

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.

RdV46 Participating Laboratories

| Lab Code | Lab Name | Matrix Code |
|-----------------|---|--------------------|
| ADEM01 | Alabama Department of Environmental Management | RdV |
| ADFC99 | Abu Dhabi Quality and Conformity Council-Central Testing Lab | RdV |
| AMEC99 | Jacobs Clean Energy Limited - Analytical Services | RdV |
| ANTE01 | ALS Environmental - Fort Collins, CO | RdV |
| ARSL01 | ARS Aleut Analytical, LLC | RdV |
| ASUK99 | AWE (Aldermaston) | RdV |
| COPS99 | Health Canada Radiation Protection Bureau | RdV |
| DINL99 | Departamento Ingeniería Energética | RdV |
| ERCL01 | Washington State Public Health Laboratories | RdV |
| ERHD99 | National Monitoring Section, Radiation Protection Bureau, Health Canada | RdV |
| FDHE01 | Florida Dept of Health Environmental Laboratory | RdV |
| FDOH01 | Florida Dept. of Health, Mobile Environmental Radiological Lab | RdV |
| GENE01 | GEL Laboratories, LLC | RdV |
| GPCL01 | Georgia Power Company Environmental Laboratory | RdV |
| HECR01 | SC Dept. Health and Environmental Control Radiological Laboratory | RdV |
| HEMA01 | Illinois Emergency Management Agency Radiochemistry Laboratory | RdV |
| ISUE01 | ISU Environmental Monitoring Laboratory | RdV |
| ISUP01 | ISU - Department of Physics/Health Physics/EAL | RdV |
| LAWR01 | LAWRENCE BERKELEY NATIONAL LABORATORY | RdV |
| LOCK03 | Advanced Test Reactor (ATR) Complex Radioanalytical Laboratory | RdV |
| MDPH01 | MDPH-Radiation Control Program | RdV |
| MSDH01 | Mississippi State Dept of Health | RdV |
| NARL01 | National Analytical Radiation Environmental Laboratory | RdV |
| NJDH01 | New Jersey Dept. of Health, ECLS | RdV |
| NOCS99 | National Oceanography Centre, Southampton | RdV |
| ODHL01 | Ohio Department of Health Laboratory | RdV |
| ORIS01 | ORISE/IEAV | RdV |
| OTLI01 | Pace Analytical National Center for Testing & Innovation | RdV |
| RAVR99 | Radiactividad Ambiental y Vigilancia Radiologica | RdV |
| SANC99 | RadioAnalysis, South Africa Nuclear Energy Corp. | RdV |
| SEML01 | SRS Environmental Monitoring Laboratory | RdV |
| SOUT01 | Southwest Research Institute | RdV |
| SRPD01 | Sandia National Laboratories, Radiation Protection Sample Diagnostics | RdV |
| TDHL01 | Texas Department of State Health Services Laboratory | RdV |
| TELE01 | Teledyne Brown Engineering - Environmental Services | RdV |
| TELE02 | ATI Environmental, Inc., Midwest Lab | RdV |
| TMAO01 | EBERLINE Analytical Corporation | RdV |
| UNTE01 | UniTech-235 | RdV |
| WIPP01 | WIPP Laboratories | RdV |
| WSHL01 | Wisconsin State Laboratory of Hygiene | RdV |
| WSTP99 | Cavendish Nuclear Limited | RdV |

Laboratories Not Reporting

| Lab Code | Lab Name | Matrix Code |
|-----------------|---|--------------------|
| CSSL99 | Chemistry Support Services | RdV |
| DEHS01 | Department of Environmental Health & Safety | RdV |
| DLEA01 | DLE Associates | RdV |
| HPAC99 | PHE, CRCE Glasgow | RdV |
| HSSB99 | HG SOLUTION SDN BHD | RdV |
| IAEA99 | International Atomic Energy Agency | RdV |
| RPSC01 | Radiation Protection Service | RdV |
| WIPH01 | WI, DPH, Radiation Protection Section | RdV |

Study Reference Values

MAPEP-22-RdV46

Radiological Reference Date: 02/01/2022

| Analyte | Ref Value | Ref Unc |
|---------------|--------------------|---------|
| Inorganic | Units: (ug/sample) | |
| Uranium-235 | 0.0434 | 0.0017 |
| Uranium-238 | 5.95 | 0.20 |
| Uranium-Total | 5.99 | 0.20 |

| Analyte | Ref Value | Ref Unc |
|-------------------|--------------------|---------|
| Radiological | Units: (Bq/sample) | |
| Americium-241 | 0.101 | 0.002 |
| Cesium-134 | 7.61 | 0.19 |
| Cesium-137 | 1.52 | 0.03 |
| Cobalt-57 | 5.09 | 0.13 |
| Manganese-54 | 2.59 | 0.06 |
| Plutonium-238 | 0.027 | 0.0005 |
| Plutonium-239/240 | 0.0594 | 0.0017 |
| Strontium-90 | 0.789 | 0.019 |
| Uranium-234 | 0.071 | 0.002 |
| Uranium-238 | 0.074 | 0.002 |
| Zinc-65 | 1.47 | 0.04 |

Sample Statistical Summary

MAPEP-22-RdV46

Radiological Reference Date: 02/01/2022

| Analyte | T(1) | A(2) | Grand(3) Mean | Std Dev | Ref Value | Ref Unc | Acceptance Range |
|---------------|------|------|------------------|------------|--------------|------------|---------------------|
| Inorganic | | | | | | | Units: (ug/sample) |
| Uranium-235 | 4 | 4 | | | 0.0434 | 0.0017 | 0.0304 - 0.0564 |
| Uranium-238 | 6 | 6 | 5.90 | 0.70 | 5.95 | 0.20 | 4.17 - 7.74 |
| Uranium-Total | 6 | 5 | | | 5.99 | 0.20 | 4.19 - 7.79 |

| Analyte | T(1) | A(2) | Grand(3) Mean | Std Dev | Ref Value | Ref Unc | Acceptance Range |
|-------------------|------|------|------------------|------------|--------------|------------|---------------------|
| Radiological | | | | | | | Units: (Bq/sample) |
| Americium-241 | 22 | 19 | 0.097 | 0.013 | 0.101 | 0.002 | 0.071 - 0.131 |
| Cesium-134 | 40 | 36 | 7.40 | 0.69 | 7.61 | 0.19 | 5.33 - 9.89 |
| Cesium-137 | 40 | 37 | 1.61 | 0.19 | 1.52 | 0.03 | 1.06 - 1.98 |
| Cobalt-57 | 40 | 36 | 5.20 | 0.61 | 5.09 | 0.13 | 3.56 - 6.62 |
| Cobalt-60 | 38 | 37 | | | | | False Positive Test |
| Manganese-54 | 40 | 36 | 2.67 | 0.23 | 2.59 | 0.06 | 1.81 - 3.37 |
| Plutonium-238 | 19 | 13 | 0.026 | 0.003 | 0.027 | 0.0005 | 0.019 - 0.035 |
| Plutonium-239/240 | 19 | 17 | 0.0582 | 0.0080 | 0.0594 | 0.0017 | 0.0416 - 0.0772 |
| Strontium-90 | 19 | 12 | 0.779 | 0.079 | 0.789 | 0.019 | 0.552 - 1.026 |
| Uranium-234 | 20 | 17 | 0.073 | 0.008 | 0.071 | 0.002 | 0.050 - 0.092 |
| Uranium-238 | 21 | 17 | 0.076 | 0.005 | 0.074 | 0.002 | 0.052 - 0.096 |
| Zinc-65 | 40 | 35 | 1.49 | 0.16 | 1.47 | 0.04 | 1.03 - 1.91 |

- 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, from large vegetation sample size and values indicated as "Not Acceptable".
 - (4) Uranium Reference values shown for small vegetation sample size only.

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-22-RdV46

Inorganic

| Analyte | A | W | RW | N |
|---------------|---|---|----|---|
| Uranium-Total | 5 | | | 1 |
| Uranium-235 | 4 | | | |
| Uranium-238 | 5 | 1 | | |

Radiological

| Analyte | A | W | RW | N |
|-------------------|----|---|----|---|
| Americium-241 | 17 | 2 | | 3 |
| Cesium-134 | 34 | 2 | | 4 |
| Cesium-137 | 32 | 5 | | 3 |
| Cobalt-57 | 31 | 5 | | 4 |
| Cobalt-60 | 37 | | | 3 |
| Manganese-54 | 34 | 2 | | 4 |
| Plutonium-238 | 13 | | | 6 |
| Plutonium-239/240 | 15 | 2 | | 2 |
| Strontium-90 | 12 | | | 7 |
| Uranium-234 | 15 | 2 | | 3 |
| Uranium-238 | 17 | | | 4 |
| Zinc-65 | 34 | 1 | | 5 |



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

Laboratory Results For MAPEP-22-RdV46
 (ADEM01) Alabama Department of Environmental Management
 1350 Coliseum Blvd.
 Montgomery, AL 36110

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | NR | 0.101 | | | | 0.071 - 0.131 | | |
| Cesium-134 | 7.00 | 7.61 | A | | -8.0 | 5.33 - 9.89 | 0.439 | A |
| Cesium-137 | 1.66 | 1.52 | A | | 9.2 | 1.06 - 1.98 | 0.0952 | A |
| Cobalt-57 | 5.52 | 5.09 | A | | 8.4 | 3.56 - 6.62 | 1.91 | N |
| Cobalt-60 | NR | | N | (11) | | False Positive Test | | |
| Manganese-54 | 2.34 | 2.59 | A | | -9.7 | 1.81 - 3.37 | 0.143 | A |
| Plutonium-238 | NR | 0.027 | | | | 0.019 - 0.035 | | |
| Plutonium-239/240 | NR | 0.0594 | | | | 0.0416 - 0.0772 | | |
| Strontium-90 | NR | 0.789 | | | | 0.552 - 1.026 | | |
| Uranium-234 | NR | 0.071 | | | | 0.050 - 0.092 | | |
| Uranium-238 | NR | 0.074 | | | | 0.052 - 0.096 | | |
| Zinc-65 | 1.27 | 1.47 | A | | -13.6 | 1.03 - 1.91 | 0.139 | A |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46

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

Radiation Lab

Abu Dhabi, - -

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | NR | 0.101 | | | | 0.071 - 0.131 | | |
| Cesium-134 | 6.59 | 7.61 | A | | -13.4 | 5.33 - 9.89 | 0.1 | N |
| Cesium-137 | 1.51 | 1.52 | A | | -0.7 | 1.06 - 1.98 | 0.05 | A |
| Cobalt-57 | 4.86 | 5.09 | A | | -4.5 | 3.56 - 6.62 | 0.11 | A |
| Cobalt-60 | 0.01 | | | A | | False Positive Test | 0.01 | |
| Manganese-54 | 2.51 | 2.59 | A | | -3.1 | 1.81 - 3.37 | 0.07 | A |
| Plutonium-238 | NR | 0.027 | | | | 0.019 - 0.035 | | |
| Plutonium-239/240 | NR | 0.0594 | | | | 0.0416 - 0.0772 | | |
| Strontium-90 | NR | 0.789 | | | | 0.552 - 1.026 | | |
| Uranium-234 | NR | 0.071 | | | | 0.050 - 0.092 | | |
| Uranium-238 | NR | 0.074 | | | | 0.052 - 0.096 | | |
| Zinc-65 | 1.46 | 1.47 | A | | -0.7 | 1.03 - 1.91 | 0.07 | A |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46
 (AMEC99) Jacobs Clean Energy Limited - Analytical Services
 612 Faraday Street
 Birchwood Park, Warrington WA3 6GN

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | 0.65 | 0.101 | N | | 543.6 | 0.071 - 0.131 | 0.51 | N |
| Cesium-134 | 7.76 | 7.61 | A | | 2.0 | 5.33 - 9.89 | 0.83 | A |
| Cesium-137 | 1.75 | 1.52 | A | | 15.1 | 1.06 - 1.98 | 0.44 | W |
| Cobalt-57 | 5.67 | 5.09 | A | | 11.4 | 3.56 - 6.62 | 0.65 | A |
| Cobalt-60 | 0.29 | | A | | | False Positive Test | 0.30 | |
| Manganese-54 | 3.13 | 2.59 | W | | 20.8 | 1.81 - 3.37 | 0.65 | W |
| Plutonium-238 | 0.0171 | 0.027 | N | | -36.7 | 0.019 - 0.035 | 0.0020 | A |
| Plutonium-239/240 | 0.0356 | 0.0594 | N | | -40.1 | 0.0416 - 0.0772 | 0.0029 | A |
| Strontium-90 | 0.406 | 0.789 | N | | -48.5 | 0.552 - 1.026 | 0.056 | A |
| Uranium-234 | 0.0394 | 0.071 | N | | -44.5 | 0.050 - 0.092 | 0.0044 | A |
| Uranium-238 | 0.0456 | 0.074 | N | | -38.4 | 0.052 - 0.096 | 0.0047 | A |
| Zinc-65 | 2.49 | 1.47 | N | | 69.4 | 1.03 - 1.91 | 1.16 | N |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46
 (ANTE01) ALS Environmental - Fort Collins, CO
 225 Commerce Drive
 Fort Collins, CO 80524-1416

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | 0.085 | 0.101 | A | | -15.8 | 0.071 - 0.131 | 0.008 | A |
| Cesium-134 | 5.92 | 7.61 | W | | -22.2 | 5.33 - 9.89 | 0.37 | A |
| Cesium-137 | 1.18 | 1.52 | W | | -22.4 | 1.06 - 1.98 | 0.10 | A |
| Cobalt-57 | 5.12 | 5.09 | A | | 0.6 | 3.56 - 6.62 | 0.31 | A |
| Cobalt-60 | 0.214 | | A | | | False Positive Test | 0.214 | |
| Manganese-54 | 2.60 | 2.59 | A | | 0.4 | 1.81 - 3.37 | 0.18 | A |
| Plutonium-238 | 0.028 | 0.027 | A | | 3.7 | 0.019 - 0.035 | 0.003 | A |
| Plutonium-239/240 | 0.061 | 0.0594 | A | | 2.7 | 0.0416 - 0.0772 | 0.006 | A |
| Strontium-90 | 0.754 | 0.789 | A | | -4.4 | 0.552 - 1.026 | 0.089 | A |
| Uranium-234 | 0.074 | 0.071 | A | | 4.2 | 0.050 - 0.092 | 0.006 | A |
| Uranium-238 | 0.078 | 0.074 | A | | 5.4 | 0.052 - 0.096 | 0.007 | A |
| Zinc-65 | 1.24 | 1.47 | A | | -15.6 | 1.03 - 1.91 | 0.17 | A |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46
 (ARSL01) ARS Aleut Analytical, LLC
 2609 North River Road
 Port Allen, LA 70767

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | NR | 0.101 | | | | 0.071 - 0.131 | | |
| Cesium-134 | 7.826 | 7.61 | A | | 2.8 | 5.33 - 9.89 | 0.277 | A |
| Cesium-137 | 1.770 | 1.52 | A | | 16.4 | 1.06 - 1.98 | 0.070 | A |
| Cobalt-57 | 5.977 | 5.09 | A | | 17.4 | 3.56 - 6.62 | 0.236 | A |
| Cobalt-60 | 0.043 | | | A | | False Positive Test | 0.044 | |
| Manganese-54 | 2.900 | 2.59 | A | | 12.0 | 1.81 - 3.37 | 0.120 | A |
| Plutonium-238 | NR | 0.027 | | | | 0.019 - 0.035 | | |
| Plutonium-239/240 | NR | 0.0594 | | | | 0.0416 - 0.0772 | | |
| Strontium-90 | NR | 0.789 | | | | 0.552 - 1.026 | | |
| Uranium-234 | NR | 0.071 | | | | 0.050 - 0.092 | | |
| Uranium-238 | NR | 0.074 | | | | 0.052 - 0.096 | | |
| Zinc-65 | 1.668 | 1.47 | A | | 13.5 | 1.03 - 1.91 | 0.119 | A |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46

(ASUK99) AWE (Aldermaston)

A38.1 AWE,

Reading, Berkshire RG7 4PR

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | NR | 0.101 | | | | 0.071 - 0.131 | | |
| Cesium-134 | NR | 7.61 | | | | 5.33 - 9.89 | | |
| Cesium-137 | NR | 1.52 | | | | 1.06 - 1.98 | | |
| Cobalt-57 | NR | 5.09 | | | | 3.56 - 6.62 | | |
| Cobalt-60 | NR | | | | | False Positive Test | | |
| Manganese-54 | NR | 2.59 | | | | 1.81 - 3.37 | | |
| Plutonium-238 | 0.0221 | 0.027 | A | | -18.1 | 0.019 - 0.035 | 0.006 | W |
| Plutonium-239/240 | 0.0514 | 0.0594 | A | | -13.5 | 0.0416 - 0.0772 | 0.0137 | W |
| Strontium-90 | NR | 0.789 | | | | 0.552 - 1.026 | | |
| Uranium-234 | 0.0657 | 0.071 | A | | -7.5 | 0.050 - 0.092 | 0.019 | W |
| Uranium-238 | 0.0704 | 0.074 | A | | -4.9 | 0.052 - 0.096 | 0.0203 | W |
| Zinc-65 | NR | 1.47 | | | | 1.03 - 1.91 | | |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46
 (COPS99) Health Canada Radiation Protection Bureau
 2720 Riverside drive
 Ottawa, Ontario K1A0K9

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | NR | 0.101 | | | | 0.071 - 0.131 | | |
| Cesium-134 | 8.634 | 7.61 | A | | 13.5 | 5.33 - 9.89 | 0.204 | A |
| Cesium-137 | 1.749 | 1.52 | A | | 15.1 | 1.06 - 1.98 | 0.108 | A |
| Cobalt-57 | 5.789 | 5.09 | A | | 13.7 | 3.56 - 6.62 | 0.413 | A |
| Cobalt-60 | 0.005 | | | A | | False Positive Test | 0.012 | |
| Manganese-54 | 2.923 | 2.59 | A | | 12.9 | 1.81 - 3.37 | 0.178 | A |
| Plutonium-238 | NR | 0.027 | | | | 0.019 - 0.035 | | |
| Plutonium-239/240 | NR | 0.0594 | | | | 0.0416 - 0.0772 | | |
| Strontium-90 | NR | 0.789 | | | | 0.552 - 1.026 | | |
| Uranium-234 | NR | 0.071 | | | | 0.050 - 0.092 | | |
| Uranium-238 | NR | 0.074 | | | | 0.052 - 0.096 | | |
| Zinc-65 | 1.591 | 1.47 | A | | 8.2 | 1.03 - 1.91 | 0.083 | A |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46
 (DINL99) Departamento Ingeniería Energética
 Escuela de Ingeniería de Bilbao
 Bilbao, Vizcaya 48013

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|----------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | 6.431E+0 | 5.95 | A | | 8.1 | 4.17 - 7.74 | 4.201E-1 | A |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|----------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | 9.958E-2 | 0.101 | A | | -1.4 | 0.071 - 0.131 | 5.308E-3 | A |
| Cesium-134 | 8.131E+1 | 7.61 | N | | 968.5 | 5.33 - 9.89 | 4.276 | A |
| Cesium-137 | 1.733E+1 | 1.52 | N | | 1040.1 | 1.06 - 1.98 | 9.860E-1 | A |
| Cobalt-57 | 5.320E+1 | 5.09 | N | | 945.2 | 3.56 - 6.62 | 2.800 | A |
| Cobalt-60 | 4.434E-1 | | A | | | False Positive Test | 4.434E-1 | |
| Manganese-54 | 2.669E+1 | 2.59 | N | | 930.5 | 1.81 - 3.37 | 1.484 | A |
| Plutonium-238 | 2.710E-2 | 0.027 | A | | 0.4 | 0.019 - 0.035 | 2.180E-3 | A |
| Plutonium-239/240 | 6.152E-2 | 0.0594 | A | | 3.6 | 0.0416 - 0.0772 | 3.727E-3 | A |
| Strontium-90 | 7.560E-1 | 0.789 | A | | -4.2 | 0.552 - 1.026 | 4.522E-2 | A |
| Uranium-234 | 8.046E-2 | 0.071 | A | | 13.3 | 0.050 - 0.092 | 5.257E-3 | A |
| Uranium-238 | 7.999E-2 | 0.074 | A | | 8.1 | 0.052 - 0.096 | 5.225E-3 | A |
| Zinc-65 | 1.507E+1 | 1.47 | N | | 925.2 | 1.03 - 1.91 | 1.016 | A |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46
 (ERCL01) Washington State Public Health Laboratories
 1610 N.E. 150th Street
 Shoreline, WA 98155-9701

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | 0.0446 | 0.0434 | A | | 2.8 | 0.0304 - 0.0564 | 0.0037 | A |
| Uranium-238 | 6.24 | 5.95 | A | | 4.9 | 4.17 - 7.74 | 0.32 | A |
| Uranium-Total | 6.28 | 5.99 | A | | 4.8 | 4.19 - 7.79 | 0.32 | A |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | 0.0752 | 0.101 | W | | -25.5 | 0.071 - 0.131 | 0.0088 | A |
| Cesium-134 | 7.48 | 7.61 | A | | -1.7 | 5.33 - 9.89 | 0.07 | N |
| Cesium-137 | 1.36 | 1.52 | A | | -10.5 | 1.06 - 1.98 | 0.05 | A |
| Cobalt-57 | 4.00 | 5.09 | W | | -21.4 | 3.56 - 6.62 | 0.05 | N |
| Cobalt-60 | -0.001 | | A | | | False Positive Test | 0.028 | |
| Manganese-54 | 2.30 | 2.59 | A | | -11.2 | 1.81 - 3.37 | 0.06 | A |
| Plutonium-238 | 0.0414 | 0.027 | N | | 53.3 | 0.019 - 0.035 | 0.0072 | W |
| Plutonium-239/240 | 0.0441 | 0.0594 | W | | -25.8 | 0.0416 - 0.0772 | 0.0072 | W |
| Strontium-90 | 0.529 | 0.789 | N | | -33.0 | 0.552 - 1.026 | 0.037 | A |
| Uranium-234 | 0.0710 | 0.071 | A | | 0.0 | 0.050 - 0.092 | 0.0096 | A |
| Uranium-238 | 0.0756 | 0.074 | A | | 2.2 | 0.052 - 0.096 | 0.0098 | A |
| Zinc-65 | 1.20 | 1.47 | A | | -18.4 | 1.03 - 1.91 | 0.12 | A |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46

(ERHD99) National Monitoring Section, Radiation Protection Bureau, Health Canada
 775 Brookfield Road AL6302D1
 Ottawa, Ontario K1A 1C1

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | 0.046 | 0.0434 | A | | 6.0 | 0.0304 - 0.0564 | 0.00033 | N |
| Uranium-238 | 6.57 | 5.95 | A | | 10.4 | 4.17 - 7.74 | 0.03 | N |
| Uranium-Total | 6.616 | 5.99 | A | | 10.5 | 4.19 - 7.79 | 0.03 | N |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | 0.1045 | 0.101 | A | | 3.5 | 0.071 - 0.131 | 0.0027 | A |
| Cesium-134 | 7.67 | 7.61 | A | | 0.8 | 5.33 - 9.89 | 0.57 | A |
| Cesium-137 | 1.51 | 1.52 | A | | -0.7 | 1.06 - 1.98 | 0.11 | A |
| Cobalt-57 | 5.29 | 5.09 | A | | 3.9 | 3.56 - 6.62 | 0.39 | A |
| Cobalt-60 | 0.0024 | | A | | | False Positive Test | 0.004 | |
| Manganese-54 | 2.52 | 2.59 | A | | -2.7 | 1.81 - 3.37 | 0.18 | A |
| Plutonium-238 | 0.0316 | 0.027 | A | | 17.0 | 0.019 - 0.035 | 0.0015 | A |
| Plutonium-239/240 | 0.0598 | 0.0594 | A | | 0.7 | 0.0416 - 0.0772 | 0.0020 | A |
| Strontium-90 | 0.834 | 0.789 | A | | 5.7 | 0.552 - 1.026 | 0.014 | N |
| Uranium-234 | 0.0711 | 0.071 | A | | 0.1 | 0.050 - 0.092 | 0.0026 | A |
| Uranium-238 | 0.0767 | 0.074 | A | | 3.6 | 0.052 - 0.096 | 0.0027 | A |
| Zinc-65 | 1.50 | 1.47 | A | | 2.0 | 1.03 - 1.91 | 0.12 | A |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46
 (FDHE01) Florida Dept of Health Environmental Laboratory
 PO Box 680069
 Orlando, FL 32868-0069

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|----------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | 0.104 | 0.101 | A | | 3.0 | 0.071 - 0.131 | 0.469 | N |
| Cesium-134 | 8.082 | 7.61 | A | | 6.2 | 5.33 - 9.89 | 0.159 | N |
| Cesium-137 | 1.733 | 1.52 | A | | 14.0 | 1.06 - 1.98 | 0.082 | A |
| Cobalt-57 | 6.153 | 5.09 | W | | 20.9 | 3.56 - 6.62 | 0.197 | A |
| Cobalt-60 | 0.021 | | A | | | False Positive Test | 0.137 | |
| Manganese-54 | 2.895 | 2.59 | A | | 11.8 | 1.81 - 3.37 | 0.108 | A |
| Plutonium-238 | 0.02375 | 0.027 | A | | -12.0 | 0.019 - 0.035 | 0.0062 | W |
| Plutonium-239/240 | 0.05689 | 0.0594 | A | | -4.2 | 0.0416 - 0.0772 | 0.00785 | A |
| Strontium-90 | 0.3034 | 0.789 | N | | -61.5 | 0.552 - 1.026 | 0.03367 | A |
| Uranium-234 | 0.07177 | 0.071 | A | | 1.1 | 0.050 - 0.092 | 0.0056 | A |
| Uranium-238 | 0.073547 | 0.074 | A | | -0.6 | 0.052 - 0.096 | 0.0057 | A |
| Zinc-65 | 1.718 | 1.47 | A | | 16.9 | 1.03 - 1.91 | 0.120 | A |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46

(FDOH01) Florida Dept. of Health, Mobile Environmental Radiological Lab
 PO Box 680069
 Orlando, FL 32868-0069

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | 0.112 | 0.101 | A | | 10.9 | 0.071 - 0.131 | 0.191 | N |
| Cesium-134 | 7.954 | 7.61 | A | | 4.5 | 5.33 - 9.89 | 0.122 | N |
| Cesium-137 | 1.786 | 1.52 | A | | 17.5 | 1.06 - 1.98 | 0.059 | A |
| Cobalt-57 | 6.107 | 5.09 | A | | 20.0 | 3.56 - 6.62 | 0.155 | A |
| Cobalt-60 | 0.036 | | A | | | False Positive Test | 0.059 | |
| Manganese-54 | 2.869 | 2.59 | A | | 10.8 | 1.81 - 3.37 | 0.088 | A |
| Plutonium-238 | NR | 0.027 | | | | 0.019 - 0.035 | | |
| Plutonium-239/240 | NR | 0.0594 | | | | 0.0416 - 0.0772 | | |
| Strontium-90 | NR | 0.789 | | | | 0.552 - 1.026 | | |
| Uranium-234 | NR | 0.071 | | | | 0.050 - 0.092 | | |
| Uranium-238 | 0.097 | 0.074 | N | | 31.1 | 0.052 - 0.096 | 1.38 | N |
| Zinc-65 | 1.69 | 1.47 | A | | 15.0 | 1.03 - 1.91 | 0.067 | A |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46

