ENVIRONMENTAL MEASUREMENTS LABORATORY

Semi-Annual Report of the Department of Energy
Office of Environmental Management
Quality Assessment Program

Colin G. Sanderson and Pamela Greenla

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**SEMI-ANNUAL REPORT OF THE DEPARTMENT OF ENERGY,
OFFICE OF ENVIRONMENTAL MANAGEMENT,
QUALITY ASSESSMENT PROGRAM**

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July 1, 1996

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ABSTRACT

This report presents the results from the analysis of the 44th set of environmental quality assessment samples (QAP XLIV) that were received on or before June 3, 1996.

INTRODUCTION

This Quality Assessment Program (QAP) is designed to test the quality of the environmental measurements being reported to the Department of Energy by its contractors. Since 1976, real or synthetic environmental samples that have been prepared and thoroughly analyzed at the Environmental Measurements Laboratory (EML) have been distributed at first quarterly and then semi-annually to these contractors. Their results, which are returned to EML within 90 days, are compiled with EML's results and are reported back to the participating contractors 30 days later. A summary of the reported results is available to the participants 2 days after the reporting deadline via a modem-telephone connection to the EML computer.

This is the 48th report of this program. Preceding reports in this series are:

HASL-317	(February 1, 1977)	EML-432	(November 1, 1984)
HASL-319	(May 2, 1977)	EML-438	(March 1, 1985)
HASL-323	(August 1, 1977)	EML-439	(March 1, 1985)
HASL-331	(November 1, 1977)	EML-448	(October 1, 1985)
EML-336	(January 1, 1978)	EML-453	(March 1, 1986)
EML-337	(February 1, 1978)	EML-454	(March 1, 1986)
EML-340	(May 1, 1978)	EML-477	(October 1, 1986)
EML-343	(August 1, 1978)	EML-478	(March 1, 1987)
EML-346	(November 1, 1978)	EML-498	(September 1, 1987)
EML-350	(February 1, 1979)	EML-518	(January 2, 1989)
EML-351	(February 1, 1979)	EML-525*	(August 1, 1989)
EML-354	(May 1, 1979)	EML-526	(January 2, 1990)
EML-358	(August 1, 1979)	EML-530	(July 2, 1990)
EML-364	(November 1, 1979)	EML-535	(January 1, 1991)
EML-368	(February 1, 1980)	EML-539	(July 1, 1991)
EML-377	(August 1, 1980)	EML-543	(January 2, 1992)
EML-387	(February 1, 1981)	EML-546	(July 1, 1992)
EML-388	(February 1, 1981)	EML-551	(January 4, 1993)
EML-393	(August 3, 1981)	EML-556	(July 1, 1993)
EML-402	(February 1, 1982)	EML-559	(January 5, 1994)
EML-414	(April 1, 1983)	EML-561	(July 1, 1994)
EML-417	(September 1, 1983)	EML-565	(January 5, 1995)
EML-426	(March 1, 1984)	EML-569	(July 3, 1995)
PNL-5079	(April 1, 1984)	EML-576	(February 1, 1996, Revised)
EML-431	(September 1, 1984)		

*Please note this is a corrected report number.

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RESULTS

The results from the analysis of QAP-XLIV samples received on or before June 3, 1996 are listed according to the TABLE OF CONTENTS. The data for the different kinds of samples are given in the following units:

Nuclear Species	
Air Filters	Bq filter ⁻¹
Soil	Bq kg ⁻¹
Tissue	Bq kg ⁻¹
Vegetation	Bq kg ⁻¹
Water	Bq L ⁻¹

The values for elemental uranium are reported in $\mu\text{g filter}^{-1}$, g, or mL. Some programs require the use of pCi as reporting units, the conversion can be found on page 3.

The 'EML value' listed in the tables to which the contractors' results are compared is the mean of replicate determinations for each nuclide. The EML uncertainty is the standard error of the mean. All other uncertainties are as reported by the participants.

The control limits were established from percentiles of historic data distributions (1982-1992). The evaluation of this historic data and the development of the control limits is presented in DOE report EML-564.

Participants' analytical performance is evaluated based on the historical analytical capabilities for individual analyte/matrix pairs. The criteria for acceptable performance, "A", has been chosen to be between the 15th and 85th percentile of the cumulative normalized distribution, which can be viewed as the middle 70% of all historic measurements. The acceptable with warning criteria, "W", is between the 5th and 15th percentile and between the 85th and 95th percentile. In other words, the middle 90% of all reported values are acceptable, while the outer 5th-15th (10%) and 85th-95th percentiles (10%) are in the warning area. The not acceptable criteria, "N", is established at less than the 5th percentile and greater than the 95th percentile, that is, the outer 10% of the historical data. These control limits for all 48 i/j pairs are listed in the Table of Control Limits & Performance Criteria (p. 4).

QAP is an external assessment of environmental radiological analyses. If your laboratory is performing other types of analyses (screening, high-level radiological), this evaluation system may not be appropriate, and you should continue to use an evaluation system appropriate to your data objectives.

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Results Ordered by Matrix/Nuclide

Air	
²⁴¹ Am	199
¹⁴⁴ Ce	201
⁵⁷ Co	204
⁶⁰ Co	207
¹³⁴ Cs	210
¹³⁷ Cs	213
Gross Alpha (GA)	216
Gross Beta (GB)	218
⁵⁴ Mn	220
²³⁸ Pu	223
²³⁹ Pu	225
¹⁰⁶ Ru	227
¹²⁵ Sb	229

	⁹⁰ Sr	231
	²³⁴ U	233
	²³⁸ U	235
	U Bq	237
	U µg	238
Soil		
	²⁴¹ Am	239
	¹³⁷ Cs	241
	⁴⁰ K	244
	²³⁸ Pu	247
	²³⁹ Pu	249
	⁹⁰ Sr	251
	²³⁴ U	253
	²³⁸ U	255
	U Bq	257
	U µg	258
Vegetation		
	²⁴¹ Am	259
	²⁴⁴ Cm	261
	⁶⁰ Co	262
	¹³⁷ Cs	264
	⁴⁰ K	266
	²³⁸ Pu	268
	²³⁹ Pu	269
	⁹⁰ Sr	271
Water		
	²⁴¹ Am	273
	⁶⁰ Co	275
	¹³⁷ Cs	278
	⁵⁵ Fe	281
	Gross Alpha (GA)	282
	Gross Beta (GB)	284
	³ H	286
	⁵⁴ Mn	288
	²³⁸ Pu	291
	²³⁹ Pu	293
	⁹⁰ Sr	295
	²³⁴ U	297
	²³⁸ U	299
	U Bq	301
	U µg	302

List of Labcodes of Participating Laboratories for EML QAP XLIII

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QAP 44 Summary of Evaluations of 3262 Reported Analyses

Air Filter:
1208 Analyses

Soil:
617 Analyses

Summary:
All Analyses

Vegetation:
439 Analyses

Water:
998 Analyses

A = Acceptable
W = Acceptable with Warning
N = Not Acceptable

QAP44 Statistical Summary

Nuclide	EMI Value	EMI Error	Reported Values			No. of Reported Values
			Mean	Median	Std. Dev.	
Matrix: AI						
AM241	0.189	0.007	1.09	1.04	0.22	60
CE144	33.300	3.300	0.78	0.75	0.14	80
CO 57	8.900	0.900	0.81	0.79	0.14	85
CO 60	29.500	2.900	0.89	0.89	0.08	84
CS134	14.700	1.460	0.91	0.91	0.09	87
CS137	6.640	0.700	0.91	0.89	0.11	88
GA 1	1.620	0.150	1.16	1.17	0.18	59
GB 2	1.770	0.150	1.08	1.03	0.20	57
MN 54	3.440	0.380	0.92	0.90	0.12	81
PU238	0.096	0.002	0.99	1.00	0.12	61
PU239	0.093	0.003	1.04	1.05	0.12	61
RU106	11.600	1.440	0.94	0.95	0.16	76
SB125	9.780	1.030	0.94	0.94	0.15	86
SR 90	1.060	0.037	0.98	0.95	0.26	47
U 234	0.052	0.002	1.21	1.17	0.24	41
U 238	0.053	0.002	1.16	1.13	0.19	39
U BQ	0.107	0.003	1.25	1.12	0.30	13
U UG	4.310	0.100	1.09	1.02	0.19	25

Matrix: SO						
AM241	3.690	0.454	1.08	1.00	0.33	60
CS137	359.000	10.000	1.06	1.06	0.11	95
K 40	465.000	30.000	1.06	1.04	0.13	86
PU238	43.000	2.440	0.98	1.00	0.12	67
PU239	9.230	0.346	1.03	1.01	0.13	70
SR 90	1340.000	113.000	0.88	0.89	0.13	44
U 234	34.200	3.520	1.01	1.05	0.16	46
U 238	35.900	3.630	1.02	1.00	0.20	58
U BQ	71.700	4.150	0.95	0.98	0.18	17
U UG	2.900	0.290	0.96	0.97	0.21	33

Matrix: VE						
AM241	5.600	0.184	1.16	1.10	0.27	54
CM244	4.440	0.202	1.01	1.01	0.20	35
CO 60	59.700	0.963	1.04	1.04	0.13	76
CS137	944.000	16.200	1.14	1.14	0.12	69
K 40	1030.000	33.000	1.09	1.10	0.15	72
PU238	0.820	0.104	1.09	1.15	0.24	7
PU239	9.820	1.220	0.96	0.95	0.16	55
SR 90	1300.000	52.400	0.95	0.96	0.17	44

Statistical summary of "A" and "W" reported values

QAP44 Statistical Summary

Nuclide	EMI Value	EMI Error	Reported Values		Std. Dev.	No. of Reported Values
			Mean	Median		
Matrix: WA						
AM241	0.766	0.013	1.07	1.05	0.17	69
CO 60	32.800	0.580	1.03	1.02	0.06	97
CS137	38.300	0.881	1.10	1.10	0.07	96
FE 55	83.000	3.440	1.03	0.98	0.23	13
GA 1	1850.000	185.000	1.01	1.00	0.12	63
GB 2	744.000	74.000	1.06	1.08	0.19	43
H 3	251.000	11.400	0.95	0.88	0.22	81
MN 54	38.400	1.160	1.09	1.09	0.07	86
PU238	0.982	0.074	0.96	0.97	0.08	72
PU239	0.772	0.056	0.98	0.99	0.11	78
SR 90	1.450	0.034	1.09	1.06	0.19	60
U 234	0.274	0.019	1.10	1.06	0.11	53
U 238	0.275	0.024	1.08	1.09	0.10	56
U BQ	0.559	0.047	1.05	1.07	0.23	20
U UG	0.022	0.003	1.02	1.04	0.10	23

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium in μ g/filter, g or mL.

Conversion from Bq to pCi:

$$1 \text{ Bq} = 27 \text{ pCi}$$

Example: Convert 3 Bq to pCi

$$3 \text{ Bq} \times 27 \text{ pCi/Bq} = 81 \text{ pCi}$$

Statistical summary of "A" and "W" reported values

QAP44 Control Limits* by Matrix

Nuclide	Lower Limit	Lower Middle Limit	Upper Middle Limit	Upper Limit
Matrix: AI				
AM241	0.62	0.82	1.25	1.93
CE144	0.61	0.69	1.09	1.31
CO 57	0.63	0.72	1.08	1.29
CO 60	0.74	0.83	1.10	1.25
CS134	0.70	0.80	1.08	1.21
CS137	0.72	0.84	1.13	1.32
GA 1	0.82	0.91	1.30	1.58
GB 2	0.75	0.89	1.61	1.94
MN 54	0.76	0.85	1.12	1.33
PU238	0.61	0.82	1.15	1.55
PU239	0.67	0.86	1.16	1.58
RU106	0.54	0.64	1.16	1.59
SB125	0.35	0.66	1.12	1.40
SR 90	0.62	0.83	1.45	2.26
U 234	0.78	0.90	1.37	1.93
U 238	0.80	0.89	1.37	2.63
U BQ	0.79	0.87	1.66	2.88
U UG	0.54	0.84	1.26	1.73
Matrix: SO				
AM241	0.52	0.75	1.49	2.41
CS137	0.74	0.88	1.23	1.40
K 40	0.70	0.84	1.23	1.59
PU238	0.22	0.62	1.19	1.99
PU239	0.62	0.84	1.28	1.99
SR 90	0.58	0.76	1.66	2.96
U 234	0.39	0.64	1.06	1.26
U 238	0.35	0.64	1.09	1.64
U BQ	0.27	0.42	1.05	1.48
U UG	0.30	0.51	1.10	1.55
Matrix: VE				
AM241	0.58	0.81	1.60	2.86
CM244	0.40	0.84	1.55	1.87
CO 60	0.64	0.82	1.23	1.49
CS137	0.75	0.92	1.25	1.48
K 40	0.45	0.81	1.20	1.51
PU238	0.56	0.82	1.63	2.76
PU239	0.60	0.81	1.36	1.98
SR 90	0.50	0.71	1.11	1.37
Matrix: WA				
AM241	0.66	0.84	1.20	1.56
CO 60	0.87	0.95	1.11	1.17
CS137	0.90	0.97	1.15	1.25
FE 55	0.27	0.80	1.28	1.62

*Control limits are reported as: the ratio of Reported Value vs. EML Value

QAP44 Control Limits* by Matrix

Nuclide	Lower Limit	Lower Middle Limit	Upper Middle Limit	Upper Limit
GA 1	0.55	0.80	1.22	1.31
GB 2	0.75	0.93	1.52	1.65
H 3	0.69	0.84	1.20	1.91
MN 54	0.88	0.95	1.13	1.21
PU238	0.68	0.91	1.14	1.33
PU239	0.62	0.78	1.16	1.38
SR 90	0.73	0.87	1.24	1.65
U 234	0.77	0.90	1.19	1.47
U 238	0.78	0.90	1.14	1.40
U BQ	0.40	0.82	1.21	1.45
U UG	0.73	0.89	1.15	1.35

Control limits are established from historical QAP data.

