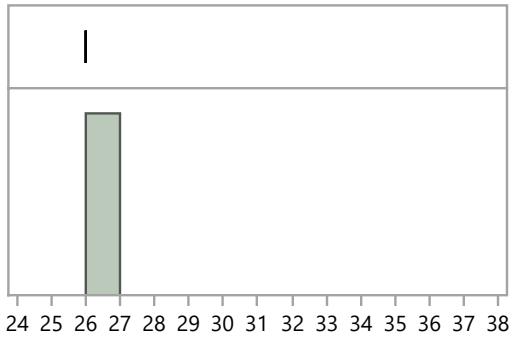
Quantiles		
100.0%	maximum	17.1
99.5%		17.1
97.5%		17.1
90.0%		17.1
75.0%	quartile	17.1
50.0%	median	-1.0
25.0%	quartile	-2.2
10.0%		-2.2
2.5%		-2.2
0.5%		-2.2
0.0%	minimum	-2.2

Summary Statistics	
Mean	4.6
Std Dev	10.8
Std Err Mean	6.2
Upper 95% Mean	31.5
Lower 95% Mean	-22.2
N	3.0

GrW53 Distribution by Detection Method

Distributions Analyte_Detection=Gross alpha Other

Bias

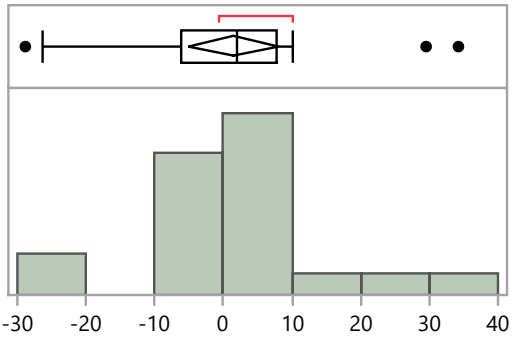


Quantiles		
100.0%	maximum	26.0
99.5%		26.0
97.5%		26.0
90.0%		26.0
75.0%	quartile	26.0
50.0%	median	26.0
25.0%	quartile	26.0
10.0%		26.0
2.5%		26.0
0.5%		26.0
0.0%	minimum	26.0

Summary Statistics	
Mean	26.0
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Detection=Gross beta Gas Flow Proportional Counter

Bias

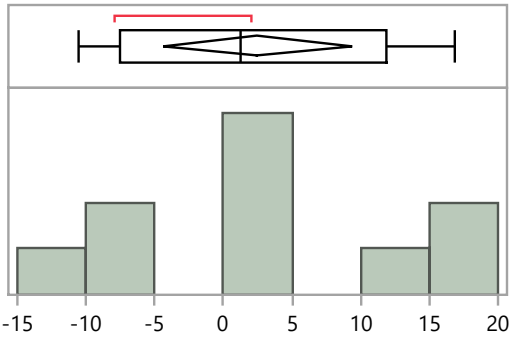


Quantiles		
100.0%	maximum	34.2
99.5%		34.2
97.5%		34.2
90.0%		25.6
75.0%	quartile	7.8
50.0%	median	2.1
25.0%	quartile	-6.0
10.0%		-22.6
2.5%		-28.8
0.5%		-28.8
0.0%	minimum	-28.8

Summary Statistics	
Mean	1.6
Std Dev	14.4
Std Err Mean	3.2
Upper 95% Mean	8.1
Lower 95% Mean	-5.0
N	21.0

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

Bias



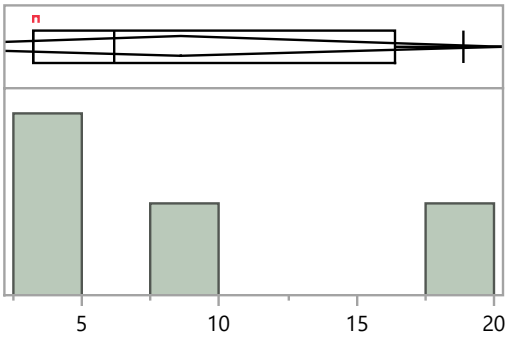
Quantiles		
100.0%	maximum	16.8
99.5%		16.8
97.5%		16.8
90.0%		16.7
75.0%	quartile	11.8
50.0%	median	1.3
25.0%	quartile	-7.5
10.0%		-10.2
2.5%		-10.5
0.5%		-10.5
0.0%	minimum	-10.5