(GENE01) GEL Laboratories, LLC

2040 Savage Road

Charleston, SC 29407

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|---------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | 0.0892 | 0.101 | A | | -11.7 | 0.071 - 0.131 | 0.00443 | A |
| Cesium-134 | 7.05 | 7.61 | A | | -7.4 | 5.33 - 9.89 | 0.327 | A |
| Cesium-137 | 1.57 | 1.52 | A | | 3.3 | 1.06 - 1.98 | 0.106 | A |
| Cobalt-57 | 5.06 | 5.09 | A | | -0.6 | 3.56 - 6.62 | 0.22 | A |
| Cobalt-60 | -0.0772 | | | A | | False Positive Test | 0.0462 | |
| Manganese-54 | 2.7 | 2.59 | A | | 4.2 | 1.81 - 3.37 | 0.148 | A |
| Plutonium-238 | 0.0267 | 0.027 | A | | -1.1 | 0.019 - 0.035 | 0.00165 | A |
| Plutonium-239/240 | 0.0625 | 0.0594 | A | | 5.2 | 0.0416 - 0.0772 | 0.00315 | A |
| Strontium-90 | 1.12 | 0.789 | N | | 42.0 | 0.552 - 1.026 | 0.0875 | A |
| Uranium-234 | 0.0763 | 0.071 | A | | 7.5 | 0.050 - 0.092 | 0.00409 | A |
| Uranium-238 | 0.0746 | 0.074 | A | | 0.8 | 0.052 - 0.096 | 0.004 | A |
| Zinc-65 | 1.53 | 1.47 | A | | 4.1 | 1.03 - 1.91 | 0.177 | A |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46
 (GPCL01) Georgia Power Company Environmental Laboratory
 2480 Maner Road
 Atlanta, GA 30339

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | NR | 0.101 | | | | 0.071 - 0.131 | | |
| Cesium-134 | 7.61 | 7.61 | A | | 0.0 | 5.33 - 9.89 | 0.57 | A |
| Cesium-137 | 1.72 | 1.52 | A | | 13.2 | 1.06 - 1.98 | 0.24 | A |
| Cobalt-57 | 5.43 | 5.09 | A | | 6.7 | 3.56 - 6.62 | 0.52 | A |
| Cobalt-60 | 0.02 | | A | | | False Positive Test | 0.12 | |
| Manganese-54 | 2.62 | 2.59 | A | | 1.2 | 1.81 - 3.37 | 0.3 | A |
| Plutonium-238 | NR | 0.027 | | | | 0.019 - 0.035 | | |
| Plutonium-239/240 | NR | 0.0594 | | | | 0.0416 - 0.0772 | | |
| Strontium-90 | NR | 0.789 | | | | 0.552 - 1.026 | | |
| Uranium-234 | NR | 0.071 | | | | 0.050 - 0.092 | | |
| Uranium-238 | NR | 0.074 | | | | 0.052 - 0.096 | | |
| Zinc-65 | 1.48 | 1.47 | A | | 0.7 | 1.03 - 1.91 | 0.36 | W |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46

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

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | NR | 0.101 | | | | 0.071 - 0.131 | | |
| Cesium-134 | 6.393 | 7.61 | A | | -16.0 | 5.33 - 9.89 | 0.3922 | A |
| Cesium-137 | 1.301 | 1.52 | A | | -14.4 | 1.06 - 1.98 | 0.2155 | W |
| Cobalt-57 | 4.241 | 5.09 | A | | -16.7 | 3.56 - 6.62 | 0.3368 | A |
| Cobalt-60 | 0.1277 | | | A | | False Positive Test | 0.1098 | |
| Manganese-54 | 2.436 | 2.59 | A | | -5.9 | 1.81 - 3.37 | 0.3220 | A |
| Plutonium-238 | NR | 0.027 | | | | 0.019 - 0.035 | | |
| Plutonium-239/240 | NR | 0.0594 | | | | 0.0416 - 0.0772 | | |
| Strontium-90 | NR | 0.789 | | | | 0.552 - 1.026 | | |
| Uranium-234 | NR | 0.071 | | | | 0.050 - 0.092 | | |
| Uranium-238 | NR | 0.074 | | | | 0.052 - 0.096 | | |
| Zinc-65 | 1.396 | 1.47 | A | | -5.0 | 1.03 - 1.91 | 0.2779 | W |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46

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

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | 0.0811 | 0.101 | A | | -19.7 | 0.071 - 0.131 | 0.0033 | A |
| Cesium-134 | 7.19 | 7.61 | A | | -5.5 | 5.33 - 9.89 | 0.15 | A |
| Cesium-137 | 1.40 | 1.52 | A | | -7.9 | 1.06 - 1.98 | 0.15 | N |
| Cobalt-57 | 5.05 | 5.09 | A | | -0.8 | 3.56 - 6.62 | 0.12 | A |
| Cobalt-60 | -0.04 | | A | | | False Positive Test | 0.13 | |
| Manganese-54 | 2.51 | 2.59 | A | | -3.1 | 1.81 - 3.37 | 0.17 | A |
| Plutonium-238 | 0.0396 | 0.027 | N | | 46.7 | 0.019 - 0.035 | 0.0035 | A |
| Plutonium-239/240 | 0.0652 | 0.0594 | A | | 9.8 | 0.0416 - 0.0772 | 0.0048 | A |
| Strontium-90 | 0.755 | 0.789 | A | | -4.3 | 0.552 - 1.026 | 0.059 | A |
| Uranium-234 | 0.0777 | 0.071 | A | | 9.4 | 0.050 - 0.092 | 0.0035 | A |
| Uranium-238 | 0.0794 | 0.074 | A | | 7.3 | 0.052 - 0.096 | 0.0036 | A |
| Zinc-65 | 1.42 | 1.47 | A | | -3.4 | 1.03 - 1.91 | 0.27 | W |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46
 (ISUE01) ISU Environmental Monitoring Laboratory
 785 5th 8th Ave Rm B107
 Pocatello, Idaho 83209

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | NR | 0.101 | | | | 0.071 - 0.131 | | |
| Cesium-134 | 7.2 | 7.61 | A | | -5.4 | 5.33 - 9.89 | 0.2 | A |
| Cesium-137 | 1.6 | 1.52 | A | | 5.3 | 1.06 - 1.98 | 0.1 | A |
| Cobalt-57 | 4.8 | 5.09 | A | | -5.7 | 3.56 - 6.62 | 0.4 | A |
| Cobalt-60 | .03 | | | A | | False Positive Test | .02 | |
| Manganese-54 | 2.6 | 2.59 | A | | 0.4 | 1.81 - 3.37 | 0.1 | A |
| Plutonium-238 | NR | 0.027 | | | | 0.019 - 0.035 | | |
| Plutonium-239/240 | NR | 0.0594 | | | | 0.0416 - 0.0772 | | |
| Strontium-90 | NR | 0.789 | | | | 0.552 - 1.026 | | |
| Uranium-234 | NR | 0.071 | | | | 0.050 - 0.092 | | |
| Uranium-238 | NR | 0.074 | | | | 0.052 - 0.096 | | |
| Zinc-65 | 1.3 | 1.47 | A | | -11.6 | 1.03 - 1.91 | 0.1 | A |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46

(ISUP01) ISU - Department of Physics/Health Physics/EAL

785 S. 8th Ave, Rm 120

Pocatello, ID 83209-8106

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | NR | 0.101 | | | | 0.071 - 0.131 | | |
| Cesium-134 | 8.02 | 7.61 | A | | 5.4 | 5.33 - 9.89 | 0.45 | A |
| Cesium-137 | 1.59 | 1.52 | A | | 4.6 | 1.06 - 1.98 | 0.08 | A |
| Cobalt-57 | 5.24 | 5.09 | A | | 2.9 | 3.56 - 6.62 | 0.11 | A |
| Cobalt-60 | 0.161 | | N | (1) | | False Positive Test | 0.01 | |
| Manganese-54 | 2.40 | 2.59 | A | | -7.3 | 1.81 - 3.37 | 0.06 | A |
| Plutonium-238 | NR | 0.027 | | | | 0.019 - 0.035 | | |
| Plutonium-239/240 | NR | 0.0594 | | | | 0.0416 - 0.0772 | | |
| Strontium-90 | NR | 0.789 | | | | 0.552 - 1.026 | | |
| Uranium-234 | NR | 0.071 | | | | 0.050 - 0.092 | | |
| Uranium-238 | NR | 0.074 | | | | 0.052 - 0.096 | | |
| Zinc-65 | 1.57 | 1.47 | A | | 6.8 | 1.03 - 1.91 | 0.13 | A |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46
 (LAWR01) LAWRENCE BERKELEY NATIONAL LABORATORY
 1 CYCLOTRON RD.
 BERKELEY, CA 94720

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|---------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | NR | 0.101 | | | | 0.071 - 0.131 | | |
| Cesium-134 | 7.301 | 7.61 | A | | -4.1 | 5.33 - 9.89 | 0.1995 | A |
| Cesium-137 | 1.745 | 1.52 | A | | 14.8 | 1.06 - 1.98 | 0.06524 | A |
| Cobalt-57 | 5.420 | 5.09 | A | | 6.5 | 3.56 - 6.62 | 0.1279 | A |
| Cobalt-60 | 0.01554 | | | A | | False Positive Test | 0.02025 | |
| Manganese-54 | 2.974 | 2.59 | A | | 14.8 | 1.81 - 3.37 | 0.0977 | A |
| Plutonium-238 | NR | 0.027 | | | | 0.019 - 0.035 | | |
| Plutonium-239/240 | NR | 0.0594 | | | | 0.0416 - 0.0772 | | |
| Strontium-90 | NR | 0.789 | | | | 0.552 - 1.026 | | |
| Uranium-234 | NR | 0.071 | | | | 0.050 - 0.092 | | |
| Uranium-238 | NR | 0.074 | | | | 0.052 - 0.096 | | |
| Zinc-65 | 1.446 | 1.47 | A | | -1.6 | 1.03 - 1.91 | 0.105 | A |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46

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

INL/Battelle Energy Alliance, LLC

Idaho Falls, ID 83415-7111

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | NR | 0.101 | | | | 0.071 - 0.131 | | |
| Cesium-134 | 6.75 | 7.61 | A | | -11.3 | 5.33 - 9.89 | 0.38 | A |
| Cesium-137 | 1.5 | 1.52 | A | | -1.3 | 1.06 - 1.98 | 0.14 | A |
| Cobalt-57 | 4.51 | 5.09 | A | | -11.4 | 3.56 - 6.62 | 0.25 | A |
| Cobalt-60 | -0.05 | | | A | | False Positive Test | 0.08 | |
| Manganese-54 | 2.37 | 2.59 | A | | -8.5 | 1.81 - 3.37 | 0.19 | A |
| Plutonium-238 | NR | 0.027 | | | | 0.019 - 0.035 | | |
| Plutonium-239/240 | NR | 0.0594 | | | | 0.0416 - 0.0772 | | |
| Strontium-90 | NR | 0.789 | | | | 0.552 - 1.026 | | |
| Uranium-234 | NR | 0.071 | | | | 0.050 - 0.092 | | |
| Uranium-238 | NR | 0.074 | | | | 0.052 - 0.096 | | |
| Zinc-65 | 1.26 | 1.47 | A | | -14.3 | 1.03 - 1.91 | 0.21 | W |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46
 (MDPH01) MDPH-Radiation Control Program
 MERL-Room 362
 Jamaica Plain, MA 02130-3597

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | NR | 0.101 | | | | 0.071 - 0.131 | | |
| Cesium-134 | 6.33 | 7.61 | A | | -16.8 | 5.33 - 9.89 | 0.17 | A |
| Cesium-137 | 1.48 | 1.52 | A | | -2.6 | 1.06 - 1.98 | 0.06 | A |
| Cobalt-57 | 4.90 | 5.09 | A | | -3.7 | 3.56 - 6.62 | 0.19 | A |
| Cobalt-60 | NR | | N | (11) | | False Positive Test | | |
| Manganese-54 | 2.55 | 2.59 | A | | -1.5 | 1.81 - 3.37 | 0.09 | A |
| Plutonium-238 | NR | 0.027 | | | | 0.019 - 0.035 | | |
| Plutonium-239/240 | NR | 0.0594 | | | | 0.0416 - 0.0772 | | |
| Strontium-90 | NR | 0.789 | | | | 0.552 - 1.026 | | |
| Uranium-234 | NR | 0.071 | | | | 0.050 - 0.092 | | |
| Uranium-238 | NR | 0.074 | | | | 0.052 - 0.096 | | |
| Zinc-65 | 1.47 | 1.47 | A | | 0.0 | 1.03 - 1.91 | 0.08 | A |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46
 (MSDH01) Mississippi State Dept of Health
 Radiological Environmental Laboratory
 Jackson, MS 39216

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|-----------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | 3.4606E+3 | 0.101 | N | | 3426236 | 0.071 - 0.131 | 2.596 | N |
| Cesium-134 | -1.6893 | 7.61 | N | | -222084. | 5.33 - 9.89 | 7.201 | N |
| Cesium-137 | -1.0410 | 1.52 | N | | -684968. | 1.06 - 1.98 | 4.468 | N |
| Cobalt-57 | 8.7110E+5 | 5.09 | N | | 1711384 | 3.56 - 6.62 | 4.003 | A |
| Cobalt-60 | 1.2322E+4 | | | A | | False Positive Test | 2.654 | |
| Manganese-54 | -5.5590 | 2.59 | N | | -214733. | 1.81 - 3.37 | 4.989 | N |
| Plutonium-238 | NR | 0.027 | | | | 0.019 - 0.035 | | |
| Plutonium-239/240 | NR | 0.0594 | | | | 0.0416 - 0.0772 | | |
| Strontium-90 | NR | 0.789 | | | | 0.552 - 1.026 | | |
| Uranium-234 | NR | 0.071 | | | | 0.050 - 0.092 | | |
| Uranium-238 | NR | 0.074 | | | | 0.052 - 0.096 | | |
| Zinc-65 | 8.0973E+4 | 1.47 | N | | 5508267 | 1.03 - 1.91 | 5.000 | N |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46

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

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | 0.0958 | 0.101 | A | | -5.1 | 0.071 - 0.131 | 0.00984 | A |
| Cesium-134 | 8.00 | 7.61 | A | | 5.1 | 5.33 - 9.89 | 0.445 | A |
| Cesium-137 | 1.49 | 1.52 | A | | -2.0 | 1.06 - 1.98 | 0.112 | A |
| Cobalt-57 | 5.02 | 5.09 | A | | -1.4 | 3.56 - 6.62 | 0.286 | A |
| Cobalt-60 | 0.0288 | | | A | | False Positive Test | 0.0389 | |
| Manganese-54 | 2.53 | 2.59 | A | | -2.3 | 1.81 - 3.37 | 0.17 | A |
| Plutonium-238 | 0.0261 | 0.027 | A | | -3.3 | 0.019 - 0.035 | 0.00385 | A |
| Plutonium-239/240 | 0.0647 | 0.0594 | A | | 8.9 | 0.0416 - 0.0772 | 0.00624 | A |
| Strontium-90 | NR | 0.789 | | | | 0.552 - 1.026 | | |
| Uranium-234 | 0.0918 | 0.071 | W | | 29.3 | 0.050 - 0.092 | 0.00832 | A |
| Uranium-238 | 0.0784 | 0.074 | A | | 5.9 | 0.052 - 0.096 | 0.00755 | A |
| Zinc-65 | 1.62 | 1.47 | A | | 10.2 | 1.03 - 1.91 | 0.237 | A |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46
 (NJDH01) New Jersey Dept. of Health, ECLS
 3 Schwarzkopf Drive
 Ewing, NJ 08628

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | NR | 0.101 | | | | 0.071 - 0.131 | | |
| Cesium-134 | 24.7 | 7.61 | N | | 224.6 | 5.33 - 9.89 | 0.34 | N |
| Cesium-137 | 6.13 | 1.52 | N | | 303.3 | 1.06 - 1.98 | 0.13 | A |
| Cobalt-57 | 22.6 | 5.09 | N | | 344.0 | 3.56 - 6.62 | 0.33 | N |
| Cobalt-60 | 0.02 | | A | | | False Positive Test | 0.03 | |
| Manganese-54 | 10.7 | 2.59 | N | | 313.1 | 1.81 - 3.37 | 0.27 | A |
| Plutonium-238 | NR | 0.027 | | | | 0.019 - 0.035 | | |
| Plutonium-239/240 | NR | 0.0594 | | | | 0.0416 - 0.0772 | | |
| Strontium-90 | NR | 0.789 | | | | 0.552 - 1.026 | | |
| Uranium-234 | NR | 0.071 | | | | 0.050 - 0.092 | | |
| Uranium-238 | NR | 0.074 | | | | 0.052 - 0.096 | | |
| Zinc-65 | 6.11 | 1.47 | N | | 315.6 | 1.03 - 1.91 | 0.23 | A |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46
 (NOCS99) National Oceanography Centre, Southampton
 GAU-Radioanalytical
 Southampton, Hampshire SO14 3ZH

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | 0.041 | 0.0434 | A | | -5.5 | 0.0304 - 0.0564 | 0.003 | A |
| Uranium-238 | 5.60 | 5.95 | A | | -5.9 | 4.17 - 7.74 | 0.07 | N |
| Uranium-Total | 5.90 | 5.99 | A | | -1.5 | 4.19 - 7.79 | 0.04 | N |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | 0.098 | 0.101 | A | | -3.0 | 0.071 - 0.131 | 0.008 | A |
| Cesium-134 | 7.1 | 7.61 | A | | -6.7 | 5.33 - 9.89 | 0.2 | A |
| Cesium-137 | 1.69 | 1.52 | A | | 11.2 | 1.06 - 1.98 | 0.08 | A |
| Cobalt-57 | 5.3 | 5.09 | A | | 4.1 | 3.56 - 6.62 | 0.2 | A |
| Cobalt-60 | 0.2 | | A | | | False Positive Test | 0.9 | |
| Manganese-54 | 2.8 | 2.59 | A | | 8.1 | 1.81 - 3.37 | 0.1 | A |
| Plutonium-238 | 0.024 | 0.027 | A | | -11.1 | 0.019 - 0.035 | 0.002 | A |
| Plutonium-239/240 | 0.054 | 0.0594 | A | | -9.1 | 0.0416 - 0.0772 | 0.004 | A |
| Strontium-90 | 0.77 | 0.789 | A | | -2.4 | 0.552 - 1.026 | 0.07 | A |
| Uranium-234 | 0.068 | 0.071 | A | | -4.2 | 0.050 - 0.092 | 0.004 | A |
| Uranium-238 | 0.073 | 0.074 | A | | -1.4 | 0.052 - 0.096 | 0.004 | A |
| Zinc-65 | 1.7 | 1.47 | A | | 15.6 | 1.03 - 1.91 | 0.1 | A |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46
 (ODHL01) Ohio Department of Health Laboratory
 8995 E Main Street
 Reynoldsburg, OH 43068

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | NR | 0.101 | | | | 0.071 - 0.131 | | |
| Cesium-134 | 7.91 | 7.61 | A | | 3.9 | 5.33 - 9.89 | 0.267 | A |
| Cesium-137 | 1.52 | 1.52 | A | | 0.0 | 1.06 - 1.98 | 0.125 | A |
| Cobalt-57 | 5.09 | 5.09 | A | | 0.0 | 3.56 - 6.62 | 0.403 | A |
| Cobalt-60 | 0.039 | | | A | | False Positive Test | 0.0167 | |
| Manganese-54 | 2.79 | 2.59 | A | | 7.7 | 1.81 - 3.37 | 0.194 | A |
| Plutonium-238 | NR | 0.027 | | | | 0.019 - 0.035 | | |
| Plutonium-239/240 | NR | 0.0594 | | | | 0.0416 - 0.0772 | | |
| Strontium-90 | NR | 0.789 | | | | 0.552 - 1.026 | | |
| Uranium-234 | NR | 0.071 | | | | 0.050 - 0.092 | | |
| Uranium-238 | NR | 0.074 | | | | 0.052 - 0.096 | | |
| Zinc-65 | 1.45 | 1.47 | A | | -1.4 | 1.03 - 1.91 | 0.126 | A |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46

(ORIS01) ORISE/IEAV
 1299 Bethel Valley Road SC-10
 Oak Ridge, TN 37830

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | 0.091 | 0.101 | A | | -9.9 | 0.071 - 0.131 | 0.005 | A |
| Cesium-134 | 7.41 | 7.61 | A | | -2.6 | 5.33 - 9.89 | 0.28 | A |
| Cesium-137 | 1.564 | 1.52 | A | | 2.9 | 1.06 - 1.98 | 0.080 | A |
| Cobalt-57 | 4.85 | 5.09 | A | | -4.7 | 3.56 - 6.62 | 0.10 | A |
| Cobalt-60 | 0.004 | | | A | | False Positive Test | 0.030 | |
| Manganese-54 | 2.63 | 2.59 | A | | 1.5 | 1.81 - 3.37 | 0.11 | A |
| Plutonium-238 | 0.026 | 0.027 | A | | -3.7 | 0.019 - 0.035 | 0.002 | A |
| Plutonium-239/240 | 0.063 | 0.0594 | A | | 6.1 | 0.0416 - 0.0772 | 0.004 | A |
| Strontium-90 | 0.785 | 0.789 | A | | -0.5 | 0.552 - 1.026 | 0.020 | A |
| Uranium-234 | 0.087 | 0.071 | W | | 22.5 | 0.050 - 0.092 | 0.005 | A |
| Uranium-238 | 0.081 | 0.074 | A | | 9.5 | 0.052 - 0.096 | 0.004 | A |
| Zinc-65 | 1.459 | 1.47 | A | | -0.7 | 1.03 - 1.91 | 0.082 | A |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46
 (OTLI01) Pace Analytical National Center for Testing & Innovation
 12065 Lebanon Road
 Mt. Juliet, TN 37122

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | 12.9 | 5.99 | N | | 115.4 | 4.19 - 7.79 | 0.1 | N |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | .063 | 0.101 | N | | -37.6 | 0.071 - 0.131 | .029 | N |
| Cesium-134 | 5.18 | 7.61 | N | | -31.9 | 5.33 - 9.89 | 0.688 | A |
| Cesium-137 | 1.22 | 1.52 | A | | -19.7 | 1.06 - 1.98 | 0.2 | W |
| Cobalt-57 | 3.73 | 5.09 | W | | -26.7 | 3.56 - 6.62 | 0.502 | A |
| Cobalt-60 | .005 | | A | | | False Positive Test | .054 | |
| Manganese-54 | 2.38 | 2.59 | A | | -8.1 | 1.81 - 3.37 | 0.351 | A |
| Plutonium-238 | 0.047 | 0.027 | N | | 74.1 | 0.019 - 0.035 | 0.014 | W |
| Plutonium-239/240 | 0.042 | 0.0594 | W | | -29.3 | 0.0416 - 0.0772 | 0.013 | N |
| Strontium-90 | 0.370 | 0.789 | N | | -53.1 | 0.552 - 1.026 | 0.014 | A |
| Uranium-234 | 0.059 | 0.071 | A | | -16.9 | 0.050 - 0.092 | 0.066 | N |
| Uranium-238 | 0.120 | 0.074 | N | | 62.2 | 0.052 - 0.096 | 0.059 | N |
| Zinc-65 | 1.28 | 1.47 | A | | -12.9 | 1.03 - 1.91 | 0.312 | W |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46
 (RAVR99) Radiactividad Ambiental y Vigilancia Radiologica
 CIEMAT (Ed 70 P2 D11)
 Madrid, Madrid 28040

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | 5.3 | 5.99 | A | | -11.5 | 4.19 - 7.79 | 0.4 | A |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | 0.0920 | 0.101 | A | | -8.9 | 0.071 - 0.131 | 0.0047 | A |
| Cesium-134 | 6.08 | 7.61 | W | | -20.1 | 5.33 - 9.89 | 0.16 | A |
| Cesium-137 | 1.439 | 1.52 | A | | -5.3 | 1.06 - 1.98 | 0.060 | A |
| Cobalt-57 | 3.83 | 5.09 | W | | -24.8 | 3.56 - 6.62 | 0.57 | A |
| Cobalt-60 | 0.01 | | A | | | False Positive Test | 0.1 | |
| Manganese-54 | 2.48 | 2.59 | A | | -4.2 | 1.81 - 3.37 | 0.12 | A |
| Plutonium-238 | 0.0155 | 0.027 | N | | -42.6 | 0.019 - 0.035 | 0.0010 | A |
| Plutonium-239/240 | 0.0359 | 0.0594 | N | | -39.6 | 0.0416 - 0.0772 | 0.0021 | A |
| Strontium-90 | 0.94 | 0.789 | A | | 19.1 | 0.552 - 1.026 | 0.04 | A |
| Uranium-234 | 0.0654 | 0.071 | A | | -7.9 | 0.050 - 0.092 | 0.0034 | A |
| Uranium-238 | 0.0710 | 0.074 | A | | -4.1 | 0.052 - 0.096 | 0.0035 | A |
| Zinc-65 | 1.48 | 1.47 | A | | 0.7 | 1.03 - 1.91 | 0.10 | A |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46
 (SANC99) RadioAnalysis, South Africa Nuclear Energy Corp.
 Sample Receipt Gate 1
 Pretoria, Gauteng 0001

| Inorganic | | | | | | | Units: (ug/sample) | |
|---------------|--------|-----------|------|-------|----------|------------------|--------------------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | 4.67 | 5.95 | W | | -21.5 | 4.17 - 7.74 | 0.68 | A |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | | Units: (Bq/sample) | |
|-------------------|--------|-----------|------|-------|----------|---------------------|--------------------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | 0.11 | 0.101 | A | | 8.9 | 0.071 - 0.131 | 0.02 | W |
| Cesium-134 | 8.49 | 7.61 | A | | 11.6 | 5.33 - 9.89 | 0.51 | A |
| Cesium-137 | 1.75 | 1.52 | A | | 15.1 | 1.06 - 1.98 | 0.11 | A |
| Cobalt-57 | 5.69 | 5.09 | A | | 11.8 | 3.56 - 6.62 | 0.57 | A |
| Cobalt-60 | 0.02 | | A | | | False Positive Test | 0.02 | |
| Manganese-54 | 3.01 | 2.59 | A | | 16.2 | 1.81 - 3.37 | 0.18 | A |
| Plutonium-238 | NR | 0.027 | | | | 0.019 - 0.035 | | |
| Plutonium-239/240 | NR | 0.0594 | | | | 0.0416 - 0.0772 | | |
| Strontium-90 | 1.912 | 0.789 | N | | 142.3 | 0.552 - 1.026 | 0.272 | A |
| Uranium-234 | NR | 0.071 | | | | 0.050 - 0.092 | | |
| Uranium-238 | NR | 0.074 | | | | 0.052 - 0.096 | | |
| Zinc-65 | 1.76 | 1.47 | A | | 19.7 | 1.03 - 1.91 | 0.08 | A |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46
 (SEML01) SRS Environmental Monitoring Laboratory
 Bldg 735-B
 Aiken, SC 29808