Where historical data are insufficient, limits of $\pm 20\%$ and $\pm 50\%$ are applied.

The following are recommended performance criteria for analysis of environmental levels of analytes:

Acceptable: Lower Middle Limit $\leq A \leq$ Upper Middle Limit

Acceptable with Warning: Lower Limit $\leq W <$ Lower Middle Limit or Upper Middle Limit $< W \leq$ Upper Limit

Not Acceptable: $N <$ Lower Limit or $N >$ Upper Limit

*Control limits are reported as: the ratio of Reported Value vs. EML Value

QAP44 Summary of Matrix Evaluations by Laboratory

Evaluation Summary				Evaluation Percentages			
Matrix	A	W	N	Total Analyses	%A	%W	%N
Lab: AA Environmental Measurements Laboratory							
AI	1	0	0	1	100	0	0
AI	17	0	0	17	100	0	0
SO	10	0	0	10	100	0	0
VE	8	0	0	8	100	0	0
WA	15	0	0	15	100	0	0
Totals: 51 0 0 51 100% 0% 0%							
Lab: AC Analytical Chemistry Laboratory, Argonne National Lab							
AI	9	3	0	12	75	25	0
SO	5	0	0	5	100	0	0
WA	6	1	1	8	75	13	13
Totals: 20 4 1 25 80% 16% 4%							
Lab: AE Analytical Resources, Inc., Seattle							
SO	6	1	0	7	86	14	0
WA	9	1	0	10	90	10	0
Totals: 15 2 0 17 88% 12% 0%							
Lab: AG Paragon Analytics, Inc, Fort Collins, CO							
AI	13	3	0	16	81	19	0
SO	6	2	0	8	75	25	0
VE	7	0	0	7	100	0	0
WA	10	1	2	13	77	8	15
Totals: 36 6 2 44 82% 14% 5%							
Lab: AI Nuclear Technology Services, Inc., Roswell, GA							
AI	6	3	3	12	50	25	25
SO	2	3	1	6	33	50	17
VE	0	2	1	3	0	67	33
WA	5	3	1	9	56	33	11

QAP44 Summary of Matrix Evaluations by Laboratory

Evaluation Summary				Evaluation Percentages			
Matrix	A	W	N	Total Analyses	%A	%W	%N
Lab: AI Nuclear Technology Services, Inc., Roswell, GA							
Totals:	13	11	6	30	43%	37%	20%
Lab: AL Ames Laboratory, Ames, IA							
AI	2	0	4	6	33	0	67
SO	1	0	0	1	100	0	0
VE	2	0	0	2	100	0	0
WA	3	0	0	3	100	0	0
Totals:	8	0	4	12	67%	0%	33%
Lab: AM American Radiation Services, Inc., Baton Rouge							
AI	5	5	1	11	45	45	9
SO	3	2	0	5	60	40	0
WA	4	2	1	7	57	29	14
Totals:	12	9	2	23	52%	39%	9%
Lab: AN Argonne National Laboratory							
AI	15	1	0	16	94	6	0
SO	7	1	0	8	88	13	0
VE	7	1	0	8	88	13	0
WA	11	1	0	12	92	8	0
Totals:	40	4	0	44	91%	9%	0%
Lab: AR Accu-Labs Research Inc., Golden, CO							
AI	16	2	0	18	89	11	0
SO	7	3	0	10	70	30	0
VE	3	4	1	8	38	50	13
WA	6	6	2	14	43	43	14
Totals:	32	15	3	50	64%	30%	6%

QAP44 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary				Evaluation Percentages		
	A	W	N	Total Analyses	%A	%W	%N
Lab: AU ORISE EESD/ESSAP, Oak Ridge							
AI	1	1	4	6	17	17	67
SO	2	0	4	6	33	0	67
VE	2	1	2	5	40	20	40
WA	2	4	3	9	22	44	33
Totals:	7	6	13	26	27%	23%	50%
Lab: AW Argonne National Laboratory, Idaho Falls							
AI	9	0	0	9	100	0	0
WA	5	1	1	7	71	14	14
Totals:	14	1	1	16	88%	6%	6%
Lab: BA Bettis Atomic Power Lab, West Mifflin, PA							
AI	8	3	0	11	73	27	0
SO	1	0	0	1	100	0	0
VE	4	0	0	4	100	0	0
WA	5	2	0	7	71	29	0
Totals:	18	5	0	23	78%	22%	0%
Lab: BC Babcock & Wilcox MC #42, Lynchburg, VA							
AI	12	1	0	13	92	8	0
SO	2	3	0	5	40	60	0
VE	2	1	0	3	67	33	0
WA	4	4	0	8	50	50	0
Totals:	20	9	0	29	69%	31%	0%
Lab: BE RUST Geotech, Grand Junction, CO							
AI	10	7	0	17	59	41	0
SO	6	3	0	9	67	33	0
VE	5	2	0	7	71	29	0
WA	7	4	2	13	54	31	15

QAP44 Summary of Matrix Evaluations by Laboratory

Evaluation Summary				Evaluation Percentages			
Matrix	A	W	N	Total Analyses	%A	%W	%N
Lab: BE RUST Geotech, Grand Junction, CO							
Totals:	28	16	2	46	61%	35%	4%
Lab: BK Brookhaven National Laboratory, Upton, NY							
WA	1	3	0	4	25	75	0
Totals:	1	3	0	4	25%	75%	0%
Lab: BL Barringer Laboratories Inc., Golden, CO							
AI	43	9	0	52	83	17	0
SO	9	10	3	22	41	45	14
VE	23	1	0	24	96	4	0
WA	38	3	6	47	81	6	13
Totals:	113	23	9	145	78%	16%	6%
Lab: BM Battelle Memorial Institute, Columbus, OH							
AI	9	5	0	14	64	36	0
SO	0	2	2	4	0	50	50
VE	2	2	1	5	40	40	20
WA	6	2	0	8	75	25	0
Totals:	17	11	3	31	55%	35%	10%
Lab: BN Brookhaven National Laboratory, Upton, NY							
AI	8	2	0	10	80	20	0
SO	2	0	0	2	100	0	0
VE	2	1	0	3	67	33	0
WA	7	0	0	7	100	0	0
Totals:	19	3	0	22	86%	14%	0%

QAP44 Summary of Matrix Evaluations by Laboratory

Evaluation Summary				Evaluation Percentages			
Matrix	A	W	N	Total Analyses	%A	%W	%N
Lab: BP Battelle Pacific Northwest Laboratory							
AI	10	1	0	11	91	9	0
SO	7	0	0	7	100	0	0
VE	1	1	1	3	33	33	33
WA	4	4	1	9	44	44	11
Totals: 22 6 2 30 73% 20% 7%							
Lab: BQ Becquerel Laboratories Inc., Mississauga, Ontario, Canada							
AI	7	2	0	9	78	22	0
SO	2	0	1	3	67	0	33
VE	1	1	1	3	33	33	33
WA	3	1	0	4	75	25	0
Totals: 13 4 2 19 68% 21% 11%							
Lab: BR US Army Research Laboratory, Aberdeen Proving Ground							
AI	6	2	0	8	75	25	0
SO	1	1	0	2	50	50	0
VE	0	1	1	2	0	50	50
WA	1	2	0	3	33	67	0
Totals: 8 6 1 15 53% 40% 7%							
Lab: BS B&W Nuclear Envir. Services, Leechburg, PA							
AI	7	4	0	11	64	36	0
SO	3	0	1	4	75	0	25
VE	0	3	1	4	0	75	25
WA	5	1	0	6	83	17	0
Totals: 15 8 2 25 60% 32% 8%							
Lab: BU Autoridad Regulatoria, Buenos Aires, Argentina							
AI	11	0	2	13	85	0	15
SO	5	0	1	6	83	0	17
VE	4	0	1	5	80	0	20
WA	7	1	1	9	78	11	11

QAP44 Summary of Matrix Evaluations by Laboratory

Evaluation Summary				Evaluation Percentages			
Matrix	A	W	N	Total Analyses	%A	%W	%N
Lab: BU Autoridad Regulatoria, Buenos Aires, Argentina							
Totals:	27	1	5	33	82%	3%	15%
Lab: BX B&W Nuclear Envir. Services, Lynchburg, VA							
AI	14	2	0	16	88	13	0
SO	4	3	1	8	50	38	13
VE	3	3	0	6	50	50	0
WA	9	4	0	13	69	31	0
Totals:	30	12	1	43	70%	28%	2%
Lab: CA Atomic Energy Control Board, Ottawa, Canada							
AI	2	5	0	7	29	71	0
SO	1	0	0	1	100	0	0
Totals:	3	5	0	8	38%	63%	0%
Lab: CC Compuchem Environmental Corp., RTP, NC							
AI	9	5	0	14	64	36	0
SO	7	2	0	9	78	22	0
VE	4	3	0	7	57	43	0
WA	10	0	1	11	91	0	9
Totals:	30	10	1	41	73%	24%	2%
Lab: CH California State Dept. Health Serv., Sanitation & Radiation Laboratory							
AI	15	3	0	18	83	17	0
SO	9	1	0	10	90	10	0
VE	6	1	0	7	86	14	0
WA	10	3	1	14	71	21	7
Totals:	40	8	1	49	82%	16%	2%

QAP44 Summary of Matrix Evaluations by Laboratory

Evaluation Summary				Evaluation Percentages			
Matrix	A	W	N	Total Analyses	%A	%W	%N
Lab: CL Core Laboratories, Casper, WY							
AI	11	3	1	15	73	20	7
SO	4	4	1	9	44	44	11
VE	6	0	1	7	86	0	14
WA	7	4	0	11	64	36	0
Totals:	28	11	3	42	67%	26%	7%
Lab: CP Controls for Environmental Pollution, Santa Fe							
AI	9	1	1	11	82	9	9
SO	3	0	0	3	100	0	0
VE	3	1	0	4	75	25	0
WA	5	0	1	6	83	0	17
Totals:	20	2	2	24	83%	8%	8%
Lab: CS Rockwell International Corp., Canoga Park, CA							
AI	1	2	7	10	10	20	70
WA	1	0	0	1	100	0	0
Totals:	2	2	7	11	18%	18%	64%
Lab: CW Carlsbad Environmental Monitoring Research Center, NM							
AI	5	0	0	5	100	0	0
SO	5	0	0	5	100	0	0
VE	3	0	0	3	100	0	0
WA	5	0	0	5	100	0	0
Totals:	18	0	0	18	100%	0%	0%
Lab: CZ ACZ Laboratories, Inc., Steamboat Springs, CO							
WA	1	0	0	1	100	0	0
Totals:	1	0	0	1	100%	0%	0%

QAP44 Summary of Matrix Evaluations by Laboratory

Evaluation Summary				Evaluation Percentages			
Matrix	A	W	N	Total Analyses	%A	%W	%N
Lab: DC Datachem Laboratories, Salt Lake City							
AI	10	6	1	17	59	35	6
SO	14	5	0	19	74	26	0
VE	6	1	0	7	86	14	0
WA	12	2	2	16	75	13	13
<hr/>							
Totals:	42	14	3	59	71%	24%	5%
Lab: EG LITCO/INEL, Scoville							
AI	9	1	0	10	90	10	0
SO	5	2	1	8	63	25	13
VE	4	0	0	4	100	0	0
WA	6	5	0	11	55	45	0
<hr/>							
Totals:	24	8	1	33	73%	24%	3%
Lab: EI Eichrom Industries, Inc., Argonne							
AI	6	0	0	6	100	0	0
SO	1	2	1	4	25	50	25
VE	3	0	1	4	75	0	25
WA	2	5	0	7	29	71	0
<hr/>							
Totals:	12	7	2	21	57%	33%	10%
Lab: EL Energy Laboratories, Inc., Casper, WY							
AI	8	5	0	13	62	38	0
SO	2	3	1	6	33	50	17
VE	2	1	1	4	50	25	25
WA	4	4	1	9	44	44	11
<hr/>							
Totals:	16	13	3	32	50%	41%	9%
Lab: EP US EPA, Las Vegas							
AI	10	0	0	10	100	0	0
SO	2	0	1	3	67	0	33
VE	1	0	1	2	50	0	50
WA	6	3	0	9	67	33	0