Summary Statistics	
Mean	2.5
Std Dev	9.6
Std Err Mean	3.0
Upper 95% Mean	9.4
Lower 95% Mean	-4.4
N	10.0

GrW53 Distribution by Detection Method

Distributions Analyte_Detection=Gross beta Liquid Scintillation Counter

Bias



Quantiles

100.0%	maximum	18.9
99.5%		18.9
97.5%		18.9
90.0%		18.9
75.0%	quartile	16.4
50.0%	median	6.2
25.0%	quartile	3.3
10.0%		3.2
2.5%		3.2
0.5%		3.2
0.0%	minimum	3.2

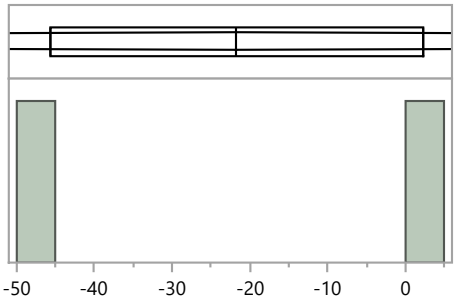
Summary Statistics

Mean	8.6
Std Dev	7.4
Std Err Mean	3.7
Upper 95% Mean	20.3
Lower 95% Mean	-3.1
N	4.0

GrW53 Distribution by Preparation Method

Distributions Analyte_Method=Gross alpha Coprecipitation, acidified

Bias

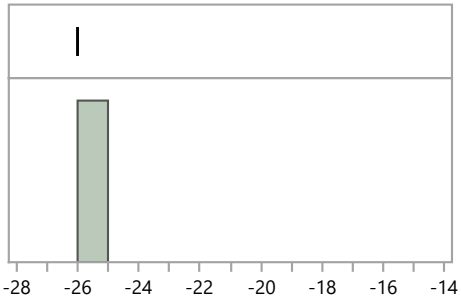


Quantiles		
100.0%	maximum	2.2
99.5%		2.2
97.5%		2.2
90.0%		2.2
75.0%	quartile	2.2
50.0%	median	-21.8
25.0%	quartile	-45.7
10.0%		-45.7
2.5%		-45.7
0.5%		-45.7
0.0%	minimum	-45.7

Summary Statistics	
Mean	-21.8
Std Dev	33.9
Std Err Mean	24.0
Upper 95% Mean	282.6
Lower 95% Mean	-326.1
N	2.0

Distributions Analyte_Method=Gross alpha Coprecipitation, straight

Bias

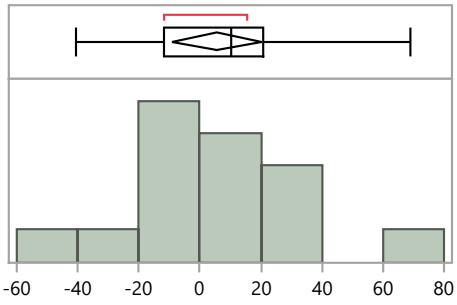


Quantiles		
100.0%	maximum	-26.0
99.5%		-26.0
97.5%		-26.0
90.0%		-26.0
75.0%	quartile	-26.0
50.0%	median	-26.0
25.0%	quartile	-26.0
10.0%		-26.0
2.5%		-26.0
0.5%		-26.0
0.0%	minimum	-26.0

Summary Statistics	
Mean	-26.0
Std Dev	.
Std Err Mean	.
Upper 95% Mean	.
Lower 95% Mean	.
N	1.0

Distributions Analyte_Method=Gross alpha EPA 900, Radioactivity, Gross Alpha/Beta Screening, 600/4-80-032

Bias



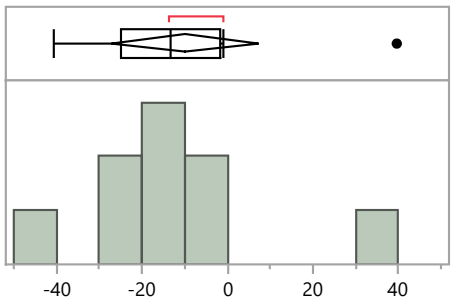
Quantiles		
100.0%	maximum	68.8
99.5%		68.8
97.5%		68.8
90.0%		44.8
75.0%	quartile	20.6
50.0%	median	10.2
25.0%	quartile	-11.8
10.0%		-31.5
2.5%		-40.4
0.5%		-40.4
0.0%	minimum	-40.4