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | 0.0871 | 0.101 | A | | -13.8 | 0.071 - 0.131 | 0.0057 | A |
| Cesium-134 | 7.89 | 7.61 | A | | 3.7 | 5.33 - 9.89 | 0.25 | A |
| Cesium-137 | 1.575 | 1.52 | A | | 3.6 | 1.06 - 1.98 | 0.060 | A |
| Cobalt-57 | 5.04 | 5.09 | A | | -1.0 | 3.56 - 6.62 | 0.15 | A |
| Cobalt-60 | 0.051 | | | A | | False Positive Test | 0.018 | |
| Manganese-54 | 2.705 | 2.59 | A | | 4.4 | 1.81 - 3.37 | 0.093 | A |
| Plutonium-238 | 0.0256 | 0.027 | A | | -5.2 | 0.019 - 0.035 | 0.0044 | W |
| Plutonium-239/240 | 0.0644 | 0.0594 | A | | 8.4 | 0.0416 - 0.0772 | 0.0049 | A |
| Strontium-90 | 0.738 | 0.789 | A | | -6.5 | 0.552 - 1.026 | 0.041 | A |
| Uranium-234 | 0.0702 | 0.071 | A | | -1.1 | 0.050 - 0.092 | 0.0052 | A |
| Uranium-238 | 0.0694 | 0.074 | A | | -6.2 | 0.052 - 0.096 | 0.0049 | A |
| Zinc-65 | 1.655 | 1.47 | A | | 12.6 | 1.03 - 1.91 | 0.077 | A |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46
 (SOUT01) Southwest Research Institute
 6220 Culebra Rd.
 San Antonio, TX 78228-0510

| Inorganic | | | | | | | Units: (ug/sample) | |
|---------------|--------|-----------|------|-------|----------|------------------|--------------------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | 0.0439 | 0.0434 | A | | 1.2 | 0.0304 - 0.0564 | 0.00759 | W |
| Uranium-238 | 5.86 | 5.95 | A | | -1.5 | 4.17 - 7.74 | 0.938 | W |
| Uranium-Total | 5.91 | 5.99 | A | | -1.3 | 4.19 - 7.79 | 0.946 | W |

| Radiological | | | | | | | Units: (Bq/sample) | |
|-------------------|--------|-----------|------|-------|----------|---------------------|--------------------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | 0.129 | 0.101 | W | | 27.7 | 0.071 - 0.131 | 0.0149 | A |
| Cesium-134 | 7.56 | 7.61 | A | | -0.7 | 5.33 - 9.89 | 0.334 | A |
| Cesium-137 | 1.87 | 1.52 | W | | 23.0 | 1.06 - 1.98 | 0.128 | A |
| Cobalt-57 | 5.70 | 5.09 | A | | 12.0 | 3.56 - 6.62 | 0.222 | A |
| Cobalt-60 | 0.114 | | A | | | False Positive Test | 0.0733 | |
| Manganese-54 | 2.92 | 2.59 | A | | 12.7 | 1.81 - 3.37 | 0.183 | A |
| Plutonium-238 | 0.0241 | 0.027 | A | | -10.7 | 0.019 - 0.035 | 0.00522 | W |
| Plutonium-239/240 | 0.0711 | 0.0594 | A | | 19.7 | 0.0416 - 0.0772 | 0.00963 | A |
| Strontium-90 | 0.781 | 0.789 | A | | -1.0 | 0.552 - 1.026 | 0.0926 | A |
| Uranium-234 | 0.0930 | 0.071 | N | | 31.0 | 0.050 - 0.092 | 0.0112 | A |
| Uranium-238 | 0.0867 | 0.074 | A | | 17.2 | 0.052 - 0.096 | 0.0107 | A |
| Zinc-65 | 1.57 | 1.47 | A | | 6.8 | 1.03 - 1.91 | 0.206 | A |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46

(SRPD01) Sandia National Laboratories, Radiation Protection Sample Diagnostics
 PO Box 5800, MS1103
 Albuquerque, NM 87185-1103

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|-----------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | NR | 0.101 | | | | 0.071 - 0.131 | | |
| Cesium-134 | 8.45E+00 | 7.61 | A | | 11.0 | 5.33 - 9.89 | 5.39E-01 | A |
| Cesium-137 | 1.93E+00 | 1.52 | W | | 27.0 | 1.06 - 1.98 | 1.75E-01 | A |
| Cobalt-57 | 5.73E+00 | 5.09 | A | | 12.6 | 3.56 - 6.62 | 5.86E-01 | A |
| Cobalt-60 | -1.90E-03 | | A | | | False Positive Test | 7.72E-02 | |
| Manganese-54 | 2.71E+00 | 2.59 | A | | 4.6 | 1.81 - 3.37 | 2.08E-01 | A |
| Plutonium-238 | NR | 0.027 | | | | 0.019 - 0.035 | | |
| Plutonium-239/240 | NR | 0.0594 | | | | 0.0416 - 0.0772 | | |
| Strontium-90 | NR | 0.789 | | | | 0.552 - 1.026 | | |
| Uranium-234 | NR | 0.071 | | | | 0.050 - 0.092 | | |
| Uranium-238 | NR | 0.074 | | | | 0.052 - 0.096 | | |
| Zinc-65 | 1.63E+00 | 1.47 | A | | 10.9 | 1.03 - 1.91 | 2.68E-01 | W |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46
 (TDHL01) Texas Department of State Health Services Laboratory
 1100 W 49th Street
 Austin, TX 78756

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | 0.116 | 0.101 | A | | 14.9 | 0.071 - 0.131 | 0.017 | A |
| Cesium-134 | 7.45 | 7.61 | A | | -2.1 | 5.33 - 9.89 | 0.16 | A |
| Cesium-137 | 1.495 | 1.52 | A | | -1.6 | 1.06 - 1.98 | 0.090 | A |
| Cobalt-57 | 5.55 | 5.09 | A | | 9.0 | 3.56 - 6.62 | 0.16 | A |
| Cobalt-60 | 0.007 | | A | | | False Positive Test | 0.081 | |
| Manganese-54 | 2.59 | 2.59 | A | | 0.0 | 1.81 - 3.37 | 0.11 | A |
| Plutonium-238 | 0.0371 | 0.027 | N | | 37.4 | 0.019 - 0.035 | 0.0086 | W |
| Plutonium-239/240 | 0.050 | 0.0594 | A | | -15.8 | 0.0416 - 0.0772 | 0.010 | W |
| Strontium-90 | 0.657 | 0.789 | A | | -16.7 | 0.552 - 1.026 | 0.024 | A |
| Uranium-234 | 0.067 | 0.071 | A | | -5.6 | 0.050 - 0.092 | 0.010 | A |
| Uranium-238 | 0.080 | 0.074 | A | | 8.1 | 0.052 - 0.096 | 0.011 | A |
| Zinc-65 | 1.09 | 1.47 | W | | -25.9 | 1.03 - 1.91 | 0.14 | A |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46
 (TELE01) Teledyne Brown Engineering - Environmental Services
 2508 Quality Lane
 Knoxville, TN 37931-6819

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | NR | 0.101 | | | | 0.071 - 0.131 | | |
| Cesium-134 | 6.61 | 7.61 | A | | -13.1 | 5.33 - 9.89 | .267 | A |
| Cesium-137 | 1.5 | 1.52 | A | | -1.3 | 1.06 - 1.98 | .148 | A |
| Cobalt-57 | 5.11 | 5.09 | A | | 0.4 | 3.56 - 6.62 | .188 | A |
| Cobalt-60 | .0162 | | A | | | False Positive Test | .0775 | |
| Manganese-54 | 2.42 | 2.59 | A | | -6.6 | 1.81 - 3.37 | .235 | A |
| Plutonium-238 | NR | 0.027 | | | | 0.019 - 0.035 | | |
| Plutonium-239/240 | NR | 0.0594 | | | | 0.0416 - 0.0772 | | |
| Strontium-90 | .684 | 0.789 | A | | -13.3 | 0.552 - 1.026 | .0229 | A |
| Uranium-234 | NR | 0.071 | | | | 0.050 - 0.092 | | |
| Uranium-238 | NR | 0.074 | | | | 0.052 - 0.096 | | |
| Zinc-65 | 1.44 | 1.47 | A | | -2.0 | 1.03 - 1.91 | .344 | W |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46
 (TELE02) ATI Environmental, Inc., Midwest Lab
 700 Landwehr Road
 Northbrook, IL 60062-

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | NR | 0.101 | | | | 0.071 - 0.131 | | |
| Cesium-134 | 7.53 | 7.61 | A | | -1.1 | 5.33 - 9.89 | 0.17 | A |
| Cesium-137 | 1.60 | 1.52 | A | | 5.3 | 1.06 - 1.98 | 0.12 | A |
| Cobalt-57 | 6.21 | 5.09 | W | | 22.0 | 3.56 - 6.62 | 0.17 | A |
| Cobalt-60 | 0.01 | | A | | | False Positive Test | 0.03 | |
| Manganese-54 | 2.94 | 2.59 | A | | 13.5 | 1.81 - 3.37 | 0.14 | A |
| Plutonium-238 | NR | 0.027 | | | | 0.019 - 0.035 | | |
| Plutonium-239/240 | NR | 0.0594 | | | | 0.0416 - 0.0772 | | |
| Strontium-90 | NR | 0.789 | | | | 0.552 - 1.026 | | |
| Uranium-234 | NR | 0.071 | | | | 0.050 - 0.092 | | |
| Uranium-238 | NR | 0.074 | | | | 0.052 - 0.096 | | |
| Zinc-65 | 1.69 | 1.47 | A | | 15.0 | 1.03 - 1.91 | 0.17 | A |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46
 (TMAO01) EBERLINE Analytical Corporation
 601 A SCARBORO RD
 OAK RIDGE, TN 37830-

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | NR | 0.101 | | | | 0.071 - 0.131 | | |
| Cesium-134 | 7.833 | 7.61 | A | | 2.9 | 5.33 - 9.89 | 0.975 | A |
| Cesium-137 | 1.976 | 1.52 | W | | 30.0 | 1.06 - 1.98 | 0.920 | N |
| Cobalt-57 | 6.759 | 5.09 | N | | 32.8 | 3.56 - 6.62 | 1.170 | W |
| Cobalt-60 | 0.042 | | A | | | False Positive Test | 0.692 | |
| Manganese-54 | 2.755 | 2.59 | A | | 6.4 | 1.81 - 3.37 | 0.952 | N |
| Plutonium-238 | NR | 0.027 | | | | 0.019 - 0.035 | | |
| Plutonium-239/240 | NR | 0.0594 | | | | 0.0416 - 0.0772 | | |
| Strontium-90 | NR | 0.789 | | | | 0.552 - 1.026 | | |
| Uranium-234 | 0.118 | 0.071 | N | | 66.2 | 0.050 - 0.092 | 0.009 | A |
| Uranium-238 | 0.108 | 0.074 | N | | 45.9 | 0.052 - 0.096 | 0.009 | A |
| Zinc-65 | 3.023 | 1.47 | N | | 105.6 | 1.03 - 1.91 | 2.013 | N |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46

(UNTE01) UniTech-235

178 Aldo Drive

Barnwell, SC 29812

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | NR | 0.101 | | | | 0.071 - 0.131 | | |
| Cesium-134 | 6.23 | 7.61 | A | | -18.1 | 5.33 - 9.89 | 0.51 | A |
| Cesium-137 | 1.82 | 1.52 | A | | 19.7 | 1.06 - 1.98 | 0.37 | W |
| Cobalt-57 | 5.11 | 5.09 | A | | 0.4 | 3.56 - 6.62 | 0.48 | A |
| Cobalt-60 | 0.02 | | | A | | False Positive Test | 0.01 | |
| Manganese-54 | 1.55 | 2.59 | N | | -40.2 | 1.81 - 3.37 | 0.26 | W |
| Plutonium-238 | NR | 0.027 | | | | 0.019 - 0.035 | | |
| Plutonium-239/240 | NR | 0.0594 | | | | 0.0416 - 0.0772 | | |
| Strontium-90 | NR | 0.789 | | | | 0.552 - 1.026 | | |
| Uranium-234 | NR | 0.071 | | | | 0.050 - 0.092 | | |
| Uranium-238 | NR | 0.074 | | | | 0.052 - 0.096 | | |
| Zinc-65 | 1.65 | 1.47 | A | | 12.2 | 1.03 - 1.91 | 0.67 | N |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46

(WIPP01) WIPP Laboratories

1400 University Drive

Carlsbad, NM 88220

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|----------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | 9.41E-02 | 0.101 | A | | -6.8 | 0.071 - 0.131 | 1.63E-02 | W |
| Cesium-134 | 7.91E+00 | 7.61 | A | | 3.9 | 5.33 - 9.89 | 1.75E-01 | A |
| Cesium-137 | 1.85E+00 | 1.52 | W | | 21.7 | 1.06 - 1.98 | 1.08E-01 | A |
| Cobalt-57 | 5.73E+00 | 5.09 | A | | 12.6 | 3.56 - 6.62 | 1.62E-01 | A |
| Cobalt-60 | 4.14E-03 | | A | | | False Positive Test | 3.91E-02 | |
| Manganese-54 | 3.11E+00 | 2.59 | W | | 20.1 | 1.81 - 3.37 | 1.33E-01 | A |
| Plutonium-238 | 2.74E-02 | 0.027 | A | | 1.5 | 0.019 - 0.035 | 5.66E-03 | W |
| Plutonium-239/240 | 6.43E-02 | 0.0594 | A | | 8.2 | 0.0416 - 0.0772 | 1.29E-02 | W |
| Strontium-90 | 8.91E-01 | 0.789 | A | | 12.9 | 0.552 - 1.026 | 4.32E-02 | A |
| Uranium-234 | 7.73E-02 | 0.071 | A | | 8.9 | 0.050 - 0.092 | 6.53E-03 | A |
| Uranium-238 | 8.18E-02 | 0.074 | A | | 10.5 | 0.052 - 0.096 | 6.85E-03 | A |
| Zinc-65 | 1.48E+00 | 1.47 | A | | 0.7 | 1.03 - 1.91 | 2.26E-01 | W |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46
 (WSHL01) Wisconsin State Laboratory of Hygiene
 2601 Agriculture Drive
 Madison, WI 53718

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|---------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | 0.09609 | 0.101 | A | | -4.9 | 0.071 - 0.131 | 0.00712 | A |
| Cesium-134 | 7.266 | 7.61 | A | | -4.5 | 5.33 - 9.89 | 0.22 | A |
| Cesium-137 | 1.572 | 1.52 | A | | 3.4 | 1.06 - 1.98 | 0.058 | A |
| Cobalt-57 | 4.911 | 5.09 | A | | -3.5 | 3.56 - 6.62 | 0.16 | A |
| Cobalt-60 | 0.0148 | | | A | | False Positive Test | 0.016 | |
| Manganese-54 | 2.543 | 2.59 | A | | -1.8 | 1.81 - 3.37 | 0.115 | A |
| Plutonium-238 | NR | 0.027 | | | | 0.019 - 0.035 | | |
| Plutonium-239/240 | NR | 0.0594 | | | | 0.0416 - 0.0772 | | |
| Strontium-90 | NR | 0.789 | | | | 0.552 - 1.026 | | |
| Uranium-234 | 0.069 | 0.071 | A | | -2.8 | 0.050 - 0.092 | 0.0064 | A |
| Uranium-238 | 0.0703 | 0.074 | A | | -5.0 | 0.052 - 0.096 | 0.0057 | A |
| Zinc-65 | 1.42 | 1.47 | A | | -3.4 | 1.03 - 1.91 | 0.122 | A |

Radiological Reference Date: February 1, 2022

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

Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported



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

Laboratory Results For MAPEP-22-RdV46
 (WSTP99) Cavendish Nuclear Limited
 Greeson Court
 Cumbria, UK CA24 3HZ

| Inorganic | | | | | | Units: (ug/sample) | | |
|---------------|--------|-----------|------|-------|----------|--------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Uranium-235 | NR | 0.0434 | | | | 0.0304 - 0.0564 | | |
| Uranium-238 | NR | 5.95 | | | | 4.17 - 7.74 | | |
| Uranium-Total | NR | 5.99 | | | | 4.19 - 7.79 | | |

| Radiological | | | | | | Units: (Bq/sample) | | |
|-------------------|--------|-----------|------|-------|----------|---------------------|-----------|----------|
| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
| Americium-241 | 0.088 | 0.101 | A | | -12.9 | 0.071 - 0.131 | 0.0063 | A |
| Cesium-134 | 7.75 | 7.61 | A | | 1.8 | 5.33 - 9.89 | 0.27 | A |
| Cesium-137 | 1.657 | 1.52 | A | | 9.0 | 1.06 - 1.98 | 0.084 | A |
| Cobalt-57 | 5.40 | 5.09 | A | | 6.1 | 3.56 - 6.62 | 0.14 | A |
| Cobalt-60 | -0.006 | | | A | | False Positive Test | 0.019 | |
| Manganese-54 | 2.563 | 2.59 | A | | -1.0 | 1.81 - 3.37 | 0.089 | A |
| Plutonium-238 | 0.0222 | 0.027 | A | | -17.8 | 0.019 - 0.035 | 0.0020 | A |
| Plutonium-239/240 | 0.0528 | 0.0594 | A | | -11.1 | 0.0416 - 0.0772 | 0.0039 | A |
| Strontium-90 | 1.162 | 0.789 | N | | 47.3 | 0.552 - 1.026 | 0.065 | A |
| Uranium-234 | NR | 0.071 | | | | 0.050 - 0.092 | | |
| Uranium-238 | NR | 0.074 | | | | 0.052 - 0.096 | | |
| Zinc-65 | 1.485 | 1.47 | A | | 1.0 | 1.03 - 1.91 | 0.091 | A |

Radiological Reference Date: February 1, 2022

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%

Radiological Units: (Bq/sample)

| Analyte | Result | Ref Value | Flag | Notes | Bias (%) | Acceptance Range | Unc Value | Unc Flag |
|---------|--------|-----------|------|-------|----------|------------------|-----------|----------|
|---------|--------|-----------|------|-------|----------|------------------|-----------|----------|

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

NOT ACCEPTABLE.....RP > 30%

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

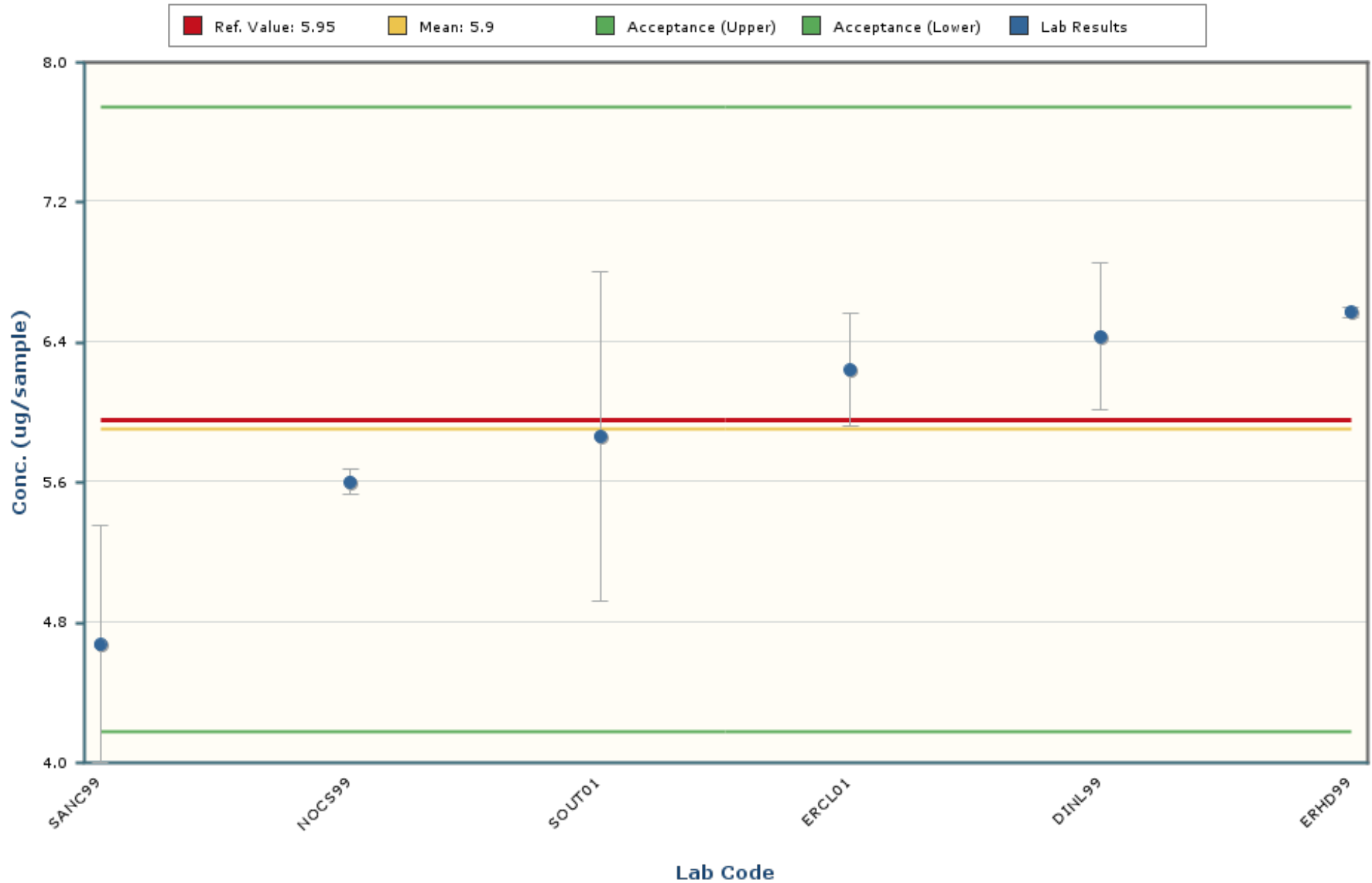
Notes:

(1) = False Positive

(11) = False Positive Test, Result Not Reported

Uranium-238

MAPEP-22-RdV46



Notes:

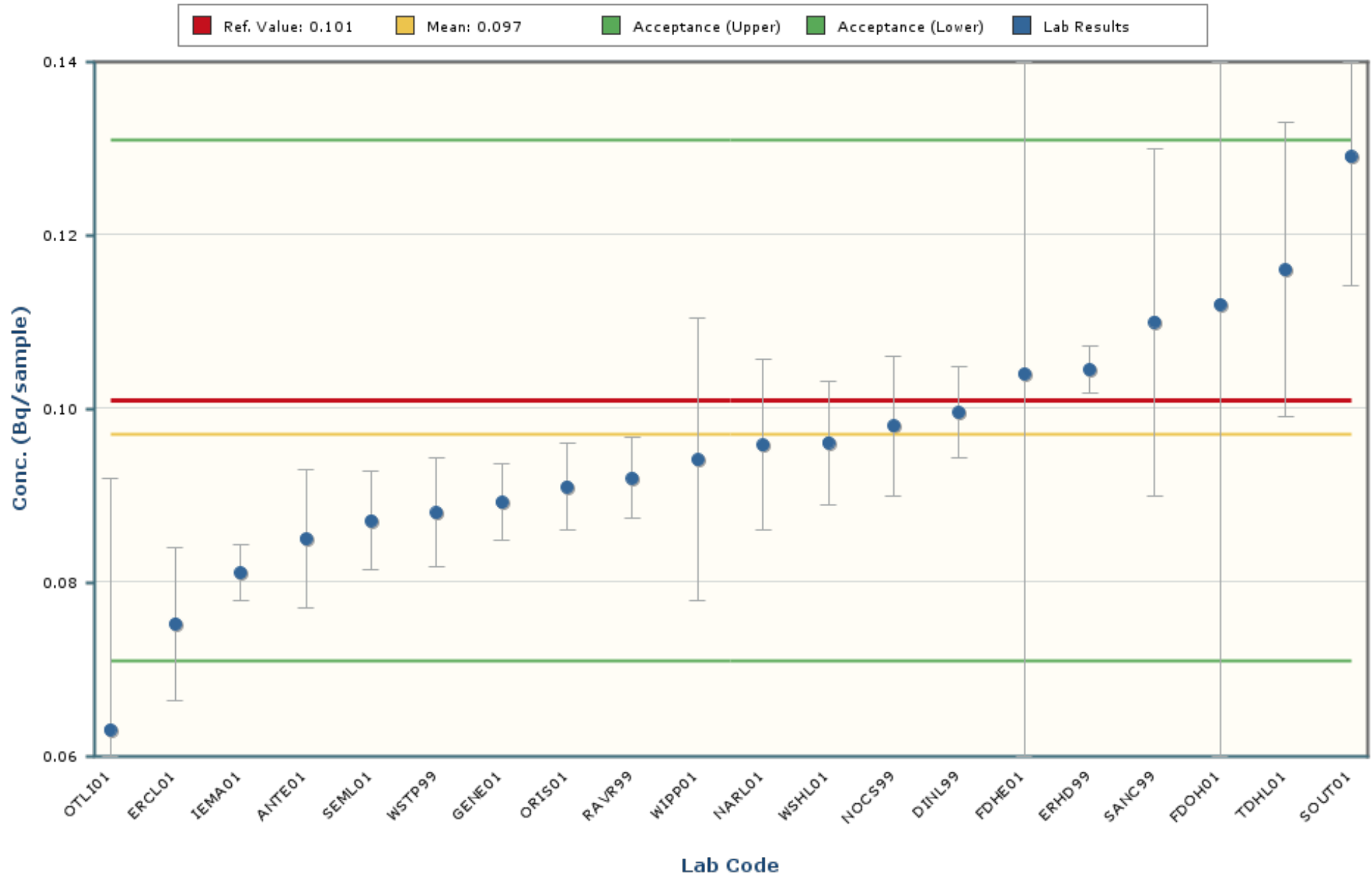
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 2.39 and 9.40 (± 5 Standard Deviations).

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

Americium-241

MAPEP-22-RdV46



Notes:

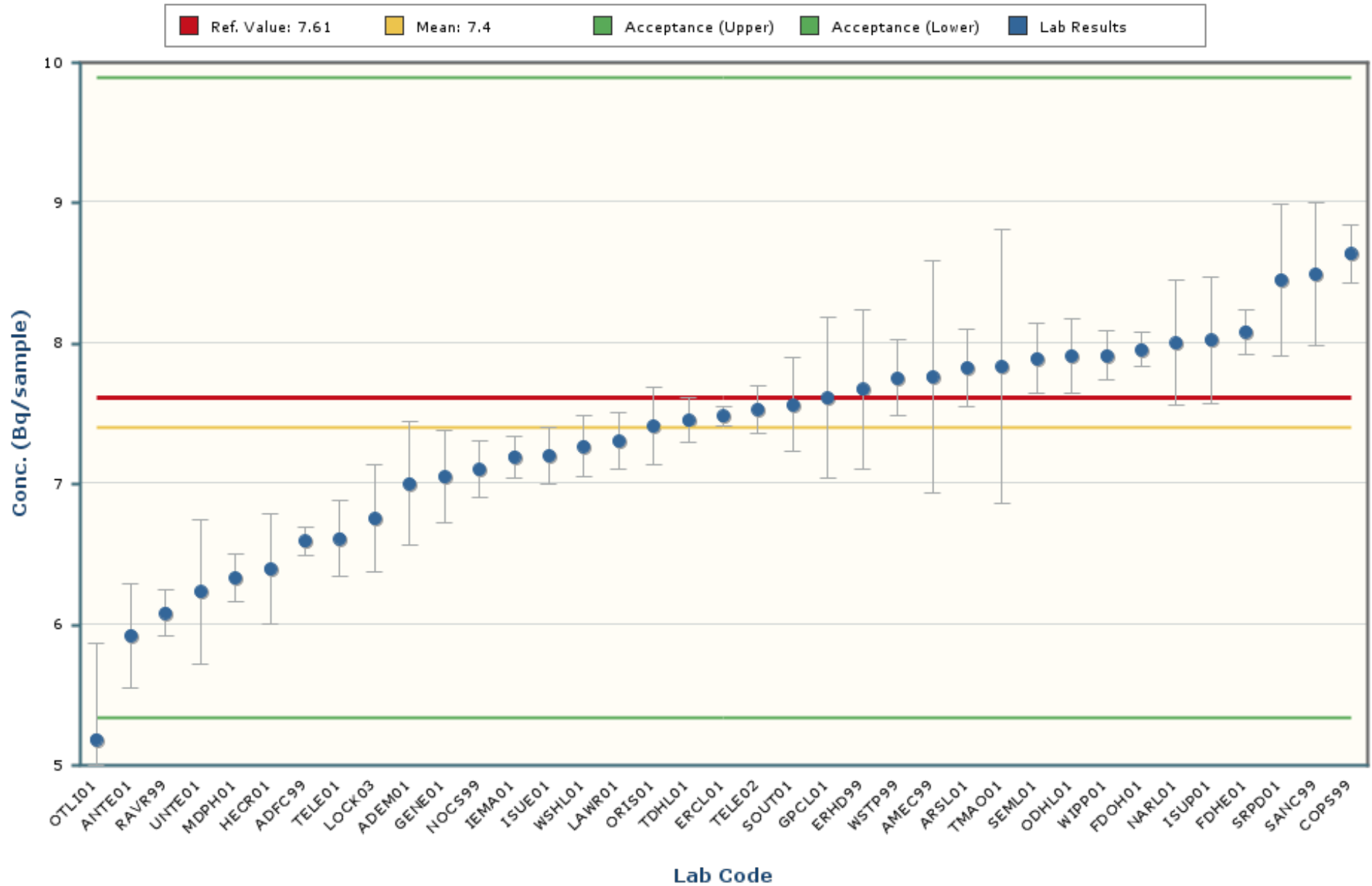
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.032 and 0.163 (± 5 Standard Deviations).