QAP44 Summary of Matrix Evaluations by Laboratory

Evaluation Summary				Evaluation Percentages			
Matrix	A	W	N	Total Analyses	%A	%W	%N
Lab: EP US EPA, Las Vegas							
Totals:	19	3	2	24	79%	13%	8%
Lab: ES Environmental Sci. & Engr., Inc., Gainesville, FL							
AI	14	2	2	18	78	11	11
SO	11	1	1	13	85	8	8
VE	6	1	0	7	86	14	0
WA	11	4	1	16	69	25	6
Totals:	42	8	4	54	78%	15%	7%
Lab: FG FGL Environmental, Santa Paula, CA							
AI	9	2	0	11	82	18	0
SO	2	2	0	4	50	50	0
WA	8	1	2	11	73	9	18
Totals:	19	5	2	26	73%	19%	8%
Lab: FL Florida Dept of Health & Rehab. Serv., Orlando							
AI	13	0	0	13	100	0	0
SO	6	0	0	6	100	0	0
VE	4	0	0	4	100	0	0
WA	5	4	0	9	56	44	0
Totals:	28	4	0	32	88%	13%	0%
Lab: FM Florida Mobile Emergency Radiological Laboratory, Orlando							
AI	9	0	0	9	100	0	0
WA	3	1	0	4	75	25	0
Totals:	12	1	0	13	92%	8%	0%

QAP44 Summary of Matrix Evaluations by Laboratory

Evaluation Summary				Evaluation Percentages			
Matrix	A	W	N	Total Analyses	%A	%W	%N
Lab: FN Fermi Lab, Batavia, IL							
AI	6	1	0	7	86	14	0
SO	3	0	0	3	100	0	0
VE	3	0	0	3	100	0	0
WA	4	0	0	4	100	0	0
Totals:	16	1	0	17	94%	6%	0%
Lab: FS Florida State University, Tallahassee							
SO	5	2	0	7	71	29	0
Totals:	5	2	0	7	71%	29%	0%
Lab: GA Lockheed Martin, Pikton, OH							
AI	12	3	0	15	80	20	0
SO	7	1	0	8	88	13	0
VE	5	1	0	6	83	17	0
WA	10	0	0	10	100	0	0
Totals:	34	5	0	39	87%	13%	0%
Lab: GE Environmental Physics, Inc., Charleston, SC							
AI	16	1	0	17	94	6	0
SO	8	1	0	9	89	11	0
VE	7	0	0	7	100	0	0
WA	5	8	0	13	38	62	0
Totals:	36	10	0	46	78%	22%	0%
Lab: GS USGS/NWQL, Arvada, CO							
WA	0	1	0	1	0	100	0
Totals:	0	1	0	1	0%	100%	0%

QAP44 Summary of Matrix Evaluations by Laboratory

Evaluation Summary				Evaluation Percentages			
Matrix	A	W	N	Total Analyses	%A	%W	%N
Lab: HA NUS Laboratory, Pittsburgh							
SO	4	3	0	7	57	43	0
WA	9	4	0	13	69	31	0
Totals:	13	7	0	20	65%	35%	0%
Lab: HC Lawrence Livermore Laboratory, California							
AI	2	0	0	2	100	0	0
WA	2	1	0	3	67	33	0
Totals:	4	1	0	5	80%	20%	0%
Lab: HL Heritage Laboratories, Inc., Romeoville, IL							
SO	4	3	0	7	57	43	0
WA	6	2	0	8	75	25	0
Totals:	10	5	0	15	67%	33%	0%
Lab: ID DPRA - IRD/CNEN, Rio de Janeiro, Brazil							
AI	8	2	0	10	80	20	0
SO	7	0	0	7	100	0	0
VE	5	1	0	6	83	17	0
WA	5	2	1	8	63	25	13
Totals:	25	5	1	31	81%	16%	3%
Lab: IE IEA, Inc., Morrisville, NC							
AI	12	3	0	15	80	20	0
SO	9	0	0	9	100	0	0
VE	7	0	0	7	100	0	0
WA	10	1	2	13	77	8	15
Totals:	38	4	2	44	86%	9%	5%

QAP44 Summary of Matrix Evaluations by Laboratory

Evaluation Summary				Evaluation Percentages			
Matrix	A	W	N	Total Analyses	%A	%W	%N
Lab: IL ISU Environmental Monitoring Program, Pocatello, ID							
AI	1	1	0	2	50	50	0
SO	0	0	2	2	0	0	100
VE	0	0	2	2	0	0	100
VE	0	0	1	1	0	0	100
WA	1	2	2	5	20	40	40
Totals: 2 3 7 12 17% 25% 58%							
Lab: IN WINCO, Idaho Falls							
AI	4	3	1	8	50	38	13
SO	4	2	0	6	67	33	0
VE	2	1	0	3	67	33	0
WA	5	2	0	7	71	29	0
Totals: 15 8 1 24 63% 33% 4%							
Lab: IR Idaho National Engineering Laboratory							
AI	1	0	0	1	100	0	0
WA	0	0	1	1	0	0	100
Totals: 1 0 1 2 50% 0% 50%							
Lab: IS Quanterra- St. Louis							
AI	5	7	2	14	36	50	14
SO	7	1	1	9	78	11	11
VE	6	0	0	6	100	0	0
WA	8	3	1	12	67	25	8
Totals: 26 11 4 41 63% 27% 10%							
Lab: IT Quanterra- Richland Laboratory							
AI	8	6	1	15	53	40	7
SO	6	1	0	7	86	14	0
VE	4	3	0	7	57	43	0
WA	5	5	1	11	45	45	9

QAP44 Summary of Matrix Evaluations by Laboratory

Evaluation Summary				Evaluation Percentages			
Matrix	A	W	N	Total Analyses	%A	%W	%N
Lab: IT Quanterra- Richland Laboratory							
Totals:	23	15	2	40	57%	38%	5%
Lab: JP Japan Chemical Analysis Center							
AI	13	2	0	15	87	13	0
SO	8	0	0	8	100	0	0
VE	7	0	0	7	100	0	0
WA	12	0	0	12	100	0	0
Totals:	40	2	0	42	95%	5%	0%
Lab: KA Knolls Atomic Power Lab, Schenectady							
AI	1	1	0	2	50	50	0
SO	5	0	0	5	100	0	0
WA	10	1	0	11	91	9	0
Totals:	16	2	0	18	89%	11%	0%
Lab: LA Los Alamos National Laboratory, NM							
AI	31	14	0	45	69	31	0
SO	21	0	0	21	100	0	0
VE	17	1	0	18	94	6	0
WA	19	5	9	33	58	15	27
Totals:	88	20	9	117	75%	17%	8%
Lab: LB Lawrence Berkeley Lab UCB							
AI	7	3	0	10	70	30	0
SO	2	1	0	3	67	33	0
VE	3	0	1	4	75	0	25
WA	1	2	1	4	25	50	25
Totals:	13	6	2	21	62%	29%	10%

QAP44 Summary of Matrix Evaluations by Laboratory

Evaluation Summary				Evaluation Percentages			
Matrix	A	W	N	Total Analyses	%A	%W	%N
Lab: LH Lockheed Analytical Laboratory, Las Vegas							
AI	7	8	1	16	44	50	6
SO	8	0	0	8	100	0	0
VE	6	1	0	7	86	14	0
WA	12	0	1	13	92	0	8
<hr/>							
Totals:	33	9	2	44	75%	20%	5%
Lab: LL Lawrence Livermore National Lab, CA							
AI	11	1	2	14	79	7	14
SO	4	0	0	4	100	0	0
VE	4	0	0	4	100	0	0
WA	5	2	3	10	50	20	30
<hr/>							
Totals:	24	3	5	32	75%	9%	16%
Lab: LM Los Alamos National Lab, Mercury, NV							
AI	2	3	5	10	20	30	50
SO	0	0	2	2	0	0	100
WA	1	0	3	4	25	0	75
<hr/>							
Totals:	3	3	10	16	19%	19%	63%
Lab: LV UNLV, Dept of Health Physics							
AI	7	2	0	9	78	22	0
SO	2	1	0	3	67	33	0
VE	2	2	0	4	50	50	0
WA	2	2	0	4	50	50	0
<hr/>							
Totals:	13	7	0	20	65%	35%	0%
Lab: LW Lawrence Livermore National Lab, CA							
SO	3	1	0	4	75	25	0
VE	4	0	0	4	100	0	0
WA	5	1	0	6	83	17	0

QAP44 Summary of Matrix Evaluations by Laboratory

Evaluation Summary				Evaluation Percentages			
Matrix	A	W	N	Total Analyses	%A	%W	%N
Lab: LW Lawrence Livermore National Lab, CA							
Totals:	12	2	0	14	86%	14%	0%
Lab: MA ORNL Health Sciences Research Div.							
SO	2	1	0	3	67	33	0
VE	3	1	0	4	75	25	0
Totals:	5	2	0	7	71%	29%	0%
Lab: ME Radiation Control Program, Jamaica Plain, MA							
AI	7	0	1	8	88	0	13
SO	1	1	0	2	50	50	0
VE	2	1	0	3	67	33	0
WA	1	2	0	3	33	67	0
Totals:	11	4	1	16	69%	25%	6%
Lab: MI Massachusetts Institute of Technology							
AI	2	3	0	5	40	60	0
WA	4	6	2	12	33	50	17
Totals:	6	9	2	17	35%	53%	12%
Lab: ML EG&G Mound Applied Technologies, Miamisburg, OH							
AI	11	1	0	12	92	8	0
SO	6	0	0	6	100	0	0
VE	4	0	0	4	100	0	0
WA	7	1	0	8	88	13	0
Totals:	28	2	0	30	93%	7%	0%
Lab: MS Manufacturing Sciences Corporation, Oak Ridge							
AI	6	1	0	7	86	14	0

QAP44 Summary of Matrix Evaluations by Laboratory

Evaluation Summary				Evaluation Percentages			
Matrix	A	W	N	Total Analyses	%A	%W	%N
Lab: MS Manufacturing Sciences Corporation, Oak Ridge							
SO	2	0	0	2	100	0	0
WA	3	1	0	4	75	25	0
<hr/>							
Totals:	11	2	0	13	85%	15%	0%
Lab: NA US EPA NAREL, Montgomery, AL							
AI	12	0	0	12	100	0	0
SO	7	0	0	7	100	0	0
VE	7	0	0	7	100	0	0
WA	5	2	1	8	63	25	13
<hr/>							
Totals:	31	2	1	34	91%	6%	3%
Lab: NC Nuclear Services North Carolina State University, Raleigh							
AI	7	0	0	7	100	0	0
SO	1	0	0	1	100	0	0
VE	2	0	0	2	100	0	0
WA	3	0	0	3	100	0	0
<hr/>							
Totals:	13	0	0	13	100%	0%	0%
Lab: NL FERMCO, Cincinnati, OH							
AI	12	0	1	13	92	0	8
SO	5	1	0	6	83	17	0
WA	6	2	0	8	75	25	0
<hr/>							
Totals:	23	3	1	27	85%	11%	4%
Lab: NM Environmental Evaluation Group, Carlsbad, NM							
AI	7	0	2	9	78	0	22
SO	4	0	1	5	80	0	20
WA	8	1	0	9	89	11	0
<hr/>							
Totals:	19	1	3	23	83%	4%	13%

QAP44 Summary of Matrix Evaluations by Laboratory

Evaluation Summary				Evaluation Percentages			
Matrix	A	W	N	Total Analyses	%A	%W	%N
Lab: NR Naval Reactors Facility Chemistry, Scoville, ID							
SO	1	1	0	2	50	50	0
VE	1	2	0	3	33	67	0
Totals:	2	3	0	5	40%	60%	0%
Lab: OB OBG Laboratories, East Syracuse, NY							
AI	2	0	0	2	100	0	0
SO	0	2	0	2	0	100	0
WA	1	1	0	2	50	50	0
Totals:	3	3	0	6	50%	50%	0%
Lab: OD ORNL Radiobioassay Lab							
AI	10	1	0	11	91	9	0
WA	4	2	0	6	67	33	0
Totals:	14	3	0	17	82%	18%	0%
Lab: OL ORNL Environmental Sciences Div.							
AI	7	1	0	8	88	13	0
SO	2	0	0	2	100	0	0
VE	3	0	0	3	100	0	0
WA	3	0	0	3	100	0	0
Totals:	15	1	0	16	94%	6%	0%
Lab: OR Oak Ridge National Lab							
AI	12	1	0	13	92	8	0
SO	6	0	1	7	86	0	14
VE	6	1	0	7	86	14	0
WA	8	1	0	9	89	11	0
Totals:	32	3	1	36	89%	8%	3%

QAP44 Summary of Matrix Evaluations by Laboratory

Evaluation Summary				Evaluation Percentages			
Matrix	A	W	N	Total Analyses	%A	%W	%N
Lab: OS Oregon Health Division Radiation Controls Section, Portland							
SO	1	0	0	1	100	0	0
Totals:	1	0	0	1	100%	0%	0%
Lab: OT ORNL Radioactive Material Analysis Lab							
AI	9	2	4	15	60	13	27
SO	4	1	0	5	80	20	0
VE	4	0	1	5	80	0	20
WA	6	4	1	11	55	36	9
Totals:	23	7	6	36	64%	19%	17%
Lab: PA Mason & Hanger-Silas Mason Co., Inc., Battelle Pantex, Amarillo, TX							
AI	3	0	2	5	60	0	40
SO	3	0	0	3	100	0	0
VE	0	1	0	1	0	100	0
WA	5	0	1	6	83	0	17
Totals:	11	1	3	15	73%	7%	20%
Lab: PB Mason & Hanger-Silas Mason Co., Inc., Battelle Pantex, Amarillo, TX							
SO	3	0	0	3	100	0	0
VE	1	0	0	1	100	0	0
WA	5	0	1	6	83	0	17
Totals:	9	0	1	10	90%	0%	10%
Lab: PI Lockheed Martin Specialty Components, Largo, FL							
AI	2	0	0	2	100	0	0
SO	2	0	0	2	100	0	0
WA	5	0	0	5	100	0	0
Totals:	9	0	0	9	100%	0%	0%