Summary Statistics	
Mean	5.4
Std Dev	26.6
Std Err Mean	6.9
Upper 95% Mean	20.1
Lower 95% Mean	-9.3
N	15.0

GrW53 Distribution by Preparation Method

Distributions Analyte_Method=Gross alpha Evaporation, acidified

Bias

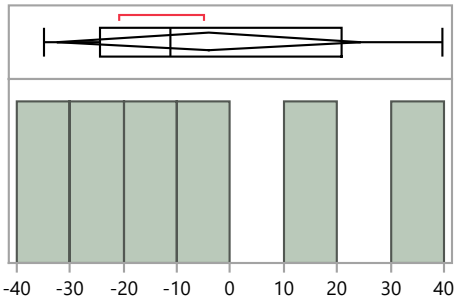


Quantiles		
100.0%	maximum	39.6
99.5%		39.6
97.5%		39.6
90.0%		39.6
75.0%	quartile	-1.6
50.0%	median	-13.4
25.0%	quartile	-24.7
10.0%		-40.5
2.5%		-40.5
0.5%		-40.5
0.0%	minimum	-40.5

Summary Statistics	
Mean	-10.1
Std Dev	22.4
Std Err Mean	7.5
Upper 95% Mean	7.2
Lower 95% Mean	-27.3
N	9.0

Distributions Analyte_Method=Gross alpha Evaporation, straight

Bias

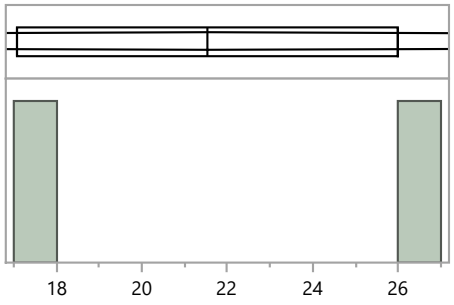


Quantiles		
100.0%	maximum	39.6
99.5%		39.6
97.5%		39.6
90.0%		39.6
75.0%	quartile	20.9
50.0%	median	-11.4
25.0%	quartile	-24.4
10.0%		-35.0
2.5%		-35.0
0.5%		-35.0
0.0%	minimum	-35.0

Summary Statistics	
Mean	-4.1
Std Dev	27.1
Std Err Mean	11.1
Upper 95% Mean	24.4
Lower 95% Mean	-32.5
N	6.0

Distributions Analyte_Method=Gross alpha No preparation - analyzed as received

Bias



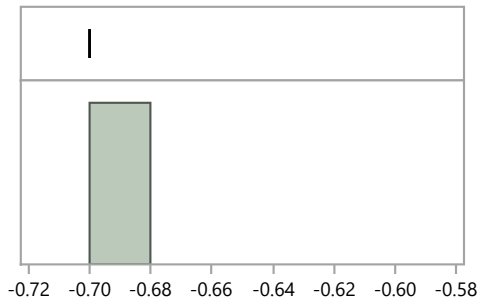
Quantiles		
100.0%	maximum	26.0
99.5%		26.0
97.5%		26.0
90.0%		26.0
75.0%	quartile	26.0
50.0%	median	21.6
25.0%	quartile	17.1
10.0%		17.1
2.5%		17.1
0.5%		17.1
0.0%	minimum	17.1

Summary Statistics	
Mean	21.6
Std Dev	6.3
Std Err Mean	4.5
Upper 95% Mean	78.1
Lower 95% Mean	-35.0
N	2.0

GrW53 Distribution by Preparation Method

Distributions Analyte_Method=Gross beta Coprecipitation, acidified

Bias

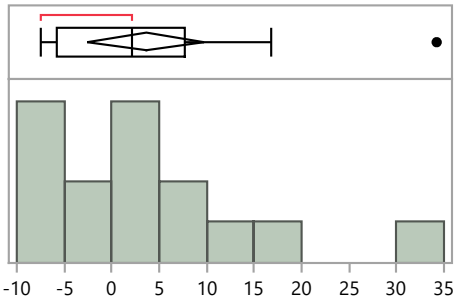


Quantiles		
100.0%	maximum	-0.7
99.5%		-0.7
97.5%		-0.7
90.0%		-0.7
75.0%	quartile	-0.7
50.0%	median	-0.7
25.0%	quartile	-0.7
10.0%		-0.7
2.5%		-0.7
0.5%		-0.7
0.0%	minimum	-0.7