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

Cesium-134

MAPEP-22-RdV46



Notes:

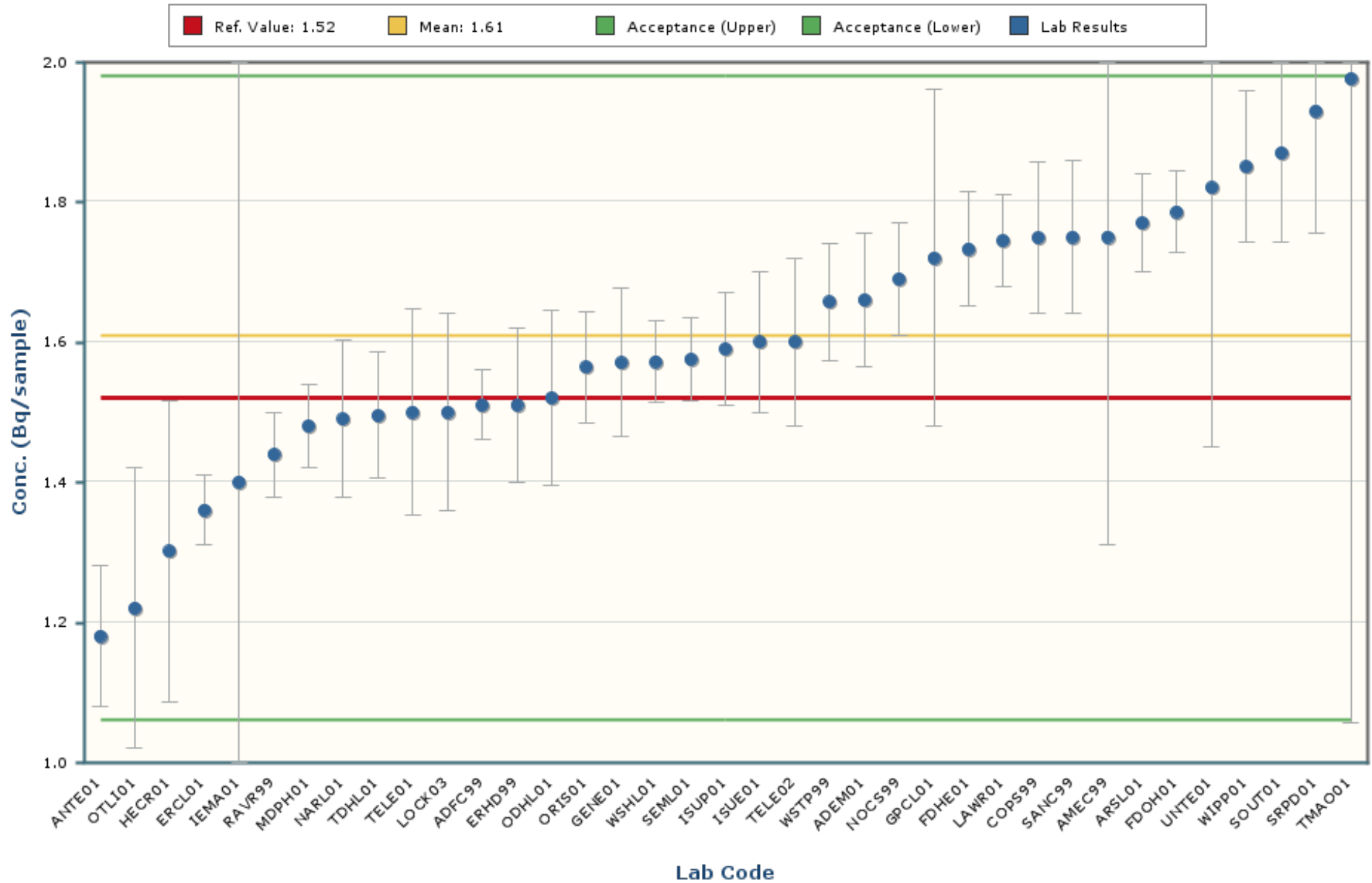
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 3.96 and 10.83 (± 5 Standard Deviations).

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

Cesium-137

MAPEP-22-RdV46



Notes:

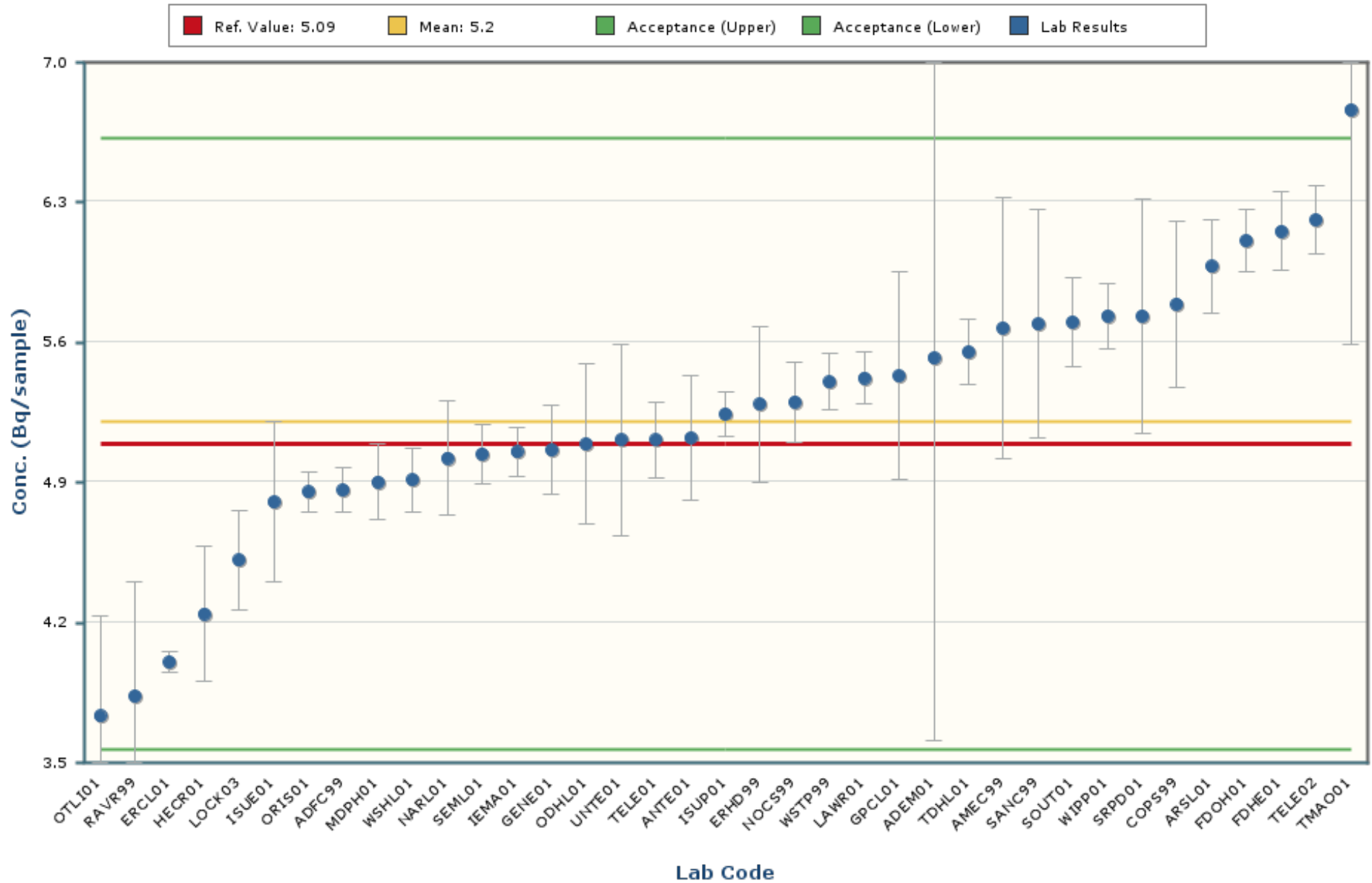
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.67 and 2.54 (± 5 Standard Deviations).

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

Cobalt-57

MAPEP-22-RdV46



Notes:

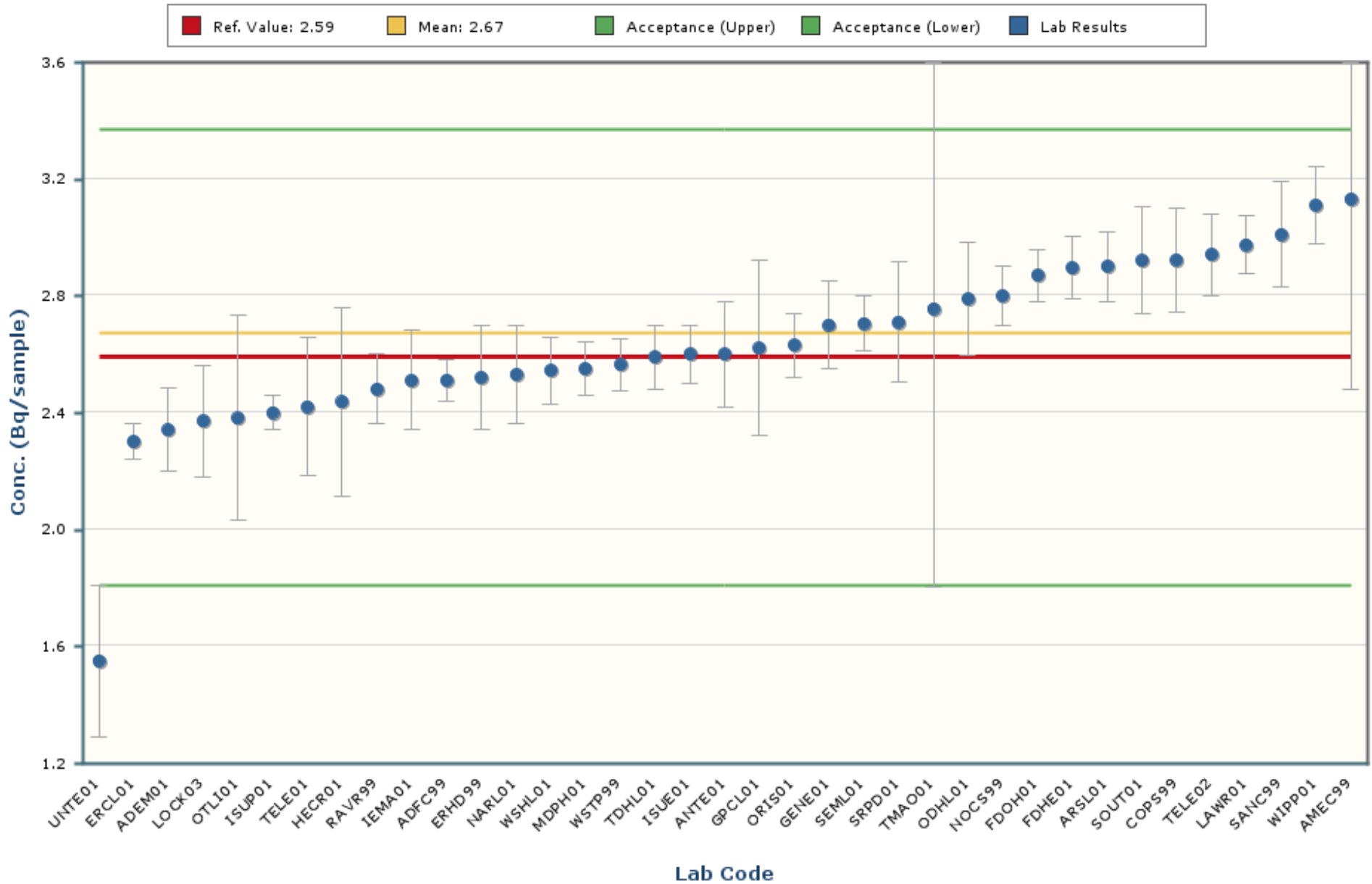
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 2.16 and 8.24 (± 5 Standard Deviations).

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

Manganese-54

MAPEP-22-RdV46



Notes:

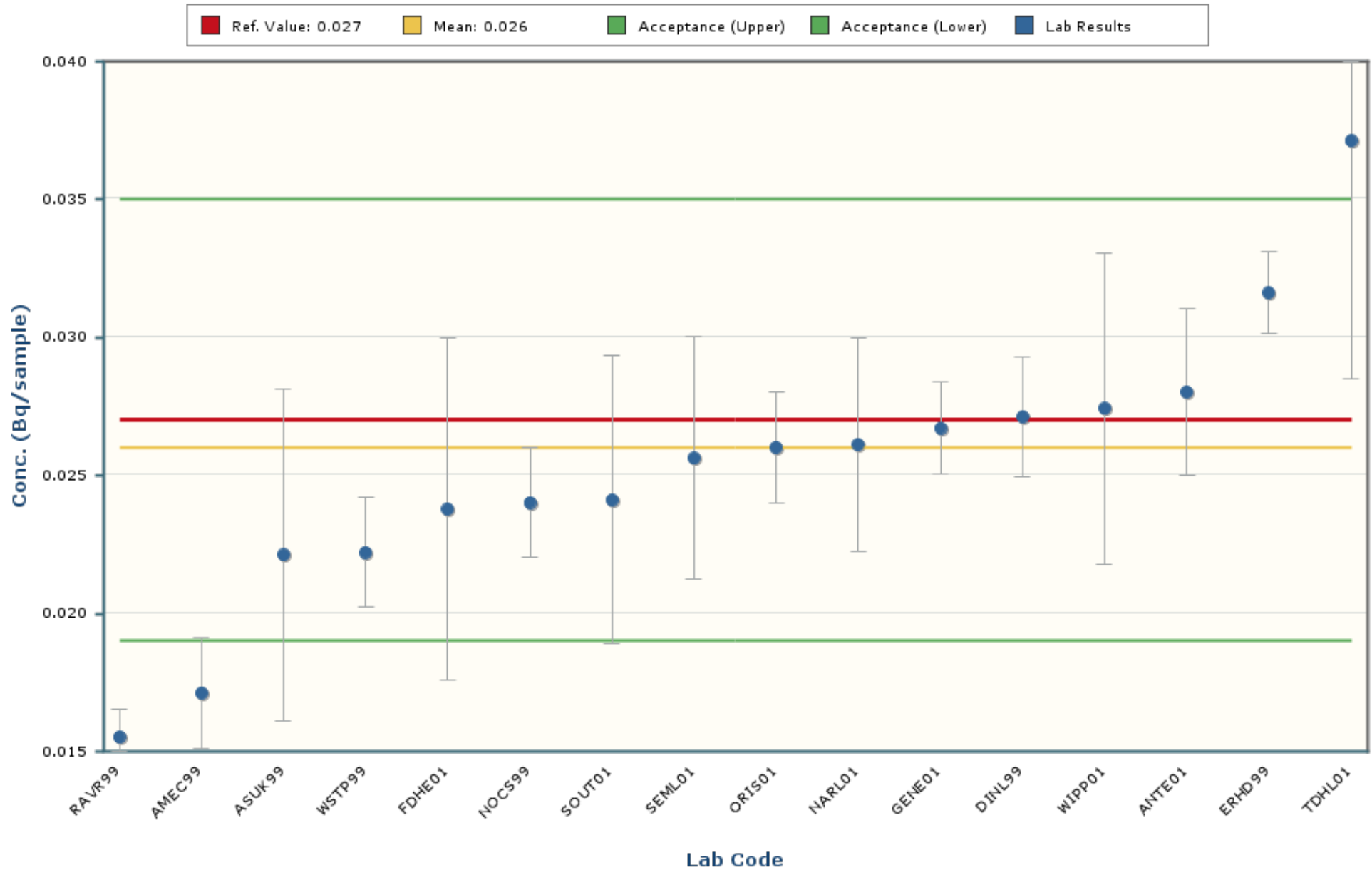
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 1.53 and 3.80 (± 5 Standard Deviations).

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

Plutonium-238

MAPEP-22-RdV46



Notes:

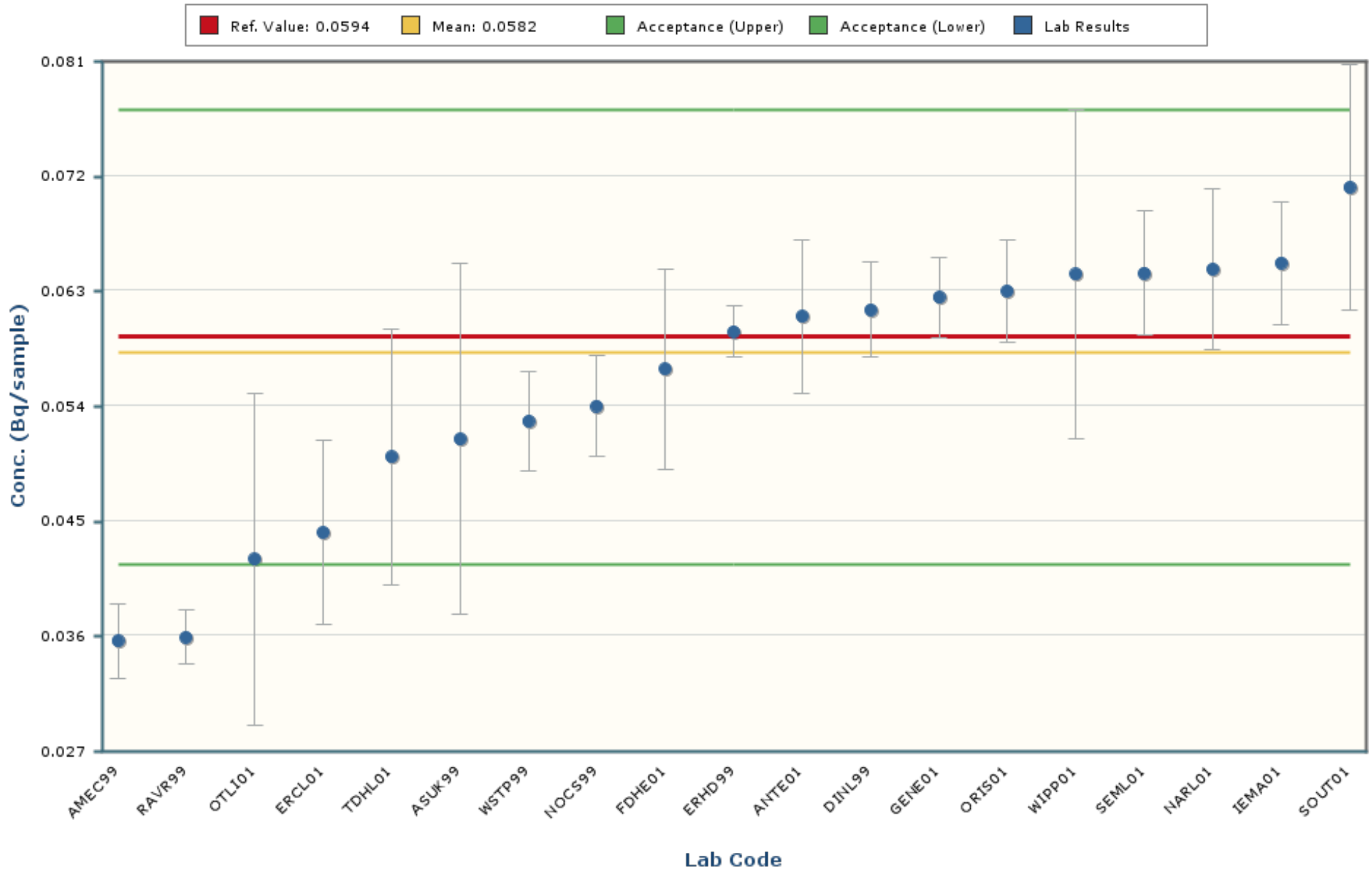
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.013 and 0.039 (± 5 Standard Deviations).

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

Plutonium-239/240

MAPEP-22-RdV46



Notes:

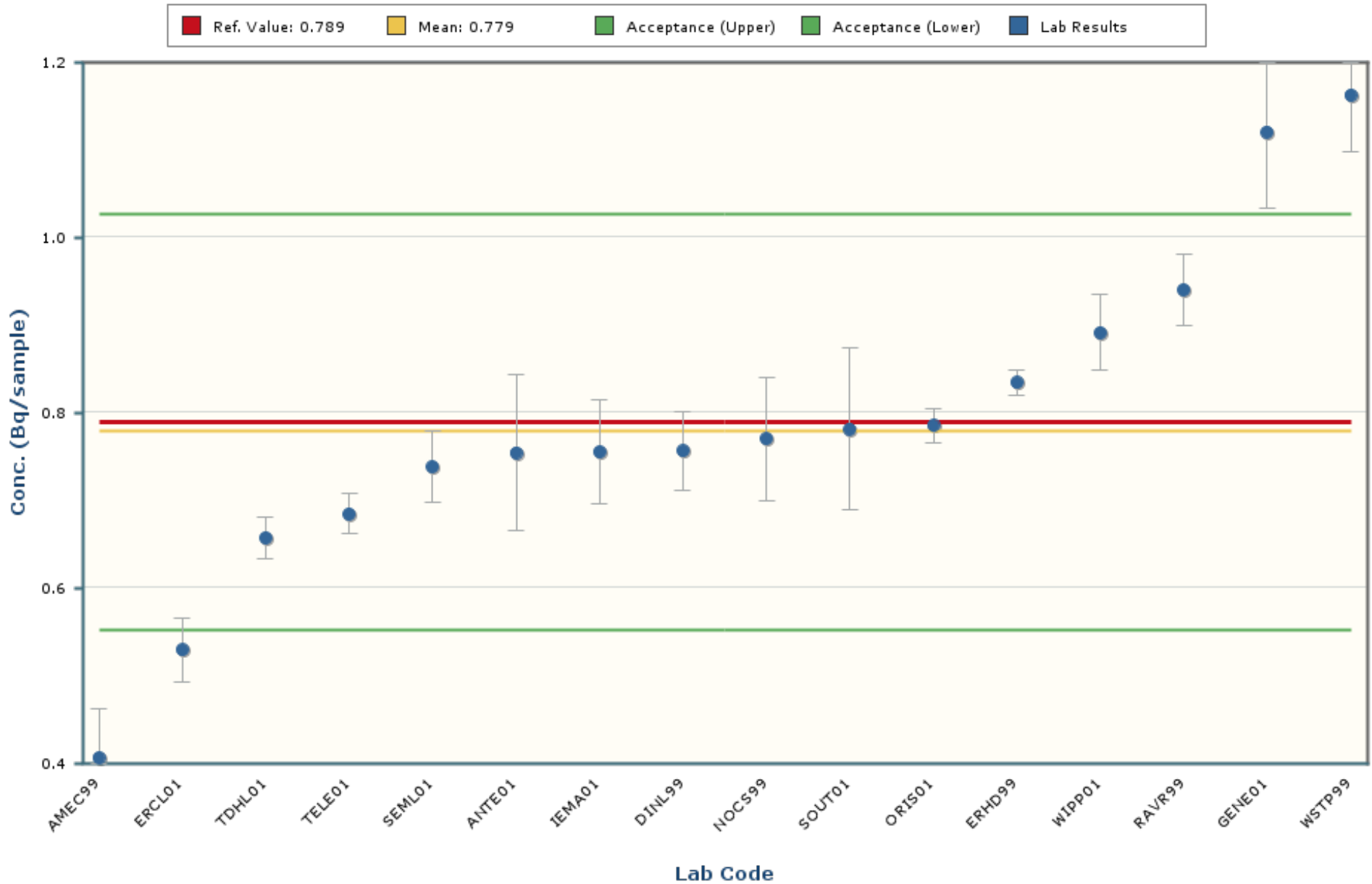
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.0182 and 0.0981 (± 5 Standard Deviations).

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

Strontium-90

MAPEP-22-RdV46



Notes:

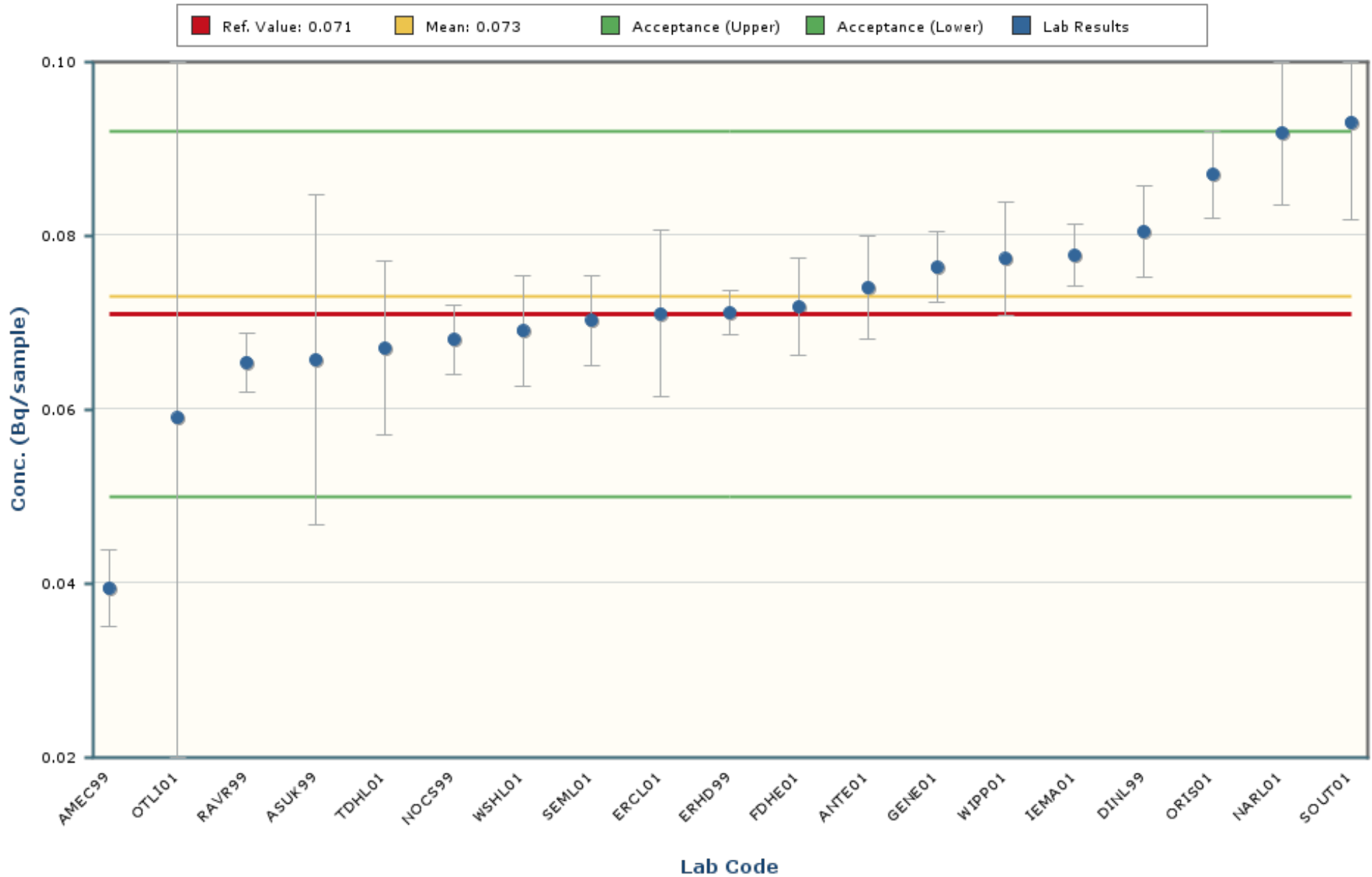
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.383 and 1.175 (± 5 Standard Deviations).