QAP44 Summary of Matrix Evaluations by Laboratory

Evaluation Summary				Evaluation Percentages			
Matrix	A	W	N	Total Analyses	%A	%W	%N
Lab: RA V. G. Khlopin Radium Institute, St. Petersburg, Russia							
AI	7	3	1	11	64	27	9
SO	7	0	2	9	78	0	22
VE	5	1	1	7	71	14	14
Totals:	19	4	4	27	70%	15%	15%
Lab: RE Bechtel Nevada, Mercury, NV							
AI	10	4	2	16	63	25	13
SO	6	1	0	7	86	14	0
VE	6	0	0	6	100	0	0
WA	11	2	0	13	85	15	0
Totals:	33	7	2	42	79%	17%	5%
Lab: RF EG&G Rocky Flats Plant, Golden							
AI	0	0	2	2	0	0	100
SO	3	1	0	4	75	25	0
VE	1	0	0	1	100	0	0
WA	6	2	0	8	75	25	0
Totals:	10	3	2	15	67%	20%	13%
Lab: RG EG&G Rocky Flats Plant, Golden							
SO	6	0	0	6	100	0	0
WA	7	2	0	9	78	22	0
Totals:	13	2	0	15	87%	13%	0%
Lab: RI Westinghouse Hanford Co. Analytical Labs							
AI	5	3	4	12	42	25	33
SO	0	0	2	2	0	0	100
VE	3	1	2	6	50	17	33
WA	5	2	2	9	56	22	22

QAP44 Summary of Matrix Evaluations by Laboratory

Evaluation Summary				Evaluation Percentages			
Matrix	A	W	N	Total Analyses	%A	%W	%N
Lab: RI Westinghouse Hanford Co. Analytical Labs							
Totals:	13	6	10	29	45%	21%	34%
Lab: SA Sandia Labs Radioactive Sample Diag. Prog., NM							
AI	0	7	0	7	0	100	0
SO	2	0	0	2	100	0	0
WA	5	0	0	5	100	0	0
Totals:	7	7	0	14	50%	50%	0%
Lab: SC S-Cubed Division Maxwell Labs, La Jolla, CA							
AI	2	0	0	2	100	0	0
SO	5	1	1	7	71	14	14
WA	9	2	2	13	69	15	15
Totals:	16	3	3	22	73%	14%	14%
Lab: SE Shealy Environmental Services Inc., Cayce, SC							
AI	8	1	0	9	89	11	0
SO	1	4	1	6	17	67	17
VE	5	2	0	7	71	29	0
WA	5	5	1	11	45	45	9
Totals:	19	12	2	33	58%	36%	6%
Lab: SK Savannah River Plant							
AI	3	4	1	8	38	50	13
SO	2	0	0	2	100	0	0
VE	3	0	0	3	100	0	0
WA	4	0	0	4	100	0	0
Totals:	12	4	1	17	71%	24%	6%

QAP44 Summary of Matrix Evaluations by Laboratory

Evaluation Summary				Evaluation Percentages			
Matrix	A	W	N	Total Analyses	%A	%W	%N
Lab: SN Sanford Cohen Associates, Inc., Montgomery, AL							
AI	4	0	0	4	100	0	0
SO	4	1	1	6	67	17	17
VE	3	1	0	4	75	25	0
WA	6	1	0	7	86	14	0
Totals:	17	3	1	21	81%	14%	5%
Lab: SR Savannah River Plant							
AI	13	2	1	16	81	13	6
SO	4	0	1	5	80	0	20
VE	2	1	2	5	40	20	40
WA	10	2	0	12	83	17	0
Totals:	29	5	4	38	76%	13%	11%
Lab: SS Savannah River Tech Center							
AI	5	3	0	8	63	38	0
SO	1	1	0	2	50	50	0
VE	3	0	0	3	100	0	0
WA	3	0	0	3	100	0	0
Totals:	12	4	0	16	75%	25%	0%
Lab: SV Savannah Lab & Environmental Services, Inc., Tampa, FL							
WA	5	0	0	5	100	0	0
Totals:	5	0	0	5	100%	0%	0%
Lab: SW Southwest Research Institute, San Antonio, TX							
AI	6	5	2	13	46	38	15
SO	1	2	1	4	25	50	25
VE	5	2	0	7	71	29	0
WA	5	0	2	7	71	0	29

QAP44 Summary of Matrix Evaluations by Laboratory

Evaluation Summary				Evaluation Percentages			
Matrix	A	W	N	Total Analyses	%A	%W	%N
Lab: SW Southwest Research Institute, San Antonio, TX							
Totals:	17	9	5	31	55%	29%	16%
Lab: TE Teledyne Isotopes Midwest Lab, Northbrook, IL							
AI	12	3	0	15	80	20	0
SO	6	1	0	7	86	14	0
VE	7	0	0	7	100	0	0
WA	9	3	0	12	75	25	0
Totals:	34	7	0	41	83%	17%	0%
Lab: TI Teledyne Brown Engineering Environmental Services, Westwood, NJ							
AI	14	2	1	17	82	12	6
SO	9	0	0	9	100	0	0
VE	4	3	0	7	57	43	0
WA	9	1	4	14	64	7	29
Totals:	36	6	5	47	77%	13%	11%
Lab: TM TMA/Eberline-Albuquerque Lab, NM							
AI	14	2	1	17	82	12	6
SO	8	1	0	9	89	11	0
VE	6	1	0	7	86	14	0
WA	10	3	0	13	77	23	0
Totals:	38	7	1	46	83%	15%	2%
Lab: TN TMA/NORCAL, Richmond, CA							
AI	16	1	0	17	94	6	0
SO	8	1	0	9	89	11	0
VE	6	1	0	7	86	14	0
WA	10	4	1	15	67	27	7
Totals:	40	7	1	48	83%	15%	2%

QAP44 Summary of Matrix Evaluations by Laboratory

Evaluation Summary				Evaluation Percentages			
Matrix	A	W	N	Total Analyses	%A	%W	%N
Lab: TO TMA/Eberline Oak Ridge Laboratory							
AI	15	2	0	17	88	12	0
SO	7	2	0	9	78	22	0
VE	6	1	0	7	86	14	0
WA	11	1	1	13	85	8	8
Totals:	39	6	1	46	85%	13%	2%
Lab: TW Taiwan Radiation Monitoring Center							
AI	13	1	2	16	81	6	13
SO	7	1	0	8	88	13	0
VE	7	0	0	7	100	0	0
WA	6	4	2	12	50	33	17
Totals:	33	6	4	43	77%	14%	9%
Lab: TX Texas Dept. of Health/Laboratories, Austin							
AI	9	4	0	13	69	31	0
SO	5	3	0	8	63	38	0
VE	4	2	0	6	67	33	0
WA	2	5	3	10	20	50	30
Totals:	20	14	3	37	54%	38%	8%
Lab: TY Scientific Production Association, Russia							
AI	2	2	4	8	25	25	50
SO	2	0	1	3	67	0	33
VE	4	1	0	5	80	20	0
Totals:	8	3	5	16	50%	19%	31%
Lab: UC Lockheed Martin, Paducah, KY							
AI	4	0	0	4	100	0	0
SO	2	0	0	2	100	0	0
VE	3	0	0	3	100	0	0
WA	5	1	0	6	83	17	0

QAP44 Summary of Matrix Evaluations by Laboratory

Evaluation Summary				Evaluation Percentages			
Matrix	A	W	N	Total Analyses	%A	%W	%N
Lab: UC Lockheed Martin, Paducah, KY							
Totals:	14	1	0	15	93%	7%	0%
Lab: UK Lockheed Martin Energy Systems, Oak Ridge							
AI	5	5	0	10	50	50	0
SO	4	1	1	6	67	17	17
WA	6	0	1	7	86	0	14
Totals:	15	6	2	23	65%	26%	9%
Lab: UP Lockheed Martin Energy Systems, Y-12 Plant, Oak Ridge							
AI	6	10	1	17	35	59	6
SO	6	1	0	7	86	14	0
WA	11	2	0	13	85	15	0
Totals:	23	13	1	37	62%	35%	3%
Lab: UY Lockheed Martin Energy Systems, Y-12 Plant, Oak Ridge							
AI	13	3	0	16	81	19	0
SO	7	1	0	8	88	13	0
WA	11	0	2	13	85	0	15
Totals:	31	4	2	37	84%	11%	5%
Lab: WA Environmental Radiation Lab, Off. of Public Health Labs, Seattle							
AI	14	3	0	17	82	18	0
SO	6	2	1	9	67	22	11
VE	4	1	1	6	67	17	17
WA	10	1	2	13	77	8	15
Totals:	34	7	4	45	76%	16%	9%

QAP44 Summary of Matrix Evaluations by Laboratory

Evaluation Summary				Evaluation Percentages			
Matrix	A	W	N	Total Analyses	%A	%W	%N
Lab: WC Westinghouse Hanford Co.							
AI	9	6	1	16	56	38	6
SO	2	0	0	2	100	0	0
VE	3	0	0	3	100	0	0
WA	4	7	1	12	33	58	8
Totals: 18 13 2 33 55% 39% 6%							
Lab: WE Westinghouse Electric Corp., Madison, PA							
AI	3	3	7	13	23	23	54
SO	4	1	2	7	57	14	29
VE	3	0	2	5	60	0	40
WA	3	4	1	8	38	50	13
Totals: 13 8 12 33 39% 24% 36%							
Lab: WI WIPP Site, Westinghouse Electric Corp.							
AI	7	0	0	7	100	0	0
WA	1	2	0	3	33	67	0
Totals: 8 2 0 10 80% 20% 0%							
Lab: WN WINCO, Idaho Chemical Processing Plant, Scoville							
AI	11	0	0	11	100	0	0
SO	2	0	0	2	100	0	0
VE	4	0	0	4	100	0	0
WA	8	2	1	11	73	18	9
Totals: 25 2 1 28 89% 7% 4%							
Lab: WP Washington Public Power Supply System, Richland							
AI	9	0	0	9	100	0	0
SO	3	0	0	3	100	0	0
VE	2	2	0	4	50	50	0
WA	5	0	0	5	100	0	0

QAP44 Summary of Matrix Evaluations by Laboratory

Evaluation Summary				Evaluation Percentages			
Matrix	A	W	N	Total Analyses	%A	%W	%N
Lab: WP Washington Public Power Supply System, Richland							
Totals:	19	2	0	21	90%	10%	0%
Lab: WS Weldon Springs Site, St Charles, MO							
SO	4	0	0	4	100	0	0
Totals:	4	0	0	4	100%	0%	0%
Lab: WV West Valley Nuclear Services Co, Inc, NY							
AI	2	0	0	2	100	0	0
WA	6	1	0	7	86	14	0
Totals:	8	1	0	9	89%	11%	0%
Lab: YA Yankee Atomic Electric Company, Westboro, MA							
AI	5	0	0	5	100	0	0
SO	5	0	0	5	100	0	0
VE	6	0	0	6	100	0	0
WA	8	1	0	9	89	11	0
Totals:	24	1	0	25	96%	4%	0%
Lab: YP US Army Proving Ground, Yuma, AZ							
AI	1	0	0	1	100	0	0
SO	0	1	0	1	0	100	0
WA	1	0	0	1	100	0	0
Totals:	2	1	0	3	67%	33%	0%

QAP44 Summary of Laboratory Evaluations by Matrix

Matrix: AI

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
AA	18	0	0	18	100	0	0
AC	9	3	0	12	75	25	0
AG	13	3	0	16	81	19	0
AI	6	3	3	12	50	25	25
AL	2	0	4	6	33	0	67
AM	5	5	1	11	45	45	9
AN	15	1	0	16	94	6	0
AR	16	2	0	18	89	11	0
AU	1	1	4	6	17	17	67
AW	9	0	0	9	100	0	0
BA	8	3	0	11	73	27	0
BC	12	1	0	13	92	8	0
BE	10	7	0	17	59	41	0
BL	43	9	0	52	83	17	0
BM	9	5	0	14	64	36	0
BN	8	2	0	10	80	20	0
BP	10	1	0	11	91	9	0
BQ	7	2	0	9	78	22	0
BR	6	2	0	8	75	25	0
BS	7	4	0	11	64	36	0
BU	11	0	2	13	85	0	15
BX	14	2	0	16	88	13	0
CA	2	5	0	7	29	71	0
CC	9	5	0	14	64	36	0
CH	15	3	0	18	83	17	0
CL	11	3	1	15	73	20	7
CP	9	1	1	11	82	9	9
CS	1	2	7	10	10	20	70
CW	5	0	0	5	100	0	0
DC	10	6	1	17	59	35	6
EG	9	1	0	10	90	10	0
EI	6	0	0	6	100	0	0
EL	8	5	0	13	62	38	0
EP	10	0	0	10	100	0	0
ES	14	2	2	18	78	11	11
FG	9	2	0	11	82	18	0
FL	13	0	0	13	100	0	0
FM	9	0	0	9	100	0	0
FN	6	1	0	7	86	14	0
GA	12	3	0	15	80	20	0
GE	16	1	0	17	94	6	0
HC	2	0	0	2	100	0	0
ID	8	2	0	10	80	20	0
IE	12	3	0	15	80	20	0
IL	1	1	0	2	50	50	0
IN	4	3	1	8	50	38	13
IR	1	0	0	1	100	0	0
IS	5	7	2	14	36	50	14
IT	8	6	1	15	53	40	7
JP	13	2	0	15	87	13	0
KA	1	1	0	2	50	50	0
LA	31	14	0	45	69	31	0
LB	7	3	0	10	70	30	0
LH	7	8	1	16	44	50	6