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

Distributions Analyte_Method=Gross beta EPA 900, Radioactivity, Gross Alpha/Beta Screening, 600/4-80-032

Bias

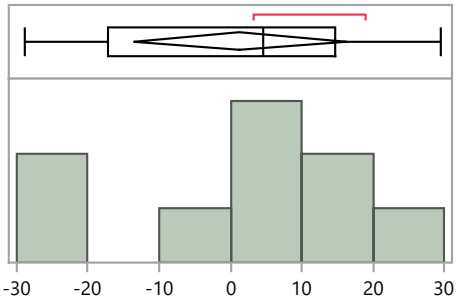


Quantiles		
100.0%	maximum	34.2
99.5%		34.2
97.5%		34.2
90.0%		23.8
75.0%	quartile	7.7
50.0%	median	2.1
25.0%	quartile	-5.8
10.0%		-7.4
2.5%		-7.4
0.5%		-7.4
0.0%	minimum	-7.4

Summary Statistics	
Mean	3.6
Std Dev	11.1
Std Err Mean	2.9
Upper 95% Mean	9.8
Lower 95% Mean	-2.5
N	15.0

Distributions Analyte_Method=Gross beta Evaporation, acidified

Bias



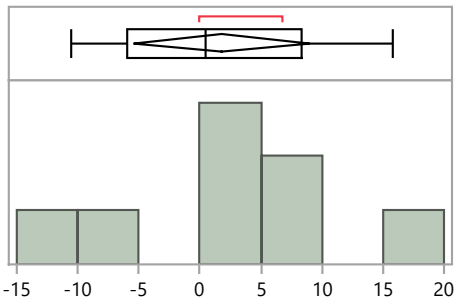
Quantiles		
100.0%	maximum	29.5
99.5%		29.5
97.5%		29.5
90.0%		29.5
75.0%	quartile	14.7
50.0%	median	4.7
25.0%	quartile	-17.1
10.0%		-28.8
2.5%		-28.8
0.5%		-28.8
0.0%	minimum	-28.8

Summary Statistics	
Mean	1.3
Std Dev	19.4
Std Err Mean	6.5
Upper 95% Mean	16.2
Lower 95% Mean	-13.6
N	9.0

GrW53 Distribution by Preparation Method

Distributions Analyte_Method=Gross beta Evaporation, straight

Bias

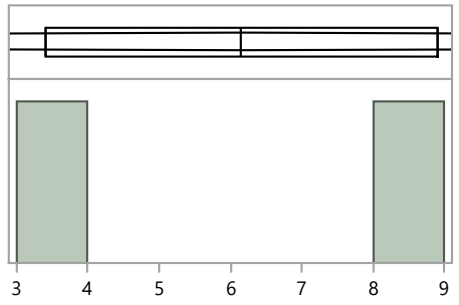


Quantiles		
100.0%	maximum	15.8
99.5%		15.8
97.5%		15.8
90.0%		15.8
75.0%	quartile	8.3
50.0%	median	0.5
25.0%	quartile	-5.9
10.0%		-10.5
2.5%		-10.5
0.5%		-10.5
0.0%	minimum	-10.5

Summary Statistics	
Mean	1.8
Std Dev	8.6
Std Err Mean	3.1
Upper 95% Mean	9.0
Lower 95% Mean	-5.5
N	8.0

Distributions Analyte_Method=Gross beta No preparation - analyzed as received

Bias



Quantiles		
100.0%	maximum	8.9
99.5%		8.9
97.5%		8.9
90.0%		8.9
75.0%	quartile	8.9
50.0%	median	6.2
25.0%	quartile	3.4
10.0%		3.4
2.5%		3.4
0.5%		3.4
0.0%	minimum	3.4

Summary Statistics	
Mean	6.2
Std Dev	3.9
Std Err Mean	2.8
Upper 95% Mean	41.1
Lower 95% Mean	-28.8
N	2.0