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

Uranium-234

MAPEP-22-RdV46



Notes:

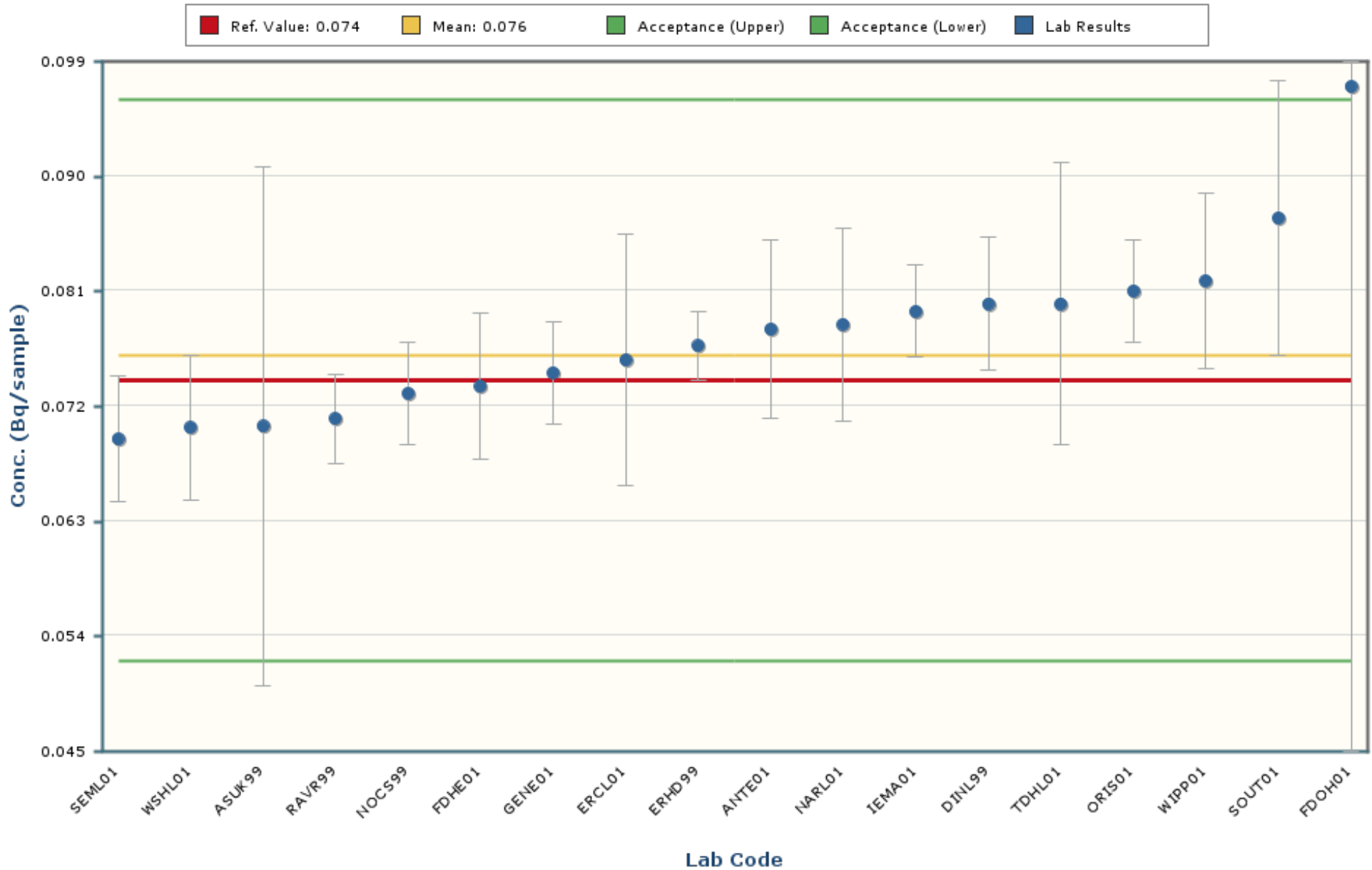
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.032 and 0.114 (± 5 Standard Deviations).

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

Uranium-238

MAPEP-22-RdV46



Notes:

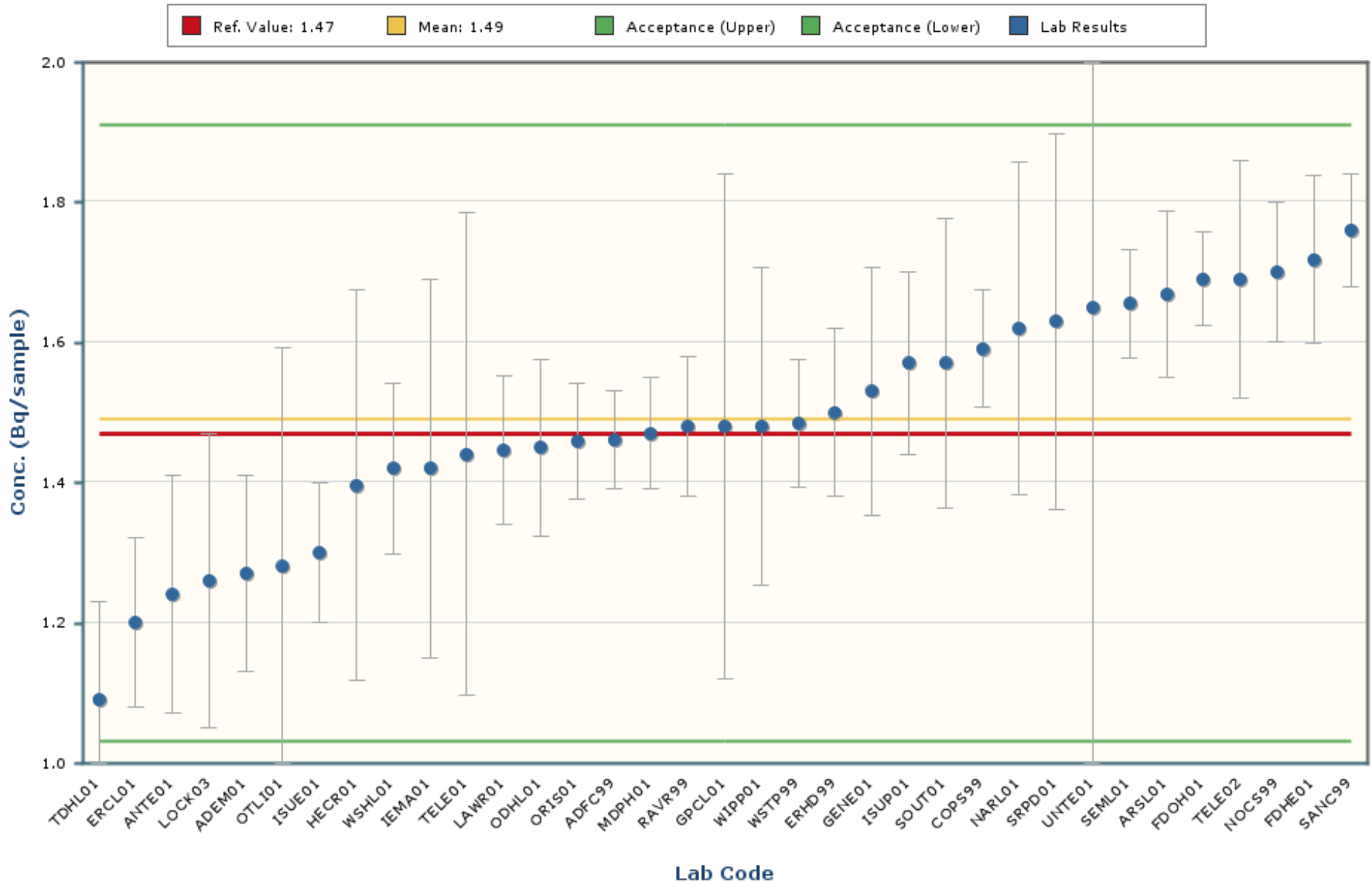
The chart mean excludes values outside of a bias range of $\pm 30\%$.

The chart shows only data points with values between 0.052 and 0.101 (± 5 Standard Deviations).

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

Zinc-65

MAPEP-22-RdV46



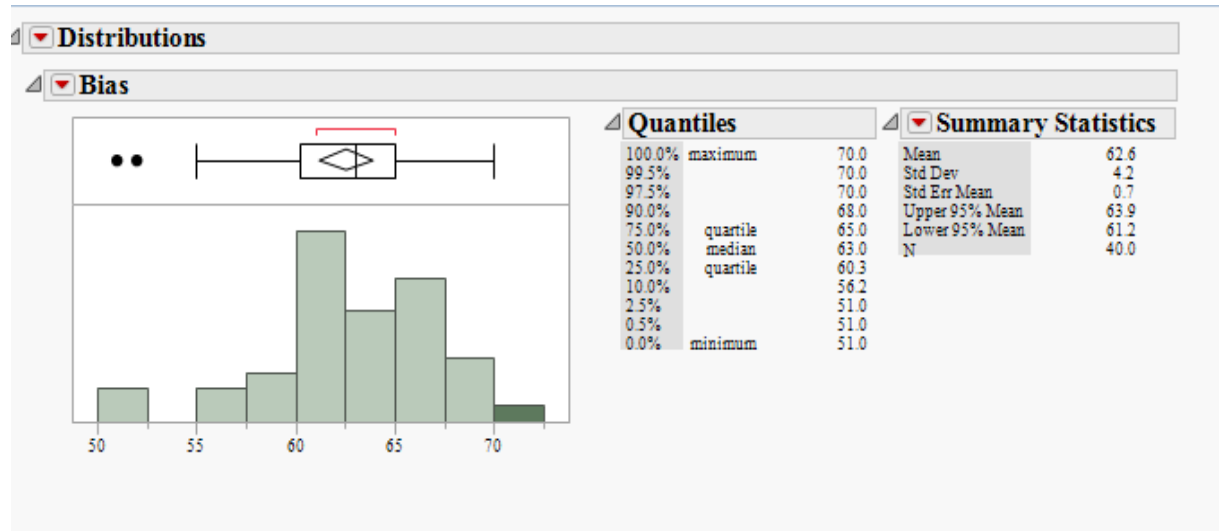
Notes:

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

The chart shows only data points with values between 0.67 and 2.31 (± 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.

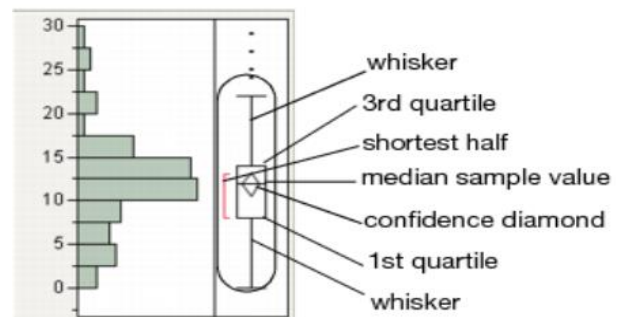


Outlier Box Plot

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)

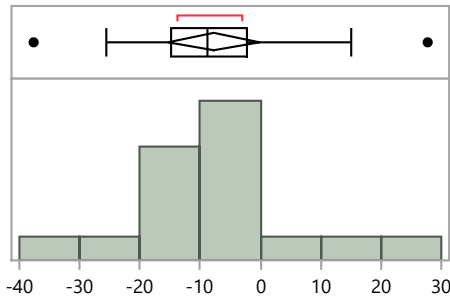


If the data points do not reach the computed ranges, then the whiskers are determined by the upper and lower data point values (not including outliers). The bracket outside of the box identifies the *shortest half*, which is the most dense 50% of the observations (Rousseuw and Leroy 1987).

RdV Distribution by Detection Method

Distributions Analyte_Detection=Americium-241 Alpha Spectrometry

Bias

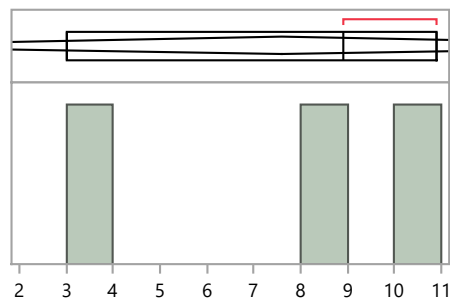


| Quantiles | | |
|-----------|----------|-------|
| 100.0% | maximum | 27.7 |
| 99.5% | | 27.7 |
| 97.5% | | 27.7 |
| 90.0% | | 17.5 |
| 75.0% | quartile | -2.2 |
| 50.0% | median | -8.9 |
| 25.0% | quartile | -14.8 |
| 10.0% | | -27.9 |
| 2.5% | | -37.6 |
| 0.5% | | -37.6 |
| 0.0% | minimum | -37.6 |

| Summary Statistics | |
|--------------------|-------|
| Mean | -7.7 |
| Std Dev | 14.7 |
| Std Err Mean | 3.6 |
| Upper 95% Mean | -0.1 |
| Lower 95% Mean | -15.3 |
| N | 17.0 |

Distributions Analyte_Detection=Americium-241 Gamma Spectrometry

Bias

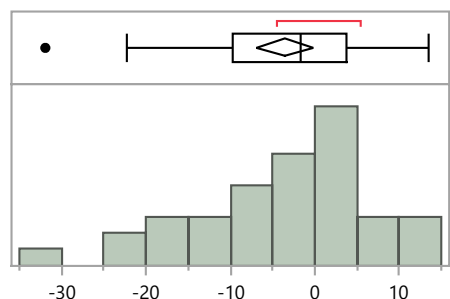


| Quantiles | | |
|-----------|----------|------|
| 100.0% | maximum | 10.9 |
| 99.5% | | 10.9 |
| 97.5% | | 10.9 |
| 90.0% | | 10.9 |
| 75.0% | quartile | 10.9 |
| 50.0% | median | 8.9 |
| 25.0% | quartile | 3.0 |
| 10.0% | | 3.0 |
| 2.5% | | 3.0 |
| 0.5% | | 3.0 |
| 0.0% | minimum | 3.0 |

| Summary Statistics | |
|--------------------|------|
| Mean | 7.6 |
| Std Dev | 4.1 |
| Std Err Mean | 2.4 |
| Upper 95% Mean | 17.8 |
| Lower 95% Mean | -2.6 |
| N | 3.0 |

Distributions Analyte_Detection=Cesium-134 Gamma Spectrometry

Bias



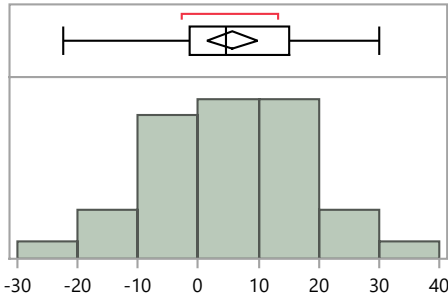
| Quantiles | | |
|-----------|----------|-------|
| 100.0% | maximum | 13.5 |
| 99.5% | | 13.5 |
| 97.5% | | 13.5 |
| 90.0% | | 7.2 |
| 75.0% | quartile | 3.8 |
| 50.0% | median | -1.7 |
| 25.0% | quartile | -9.7 |
| 10.0% | | -18.5 |
| 2.5% | | -31.9 |
| 0.5% | | -31.9 |
| 0.0% | minimum | -31.9 |

| Summary Statistics | |
|--------------------|------|
| Mean | -3.6 |
| Std Dev | 10.1 |
| Std Err Mean | 1.7 |
| Upper 95% Mean | -0.2 |
| Lower 95% Mean | -7.0 |
| N | 37.0 |

RdV Distribution by Detection Method

Distributions Analyte_Detection=Cesium-137 Gamma Spectrometry

Bias

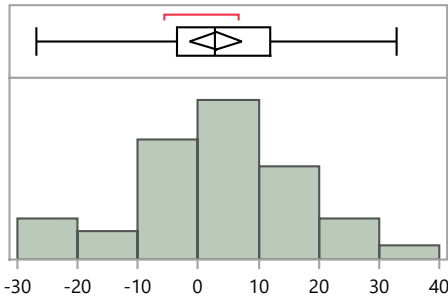


| Quantiles | | |
|-----------|----------|-------|
| 100.0% | maximum | 30.0 |
| 99.5% | | 30.0 |
| 97.5% | | 30.0 |
| 90.0% | | 22.0 |
| 75.0% | quartile | 15.1 |
| 50.0% | median | 4.6 |
| 25.0% | quartile | -1.5 |
| 10.0% | | -11.3 |
| 2.5% | | -22.4 |
| 0.5% | | -22.4 |
| 0.0% | minimum | -22.4 |

| Summary Statistics | |
|--------------------|------|
| Mean | 5.7 |
| Std Dev | 12.2 |
| Std Err Mean | 2.0 |
| Upper 95% Mean | 9.8 |
| Lower 95% Mean | 1.6 |
| N | 37.0 |

Distributions Analyte_Detection=Cobalt-57 Gamma Spectrometry

Bias

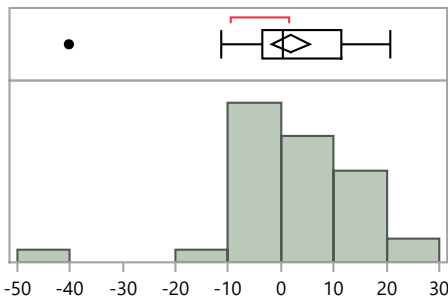


| Quantiles | | |
|-----------|----------|-------|
| 100.0% | maximum | 32.8 |
| 99.5% | | 32.8 |
| 97.5% | | 32.8 |
| 90.0% | | 20.2 |
| 75.0% | quartile | 11.9 |
| 50.0% | median | 2.9 |
| 25.0% | quartile | -3.6 |
| 10.0% | | -17.6 |
| 2.5% | | -26.7 |
| 0.5% | | -26.7 |
| 0.0% | minimum | -26.7 |

| Summary Statistics | |
|--------------------|------|
| Mean | 3.0 |
| Std Dev | 12.8 |
| Std Err Mean | 2.1 |
| Upper 95% Mean | 7.2 |
| Lower 95% Mean | -1.3 |
| N | 37.0 |

Distributions Analyte_Detection=Manganese-54 Gamma Spectrometry

Bias



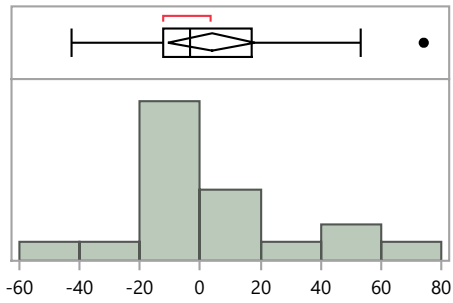
| Quantiles | | |
|-----------|----------|-------|
| 100.0% | maximum | 20.8 |
| 99.5% | | 20.8 |
| 97.5% | | 20.8 |
| 90.0% | | 15.1 |
| 75.0% | quartile | 11.3 |
| 50.0% | median | 0.4 |
| 25.0% | quartile | -3.7 |
| 10.0% | | -8.7 |
| 2.5% | | -40.2 |
| 0.5% | | -40.2 |
| 0.0% | minimum | -40.2 |

| Summary Statistics | |
|--------------------|------|
| Mean | 1.8 |
| Std Dev | 11.2 |
| Std Err Mean | 1.8 |
| Upper 95% Mean | 5.5 |
| Lower 95% Mean | -1.9 |
| N | 37.0 |

RdV Distribution by Detection Method

Distributions Analyte_Detection=Plutonium-238 Alpha Spectrometry

Bias

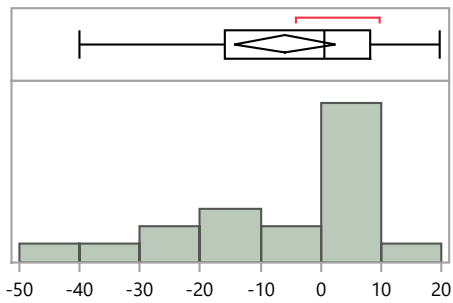


| Quantiles | | |
|-----------|----------|-------|
| 100.0% | maximum | 74.1 |
| 99.5% | | 74.1 |
| 97.5% | | 74.1 |
| 90.0% | | 53.3 |
| 75.0% | quartile | 17.0 |
| 50.0% | median | -3.3 |
| 25.0% | quartile | -12.0 |
| 10.0% | | -36.7 |
| 2.5% | | -42.6 |
| 0.5% | | -42.6 |
| 0.0% | minimum | -42.6 |

| Summary Statistics | |
|--------------------|-------|
| Mean | 3.8 |
| Std Dev | 30.0 |
| Std Err Mean | 6.9 |
| Upper 95% Mean | 18.2 |
| Lower 95% Mean | -10.7 |
| N | 19.0 |

Distributions Analyte_Detection=Plutonium-239/240 Alpha Spectrometry

Bias

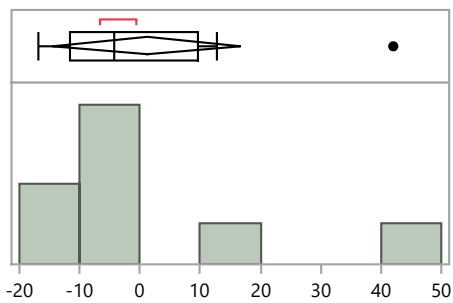


| Quantiles | | |
|-----------|----------|-------|
| 100.0% | maximum | 19.7 |
| 99.5% | | 19.7 |
| 97.5% | | 19.7 |
| 90.0% | | 9.8 |
| 75.0% | quartile | 8.2 |
| 50.0% | median | 0.7 |
| 25.0% | quartile | -15.8 |
| 10.0% | | -39.6 |
| 2.5% | | -40.1 |
| 0.5% | | -40.1 |
| 0.0% | minimum | -40.1 |

| Summary Statistics | |
|--------------------|-------|
| Mean | -6.1 |
| Std Dev | 17.4 |
| Std Err Mean | 4.0 |
| Upper 95% Mean | 2.3 |
| Lower 95% Mean | -14.4 |
| N | 19.0 |

Distributions Analyte_Detection=Strontium-90 Gas Flow Proportional Counter

Bias



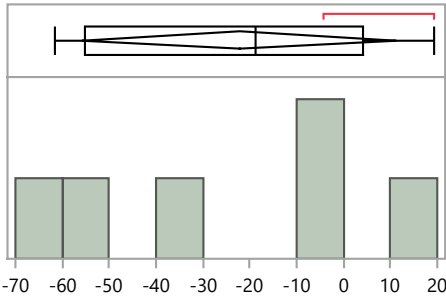
| Quantiles | | |
|-----------|----------|-------|
| 100.0% | maximum | 42.0 |
| 99.5% | | 42.0 |
| 97.5% | | 42.0 |
| 90.0% | | 42.0 |
| 75.0% | quartile | 9.6 |
| 50.0% | median | -4.3 |
| 25.0% | quartile | -11.6 |
| 10.0% | | -16.7 |
| 2.5% | | -16.7 |
| 0.5% | | -16.7 |
| 0.0% | minimum | -16.7 |

| Summary Statistics | |
|--------------------|-------|
| Mean | 1.2 |
| Std Dev | 18.7 |
| Std Err Mean | 6.6 |
| Upper 95% Mean | 16.8 |
| Lower 95% Mean | -14.5 |
| N | 8.0 |

RdV Distribution by Detection Method

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

Bias



Quantiles

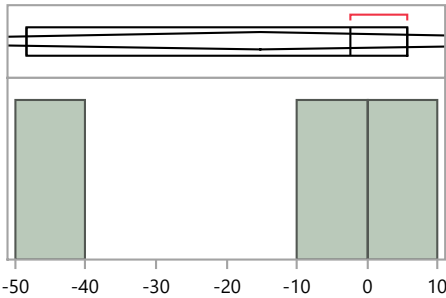
| | | |
|--------|----------|-------|
| 100.0% | maximum | 19.1 |
| 99.5% | | 19.1 |
| 97.5% | | 19.1 |
| 90.0% | | 19.1 |
| 75.0% | quartile | 4.0 |
| 50.0% | median | -18.7 |
| 25.0% | quartile | -55.2 |
| 10.0% | | -61.5 |
| 2.5% | | -61.5 |
| 0.5% | | -61.5 |
| 0.0% | minimum | -61.5 |

Summary Statistics

| | |
|----------------|-------|
| Mean | -22.3 |
| Std Dev | 31.9 |
| Std Err Mean | 13.0 |
| Upper 95% Mean | 11.2 |
| Lower 95% Mean | -55.8 |
| N | 6.0 |

Distributions Analyte_Detection=Strontium-90 Liquid Scintillation Counter

Bias



Quantiles

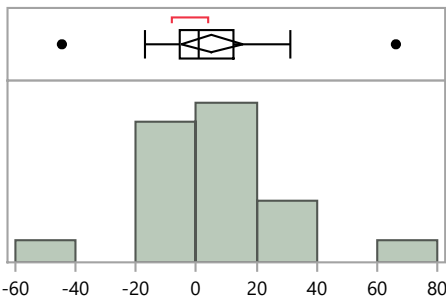
| | | |
|--------|----------|-------|
| 100.0% | maximum | 5.7 |
| 99.5% | | 5.7 |
| 97.5% | | 5.7 |
| 90.0% | | 5.7 |
| 75.0% | quartile | 5.7 |
| 50.0% | median | -2.4 |
| 25.0% | quartile | -48.5 |
| 10.0% | | -48.5 |
| 2.5% | | -48.5 |
| 0.5% | | -48.5 |
| 0.0% | minimum | -48.5 |

Summary Statistics

| | |
|----------------|-------|
| Mean | -15.1 |
| Std Dev | 29.2 |
| Std Err Mean | 16.9 |
| Upper 95% Mean | 57.6 |
| Lower 95% Mean | -87.7 |
| N | 3.0 |