QAP44 Summary of Laboratory Evaluations by Matrix

Matrix: AI

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
LH	7	8	1	16	44	50	6
LL	11	1	2	14	79	7	14
LM	2	3	5	10	20	30	50
LV	7	2	0	9	78	22	0
ME	7	0	1	8	88	0	13
MI	2	3	0	5	40	60	0
ML	11	1	0	12	92	8	0
MS	6	1	0	7	86	14	0
NA	12	0	0	12	100	0	0
NC	7	0	0	7	100	0	0
NL	12	0	1	13	92	0	8
NM	7	0	2	9	78	0	22
OB	2	0	0	2	100	0	0
OD	10	1	0	11	91	9	0
OL	7	1	0	8	88	13	0
OR	12	1	0	13	92	8	0
OT	9	2	4	15	60	13	27
PA	3	0	2	5	60	0	40
PI	2	0	0	2	100	0	0
RA	7	3	1	11	64	27	9
RE	10	4	2	16	63	25	13
RF	0	0	2	2	0	0	100
RI	5	3	4	12	42	25	33
SA	0	7	0	7	0	100	0
SC	2	0	0	2	100	0	0
SE	8	1	0	9	89	11	0
SK	3	4	1	8	38	50	13
SN	4	0	0	4	100	0	0
SR	13	2	1	16	81	13	6
SS	5	3	0	8	63	38	0
SW	6	5	2	13	46	38	15
TE	12	3	0	15	80	20	0
TI	14	2	1	17	82	12	6
TM	14	2	1	17	82	12	6
TN	16	1	0	17	94	6	0
TO	15	2	0	17	88	12	0
TW	13	1	2	16	81	6	13
TX	9	4	0	13	69	31	0
TY	2	2	4	8	25	25	50
UC	4	0	0	4	100	0	0
UK	5	5	0	10	50	50	0
UP	6	10	1	17	35	59	6
UY	13	3	0	16	81	19	0
WA	14	3	0	17	82	18	0
WC	9	6	1	16	56	38	6
WE	3	3	7	13	23	23	54
WI	7	0	0	7	100	0	0
WN	11	0	0	11	100	0	0
WP	9	0	0	9	100	0	0
WV	2	0	0	2	100	0	0
YA	5	0	0	5	100	0	0
YP	1	0	0	1	100	0	0

QAP44 Summary of Laboratory Evaluations by Matrix

Matrix: AI

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
Totals							
106 Labs:	889	241	78	1208	74%	20%	6%

QAP44 Summary of Laboratory Evaluations by Matrix

Matrix: S0

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
AA	10	0	0	10	100	0	0
AC	5	0	0	5	100	0	0
AE	6	1	0	7	86	14	0
AG	6	2	0	8	75	25	0
AI	2	3	1	6	33	50	17
AL	1	0	0	1	100	0	0
AM	3	2	0	5	60	40	0
AN	7	1	0	8	88	13	0
AR	7	3	0	10	70	30	0
AU	2	0	4	6	33	0	67
BA	1	0	0	1	100	0	0
BC	2	3	0	5	40	60	0
BE	6	3	0	9	67	33	0
BL	9	10	3	22	41	45	14
BM	0	2	2	4	0	50	50
BN	2	0	0	2	100	0	0
BP	7	0	0	7	100	0	0
BQ	2	0	1	3	67	0	33
BR	1	1	0	2	50	50	0
BS	3	0	1	4	75	0	25
BU	5	0	1	6	83	0	17
BX	4	3	1	8	50	38	13
CA	1	0	0	1	100	0	0
CC	7	2	0	9	78	22	0
CH	9	1	0	10	90	10	0
CL	4	4	1	9	44	44	11
CP	3	0	0	3	100	0	0
CW	5	0	0	5	100	0	0
DC	14	5	0	19	74	26	0
EG	5	2	1	8	63	25	13
EI	1	2	1	4	25	50	25
EL	2	3	1	6	33	50	17
EP	2	0	1	3	67	0	33
ES	11	1	1	13	85	8	8
FG	2	2	0	4	50	50	0
FL	6	0	0	6	100	0	0
FN	3	0	0	3	100	0	0
FS	5	2	0	7	71	29	0
GA	7	1	0	8	88	13	0
GE	8	1	0	9	89	11	0
HA	4	3	0	7	57	43	0
HL	4	3	0	7	57	43	0
ID	7	0	0	7	100	0	0
IE	9	0	0	9	100	0	0
IL	0	0	2	2	0	0	100
IN	4	2	0	6	67	33	0
IS	7	1	1	9	78	11	11
IT	6	1	0	7	86	14	0
JP	8	0	0	8	100	0	0
KA	5	0	0	5	100	0	0
LA	21	0	0	21	100	0	0
LB	2	1	0	3	67	33	0
LH	8	0	0	8	100	0	0
LL	4	0	0	4	100	0	0

QAP44 Summary of Laboratory Evaluations by Matrix

Matrix: S0

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
LM	0	0	2	2	0	0	100
LV	2	1	0	3	67	33	0
LW	3	1	0	4	75	25	0
MA	2	1	0	3	67	33	0
ME	1	1	0	2	50	50	0
ML	6	0	0	6	100	0	0
MS	2	0	0	2	100	0	0
NA	7	0	0	7	100	0	0
NC	1	0	0	1	100	0	0
NL	5	1	0	6	83	17	0
NM	4	0	1	5	80	0	20
NR	1	1	0	2	50	50	0
OB	0	2	0	2	0	100	0
OL	2	0	0	2	100	0	0
OR	6	0	1	7	86	0	14
OS	1	0	0	1	100	0	0
OT	4	1	0	5	80	20	0
PA	3	0	0	3	100	0	0
PB	3	0	0	3	100	0	0
PI	2	0	0	2	100	0	0
RA	7	0	2	9	78	0	22
RE	6	1	0	7	86	14	0
RF	3	1	0	4	75	25	0
RG	6	0	0	6	100	0	0
RI	0	0	2	2	0	0	100
SA	2	0	0	2	100	0	0
SC	5	1	1	7	71	14	14
SE	1	4	1	6	17	67	17
SK	2	0	0	2	100	0	0
SN	4	1	1	6	67	17	17
SR	4	0	1	5	80	0	20
SS	1	1	0	2	50	50	0
SW	1	2	1	4	25	50	25
TE	6	1	0	7	86	14	0
TI	9	0	0	9	100	0	0
TM	8	1	0	9	89	11	0
TN	8	1	0	9	89	11	0
TO	7	2	0	9	78	22	0
TW	7	1	0	8	88	13	0
TX	5	3	0	8	63	38	0
TY	2	0	1	3	67	0	33
UC	2	0	0	2	100	0	0
UK	4	1	1	6	67	17	17
UP	6	1	0	7	86	14	0
UY	7	1	0	8	88	13	0
WA	6	2	1	9	67	22	11
WC	2	0	0	2	100	0	0
WE	4	1	2	7	57	14	29
WN	2	0	0	2	100	0	0
WP	3	0	0	3	100	0	0
WS	4	0	0	4	100	0	0
YA	5	0	0	5	100	0	0
YP	0	1	0	1	0	100	0

QAP44 Summary of Laboratory Evaluations by Matrix

Matrix: SO

Evaluation Summary				Evaluation Percentages			
Labcode	A	W	N	Total Analyses	%A	%W	%N
<hr/>							
Totals 107 Labs:	469	107	41	617	76%	17%	7%
<hr/>							

QAP44 Summary of Laboratory Evaluations by Matrix

Matrix: VE

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
AA	8	0	0	8	100	0	0
AG	7	0	0	7	100	0	0
AI	0	2	1	3	0	67	33
AL	2	0	0	2	100	0	0
AN	7	1	0	8	88	13	0
AR	3	4	1	8	38	50	13
AU	2	1	2	5	40	20	40
BA	4	0	0	4	100	0	0
BC	2	1	0	3	67	33	0
BE	5	2	0	7	71	29	0
BL	23	1	0	24	96	4	0
BM	2	2	1	5	40	40	20
BN	2	1	0	3	67	33	0
BP	1	1	1	3	33	33	33
BQ	1	1	1	3	33	33	33
BR	0	1	1	2	0	50	50
BS	0	3	1	4	0	75	25
BU	4	0	1	5	80	0	20
BX	3	3	0	6	50	50	0
CC	4	3	0	7	57	43	0
CH	6	1	0	7	86	14	0
CL	6	0	1	7	86	0	14
CP	3	1	0	4	75	25	0
CW	3	0	0	3	100	0	0
DC	6	1	0	7	86	14	0
EG	4	0	0	4	100	0	0
EI	3	0	1	4	75	0	25
EL	2	1	1	4	50	25	25
EP	1	0	1	2	50	0	50
ES	6	1	0	7	86	14	0
FL	4	0	0	4	100	0	0
FN	3	0	0	3	100	0	0
GA	5	1	0	6	83	17	0
GE	7	0	0	7	100	0	0
ID	5	1	0	6	83	17	0
IE	7	0	0	7	100	0	0
IL	0	0	1	1	0	0	100
IL	0	0	2	2	0	0	100
IN	2	1	0	3	67	33	0
IS	6	0	0	6	100	0	0
IT	4	3	0	7	57	43	0
JP	7	0	0	7	100	0	0
LA	17	1	0	18	94	6	0
LB	3	0	1	4	75	0	25
LH	6	1	0	7	86	14	0
LL	4	0	0	4	100	0	0
LV	2	2	0	4	50	50	0
LW	4	0	0	4	100	0	0
MA	3	1	0	4	75	25	0
ME	2	1	0	3	67	33	0
ML	4	0	0	4	100	0	0
NA	7	0	0	7	100	0	0
NC	2	0	0	2	100	0	0
NR	1	2	0	3	33	67	0

QAP44 Summary of Laboratory Evaluations by Matrix

Matrix: VE

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
OL	3	0	0	3	100	0	0
OR	6	1	0	7	86	14	0
OT	4	0	1	5	80	0	20
PA	0	1	0	1	0	100	0
PB	1	0	0	1	100	0	0
RA	5	1	1	7	71	14	14
RE	6	0	0	6	100	0	0
RF	1	0	0	1	100	0	0
RI	3	1	2	6	50	17	33
SE	5	2	0	7	71	29	0
SK	3	0	0	3	100	0	0
SN	3	1	0	4	75	25	0
SR	2	1	2	5	40	20	40
SS	3	0	0	3	100	0	0
SW	5	2	0	7	71	29	0
TE	7	0	0	7	100	0	0
TI	4	3	0	7	57	43	0
TM	6	1	0	7	86	14	0
TN	6	1	0	7	86	14	0
TO	6	1	0	7	86	14	0
TW	7	0	0	7	100	0	0
TX	4	2	0	6	67	33	0
TY	4	1	0	5	80	20	0
UC	3	0	0	3	100	0	0
WA	4	1	1	6	67	17	17
WC	3	0	0	3	100	0	0
WE	3	0	2	5	60	0	40
WN	4	0	0	4	100	0	0
WP	2	2	0	4	50	50	0
YA	6	0	0	6	100	0	0
Totals 84 Labs:	344	68	27	439	78%	15%	6%

QAP44 Summary of Laboratory Evaluations by Matrix

Matrix: WA

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
AA	15	0	0	15	100	0	0
AC	6	1	1	8	75	13	13
AE	9	1	0	10	90	10	0
AG	10	1	2	13	77	8	15
AI	5	3	1	9	56	33	11
AL	3	0	0	3	100	0	0
AM	4	2	1	7	57	29	14
AN	11	1	0	12	92	8	0
AR	6	6	2	14	43	43	14
AU	2	4	3	9	22	44	33
AW	5	1	1	7	71	14	14
BA	5	2	0	7	71	29	0
BC	4	4	0	8	50	50	0
BE	7	4	2	13	54	31	15
BK	1	3	0	4	25	75	0
BL	38	3	6	47	81	6	13
BM	6	2	0	8	75	25	0
BN	7	0	0	7	100	0	0
BP	4	4	1	9	44	44	11
BQ	3	1	0	4	75	25	0
BR	1	2	0	3	33	67	0
BS	5	1	0	6	83	17	0
BU	7	1	1	9	78	11	11
BX	9	4	0	13	69	31	0
CC	10	0	1	11	91	0	9
CH	10	3	1	14	71	21	7
CL	7	4	0	11	64	36	0
CP	5	0	1	6	83	0	17
CS	1	0	0	1	100	0	0
CW	5	0	0	5	100	0	0
CZ	1	0	0	1	100	0	0
DC	12	2	2	16	75	13	13
EG	6	5	0	11	55	45	0
EI	2	5	0	7	29	71	0
EL	4	4	1	9	44	44	11
EP	6	3	0	9	67	33	0
ES	11	4	1	16	69	25	6
FG	8	1	2	11	73	9	18
FL	5	4	0	9	56	44	0
FM	3	1	0	4	75	25	0
FN	4	0	0	4	100	0	0
GA	10	0	0	10	100	0	0
GE	5	8	0	13	38	62	0
GS	0	1	0	1	0	100	0
HA	9	4	0	13	69	31	0
HC	2	1	0	3	67	33	0
HL	6	2	0	8	75	25	0
ID	5	2	1	8	63	25	13
IE	10	1	2	13	77	8	15
IL	1	2	2	5	20	40	40
IN	5	2	0	7	71	29	0
IR	0	0	1	1	0	0	100
IS	8	3	1	12	67	25	8
IT	5	5	1	11	45	45	9