Distributions Analyte_Detection=Uranium-234 Alpha Spectrometry

Bias



Quantiles

| | | |
|--------|----------|-------|
| 100.0% | maximum | 66.2 |
| 99.5% | | 66.2 |
| 97.5% | | 66.2 |
| 90.0% | | 30.8 |
| 75.0% | quartile | 12.3 |
| 50.0% | median | 0.6 |
| 25.0% | quartile | -5.3 |
| 10.0% | | -16.0 |
| 2.5% | | -44.5 |
| 0.5% | | -44.5 |
| 0.0% | minimum | -44.5 |

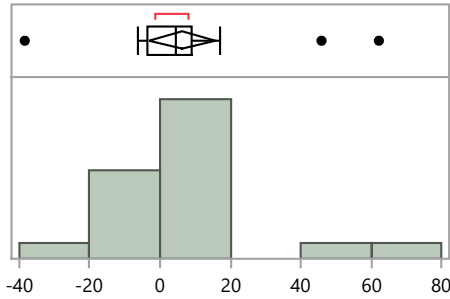
Summary Statistics

| | |
|----------------|------|
| Mean | 5.2 |
| Std Dev | 21.8 |
| Std Err Mean | 4.9 |
| Upper 95% Mean | 15.4 |
| Lower 95% Mean | -5.1 |
| N | 20.0 |

RdV Distribution by Detection Method

Distributions Analyte_Detection=Uranium-238 Alpha Spectrometry

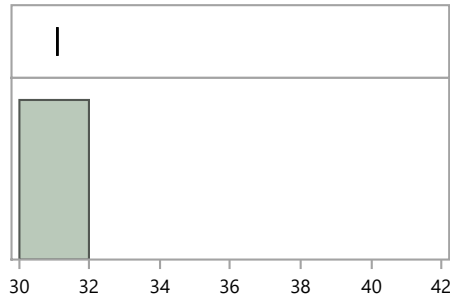
Bias



| Quantiles | | | Summary Statistics | |
|-----------|----------|-------|--------------------|------|
| 100.0% | maximum | 62.2 | Mean | 6.3 |
| 99.5% | | 62.2 | Std Dev | 19.9 |
| 97.5% | | 62.2 | Std Err Mean | 4.5 |
| 90.0% | | 43.0 | Upper 95% Mean | 15.6 |
| 75.0% | quartile | 9.2 | Lower 95% Mean | -3.0 |
| 50.0% | median | 4.5 | N | 20.0 |
| 25.0% | quartile | -3.4 | | |
| 10.0% | | -6.1 | | |
| 2.5% | | -38.4 | | |
| 0.5% | | -38.4 | | |
| 0.0% | minimum | -38.4 | | |

Distributions Analyte_Detection=Uranium-238 Gamma Spectrometry

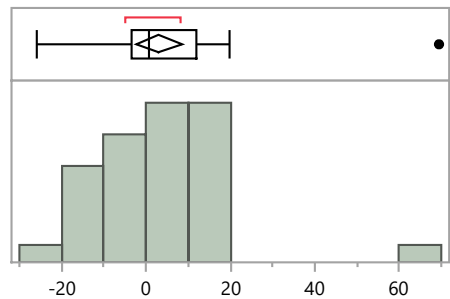
Bias



| Quantiles | | | Summary Statistics | |
|-----------|----------|------|--------------------|------|
| 100.0% | maximum | 31.1 | Mean | 31.1 |
| 99.5% | | 31.1 | Std Dev | . |
| 97.5% | | 31.1 | Std Err Mean | . |
| 90.0% | | 31.1 | Upper 95% Mean | . |
| 75.0% | quartile | 31.1 | Lower 95% Mean | . |
| 50.0% | median | 31.1 | N | 1.0 |
| 25.0% | quartile | 31.1 | | |
| 10.0% | | 31.1 | | |
| 2.5% | | 31.1 | | |
| 0.5% | | 31.1 | | |
| 0.0% | minimum | 31.1 | | |

Distributions Analyte_Detection=Zinc-65 Gamma Spectrometry

Bias

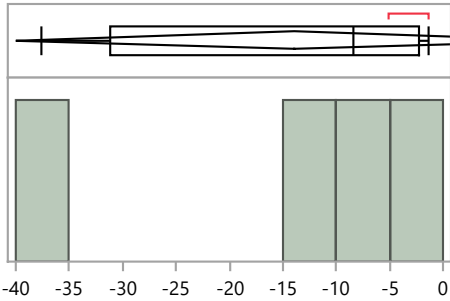


| Quantiles | | | Summary Statistics | |
|-----------|----------|-------|--------------------|------|
| 100.0% | maximum | 69.4 | Mean | 3.1 |
| 99.5% | | 69.4 | Std Dev | 15.8 |
| 97.5% | | 69.4 | Std Err Mean | 2.6 |
| 90.0% | | 16.0 | Upper 95% Mean | 8.4 |
| 75.0% | quartile | 11.9 | Lower 95% Mean | -2.2 |
| 50.0% | median | 0.7 | N | 36.0 |
| 25.0% | quartile | -3.4 | | |
| 10.0% | | -14.7 | | |
| 2.5% | | -25.9 | | |
| 0.5% | | -25.9 | | |
| 0.0% | minimum | -25.9 | | |

RdV Distribution by Prep Method

Distributions Analyte_Method=Americium-241 Acid dissolution with hydrofluoric acid

Bias



Quantiles

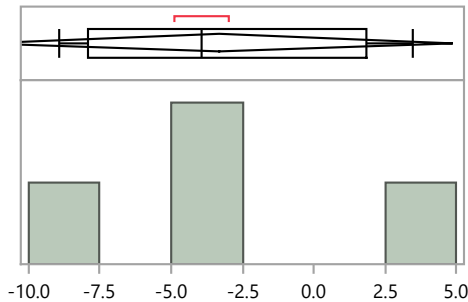
| | | |
|--------|----------|-------|
| 100.0% | maximum | -1.4 |
| 99.5% | | -1.4 |
| 97.5% | | -1.4 |
| 90.0% | | -1.4 |
| 75.0% | quartile | -2.3 |
| 50.0% | median | -8.4 |
| 25.0% | quartile | -31.1 |
| 10.0% | | -37.6 |
| 2.5% | | -37.6 |
| 0.5% | | -37.6 |
| 0.0% | minimum | -37.6 |

Summary Statistics

| | |
|----------------|-------|
| Mean | -14.0 |
| Std Dev | 16.3 |
| Std Err Mean | 8.2 |
| Upper 95% Mean | 12.0 |
| Lower 95% Mean | -39.9 |
| N | 4.0 |

Distributions Analyte_Method=Americium-241 Acid leaching without hydrofluoric acid

Bias



Quantiles

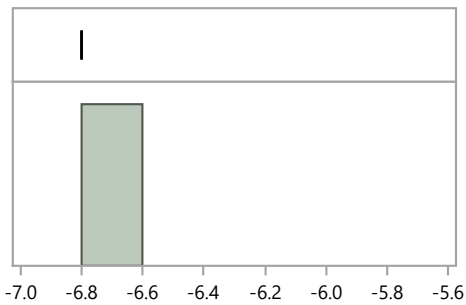
| | | |
|--------|----------|------|
| 100.0% | maximum | 3.5 |
| 99.5% | | 3.5 |
| 97.5% | | 3.5 |
| 90.0% | | 3.5 |
| 75.0% | quartile | 1.9 |
| 50.0% | median | -4.0 |
| 25.0% | quartile | -7.9 |
| 10.0% | | -8.9 |
| 2.5% | | -8.9 |
| 0.5% | | -8.9 |
| 0.0% | minimum | -8.9 |

Summary Statistics

| | |
|----------------|-------|
| Mean | -3.3 |
| Std Dev | 5.2 |
| Std Err Mean | 2.6 |
| Upper 95% Mean | 4.9 |
| Lower 95% Mean | -11.6 |
| N | 4.0 |

Distributions Analyte_Method=Americium-241 Coprecipitation, 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 |

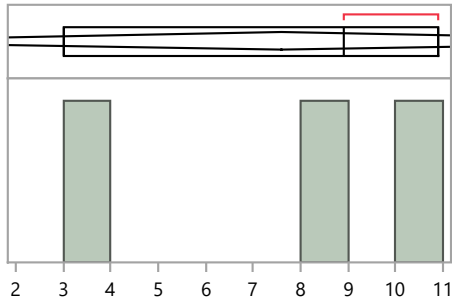
Summary Statistics

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

RdV Distribution by Prep Method

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

Bias



Quantiles

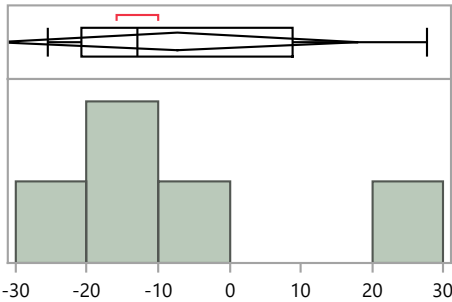
| | | |
|--------|----------|------|
| 100.0% | maximum | 10.9 |
| 99.5% | | 10.9 |
| 97.5% | | 10.9 |
| 90.0% | | 10.9 |
| 75.0% | quartile | 10.9 |
| 50.0% | median | 8.9 |
| 25.0% | quartile | 3.0 |
| 10.0% | | 3.0 |
| 2.5% | | 3.0 |
| 0.5% | | 3.0 |
| 0.0% | minimum | 3.0 |

Summary Statistics

| | |
|----------------|------|
| Mean | 7.6 |
| Std Dev | 4.1 |
| Std Err Mean | 2.4 |
| Upper 95% Mean | 17.8 |
| Lower 95% Mean | -2.6 |
| N | 3.0 |

Distributions Analyte_Method=Americium-241 Other

Bias



Quantiles

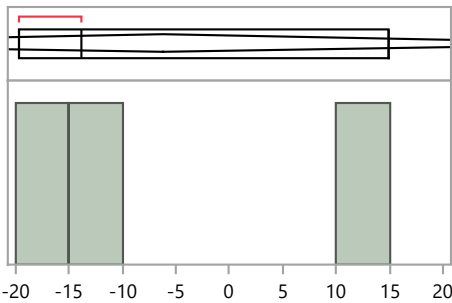
| | | |
|--------|----------|-------|
| 100.0% | maximum | 27.7 |
| 99.5% | | 27.7 |
| 97.5% | | 27.7 |
| 90.0% | | 27.7 |
| 75.0% | quartile | 8.9 |
| 50.0% | median | -12.9 |
| 25.0% | quartile | -20.7 |
| 10.0% | | -25.5 |
| 2.5% | | -25.5 |
| 0.5% | | -25.5 |
| 0.0% | minimum | -25.5 |

Summary Statistics

| | |
|----------------|-------|
| Mean | -7.3 |
| Std Dev | 20.4 |
| Std Err Mean | 9.1 |
| Upper 95% Mean | 18.1 |
| Lower 95% Mean | -32.6 |
| N | 5.0 |

Distributions Analyte_Method=Americium-241 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 | -13.8 |
| 25.0% | quartile | -19.7 |
| 10.0% | | -19.7 |
| 2.5% | | -19.7 |
| 0.5% | | -19.7 |
| 0.0% | minimum | -19.7 |

Summary Statistics

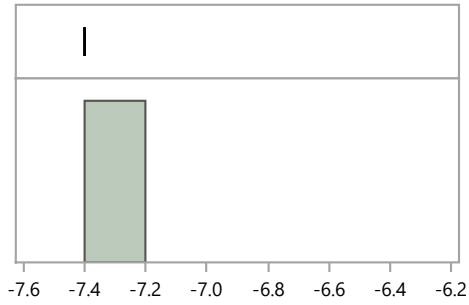
| | |
|----------------|-------|
| Mean | -6.2 |
| Std Dev | 18.5 |
| Std Err Mean | 10.7 |
| Upper 95% Mean | 39.8 |
| Lower 95% Mean | -52.2 |
| N | 3.0 |

RdV46 Distribution by Preparation Method

RdV Distribution by Prep Method

Distributions Analyte_Method=Cesium-134 Acid dissolution with hydrofluoric acid

Bias



Quantiles

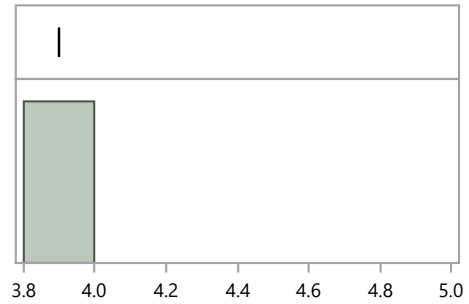
| | | |
|--------|----------|------|
| 100.0% | maximum | -7.4 |
| 99.5% | | -7.4 |
| 97.5% | | -7.4 |
| 90.0% | | -7.4 |
| 75.0% | quartile | -7.4 |
| 50.0% | median | -7.4 |
| 25.0% | quartile | -7.4 |
| 10.0% | | -7.4 |
| 2.5% | | -7.4 |
| 0.5% | | -7.4 |
| 0.0% | minimum | -7.4 |

Summary Statistics

| | |
|----------------|------|
| Mean | -7.4 |
| Std Dev | . |
| Std Err Mean | . |
| Upper 95% Mean | . |
| Lower 95% Mean | . |
| N | 1.0 |

Distributions Analyte_Method=Cesium-134 Coprecipitation, acidified

Bias



Quantiles

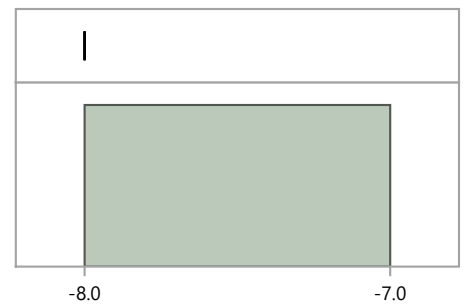
| | | |
|--------|----------|-----|
| 100.0% | maximum | 3.9 |
| 99.5% | | 3.9 |
| 97.5% | | 3.9 |
| 90.0% | | 3.9 |
| 75.0% | quartile | 3.9 |
| 50.0% | median | 3.9 |
| 25.0% | quartile | 3.9 |
| 10.0% | | 3.9 |
| 2.5% | | 3.9 |
| 0.5% | | 3.9 |
| 0.0% | minimum | 3.9 |

Summary Statistics

| | |
|----------------|-----|
| Mean | 3.9 |
| Std Dev | . |
| Std Err Mean | . |
| Upper 95% Mean | . |
| Lower 95% Mean | . |
| N | 1.0 |

Distributions Analyte_Method=Cesium-134 EPA 901, Radioactive Cesium, 600/4-80-032

Bias



Quantiles

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

Summary Statistics

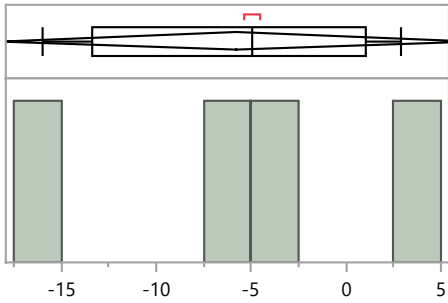
| | |
|----------------|------|
| Mean | -8.0 |
| Std Dev | . |
| Std Err Mean | . |
| Upper 95% Mean | . |
| Lower 95% Mean | . |
| N | 1.0 |

RdV46 Distribution by Preparation Method

RdV Distribution by Prep Method

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

Bias



Quantiles

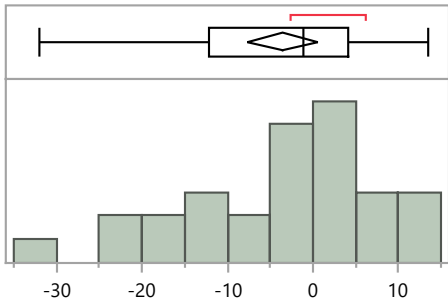
| | | |
|--------|----------|-------|
| 100.0% | maximum | 2.9 |
| 99.5% | | 2.9 |
| 97.5% | | 2.9 |
| 90.0% | | 2.9 |
| 75.0% | quartile | 1.1 |
| 50.0% | median | -5.0 |
| 25.0% | quartile | -13.4 |
| 10.0% | | -16.0 |
| 2.5% | | -16.0 |
| 0.5% | | -16.0 |
| 0.0% | minimum | -16.0 |

Summary Statistics

| | |
|----------------|-------|
| Mean | -5.8 |
| Std Dev | 7.8 |
| Std Err Mean | 3.9 |
| Upper 95% Mean | 6.6 |
| Lower 95% Mean | -18.1 |
| N | 4.0 |

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

Bias



Quantiles

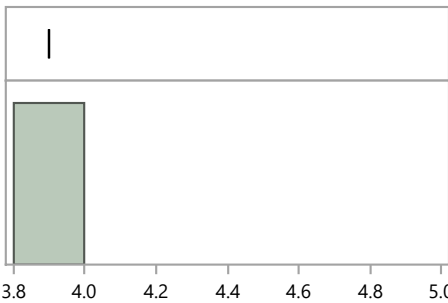
| | | |
|--------|----------|-------|
| 100.0% | maximum | 13.5 |
| 99.5% | | 13.5 |
| 97.5% | | 13.5 |
| 90.0% | | 11.0 |
| 75.0% | quartile | 4.1 |
| 50.0% | median | -1.1 |
| 25.0% | quartile | -12.2 |
| 10.0% | | -20.1 |
| 2.5% | | -31.9 |
| 0.5% | | -31.9 |
| 0.0% | minimum | -31.9 |

Summary Statistics

| | |
|----------------|------|
| Mean | -3.6 |
| Std Dev | 10.9 |
| Std Err Mean | 2.0 |
| Upper 95% Mean | 0.6 |
| Lower 95% Mean | -7.7 |
| N | 29.0 |

Distributions Analyte_Method=Cesium-134 Other

Bias



Quantiles

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

Summary Statistics

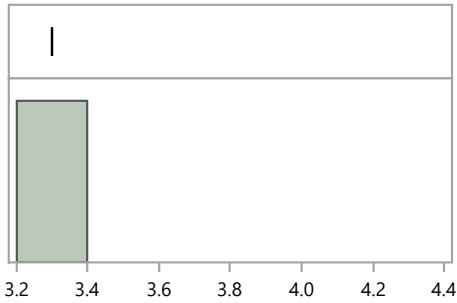
| | |
|----------------|-----|
| Mean | 3.9 |
| Std Dev | . |
| Std Err Mean | . |
| Upper 95% Mean | . |
| Lower 95% Mean | . |
| N | 1.0 |

RdV46 Distribution by Preparation Method

RdV Distribution by Prep Method

Distributions Analyte_Method=Cesium-137 Acid dissolution with hydrofluoric acid

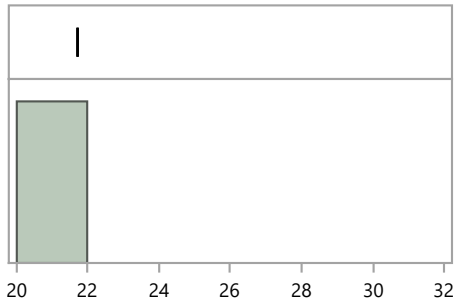
Bias



| Quantiles | | | Summary Statistics | |
|-----------|----------|-----|--------------------|-----|
| 100.0% | maximum | 3.3 | Mean | 3.3 |
| 99.5% | | 3.3 | Std Dev | . |
| 97.5% | | 3.3 | Std Err Mean | . |
| 90.0% | | 3.3 | Upper 95% Mean | . |
| 75.0% | quartile | 3.3 | Lower 95% Mean | . |
| 50.0% | median | 3.3 | N | 1.0 |
| 25.0% | quartile | 3.3 | | |
| 10.0% | | 3.3 | | |
| 2.5% | | 3.3 | | |
| 0.5% | | 3.3 | | |
| 0.0% | minimum | 3.3 | | |

Distributions Analyte_Method=Cesium-137 Coprecipitation, acidified

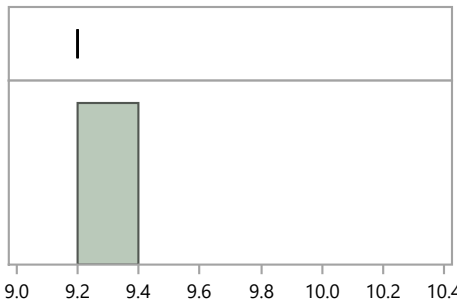
Bias



| Quantiles | | | Summary Statistics | |
|-----------|----------|------|--------------------|------|
| 100.0% | maximum | 21.7 | Mean | 21.7 |
| 99.5% | | 21.7 | Std Dev | . |
| 97.5% | | 21.7 | Std Err Mean | . |
| 90.0% | | 21.7 | Upper 95% Mean | . |
| 75.0% | quartile | 21.7 | Lower 95% Mean | . |
| 50.0% | median | 21.7 | N | 1.0 |
| 25.0% | quartile | 21.7 | | |
| 10.0% | | 21.7 | | |
| 2.5% | | 21.7 | | |
| 0.5% | | 21.7 | | |
| 0.0% | minimum | 21.7 | | |

Distributions Analyte_Method=Cesium-137 EPA 901, Radioactive Cesium, 600/4-80-032

Bias

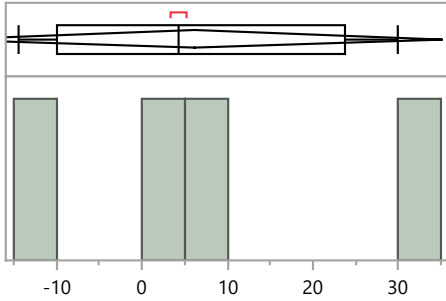


| Quantiles | | | Summary Statistics | |
|-----------|----------|-----|--------------------|-----|
| 100.0% | maximum | 9.2 | Mean | 9.2 |
| 99.5% | | 9.2 | Std Dev | . |
| 97.5% | | 9.2 | Std Err Mean | . |
| 90.0% | | 9.2 | Upper 95% Mean | . |
| 75.0% | quartile | 9.2 | Lower 95% Mean | . |
| 50.0% | median | 9.2 | N | 1.0 |
| 25.0% | quartile | 9.2 | | |
| 10.0% | | 9.2 | | |
| 2.5% | | 9.2 | | |
| 0.5% | | 9.2 | | |
| 0.0% | minimum | 9.2 | | |

RdV Distribution by Prep Method

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

Bias



Quantiles

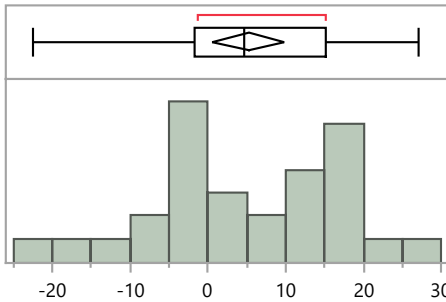
| | | |
|--------|----------|-------|
| 100.0% | maximum | 30.0 |
| 99.5% | | 30.0 |
| 97.5% | | 30.0 |
| 90.0% | | 30.0 |
| 75.0% | quartile | 23.8 |
| 50.0% | median | 4.4 |
| 25.0% | quartile | -10.0 |
| 10.0% | | -14.4 |
| 2.5% | | -14.4 |
| 0.5% | | -14.4 |
| 0.0% | minimum | -14.4 |

Summary Statistics

| | |
|----------------|-------|
| Mean | 6.1 |
| Std Dev | 18.3 |
| Std Err Mean | 9.1 |
| Upper 95% Mean | 35.1 |
| Lower 95% Mean | -23.0 |
| N | 4.0 |

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

Bias



Quantiles

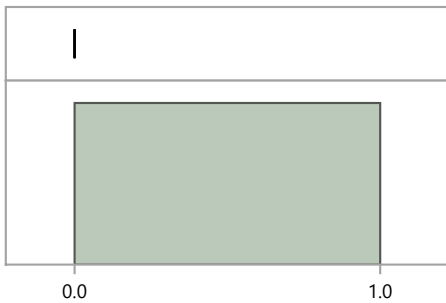
| | | |
|--------|----------|-------|
| 100.0% | maximum | 27.0 |
| 99.5% | | 27.0 |
| 97.5% | | 27.0 |
| 90.0% | | 19.7 |
| 75.0% | quartile | 15.1 |
| 50.0% | median | 4.6 |
| 25.0% | quartile | -1.8 |
| 10.0% | | -10.5 |
| 2.5% | | -22.4 |
| 0.5% | | -22.4 |
| 0.0% | minimum | -22.4 |

Summary Statistics

| | |
|----------------|------|
| Mean | 5.2 |
| Std Dev | 12.1 |
| Std Err Mean | 2.2 |
| Upper 95% Mean | 9.8 |
| Lower 95% Mean | 0.6 |
| N | 29.0 |

Distributions Analyte_Method=Cesium-137 Other

Bias



Quantiles

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

Summary Statistics

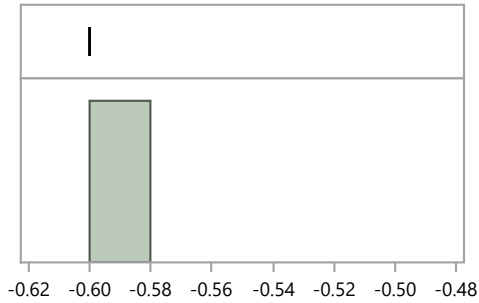
| | |
|----------------|-----|
| Mean | 0.0 |
| Std Dev | . |
| Std Err Mean | . |
| Upper 95% Mean | . |
| Lower 95% Mean | . |
| N | 1.0 |

RdV46 Distribution by Preparation Method

RdV Distribution by Prep Method

Distributions Analyte_Method=Cobalt-57 Acid dissolution with hydrofluoric acid

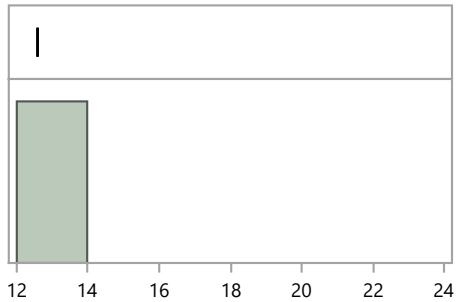
Bias



| Quantiles | | | Summary Statistics | |
|-----------|----------|------|--------------------|------|
| 100.0% | maximum | -0.6 | Mean | -0.6 |
| 99.5% | | -0.6 | Std Dev | . |
| 97.5% | | -0.6 | Std Err Mean | . |
| 90.0% | | -0.6 | Upper 95% Mean | . |
| 75.0% | quartile | -0.6 | Lower 95% Mean | . |
| 50.0% | median | -0.6 | N | 1.0 |
| 25.0% | quartile | -0.6 | | |
| 10.0% | | -0.6 | | |
| 2.5% | | -0.6 | | |
| 0.5% | | -0.6 | | |
| 0.0% | minimum | -0.6 | | |

Distributions Analyte_Method=Cobalt-57 Coprecipitation, acidified

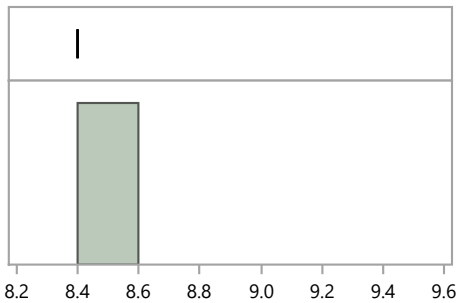
Bias



| Quantiles | | | Summary Statistics | |
|-----------|----------|------|--------------------|------|
| 100.0% | maximum | 12.6 | Mean | 12.6 |
| 99.5% | | 12.6 | Std Dev | . |
| 97.5% | | 12.6 | Std Err Mean | . |
| 90.0% | | 12.6 | Upper 95% Mean | . |
| 75.0% | quartile | 12.6 | Lower 95% Mean | . |
| 50.0% | median | 12.6 | N | 1.0 |
| 25.0% | quartile | 12.6 | | |
| 10.0% | | 12.6 | | |
| 2.5% | | 12.6 | | |
| 0.5% | | 12.6 | | |
| 0.0% | minimum | 12.6 | | |