QAP44 Summary of Laboratory Evaluations by Matrix

Matrix: WA

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
JP	12	0	0	12	100	0	0
KA	10	1	0	11	91	9	0
LA	19	5	9	33	58	15	27
LB	1	2	1	4	25	50	25
LH	12	0	1	13	92	0	8
LL	5	2	3	10	50	20	30
LM	1	0	3	4	25	0	75
LV	2	2	0	4	50	50	0
LW	5	1	0	6	83	17	0
ME	1	2	0	3	33	67	0
MI	4	6	2	12	33	50	17
ML	7	1	0	8	88	13	0
MS	3	1	0	4	75	25	0
NA	5	2	1	8	63	25	13
NC	3	0	0	3	100	0	0
NL	6	2	0	8	75	25	0
NM	8	1	0	9	89	11	0
OB	1	1	0	2	50	50	0
OD	4	2	0	6	67	33	0
OL	3	0	0	3	100	0	0
OR	8	1	0	9	89	11	0
OT	6	4	1	11	55	36	9
PA	5	0	1	6	83	0	17
PB	5	0	1	6	83	0	17
PI	5	0	0	5	100	0	0
RE	11	2	0	13	85	15	0
RF	6	2	0	8	75	25	0
RG	7	2	0	9	78	22	0
RI	5	2	2	9	56	22	22
SA	5	0	0	5	100	0	0
SC	9	2	2	13	69	15	15
SE	5	5	1	11	45	45	9
SK	4	0	0	4	100	0	0
SN	6	1	0	7	86	14	0
SR	10	2	0	12	83	17	0
SS	3	0	0	3	100	0	0
SV	5	0	0	5	100	0	0
SW	5	0	2	7	71	0	29
TE	9	3	0	12	75	25	0
TI	9	1	4	14	64	7	29
TM	10	3	0	13	77	23	0
TN	10	4	1	15	67	27	7
TO	11	1	1	13	85	8	8
TW	6	4	2	12	50	33	17
TX	2	5	3	10	20	50	30
UC	5	1	0	6	83	17	0
UK	6	0	1	7	86	0	14
UP	11	2	0	13	85	15	0
UY	11	0	2	13	85	0	15
WA	10	1	2	13	77	8	15
WC	4	7	1	12	33	58	8
WE	3	4	1	8	38	50	13
WI	1	2	0	3	33	67	0
WN	8	2	1	11	73	18	9

QAP44 Summary of Laboratory Evaluations by Matrix

Matrix: WA

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
WP	5	0	0	5	100	0	0
WV	6	1	0	7	86	14	0
YA	8	1	0	9	89	11	0
YP	1	0	0	1	100	0	0
<hr/>							
Totals							
112 Labs:	697	214	87	998	70%	21%	9%
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QAP44 Summary of Matrix Evaluations by Radionuclide

Matrix: AI

Radio-Nuclide	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
AM241	45	15	2	62	73	24	3
CE144	59	21	11	91	65	23	12
CO 57	61	24	5	90	68	27	6
CO 60	67	17	9	93	72	18	10
CS134	73	14	4	91	80	15	4
CS137	59	29	5	93	63	31	5
GA 1	46	13	5	64	72	20	8
GB 2	49	8	5	62	79	13	8
MN 54	51	30	9	90	57	33	10
PU238	55	6	1	62	89	10	2
PU239	52	9	2	63	83	14	3
RU106	67	9	0	76	88	12	0
SB125	74	12	1	87	85	14	1
SR 90	36	11	4	51	71	22	8
U 234	30	11	5	46	65	24	11
U 238	34	5	5	44	77	11	11
U BQ	11	2	3	16	69	13	19
U UG	20	5	2	27	74	19	7
Totals:	889	241	78	1208	74%	20%	6%

QAP44 Summary of Matrix Evaluations by Radionuclide

Matrix: S0

Radio-Nuclide	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
AM241	42	18	2	62	68	29	3
CS137	86	9	4	99	87	9	4
K 40	76	10	6	92	83	11	7
PU238	66	1	2	69	96	1	3
PU239	60	10	3	73	82	14	4
SR 90	33	11	11	55	60	20	20
U 234	25	21	7	53	47	40	13
U 238	41	17	2	60	68	28	3
U BQ	14	3	2	19	74	16	11
U UG	26	7	2	35	74	20	6
Totals:	469	107	41	617	76%	17%	7%

QAP44 Summary of Matrix Evaluations by Radionuclide

Matrix: VE

Radio-Nuclide	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
AM241	48	6	0	54	89	11	0
CM244	27	8	0	35	77	23	0
CO 60	68	8	3	79	86	10	4
CS137	55	14	9	78	71	18	12
K 40	58	14	3	75	77	19	4
PU238	6	1	1	8	75	13	13
PU239	49	6	4	59	83	10	7
SR 90	33	11	7	51	65	22	14
Totals:	344	68	27	439	78%	15%	6%

QAP44 Summary of Matrix Evaluations by Radionuclide

Matrix: WA

Radio-Nuclide	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
AM241	53	16	5	74	72	22	7
CO 60	83	14	4	101	82	14	4
CS137	74	22	5	101	73	22	5
FE 55	7	6	0	13	54	46	0
GA 1	58	5	4	67	87	7	6
GB 2	31	12	23	66	47	18	35
H 3	49	32	2	83	59	39	2
MN 54	61	25	12	98	62	26	12
PU238	54	18	1	73	74	25	1
PU239	70	8	0	78	90	10	0
SR 90	44	16	5	65	68	25	8
U 234	40	14	5	59	68	24	8
U 238	40	16	4	60	67	27	7
U BQ	11	9	3	23	48	39	13
U UG	22	1	14	37	59	3	38
Totals:	697	214	87	998	70%	21%	9%

QAP44 Results by Laboratory

Lab: **AA** Environmental Measurements Laboratory

No. Test	Radio- nuclide	Reported Value	Reported Error
Matrix: AI			
1	AM241	0.189	0.007
1	CE144	33.300	3.300
1	CO 57	8.900	0.900
1	CO 60	29.500	2.900
1	CS134	14.700	1.460
1	CS137	6.640	0.700
1	GA 1	1.620	0.150
1	GB 2	1.770	0.150
1	MN 54	3.440	0.380
1	PU238	0.096	0.002
1	PU239	0.093	0.003
1	RU106	11.600	1.440
1	SB125	9.780	1.030
1	SR 90	1.060	0.037
1	U 234	0.052	0.002
1	U 238	0.053	0.002
1	U BQ	0.107	0.003
1	U UG	4.310	0.100
Matrix: SO			
1	AM241	3.690	0.454
1	CS137	359.000	10.000
1	K 40	465.000	30.000
1	PU238	43.000	2.440
1	PU239	9.230	0.346
1	SR 90	1340.000	113.000
1	U 234	34.200	3.520
1	U 238	35.900	3.630
1	U BQ	71.700	4.150
1	U UG	2.900	0.290
Matrix: VE			
1	AM241	5.600	0.184
1	CM244	4.440	0.202
1	CO 60	59.700	0.963
1	CS137	944.000	16.200
1	K 40	1030.000	33.000
1	PU238	0.820	0.104
1	PU239	9.820	1.220
1	SR 90	1300.000	52.400
Matrix: WA			
1	AM241	0.766	0.013

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **AA** Environmental Measurements Laboratory

No. Test	Radio- nuclide	Reported Value	Reported Error
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Matrix: **WA**

1	CO 60	32.800	0.580
1	CS137	38.300	0.881
1	FE 55	83.000	3.440
1	GA 1	1850.000	185.000
1	GB 2	744.000	74.000
1	H 3	251.000	11.400
1	MN 54	38.400	1.160
1	PU238	0.982	0.074
1	PU239	0.772	0.056
1	SR 90	1.450	0.034
1	U 234	0.274	0.019
1	U 238	0.275	0.024
1	U BQ	0.559	0.047
1	U UG	0.022	0.003

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in μg /filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **AC** Analytical Chemistry Laboratory, Argonne National Lab

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.174	0.005	0.189	0.007	0.920	0.04	A
1	CE144	23.100	2.300	33.300	3.300	0.690	0.10	A
1	CO 57	6.240	0.110	8.900	0.900	0.700	0.07	W
1	CO 60	24.900	0.400	29.500	2.900	0.840	0.08	A
1	CS134	13.500	0.300	14.700	1.460	0.920	0.09	A
1	CS137	5.530	0.210	6.640	0.700	0.830	0.09	W
1	MN 54	2.660	0.140	3.440	0.380	0.770	0.09	W
1	PU238	0.098	0.004	0.096	0.002	1.020	0.05	A
1	PU239	0.104	0.004	0.093	0.003	1.120	0.06	A
1	SB125	9.530	0.800	9.780	1.030	0.970	0.13	A
1	U 234	0.050	0.002	0.052	0.002	0.970	0.05	A
1	U 238	0.048	0.002	0.053	0.002	0.900	0.05	A
Matrix: SO								
1	AM241	4.550	0.440	3.690	0.454	1.230	0.19	A
1	CS137	382.000	2.000	359.000	10.000	1.060	0.03	A
1	K 40	472.000	12.000	465.000	30.000	1.020	0.07	A
1	PU238	44.800	1.500	43.000	2.440	1.040	0.07	A
1	PU239	9.250	0.460	9.230	0.346	1.000	0.06	A
Matrix: WA								
1	AM241	0.815	0.044	0.766	0.013	1.060	0.06	A
1	CO 60	34.000	0.900	32.800	0.580	1.040	0.03	A
1	CS137	40.200	0.800	38.300	0.881	1.050	0.03	A
1	MN 54	50.300	1.200	38.400	1.160	1.310	0.05	N
1	PU238	1.010	0.060	0.982	0.074	1.030	0.10	A
1	PU239	0.813	0.048	0.772	0.056	1.050	0.10	A
1	U 234	0.241	0.013	0.274	0.019	0.880	0.08	W
1	U 238	0.246	0.014	0.275	0.024	0.900	0.09	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: AE Analytical Resources, Inc., Seattle

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: SO								
1	AM241	2.660	0.510	3.690	0.454	0.720	0.16	W
1	CS137	405.000	25.700	359.000	10.000	1.130	0.08	A
1	K 40	534.000	72.000	465.000	30.000	1.150	0.17	A
1	PU238	42.800	1.620	43.000	2.440	1.000	0.07	A
1	PU239	8.510	0.740	9.230	0.346	0.920	0.09	A
1	U 234	32.300	2.180	34.200	3.520	0.940	0.12	A
1	U 238	31.400	2.120	35.900	3.630	0.880	0.11	A
Matrix: WA								
1	AM241	0.665	0.090	0.766	0.013	0.870	0.12	A
1	CO 60	29.500	2.010	32.800	0.580	0.900	0.06	W
1	CS137	40.600	3.380	38.300	0.881	1.060	0.09	A
1	H 3	212.000	13.800	251.000	11.400	0.850	0.07	A
1	MN 54	38.400	3.050	38.400	1.160	1.000	0.09	A
1	PU238	0.950	0.070	0.982	0.074	0.970	0.10	A
1	PU239	0.750	0.060	0.772	0.056	0.970	0.11	A
1	SR 90	1.500	0.340	1.450	0.034	1.030	0.24	A
1	U 234	0.280	0.030	0.274	0.019	1.020	0.13	A
1	U 238	0.280	0.030	0.275	0.024	1.020	0.14	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **AG** Paragon Analytics, Inc, Fort Collins, CO