Distributions Analyte_Method=Cobalt-57 EPA 901, Radioactive Cesium, 600/4-80-032

Bias



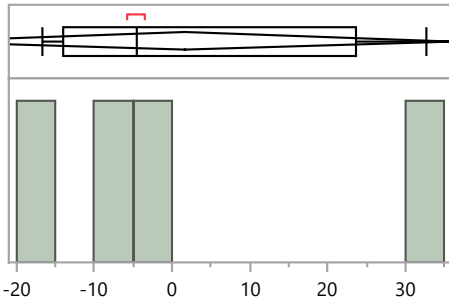
| Quantiles | | | Summary Statistics | |
|-----------|----------|-----|--------------------|-----|
| 100.0% | maximum | 8.4 | Mean | 8.4 |
| 99.5% | | 8.4 | Std Dev | . |
| 97.5% | | 8.4 | Std Err Mean | . |
| 90.0% | | 8.4 | Upper 95% Mean | . |
| 75.0% | quartile | 8.4 | Lower 95% Mean | . |
| 50.0% | median | 8.4 | N | 1.0 |
| 25.0% | quartile | 8.4 | | |
| 10.0% | | 8.4 | | |
| 2.5% | | 8.4 | | |
| 0.5% | | 8.4 | | |
| 0.0% | minimum | 8.4 | | |

RdV46 Distribution by Preparation Method

RdV Distribution by Prep Method

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

Bias



Quantiles

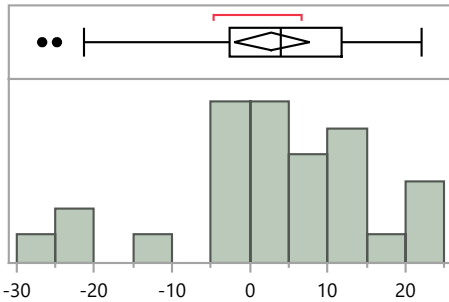
| | | |
|--------|----------|-------|
| 100.0% | maximum | 32.8 |
| 99.5% | | 32.8 |
| 97.5% | | 32.8 |
| 90.0% | | 32.8 |
| 75.0% | quartile | 23.7 |
| 50.0% | median | -4.6 |
| 25.0% | quartile | -14.0 |
| 10.0% | | -16.7 |
| 2.5% | | -16.7 |
| 0.5% | | -16.7 |
| 0.0% | minimum | -16.7 |

Summary Statistics

| | |
|----------------|-------|
| Mean | 1.7 |
| Std Dev | 21.5 |
| Std Err Mean | 10.8 |
| Upper 95% Mean | 35.9 |
| Lower 95% Mean | -32.5 |
| N | 4.0 |

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

Bias



Quantiles

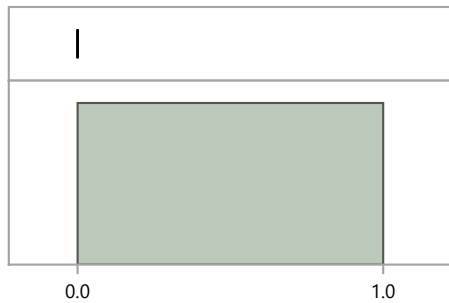
| | | |
|--------|----------|-------|
| 100.0% | maximum | 22.0 |
| 99.5% | | 22.0 |
| 97.5% | | 22.0 |
| 90.0% | | 20.0 |
| 75.0% | quartile | 11.9 |
| 50.0% | median | 3.9 |
| 25.0% | quartile | -2.6 |
| 10.0% | | -21.4 |
| 2.5% | | -26.7 |
| 0.5% | | -26.7 |
| 0.0% | minimum | -26.7 |

Summary Statistics

| | |
|----------------|------|
| Mean | 2.8 |
| Std Dev | 12.5 |
| Std Err Mean | 2.3 |
| Upper 95% Mean | 7.6 |
| Lower 95% Mean | -1.9 |
| N | 29.0 |

Distributions Analyte_Method=Cobalt-57 Other

Bias



Quantiles

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

Summary Statistics

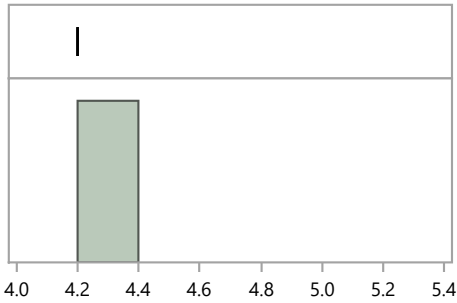
| | |
|----------------|-----|
| Mean | 0.0 |
| Std Dev | . |
| Std Err Mean | . |
| Upper 95% Mean | . |
| Lower 95% Mean | . |
| N | 1.0 |

RdV46 Distribution by Preparation Method

RdV Distribution by Prep Method

Distributions Analyte_Method=Manganese-54 Acid dissolution with hydrofluoric acid

Bias



Quantiles

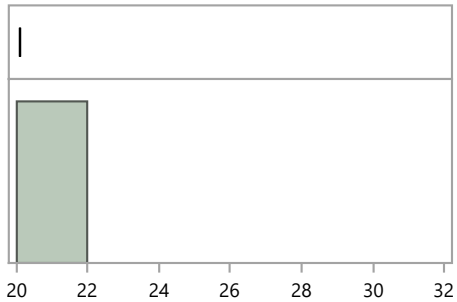
| | | |
|--------|----------|-----|
| 100.0% | maximum | 4.2 |
| 99.5% | | 4.2 |
| 97.5% | | 4.2 |
| 90.0% | | 4.2 |
| 75.0% | quartile | 4.2 |
| 50.0% | median | 4.2 |
| 25.0% | quartile | 4.2 |
| 10.0% | | 4.2 |
| 2.5% | | 4.2 |
| 0.5% | | 4.2 |
| 0.0% | minimum | 4.2 |

Summary Statistics

| | |
|----------------|-----|
| Mean | 4.2 |
| Std Dev | . |
| Std Err Mean | . |
| Upper 95% Mean | . |
| Lower 95% Mean | . |
| N | 1.0 |

Distributions Analyte_Method=Manganese-54 Coprecipitation, acidified

Bias



Quantiles

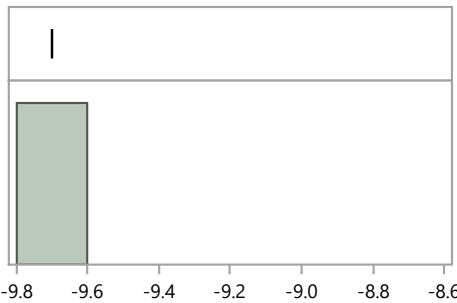
| | | |
|--------|----------|------|
| 100.0% | maximum | 20.1 |
| 99.5% | | 20.1 |
| 97.5% | | 20.1 |
| 90.0% | | 20.1 |
| 75.0% | quartile | 20.1 |
| 50.0% | median | 20.1 |
| 25.0% | quartile | 20.1 |
| 10.0% | | 20.1 |
| 2.5% | | 20.1 |
| 0.5% | | 20.1 |
| 0.0% | minimum | 20.1 |

Summary Statistics

| | |
|----------------|------|
| Mean | 20.1 |
| Std Dev | . |
| Std Err Mean | . |
| Upper 95% Mean | . |
| Lower 95% Mean | . |
| N | 1.0 |

Distributions Analyte_Method=Manganese-54 EPA 901, Radioactive Cesium, 600/4-80-032

Bias



Quantiles

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

Summary Statistics

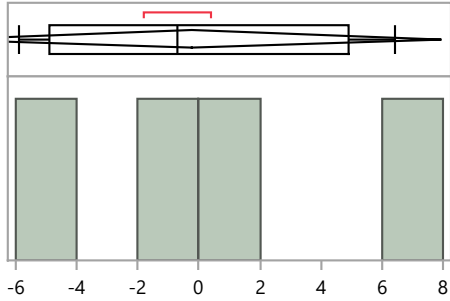
| | |
|----------------|------|
| Mean | -9.7 |
| Std Dev | . |
| Std Err Mean | . |
| Upper 95% Mean | . |
| Lower 95% Mean | . |
| N | 1.0 |

RdV46 Distribution by Preparation Method

RdV Distribution by Prep Method

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

Bias



Quantiles

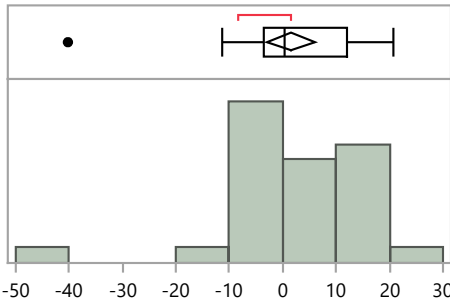
| | | |
|--------|----------|------|
| 100.0% | maximum | 6.4 |
| 99.5% | | 6.4 |
| 97.5% | | 6.4 |
| 90.0% | | 6.4 |
| 75.0% | quartile | 4.9 |
| 50.0% | median | -0.7 |
| 25.0% | quartile | -4.9 |
| 10.0% | | -5.9 |
| 2.5% | | -5.9 |
| 0.5% | | -5.9 |
| 0.0% | minimum | -5.9 |

Summary Statistics

| | |
|----------------|------|
| Mean | -0.2 |
| Std Dev | 5.1 |
| Std Err Mean | 2.6 |
| Upper 95% Mean | 7.9 |
| Lower 95% Mean | -8.4 |
| N | 4.0 |

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

Bias



Quantiles

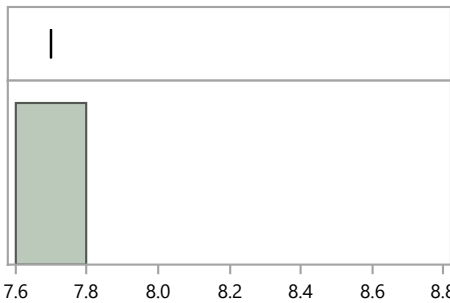
| | | |
|--------|----------|-------|
| 100.0% | maximum | 20.8 |
| 99.5% | | 20.8 |
| 97.5% | | 20.8 |
| 90.0% | | 14.8 |
| 75.0% | quartile | 11.9 |
| 50.0% | median | 0.4 |
| 25.0% | quartile | -3.7 |
| 10.0% | | -8.5 |
| 2.5% | | -40.2 |
| 0.5% | | -40.2 |
| 0.0% | minimum | -40.2 |

Summary Statistics

| | |
|----------------|------|
| Mean | 1.6 |
| Std Dev | 11.8 |
| Std Err Mean | 2.2 |
| Upper 95% Mean | 6.1 |
| Lower 95% Mean | -2.9 |
| N | 29.0 |

Distributions Analyte_Method=Manganese-54 Other

Bias



Quantiles

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

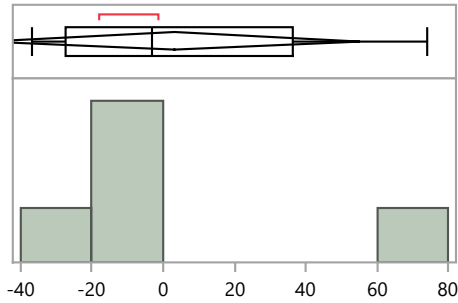
Summary Statistics

| | |
|----------------|-----|
| Mean | 7.7 |
| Std Dev | . |
| Std Err Mean | . |
| Upper 95% Mean | . |
| Lower 95% Mean | . |
| N | 1.0 |

RdV Distribution by Prep Method

Distributions Analyte_Method=Plutonium-238 Acid dissolution with hydrofluoric acid

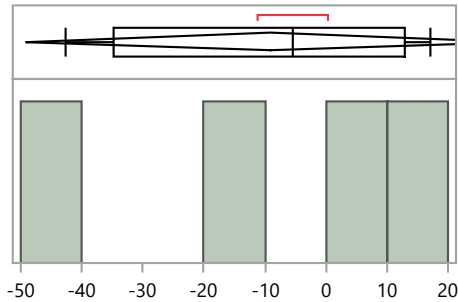
Bias



| Quantiles | | Summary Statistics | | |
|-----------|----------|--------------------|----------------|-------|
| 100.0% | maximum | 74.1 | Mean | 3.0 |
| 99.5% | | 74.1 | Std Dev | 42.2 |
| 97.5% | | 74.1 | Std Err Mean | 18.9 |
| 90.0% | | 74.1 | Upper 95% Mean | 55.4 |
| 75.0% | quartile | 36.5 | Lower 95% Mean | -49.5 |
| 50.0% | median | -3.3 | N | 5.0 |
| 25.0% | quartile | -27.4 | | |
| 10.0% | | -36.7 | | |
| 2.5% | | -36.7 | | |
| 0.5% | | -36.7 | | |
| 0.0% | minimum | -36.7 | | |

Distributions Analyte_Method=Plutonium-238 Acid leaching without hydrofluoric acid

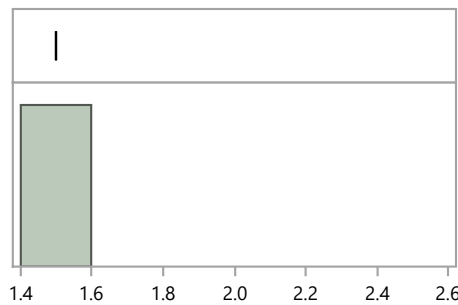
Bias



| Quantiles | | Summary Statistics | | |
|-----------|----------|--------------------|----------------|-------|
| 100.0% | maximum | 17.0 | Mean | -9.1 |
| 99.5% | | 17.0 | Std Dev | 25.2 |
| 97.5% | | 17.0 | Std Err Mean | 12.6 |
| 90.0% | | 17.0 | Upper 95% Mean | 30.9 |
| 75.0% | quartile | 12.9 | Lower 95% Mean | -49.1 |
| 50.0% | median | -5.4 | N | 4.0 |
| 25.0% | quartile | -34.7 | | |
| 10.0% | | -42.6 | | |
| 2.5% | | -42.6 | | |
| 0.5% | | -42.6 | | |
| 0.0% | minimum | -42.6 | | |

Distributions Analyte_Method=Plutonium-238 Coprecipitation, acidified

Bias

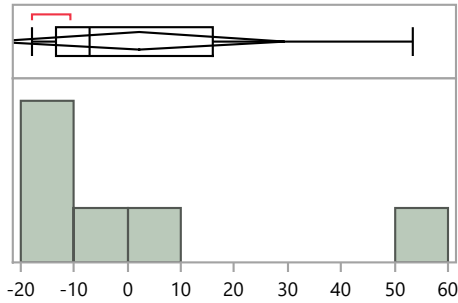


| Quantiles | | Summary Statistics | | |
|-----------|----------|--------------------|----------------|-----|
| 100.0% | maximum | 1.5 | Mean | 1.5 |
| 99.5% | | 1.5 | Std Dev | . |
| 97.5% | | 1.5 | Std Err Mean | . |
| 90.0% | | 1.5 | Upper 95% Mean | . |
| 75.0% | quartile | 1.5 | Lower 95% Mean | . |
| 50.0% | median | 1.5 | N | 1.0 |
| 25.0% | quartile | 1.5 | | |
| 10.0% | | 1.5 | | |
| 2.5% | | 1.5 | | |
| 0.5% | | 1.5 | | |
| 0.0% | minimum | 1.5 | | |

RdV Distribution by Prep Method

Distributions Analyte_Method=Plutonium-238 Other

Bias



Quantiles

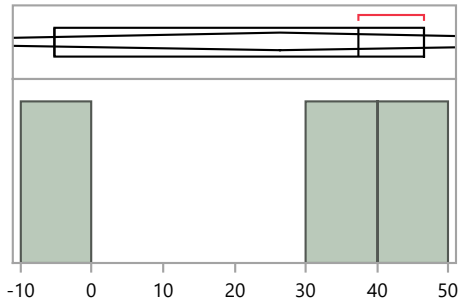
| | | |
|--------|----------|-------|
| 100.0% | maximum | 53.3 |
| 99.5% | | 53.3 |
| 97.5% | | 53.3 |
| 90.0% | | 53.3 |
| 75.0% | quartile | 16.1 |
| 50.0% | median | -7.2 |
| 25.0% | quartile | -13.5 |
| 10.0% | | -17.8 |
| 2.5% | | -17.8 |
| 0.5% | | -17.8 |
| 0.0% | minimum | -17.8 |

Summary Statistics

| | |
|----------------|-------|
| Mean | 2.1 |
| Std Dev | 26.1 |
| Std Err Mean | 10.7 |
| Upper 95% Mean | 29.6 |
| Lower 95% Mean | -25.3 |
| N | 6.0 |

Distributions Analyte_Method=Plutonium-238 Total dissolution by fusion

Bias



Quantiles

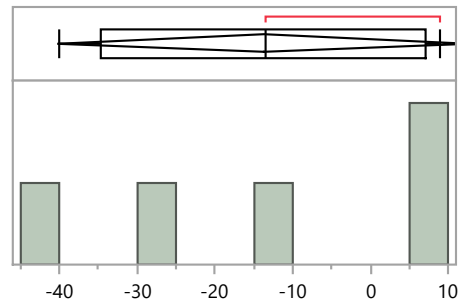
| | | |
|--------|----------|------|
| 100.0% | maximum | 46.7 |
| 99.5% | | 46.7 |
| 97.5% | | 46.7 |
| 90.0% | | 46.7 |
| 75.0% | quartile | 46.7 |
| 50.0% | median | 37.4 |
| 25.0% | quartile | -5.2 |
| 10.0% | | -5.2 |
| 2.5% | | -5.2 |
| 0.5% | | -5.2 |
| 0.0% | minimum | -5.2 |

Summary Statistics

| | |
|----------------|-------|
| Mean | 26.3 |
| Std Dev | 27.7 |
| Std Err Mean | 16.0 |
| Upper 95% Mean | 95.0 |
| Lower 95% Mean | -42.4 |
| N | 3.0 |

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

Bias



Quantiles

| | | |
|--------|----------|-------|
| 100.0% | maximum | 8.9 |
| 99.5% | | 8.9 |
| 97.5% | | 8.9 |
| 90.0% | | 8.9 |
| 75.0% | quartile | 7.1 |
| 50.0% | median | -13.5 |
| 25.0% | quartile | -34.7 |
| 10.0% | | -40.1 |
| 2.5% | | -40.1 |
| 0.5% | | -40.1 |
| 0.0% | minimum | -40.1 |

Summary Statistics

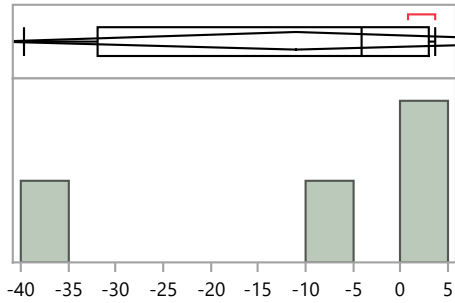
| | |
|----------------|-------|
| Mean | -13.8 |
| Std Dev | 21.3 |
| Std Err Mean | 9.5 |
| Upper 95% Mean | 12.6 |
| Lower 95% Mean | -40.2 |
| N | 5.0 |

RdV46 Distribution by Preparation Method

RdV Distribution by Prep Method

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

Bias



Quantiles

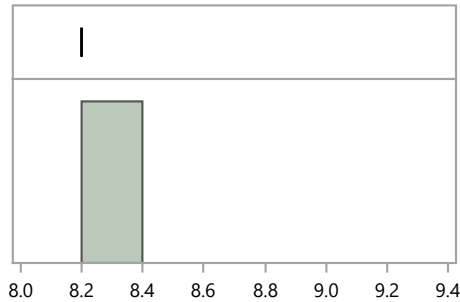
| | | |
|--------|----------|-------|
| 100.0% | maximum | 3.6 |
| 99.5% | | 3.6 |
| 97.5% | | 3.6 |
| 90.0% | | 3.6 |
| 75.0% | quartile | 2.9 |
| 50.0% | median | -4.2 |
| 25.0% | quartile | -32.0 |
| 10.0% | | -39.6 |
| 2.5% | | -39.6 |
| 0.5% | | -39.6 |
| 0.0% | minimum | -39.6 |

Summary Statistics

| | |
|----------------|-------|
| Mean | -11.1 |
| Std Dev | 19.8 |
| Std Err Mean | 9.9 |
| Upper 95% Mean | 20.3 |
| Lower 95% Mean | -42.5 |
| N | 4.0 |

Distributions Analyte_Method=Plutonium-239/240 Coprecipitation, acidified

Bias



Quantiles

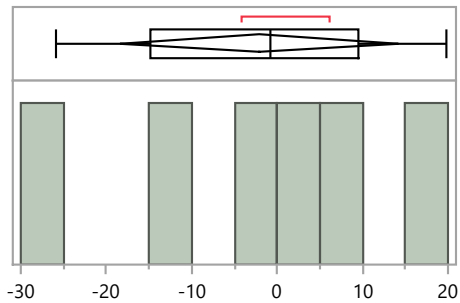
| | | |
|--------|----------|-----|
| 100.0% | maximum | 8.2 |
| 99.5% | | 8.2 |
| 97.5% | | 8.2 |
| 90.0% | | 8.2 |
| 75.0% | quartile | 8.2 |
| 50.0% | median | 8.2 |
| 25.0% | quartile | 8.2 |
| 10.0% | | 8.2 |
| 2.5% | | 8.2 |
| 0.5% | | 8.2 |
| 0.0% | minimum | 8.2 |

Summary Statistics

| | |
|----------------|-----|
| Mean | 8.2 |
| Std Dev | . |
| Std Err Mean | . |
| Upper 95% Mean | . |
| Lower 95% Mean | . |
| N | 1.0 |

Distributions Analyte_Method=Plutonium-239/240 Other

Bias



Quantiles

| | | |
|--------|----------|-------|
| 100.0% | maximum | 19.7 |
| 99.5% | | 19.7 |
| 97.5% | | 19.7 |
| 90.0% | | 19.7 |
| 75.0% | quartile | 9.5 |
| 50.0% | median | -0.8 |
| 25.0% | quartile | -14.8 |
| 10.0% | | -25.8 |
| 2.5% | | -25.8 |
| 0.5% | | -25.8 |
| 0.0% | minimum | -25.8 |

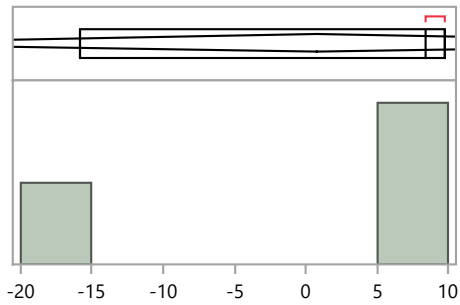
Summary Statistics

| | |
|----------------|-------|
| Mean | -2.1 |
| Std Dev | 15.6 |
| Std Err Mean | 6.4 |
| Upper 95% Mean | 14.2 |
| Lower 95% Mean | -18.4 |
| N | 6.0 |

RdV Distribution by Prep Method

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

Bias



Quantiles

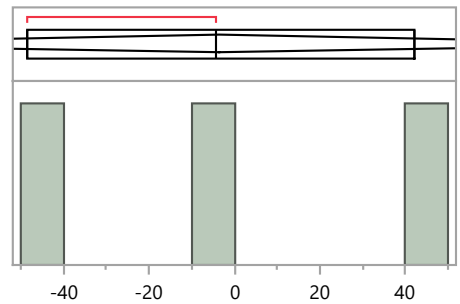
| | | |
|--------|----------|-------|
| 100.0% | maximum | 9.8 |
| 99.5% | | 9.8 |
| 97.5% | | 9.8 |
| 90.0% | | 9.8 |
| 75.0% | quartile | 9.8 |
| 50.0% | median | 8.4 |
| 25.0% | quartile | -15.8 |
| 10.0% | | -15.8 |
| 2.5% | | -15.8 |
| 0.5% | | -15.8 |
| 0.0% | minimum | -15.8 |

Summary Statistics

| | |
|----------------|-------|
| Mean | 0.8 |
| Std Dev | 14.4 |
| Std Err Mean | 8.3 |
| Upper 95% Mean | 36.6 |
| Lower 95% Mean | -35.0 |
| N | 3.0 |

Distributions Analyte_Method=Strontium-90 Acid dissolution with hydrofluoric acid

Bias



Quantiles

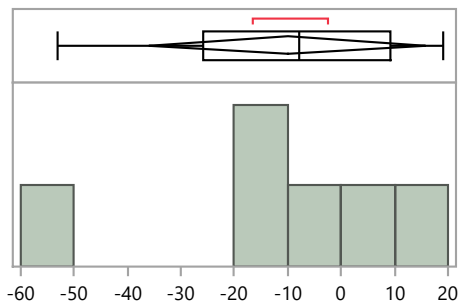
| | | |
|--------|----------|-------|
| 100.0% | maximum | 42.0 |
| 99.5% | | 42.0 |
| 97.5% | | 42.0 |
| 90.0% | | 42.0 |
| 75.0% | quartile | 42.0 |
| 50.0% | median | -4.2 |
| 25.0% | quartile | -48.5 |
| 10.0% | | -48.5 |
| 2.5% | | -48.5 |
| 0.5% | | -48.5 |
| 0.0% | minimum | -48.5 |

Summary Statistics

| | |
|----------------|--------|
| Mean | -3.6 |
| Std Dev | 45.3 |
| Std Err Mean | 26.1 |
| Upper 95% Mean | 108.8 |
| Lower 95% Mean | -116.0 |
| N | 3.0 |

Distributions Analyte_Method=Strontium-90 Acid leaching without hydrofluoric acid

Bias



Quantiles

| | | |
|--------|----------|-------|
| 100.0% | maximum | 19.1 |
| 99.5% | | 19.1 |
| 97.5% | | 19.1 |
| 90.0% | | 19.1 |
| 75.0% | quartile | 9.1 |
| 50.0% | median | -7.9 |
| 25.0% | quartile | -25.8 |
| 10.0% | | -53.1 |
| 2.5% | | -53.1 |
| 0.5% | | -53.1 |
| 0.0% | minimum | -53.1 |

Summary Statistics

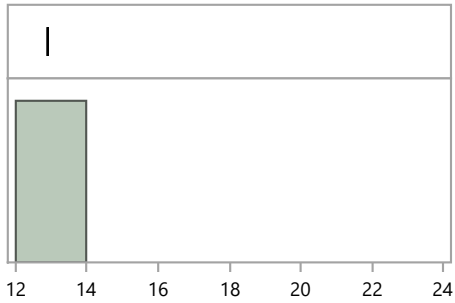
| | |
|----------------|-------|
| Mean | -10.1 |
| Std Dev | 24.8 |
| Std Err Mean | 10.1 |
| Upper 95% Mean | 15.9 |
| Lower 95% Mean | -36.1 |
| N | 6.0 |