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.169	0.022	0.189	0.007	0.890	0.12	A
1	CE144	25.300	1.800	33.300	3.300	0.760	0.09	A
1	CO 57	7.440	0.490	8.900	0.900	0.840	0.10	A
1	CO 60	26.500	1.800	29.500	2.900	0.900	0.11	A
1	CS134	14.500	0.940	14.700	1.460	0.990	0.12	A
1	CS137	6.090	0.440	6.640	0.700	0.920	0.12	A
1	GA 1	1.850	0.082	1.620	0.150	1.140	0.12	A
1	GB 2	1.730	0.066	1.770	0.150	0.980	0.09	A
1	MN 54	2.890	0.200	3.440	0.380	0.840	0.11	W
1	PU238	0.085	0.011	0.096	0.002	0.880	0.12	A
1	PU239	0.086	0.011	0.093	0.003	0.930	0.12	A
1	RU106	11.400	1.800	11.600	1.440	0.980	0.20	A
1	SB125	9.780	0.710	9.780	1.030	1.000	0.13	A
1	SR 90	0.870	0.160	1.060	0.037	0.820	0.15	W
1	U 234	0.080	0.012	0.052	0.002	1.550	0.24	W
1	U 238	0.068	0.010	0.053	0.002	1.280	0.19	A
Matrix: SO								
1	AM241	3.330	0.440	3.690	0.454	0.900	0.16	A
1	CS137	452.000	29.000	359.000	10.000	1.260	0.09	W
1	K 40	585.000	45.000	465.000	30.000	1.260	0.13	W
1	PU238	41.000	4.800	43.000	2.440	0.950	0.12	A
1	PU239	9.200	1.100	9.230	0.346	1.000	0.13	A
1	SR 90	1040.000	140.000	1340.000	113.000	0.780	0.12	A
1	U 234	31.400	3.700	34.200	3.520	0.920	0.14	A
1	U 238	32.200	4.000	35.900	3.630	0.900	0.14	A
Matrix: VE								
1	AM241	6.170	0.740	5.600	0.184	1.100	0.14	A
1	CM244	3.950	0.370	4.440	0.202	0.890	0.09	A
1	CO 60	61.800	4.100	59.700	0.963	1.040	0.07	A
1	CS137	1180.000	75.000	944.000	16.200	1.250	0.08	A
1	K 40	1220.000	84.000	1030.000	33.000	1.180	0.09	A
1	PU239	9.400	1.100	9.820	1.220	0.960	0.16	A
1	SR 90	1220.000	220.000	1300.000	52.400	0.940	0.17	A
Matrix: WA								
1	AM241	0.788	0.097	0.766	0.013	1.030	0.13	A
1	CO 60	31.900	2.600	32.800	0.580	0.970	0.08	A
1	CS137	40.500	3.300	38.300	0.881	1.060	0.09	A
1	GA 1	1850.000	233.000	1850.000	185.000	1.000	0.16	A
1	GB 2	474.000	59.000	744.000	74.000	0.640	0.10	N
1	H 3	195.000	29.000	251.000	11.400	0.780	0.12	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **AG** Paragon Analytics, Inc, Fort Collins, CO

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
1	MN 54	40.000	3.400	38.400	1.160	1.040	0.09	A
1	PU238	0.940	0.120	0.982	0.074	0.960	0.14	A
1	PU239	0.715	0.089	0.772	0.056	0.930	0.13	A
1	SR 90	1.500	0.300	1.450	0.034	1.030	0.21	A
1	U 234	0.293	0.037	0.274	0.019	1.070	0.15	A
1	U 238	0.283	0.037	0.275	0.024	1.030	0.16	A
1	U BQ	0.147	0.012	0.559	0.047	0.260	0.03	N

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.
 Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **AI** Nuclear Technology Services, Inc., Roswell, GA

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	6.910	0.360	33.300	3.300	0.210	0.02	N
1	CO 57	5.850	0.055	8.900	0.900	0.660	0.07	W
1	CO 60	19.200	0.110	29.500	2.900	0.650	0.06	N
1	CS134	10.600	0.820	14.700	1.460	0.720	0.09	W
1	CS137	4.830	0.085	6.640	0.700	0.730	0.08	W
1	MN 54	2.300	0.089	3.440	0.380	0.670	0.08	N
1	PU238	0.082	0.009	0.096	0.002	0.850	0.10	A
1	PU239	0.097	0.010	0.093	0.003	1.040	0.11	A
1	RU106	8.770	0.710	11.600	1.440	0.760	0.11	A
1	SB125	7.660	0.160	9.780	1.030	0.780	0.08	A
1	U 234	0.054	0.003	0.052	0.002	1.040	0.07	A
1	U 238	0.055	0.004	0.053	0.002	1.040	0.08	A
Matrix: SO								
1	CS137	267.000	4.600	359.000	10.000	0.740	0.02	W
1	K 40	308.000	35.900	465.000	30.000	0.660	0.09	N
1	PU238	42.300	2.500	43.000	2.440	0.980	0.08	A
1	PU239	9.580	0.850	9.230	0.346	1.040	0.10	A
1	U 234	40.500	11.000	34.200	3.520	1.180	0.34	W
1	U 238	50.700	13.000	35.900	3.630	1.410	0.39	W
Matrix: VE								
1	CO 60	39.900	2.400	59.700	0.963	0.670	0.04	W
1	CS137	700.000	7.700	944.000	16.200	0.740	0.02	N
1	PU239	6.170	1.200	9.820	1.220	0.630	0.15	W
Matrix: WA								
1	AM241	0.652	0.067	0.766	0.013	0.850	0.09	A
1	CO 60	27.600	0.750	32.800	0.580	0.840	0.03	N
1	CS137	36.100	1.120	38.300	0.881	0.940	0.04	W
1	H 3	400.000	45.000	251.000	11.400	1.590	0.19	W
1	MN 54	34.300	1.130	38.400	1.160	0.890	0.04	W
1	PU238	1.020	0.073	0.982	0.074	1.040	0.11	A
1	PU239	0.824	0.065	0.772	0.056	1.070	0.11	A
1	U 234	0.290	0.030	0.274	0.019	1.060	0.13	A
1	U 238	0.260	0.030	0.275	0.024	0.950	0.14	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **AL** Ames Laboratory, Ames, IA

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	44.400	1.060	33.300	3.300	1.330	0.14	N
1	CO 60	43.700	0.360	29.500	2.900	1.480	0.15	N
1	CS134	13.500	0.210	14.700	1.460	0.920	0.09	A
1	CS137	10.500	0.230	6.640	0.700	1.580	0.17	N
1	MN 54	3.200	0.120	3.440	0.380	0.930	0.11	A
1	SB125	14.700	0.390	9.780	1.030	1.500	0.16	N
Matrix: SO								
1	CS137	319.000	3.660	359.000	10.000	0.890	0.03	A
Matrix: VE								
1	CO 60	56.200	2.070	59.700	0.963	0.940	0.04	A
1	CS137	980.000	9.010	944.000	16.200	1.040	0.02	A
Matrix: WA								
1	CO 60	31.400	0.650	32.800	0.580	0.960	0.03	A
1	CS137	41.100	0.640	38.300	0.881	1.070	0.03	A
1	MN 54	40.000	0.670	38.400	1.160	1.040	0.04	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **AM** American Radiation Services, Inc., Baton Rouge

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.270	0.050	0.189	0.007	1.430	0.27	W
1	CE144	25.600	0.450	33.300	3.300	0.770	0.08	A
1	CO 57	6.220	0.070	8.900	0.900	0.700	0.07	W
1	CO 60	24.500	0.210	29.500	2.900	0.830	0.08	A
1	CS134	9.810	0.130	14.700	1.460	0.670	0.07	N
1	CS137	5.630	0.150	6.640	0.700	0.850	0.09	A
1	GA 1	2.400	0.050	1.620	0.150	1.480	0.14	W
1	GB 2	2.540	0.040	1.770	0.150	1.440	0.12	A
1	MN 54	2.850	0.240	3.440	0.380	0.830	0.12	W
1	RU106	8.910	0.660	11.600	1.440	0.770	0.11	A
1	SB125	6.080	0.230	9.780	1.030	0.620	0.07	W
Matrix: SO								
1	AM241	3.290	1.660	3.690	0.454	0.890	0.46	A
1	CS137	398.000	4.070	359.000	10.000	1.110	0.03	A
1	K 40	537.000	22.600	465.000	30.000	1.160	0.09	A
1	PU239	12.200	1.660	9.230	0.346	1.320	0.19	W
1	U 238	55.900	11.500	35.900	3.630	1.560	0.36	W
Matrix: WA								
1	AM241	1.060	0.590	0.766	0.013	1.380	0.77	W
1	CO 60	31.300	0.610	32.800	0.580	0.950	0.03	A
1	CS137	40.700	1.060	38.300	0.881	1.060	0.04	A
1	GA 1	709.000	15.900	1850.000	185.000	0.380	0.04	N
1	GB 2	833.000	12.300	744.000	74.000	1.120	0.11	A
1	MN 54	41.100	1.020	38.400	1.160	1.070	0.04	A
1	U BQ	0.360	0.070	0.559	0.047	0.640	0.14	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in μ g/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **AN** Argonne National Laboratory

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.192	0.006	0.189	0.007	1.020	0.05	A
1	CE144	23.100	0.700	33.300	3.300	0.690	0.07	A
1	CO 57	6.620	0.200	8.900	0.900	0.740	0.08	A
1	CO 60	26.100	0.800	29.500	2.900	0.890	0.09	A
1	CS134	13.100	0.400	14.700	1.460	0.890	0.09	A
1	CS137	5.850	0.180	6.640	0.700	0.880	0.10	A
1	GA 1	1.980	0.200	1.620	0.150	1.220	0.17	A
1	GB 2	2.250	0.230	1.770	0.150	1.270	0.17	A
1	MN 54	2.890	0.140	3.440	0.380	0.840	0.10	W
1	PU238	0.096	0.003	0.096	0.002	1.000	0.04	A
1	PU239	0.100	0.003	0.093	0.003	1.080	0.05	A
1	RU106	10.700	0.300	11.600	1.440	0.920	0.12	A
1	SB125	8.760	0.260	9.780	1.030	0.900	0.10	A
1	SR 90	1.120	0.030	1.060	0.037	1.060	0.05	A
1	U 234	0.056	0.003	0.052	0.002	1.080	0.06	A
1	U 238	0.060	0.003	0.053	0.002	1.130	0.06	A
Matrix: SO								
1	AM241	3.460	0.120	3.690	0.454	0.940	0.12	A
1	CS137	410.000	12.000	359.000	10.000	1.140	0.05	A
1	K 40	519.000	16.000	465.000	30.000	1.120	0.08	A
1	PU238	46.000	1.400	43.000	2.440	1.070	0.07	A
1	PU239	10.300	0.300	9.230	0.346	1.120	0.05	A
1	SR 90	1310.000	39.000	1340.000	113.000	0.980	0.09	A
1	U 234	37.900	1.100	34.200	3.520	1.110	0.12	W
1	U 238	37.800	1.100	35.900	3.630	1.050	0.11	A
Matrix: VE								
1	AM241	5.850	0.180	5.600	0.184	1.040	0.05	A
1	CM244	4.400	0.130	4.440	0.202	0.990	0.05	A
1	CO 60	64.400	1.900	59.700	0.963	1.080	0.04	A
1	CS137	1130.000	34.000	944.000	16.200	1.200	0.04	A
1	K 40	1170.000	35.000	1030.000	33.000	1.140	0.05	A
1	PU238	0.701	0.028	0.820	0.104	0.860	0.11	A
1	PU239	9.450	0.280	9.820	1.220	0.960	0.12	A
1	SR 90	1450.000	44.000	1300.000	52.400	1.120	0.06	W
Matrix: WA								
1	AM241	0.804	0.024	0.766	0.013	1.050	0.04	A
1	CO 60	33.200	1.000	32.800	0.580	1.010	0.04	A
1	CS137	40.900	1.200	38.300	0.881	1.070	0.04	A
1	GA 1	2040.000	200.000	1850.000	185.000	1.100	0.15	A
1	GB 2	570.000	57.000	744.000	74.000	0.770	0.11	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **AN** Argonne National Laboratory

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
1	H 3	220.000	7.000	251.000	11.400	0.880	0.05	A
1	MN 54	41.900	1.300	38.400	1.160	1.090	0.05	A
1	PU238	0.920	0.028	0.982	0.074	0.940	0.08	A
1	PU239	0.723	0.022	0.772	0.056	0.940	0.07	A
1	SR 90	1.580	0.050	1.450	0.034	1.090	0.04	A
1	U 234	0.291	0.009	0.274	0.019	1.060	0.08	A
1	U 238	0.299	0.009	0.275	0.024	1.090	0.10	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **AR** Accu-Labs Research Inc., Golden, CO

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.176	0.013	0.189	0.007	0.930	0.08	A
1	CE144	32.200	2.100	33.300	3.300	0.970	0.12	A
1	CO 57	7.110	0.300	8.900	0.900	0.800	0.09	A
1	CO 60	27.100	0.900	29.500	2.900	0.920	0.10	A
1	CS134	13.000	0.600	14.700	1.460	0.880	0.10	A
1	CS137	6.000	0.300	6.640	0.700	0.900	0.11	A
1	GA 1	1.540	0.030	1.620	0.150	0.950	0.09	A
1	GB 2	1.500	0.030	1.770	0.150	0.850	0.07	W
1	MN 54	3.000	0.180	3.440	0.380	0.870	0.11	A
1	PU238	0.097	0.013	0.096	0.002	1.010	0.13	A
1	PU239	0.091	0.013	0.093	0.003	0.980	0.14	A
1	RU106	10.300	1.400	11.600	1.440	0.890	0.16	A
1	SB125	10.100	0.900	9.780	1.030	1.030	0.14	A
1	SR 90	0.730	0.192	1.060	0.037	0.690	0.18	W
1	U 234	0.060	0.011	0.052	0.002	1.160	0.21	A
1	U 238	0.055	0.011	0.053	0.002	1.040	0.20	A
1	U BQ	0.115	0.015	0.107	0.003	1.080	0.14	A
1	U UG	4.400	0.060	4.310	0.100	1.020	0.03	A
Matrix: SO								
1	AM241	2.320	0.310	3.690	0.454	0.630	0.11	W
1	CS137	327.000	11.000	359.000	10.000	0.910	0.04	A
1	K 40	369.000	22.000	465.000	30.000	0.790	0.07	W
1	PU238	44.200	3.300	43.000	2.440	1.030	0.10	A
1	PU239	11.300	1.700	9.230	0.346	1.220	0.19	A
1	SR 90	1340.000	60.000	1340.000	113.000	1.000	0.10	A
1	U 234	37.800	3.300	34.200	3.520	1.110	0.15	W
1	U 238	31.800	3.000	35.900	3.630	0.890	0.12	A
1	U BQ	69.600	4.500	71.700	4.150	0.970	0.08	A
1	U UG	2.340	0.030	2.900	0.290	0.810	0.08	A
Matrix: VE								
1	AM241	5.580	0.260	5.600	0.184	1.000	0.06	A
1	CM244	4.390	0.230	4.440	0.202	0.990	0.07	A
1	CO 60	44.100	2.600	59.700	0.963	0.740	0.05	W
1	CS137	854.000	28.000	944.000	16.200	0.910	0.03	W
1	K 40	746.000	38.000	1030.000	33.000	0.720	0.04	W
1	PU238	0.604	0.069	0.820	0.104	0.740	0.13	W
1	PU239	8.050	0.230	9.820	1.220	0.820	0.11	A
1	SR 90	202.000	6.000	1300.000	52.400	0.160	0.01	N
Matrix: WA								
1	AM241	0.808	0.114	0.766	0.013	1.050	0.15	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **AR** Accu-Labs Research Inc., Golden, CO