RdV46 Distribution by Preparation Method

RdV Distribution by Prep Method

Distributions Analyte_Method=Strontium-90 Coprecipitation, acidified

Bias



Quantiles

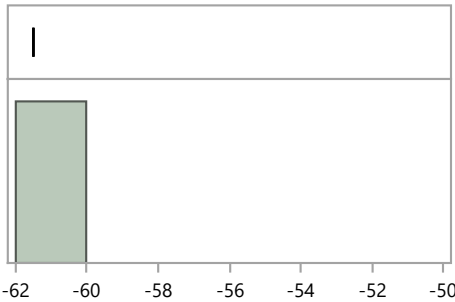
| | | |
|--------|----------|------|
| 100.0% | maximum | 12.9 |
| 99.5% | | 12.9 |
| 97.5% | | 12.9 |
| 90.0% | | 12.9 |
| 75.0% | quartile | 12.9 |
| 50.0% | median | 12.9 |
| 25.0% | quartile | 12.9 |
| 10.0% | | 12.9 |
| 2.5% | | 12.9 |
| 0.5% | | 12.9 |
| 0.0% | minimum | 12.9 |

Summary Statistics

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

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

Bias



Quantiles

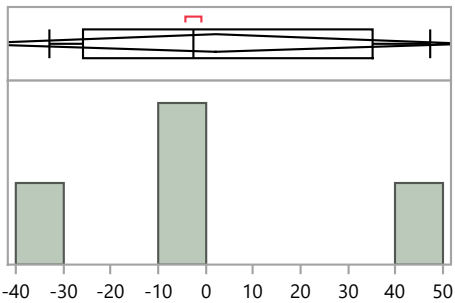
| | | |
|--------|----------|-------|
| 100.0% | maximum | -61.5 |
| 99.5% | | -61.5 |
| 97.5% | | -61.5 |
| 90.0% | | -61.5 |
| 75.0% | quartile | -61.5 |
| 50.0% | median | -61.5 |
| 25.0% | quartile | -61.5 |
| 10.0% | | -61.5 |
| 2.5% | | -61.5 |
| 0.5% | | -61.5 |
| 0.0% | minimum | -61.5 |

Summary Statistics

| | |
|----------------|-------|
| Mean | -61.5 |
| Std Dev | . |
| Std Err Mean | . |
| Upper 95% Mean | . |
| Lower 95% Mean | . |
| N | 1.0 |

Distributions Analyte_Method=Strontium-90 Other

Bias



Quantiles

| | | |
|--------|----------|-------|
| 100.0% | maximum | 47.3 |
| 99.5% | | 47.3 |
| 97.5% | | 47.3 |
| 90.0% | | 47.3 |
| 75.0% | quartile | 35.2 |
| 50.0% | median | -2.7 |
| 25.0% | quartile | -25.9 |
| 10.0% | | -33.0 |
| 2.5% | | -33.0 |
| 0.5% | | -33.0 |
| 0.0% | minimum | -33.0 |

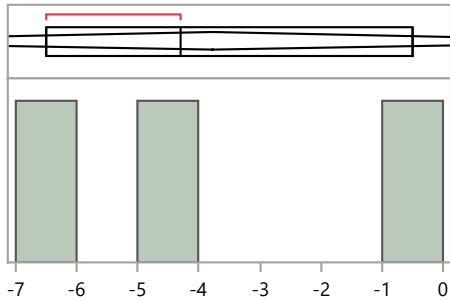
Summary Statistics

| | |
|----------------|-------|
| Mean | 2.2 |
| Std Dev | 33.3 |
| Std Err Mean | 16.7 |
| Upper 95% Mean | 55.2 |
| Lower 95% Mean | -50.8 |
| N | 4.0 |

RdV Distribution by Prep Method

Distributions Analyte_Method=Strontium-90 Total dissolution by fusion

Bias



Quantiles

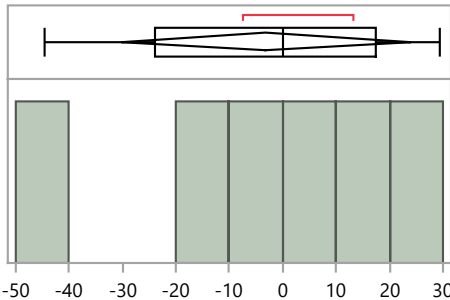
| | | |
|--------|----------|------|
| 100.0% | maximum | -0.5 |
| 99.5% | | -0.5 |
| 97.5% | | -0.5 |
| 90.0% | | -0.5 |
| 75.0% | quartile | -0.5 |
| 50.0% | median | -4.3 |
| 25.0% | quartile | -6.5 |
| 10.0% | | -6.5 |
| 2.5% | | -6.5 |
| 0.5% | | -6.5 |
| 0.0% | minimum | -6.5 |

Summary Statistics

| | |
|----------------|-------|
| Mean | -3.8 |
| Std Dev | 3.0 |
| Std Err Mean | 1.8 |
| Upper 95% Mean | 3.8 |
| Lower 95% Mean | -11.3 |
| N | 3.0 |

Distributions Analyte_Method=Uranium-234 Acid dissolution with hydrofluoric acid

Bias



Quantiles

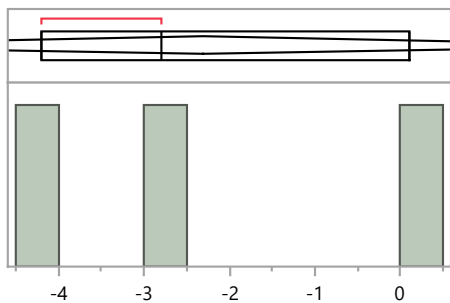
| | | |
|--------|----------|-------|
| 100.0% | maximum | 29.3 |
| 99.5% | | 29.3 |
| 97.5% | | 29.3 |
| 90.0% | | 29.3 |
| 75.0% | quartile | 17.3 |
| 50.0% | median | 0.0 |
| 25.0% | quartile | -23.8 |
| 10.0% | | -44.5 |
| 2.5% | | -44.5 |
| 0.5% | | -44.5 |
| 0.0% | minimum | -44.5 |

Summary Statistics

| | |
|----------------|-------|
| Mean | -3.1 |
| Std Dev | 25.9 |
| Std Err Mean | 10.6 |
| Upper 95% Mean | 24.1 |
| Lower 95% Mean | -30.3 |
| N | 6.0 |

Distributions Analyte_Method=Uranium-234 Acid leaching without hydrofluoric acid

Bias



Quantiles

| | | |
|--------|----------|------|
| 100.0% | maximum | 0.1 |
| 99.5% | | 0.1 |
| 97.5% | | 0.1 |
| 90.0% | | 0.1 |
| 75.0% | quartile | 0.1 |
| 50.0% | median | -2.8 |
| 25.0% | quartile | -4.2 |
| 10.0% | | -4.2 |
| 2.5% | | -4.2 |
| 0.5% | | -4.2 |
| 0.0% | minimum | -4.2 |

Summary Statistics

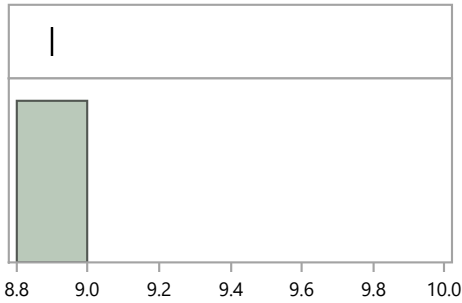
| | |
|----------------|------|
| Mean | -2.3 |
| Std Dev | 2.2 |
| Std Err Mean | 1.3 |
| Upper 95% Mean | 3.1 |
| Lower 95% Mean | -7.7 |
| N | 3.0 |

RdV46 Distribution by Preparation Method

RdV Distribution by Prep Method

Distributions Analyte_Method=Uranium-234 Coprecipitation, acidified

Bias



Quantiles

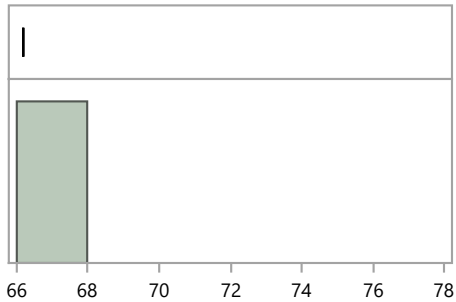
| | | |
|--------|----------|-----|
| 100.0% | maximum | 8.9 |
| 99.5% | | 8.9 |
| 97.5% | | 8.9 |
| 90.0% | | 8.9 |
| 75.0% | quartile | 8.9 |
| 50.0% | median | 8.9 |
| 25.0% | quartile | 8.9 |
| 10.0% | | 8.9 |
| 2.5% | | 8.9 |
| 0.5% | | 8.9 |
| 0.0% | minimum | 8.9 |

Summary Statistics

| | |
|----------------|-----|
| Mean | 8.9 |
| Std Dev | . |
| Std Err Mean | . |
| Upper 95% Mean | . |
| Lower 95% Mean | . |
| N | 1.0 |

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

Bias



Quantiles

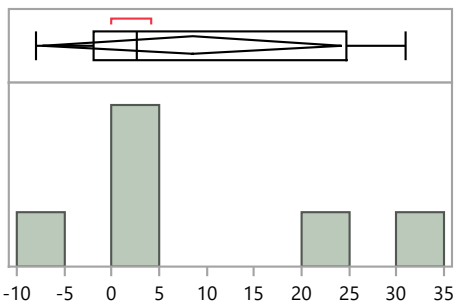
| | | |
|--------|----------|------|
| 100.0% | maximum | 66.2 |
| 99.5% | | 66.2 |
| 97.5% | | 66.2 |
| 90.0% | | 66.2 |
| 75.0% | quartile | 66.2 |
| 50.0% | median | 66.2 |
| 25.0% | quartile | 66.2 |
| 10.0% | | 66.2 |
| 2.5% | | 66.2 |
| 0.5% | | 66.2 |
| 0.0% | minimum | 66.2 |

Summary Statistics

| | |
|----------------|------|
| Mean | 66.2 |
| Std Dev | . |
| Std Err Mean | . |
| Upper 95% Mean | . |
| Lower 95% Mean | . |
| N | 1.0 |

Distributions Analyte_Method=Uranium-234 Other

Bias



Quantiles

| | | |
|--------|----------|------|
| 100.0% | maximum | 31.0 |
| 99.5% | | 31.0 |
| 97.5% | | 31.0 |
| 90.0% | | 31.0 |
| 75.0% | quartile | 24.6 |
| 50.0% | median | 2.7 |
| 25.0% | quartile | -2.0 |
| 10.0% | | -7.9 |
| 2.5% | | -7.9 |
| 0.5% | | -7.9 |
| 0.0% | minimum | -7.9 |

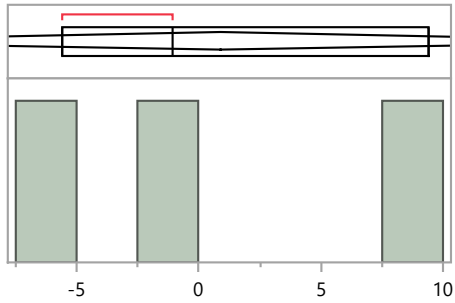
Summary Statistics

| | |
|----------------|------|
| Mean | 8.5 |
| Std Dev | 14.9 |
| Std Err Mean | 6.1 |
| Upper 95% Mean | 24.2 |
| Lower 95% Mean | -7.2 |
| N | 6.0 |

RdV Distribution by Prep Method

Distributions Analyte_Method=Uranium-234 Total dissolution by fusion

Bias



Quantiles

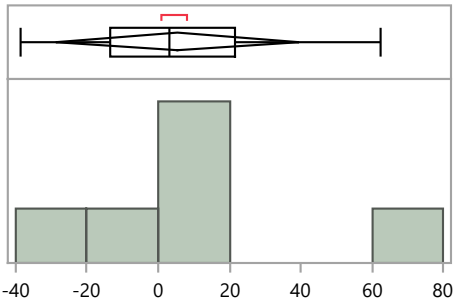
| | | |
|--------|----------|------|
| 100.0% | maximum | 9.4 |
| 99.5% | | 9.4 |
| 97.5% | | 9.4 |
| 90.0% | | 9.4 |
| 75.0% | quartile | 9.4 |
| 50.0% | median | -1.1 |
| 25.0% | quartile | -5.6 |
| 10.0% | | -5.6 |
| 2.5% | | -5.6 |
| 0.5% | | -5.6 |
| 0.0% | minimum | -5.6 |

Summary Statistics

| | |
|----------------|-------|
| Mean | 0.9 |
| Std Dev | 7.7 |
| Std Err Mean | 4.4 |
| Upper 95% Mean | 20.0 |
| Lower 95% Mean | -18.2 |
| N | 3.0 |

Distributions Analyte_Method=Uranium-238 Acid dissolution with hydrofluoric acid

Bias



Quantiles

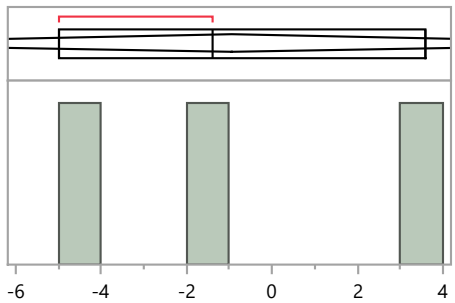
| | | |
|--------|----------|-------|
| 100.0% | maximum | 62.2 |
| 99.5% | | 62.2 |
| 97.5% | | 62.2 |
| 90.0% | | 62.2 |
| 75.0% | quartile | 21.6 |
| 50.0% | median | 3.4 |
| 25.0% | quartile | -13.3 |
| 10.0% | | -38.4 |
| 2.5% | | -38.4 |
| 0.5% | | -38.4 |
| 0.0% | minimum | -38.4 |

Summary Statistics

| | |
|----------------|-------|
| Mean | 5.6 |
| Std Dev | 32.5 |
| Std Err Mean | 13.3 |
| Upper 95% Mean | 39.7 |
| Lower 95% Mean | -28.5 |
| N | 6.0 |

Distributions Analyte_Method=Uranium-238 Acid leaching without hydrofluoric acid

Bias



Quantiles

| | | |
|--------|----------|------|
| 100.0% | maximum | 3.6 |
| 99.5% | | 3.6 |
| 97.5% | | 3.6 |
| 90.0% | | 3.6 |
| 75.0% | quartile | 3.6 |
| 50.0% | median | -1.4 |
| 25.0% | quartile | -5.0 |
| 10.0% | | -5.0 |
| 2.5% | | -5.0 |
| 0.5% | | -5.0 |
| 0.0% | minimum | -5.0 |

Summary Statistics

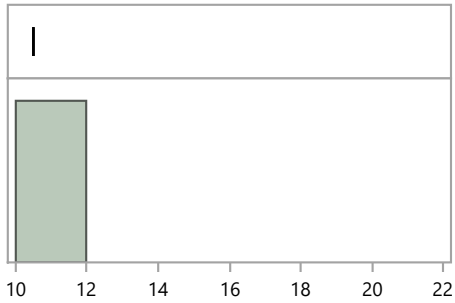
| | |
|----------------|-------|
| Mean | -0.9 |
| Std Dev | 4.3 |
| Std Err Mean | 2.5 |
| Upper 95% Mean | 9.8 |
| Lower 95% Mean | -11.7 |
| N | 3.0 |

RdV46 Distribution by Preparation Method

RdV Distribution by Prep Method

Distributions Analyte_Method=Uranium-238 Coprecipitation, acidified

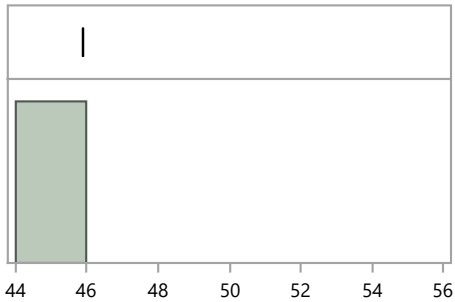
Bias



| Quantiles | | | Summary Statistics | |
|-----------|----------|------|--------------------|------|
| 100.0% | maximum | 10.5 | Mean | 10.5 |
| 99.5% | | 10.5 | Std Dev | . |
| 97.5% | | 10.5 | Std Err Mean | . |
| 90.0% | | 10.5 | Upper 95% Mean | . |
| 75.0% | quartile | 10.5 | Lower 95% Mean | . |
| 50.0% | median | 10.5 | N | 1.0 |
| 25.0% | quartile | 10.5 | | |
| 10.0% | | 10.5 | | |
| 2.5% | | 10.5 | | |
| 0.5% | | 10.5 | | |
| 0.0% | minimum | 10.5 | | |

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

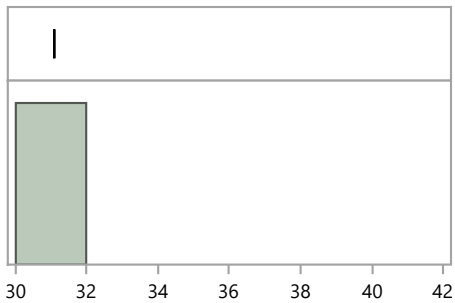
Bias



| Quantiles | | | Summary Statistics | |
|-----------|----------|------|--------------------|------|
| 100.0% | maximum | 45.9 | Mean | 45.9 |
| 99.5% | | 45.9 | Std Dev | . |
| 97.5% | | 45.9 | Std Err Mean | . |
| 90.0% | | 45.9 | Upper 95% Mean | . |
| 75.0% | quartile | 45.9 | Lower 95% Mean | . |
| 50.0% | median | 45.9 | N | 1.0 |
| 25.0% | quartile | 45.9 | | |
| 10.0% | | 45.9 | | |
| 2.5% | | 45.9 | | |
| 0.5% | | 45.9 | | |
| 0.0% | minimum | 45.9 | | |

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

Bias



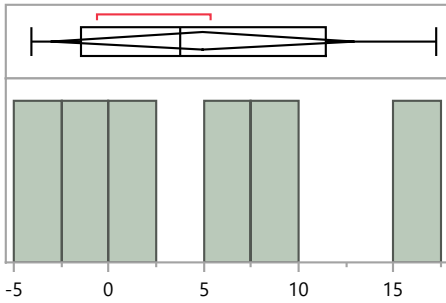
| Quantiles | | | Summary Statistics | |
|-----------|----------|------|--------------------|------|
| 100.0% | maximum | 31.1 | Mean | 31.1 |
| 99.5% | | 31.1 | Std Dev | . |
| 97.5% | | 31.1 | Std Err Mean | . |
| 90.0% | | 31.1 | Upper 95% Mean | . |
| 75.0% | quartile | 31.1 | Lower 95% Mean | . |
| 50.0% | median | 31.1 | N | 1.0 |
| 25.0% | quartile | 31.1 | | |
| 10.0% | | 31.1 | | |
| 2.5% | | 31.1 | | |
| 0.5% | | 31.1 | | |
| 0.0% | minimum | 31.1 | | |

RdV46 Distribution by Preparation Method

RdV Distribution by Prep Method

Distributions Analyte_Method=Uranium-238 Other

Bias



Quantiles

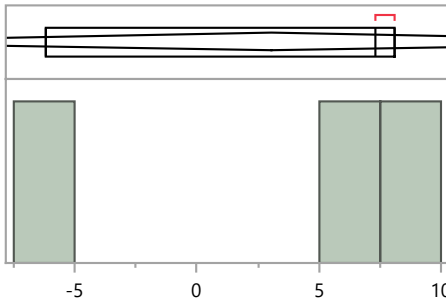
| | | |
|--------|----------|------|
| 100.0% | maximum | 17.2 |
| 99.5% | | 17.2 |
| 97.5% | | 17.2 |
| 90.0% | | 17.2 |
| 75.0% | quartile | 11.4 |
| 50.0% | median | 3.8 |
| 25.0% | quartile | -1.5 |
| 10.0% | | -4.1 |
| 2.5% | | -4.1 |
| 0.5% | | -4.1 |
| 0.0% | minimum | -4.1 |

Summary Statistics

| | |
|----------------|------|
| Mean | 4.9 |
| Std Dev | 7.6 |
| Std Err Mean | 3.1 |
| Upper 95% Mean | 12.9 |
| Lower 95% Mean | -3.1 |
| N | 6.0 |

Distributions Analyte_Method=Uranium-238 Total dissolution by fusion

Bias



Quantiles

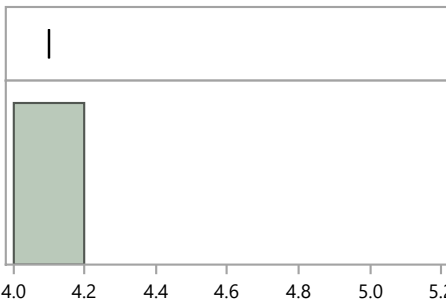
| | | |
|--------|----------|------|
| 100.0% | maximum | 8.1 |
| 99.5% | | 8.1 |
| 97.5% | | 8.1 |
| 90.0% | | 8.1 |
| 75.0% | quartile | 8.1 |
| 50.0% | median | 7.3 |
| 25.0% | quartile | -6.2 |
| 10.0% | | -6.2 |
| 2.5% | | -6.2 |
| 0.5% | | -6.2 |
| 0.0% | minimum | -6.2 |

Summary Statistics

| | |
|----------------|-------|
| Mean | 3.1 |
| Std Dev | 8.0 |
| Std Err Mean | 4.6 |
| Upper 95% Mean | 23.0 |
| Lower 95% Mean | -16.9 |
| N | 3.0 |

Distributions Analyte_Method=Zinc-65 Acid dissolution with hydrofluoric acid

Bias



Quantiles

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

Summary Statistics

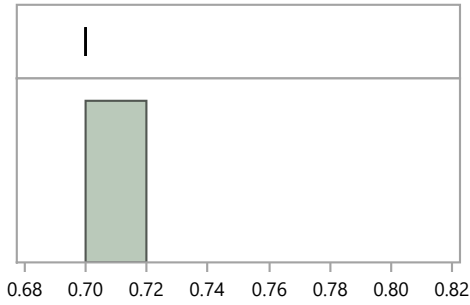
| | |
|----------------|-----|
| Mean | 4.1 |
| Std Dev | . |
| Std Err Mean | . |
| Upper 95% Mean | . |
| Lower 95% Mean | . |
| N | 1.0 |

RdV46 Distribution by Preparation Method

RdV Distribution by Prep Method

Distributions Analyte_Method=Zinc-65 Coprecipitation, acidified

Bias



Quantiles

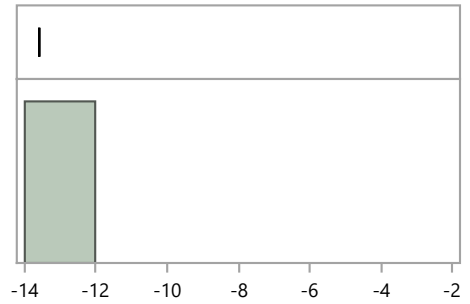
| | | |
|--------|----------|-----|
| 100.0% | maximum | 0.7 |
| 99.5% | | 0.7 |
| 97.5% | | 0.7 |
| 90.0% | | 0.7 |
| 75.0% | quartile | 0.7 |
| 50.0% | median | 0.7 |
| 25.0% | quartile | 0.7 |
| 10.0% | | 0.7 |
| 2.5% | | 0.7 |
| 0.5% | | 0.7 |
| 0.0% | minimum | 0.7 |

Summary Statistics

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

Distributions Analyte_Method=Zinc-65 EPA 901, Radioactive Cesium, 600/4-80-032

Bias



Quantiles

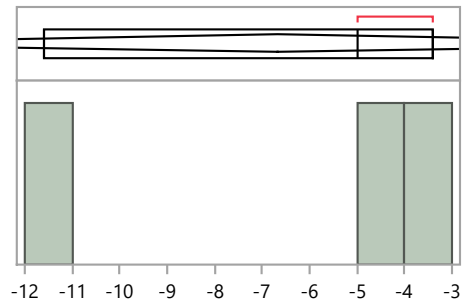
| | | |
|--------|----------|-------|
| 100.0% | maximum | -13.6 |
| 99.5% | | -13.6 |
| 97.5% | | -13.6 |
| 90.0% | | -13.6 |
| 75.0% | quartile | -13.6 |
| 50.0% | median | -13.6 |
| 25.0% | quartile | -13.6 |
| 10.0% | | -13.6 |
| 2.5% | | -13.6 |
| 0.5% | | -13.6 |
| 0.0% | minimum | -13.6 |

Summary Statistics

| | |
|----------------|-------|
| Mean | -13.6 |
| Std Dev | . |
| Std Err Mean | . |
| Upper 95% Mean | . |
| Lower 95% Mean | . |
| N | 1.0 |

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

Bias



Quantiles

| | | |
|--------|----------|-------|
| 100.0% | maximum | -3.4 |
| 99.5% | | -3.4 |
| 97.5% | | -3.4 |
| 90.0% | | -3.4 |
| 75.0% | quartile | -3.4 |
| 50.0% | median | -5.0 |
| 25.0% | quartile | -11.6 |
| 10.0% | | -11.6 |
| 2.5% | | -11.6 |
| 0.5% | | -11.6 |
| 0.0% | minimum | -11.6 |

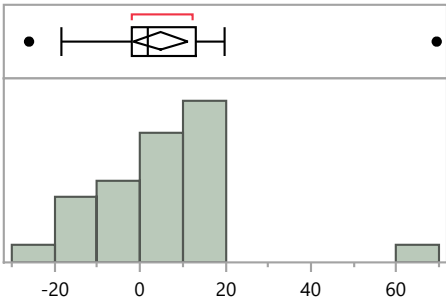
Summary Statistics

| | |
|----------------|-------|
| Mean | -6.7 |
| Std Dev | 4.3 |
| Std Err Mean | 2.5 |
| Upper 95% Mean | 4.1 |
| Lower 95% Mean | -17.5 |
| N | 3.0 |

RdV Distribution by Prep Method

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

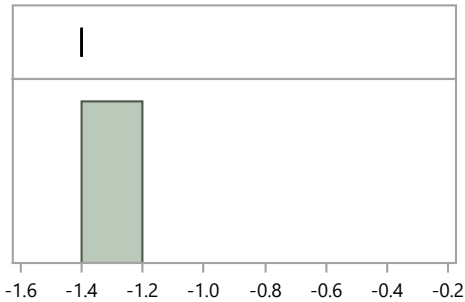
Bias



| Quantiles | | | Summary Statistics | |
|-----------|----------|-------|--------------------|------|
| 100.0% | maximum | 69.4 | Mean | 4.9 |
| 99.5% | | 69.4 | Std Dev | 16.9 |
| 97.5% | | 69.4 | Std Err Mean | 3.1 |
| 90.0% | | 16.9 | Upper 95% Mean | 11.3 |
| 75.0% | quartile | 13.1 | Lower 95% Mean | -1.5 |
| 50.0% | median | 2.0 | N | 29.0 |
| 25.0% | quartile | -1.8 | | |
| 10.0% | | -15.6 | | |
| 2.5% | | -25.9 | | |
| 0.5% | | -25.9 | | |
| 0.0% | minimum | -25.9 | | |

Distributions Analyte_Method=Zinc-65 Other

Bias



| Quantiles | | | Summary Statistics | |
|-----------|----------|------|--------------------|------|
| 100.0% | maximum | -1.4 | Mean | -1.4 |
| 99.5% | | -1.4 | Std Dev | . |
| 97.5% | | -1.4 | Std Err Mean | . |
| 90.0% | | -1.4 | Upper 95% Mean | . |
| 75.0% | quartile | -1.4 | Lower 95% Mean | . |
| 50.0% | median | -1.4 | N | 1.0 |
| 25.0% | quartile | -1.4 | | |
| 10.0% | | -1.4 | | |
| 2.5% | | -1.4 | | |
| 0.5% | | -1.4 | | |
| 0.0% | minimum | -1.4 | | |