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
1	CO 60	36.900	2.600	32.800	0.580	1.130	0.08	W
1	CS137	45.600	3.600	38.300	0.881	1.190	0.10	W
1	GA 1	1820.000	200.000	1850.000	185.000	0.980	0.15	A
1	GB 2	528.000	66.000	744.000	74.000	0.710	0.11	N
1	H 3	224.000	9.000	251.000	11.400	0.890	0.05	A
1	MN 54	44.100	3.600	38.400	1.160	1.150	0.10	W
1	PU238	0.853	0.122	0.982	0.074	0.870	0.14	W
1	PU239	0.839	0.120	0.772	0.056	1.090	0.17	A
1	SR 90	1.520	0.190	1.450	0.034	1.050	0.13	A
1	U 234	0.328	0.042	0.274	0.019	1.200	0.17	W
1	U 238	0.320	0.040	0.275	0.024	1.160	0.18	W
1	U BQ	0.648	0.058	0.559	0.047	1.160	0.14	A
1	U UG	25.700	1.100	0.022	0.003	****	****	N

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **AU** **ORISE EESD/ESSAP, Oak Ridge**

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	GA 1	2.120	0.040	1.620	0.150	1.310	0.12	W
1	GB 2	2.090	0.040	1.770	0.150	1.180	0.10	A
1	PU238	0.290	0.070	0.096	0.002	3.020	0.73	N
1	PU239	0.340	0.080	0.093	0.003	3.670	0.87	N
1	U 234	0.180	0.040	0.052	0.002	3.480	0.78	N
1	U 238	0.160	0.030	0.053	0.002	3.000	0.58	N
Matrix: SO								
1	AM241	2.960	1.480	3.690	0.454	0.800	0.41	A
1	PU238	114.000	21.000	43.000	2.440	2.650	0.51	N
1	PU239	24.000	5.000	9.230	0.346	2.600	0.55	N
1	SR 90	1280.000	25.000	1340.000	113.000	0.960	0.08	A
1	U 234	82.000	13.000	34.200	3.520	2.400	0.45	N
1	U 238	91.000	14.000	35.900	3.630	2.540	0.47	N
Matrix: VE								
1	AM241	5.700	1.000	5.600	0.184	1.020	0.18	A
1	CM244	3.300	0.700	4.440	0.202	0.740	0.16	W
1	PU238	9.000	2.000	0.820	0.104	***	2.81	N
1	PU239	29.000	6.000	9.820	1.220	2.950	0.71	N
1	SR 90	1200.000	18.000	1300.000	52.400	0.920	0.04	A
Matrix: WA								
1	AM241	0.790	0.100	0.766	0.013	1.030	0.13	A
1	GA 1	150.000	1.880	1850.000	185.000	0.080	0.01	N
1	GB 2	79.800	1.140	744.000	74.000	0.110	0.01	N
1	H 3	246.000	18.000	251.000	11.400	0.980	0.08	A
1	PU238	1.360	0.360	0.982	0.074	1.390	0.38	N
1	PU239	1.060	0.300	0.772	0.056	1.370	0.40	W
1	SR 90	2.300	0.370	1.450	0.034	1.590	0.26	W
1	U 234	0.370	0.100	0.274	0.019	1.350	0.38	W
1	U 238	0.340	0.100	0.275	0.024	1.240	0.38	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **AW** Argonne National Laboratory, Idaho Falls

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.224	0.100	0.189	0.007	1.180	0.53	A
1	CE144	33.400	5.010	33.300	3.300	1.000	0.18	A
1	CO 57	9.390	1.410	8.900	0.900	1.050	0.19	A
1	CO 60	30.200	4.530	29.500	2.900	1.020	0.18	A
1	CS134	14.500	2.180	14.700	1.460	0.990	0.18	A
1	CS137	6.950	1.040	6.640	0.700	1.050	0.19	A
1	MN 54	3.500	0.530	3.440	0.380	1.020	0.19	A
1	RU106	11.100	1.670	11.600	1.440	0.960	0.19	A
1	SB125	10.200	1.530	9.780	1.030	1.040	0.19	A
Matrix: WA								
1	CO 60	30.600	4.600	32.800	0.580	0.930	0.14	W
1	CS137	39.500	5.900	38.300	0.881	1.030	0.16	A
1	GA 1	1700.000	170.000	1850.000	185.000	0.920	0.13	A
1	GB 2	980.000	98.000	744.000	74.000	1.320	0.19	A
1	H 3	220.000	22.000	251.000	11.400	0.880	0.10	A
1	MN 54	39.100	5.900	38.400	1.160	1.020	0.16	A
1	U UG	0.016	0.002	0.022	0.003	0.720	0.11	N

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **BA** Bettis Atomic Power Lab, West Mifflin, PA

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	30.400	2.600	33.300	3.300	0.910	0.12	A
1	CO 57	8.460	0.620	8.900	0.900	0.950	0.12	A
1	CO 60	31.200	0.920	29.500	2.900	1.060	0.11	A
1	CS134	15.300	0.850	14.700	1.460	1.040	0.12	A
1	CS137	7.120	0.680	6.640	0.700	1.070	0.15	A
1	MN 54	4.170	0.600	3.440	0.380	1.210	0.22	W
1	PU238	0.087	0.019	0.096	0.002	0.900	0.20	A
1	PU239	0.102	0.020	0.093	0.003	1.100	0.22	A
1	RU106	16.100	4.600	11.600	1.440	1.390	0.43	W
1	SB125	11.600	0.990	9.780	1.030	1.190	0.16	W
1	SR 90	1.010	0.120	1.060	0.037	0.950	0.12	A
Matrix: SO								
1	CS137	337.000	21.000	359.000	10.000	0.940	0.06	A
Matrix: VE								
1	CS137	954.000	59.000	944.000	16.200	1.010	0.06	A
1	PU238	1.030	0.210	0.820	0.104	1.260	0.30	A
1	PU239	9.960	1.600	9.820	1.220	1.010	0.21	A
1	SR 90	1130.000	12.000	1300.000	52.400	0.870	0.04	A
Matrix: WA								
1	CO 60	34.800	2.200	32.800	0.580	1.060	0.07	A
1	CS137	43.900	4.200	38.300	0.881	1.150	0.11	A
1	MN 54	42.000	4.300	38.400	1.160	1.090	0.12	A
1	PU238	1.040	0.170	0.982	0.074	1.060	0.19	A
1	PU239	0.766	0.120	0.772	0.056	0.990	0.17	A
1	U 234	0.342	0.062	0.274	0.019	1.250	0.24	W
1	U 238	0.346	0.063	0.275	0.024	1.260	0.26	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **BC** Babcock & Wilcox MC #42, Lynchburg, VA

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	23.100	0.670	33.300	3.300	0.690	0.07	A
1	CO 57	6.770	0.196	8.900	0.900	0.760	0.08	A
1	CO 60	25.300	0.304	29.500	2.900	0.860	0.08	A
1	CS134	13.300	0.613	14.700	1.460	0.910	0.10	A
1	CS137	5.850	0.322	6.640	0.700	0.880	0.11	A
1	GA 1	1.690	0.058	1.620	0.150	1.040	0.10	A
1	GB 2	3.050	0.083	1.770	0.150	1.720	0.15	W
1	MN 54	2.990	0.156	3.440	0.380	0.870	0.11	A
1	RU106	11.200	0.877	11.600	1.440	0.970	0.14	A
1	SB125	9.030	0.478	9.780	1.030	0.920	0.11	A
1	SR 90	1.220	0.244	1.060	0.037	1.150	0.23	A
1	U 234	0.064	0.004	0.052	0.002	1.230	0.09	A
2	U 238	0.071	0.006	0.053	0.002	1.330	0.13	A
Matrix: SO								
1	CS137	411.000	35.300	359.000	10.000	1.150	0.10	A
1	K 40	451.000	25.700	465.000	30.000	0.970	0.08	A
1	SR 90	936.000	71.400	1340.000	113.000	0.700	0.08	W
1	U 234	42.200	2.460	34.200	3.520	1.230	0.15	W
1	U 238	42.600	2.210	35.900	3.630	1.190	0.14	W
Matrix: VE								
1	CO 60	61.800	3.520	59.700	0.963	1.040	0.06	A
1	K 40	1130.000	62.300	1030.000	33.000	1.100	0.07	A
1	SR 90	707.000	42.200	1300.000	52.400	0.540	0.04	W
Matrix: WA								
1	CO 60	32.800	1.570	32.800	0.580	1.000	0.05	A
1	CS137	43.700	3.100	38.300	0.881	1.140	0.09	A
1	GA 1	2330.000	62.900	1850.000	185.000	1.260	0.13	W
1	GB 2	951.000	28.600	744.000	74.000	1.280	0.13	A
1	MN 54	43.300	2.510	38.400	1.160	1.130	0.07	A
1	SR 90	2.180	0.518	1.450	0.034	1.500	0.36	W
1	U 234	0.335	0.021	0.274	0.019	1.220	0.11	W
1	U 238	0.336	0.026	0.275	0.024	1.220	0.14	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: BE RUST Geotech, Grand Junction, CO

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.180	0.010	0.189	0.007	0.950	0.06	A
1	CE144	21.300	2.200	33.300	3.300	0.640	0.09	W
1	CO 57	6.160	0.420	8.900	0.900	0.690	0.08	W
1	CO 60	23.600	1.610	29.500	2.900	0.800	0.10	W
1	CS134	11.600	0.820	14.700	1.460	0.790	0.10	W
1	CS137	5.480	0.390	6.640	0.700	0.830	0.11	W
1	GA 1	2.200	0.200	1.620	0.150	1.360	0.18	W
1	GB 2	1.800	0.100	1.770	0.150	1.020	0.10	A
1	MN 54	2.900	0.230	3.440	0.380	0.840	0.12	W
1	PU238	0.100	0.010	0.096	0.002	1.040	0.11	A
1	PU239	0.100	0.010	0.093	0.003	1.080	0.11	A
1	RU106	8.280	1.020	11.600	1.440	0.710	0.13	A
1	SB125	7.020	0.560	9.780	1.030	0.720	0.09	A
1	SR 90	1.060	0.090	1.060	0.037	1.000	0.09	A
1	U 234	0.052	0.010	0.052	0.002	1.010	0.20	A
1	U 238	0.055	0.010	0.053	0.002	1.030	0.19	A
1	U UG	4.500	0.000	4.310	0.100	1.040	0.02	A
Matrix: SO								
1	AM241	3.530	0.320	3.690	0.454	0.960	0.15	A
1	CS137	407.000	24.000	359.000	10.000	1.130	0.07	A
1	K 40	473.000	35.500	465.000	30.000	1.020	0.10	A
1	PU238	42.900	1.760	43.000	2.440	1.000	0.07	A
1	PU239	9.510	0.560	9.230	0.346	1.030	0.07	A
1	SR 90	1210.000	74.000	1340.000	113.000	0.900	0.09	A
1	U 234	37.700	4.160	34.200	3.520	1.100	0.17	W
1	U 238	39.300	4.390	35.900	3.630	1.100	0.17	W
1	U UG	3.400	0.000	2.900	0.290	1.170	0.12	W
Matrix: VE								
1	AM241	6.170	0.580	5.600	0.184	1.100	0.11	A
1	CM244	3.670	0.410	4.440	0.202	0.830	0.10	W
1	CO 60	55.400	4.000	59.700	0.963	0.930	0.07	A
1	CS137	1190.000	59.800	944.000	16.200	1.260	0.07	W
1	K 40	1080.000	73.000	1030.000	33.000	1.050	0.08	A
1	PU239	9.290	1.050	9.820	1.220	0.950	0.16	A
1	SR 90	1120.000	62.000	1300.000	52.400	0.860	0.06	A
Matrix: WA								
1	AM241	0.800	0.060	0.766	0.013	1.040	0.08	A
1	CO 60	35.500	1.470	32.800	0.580	1.080	0.05	A
1	CS137	46.000	1.850	38.300	0.881	1.200	0.06	W
1	GA 1	1840.000	34.000	1850.000	185.000	1.000	0.10	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: BE RUST Geotech, Grand Junction, CO

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
1	GB 2	578.000	6.800	744.000	74.000	0.780	0.08	W
1	H 3	206.000	20.500	251.000	11.400	0.820	0.09	W
1	MN 54	47.500	1.860	38.400	1.160	1.240	0.06	N
1	PU238	0.960	0.090	0.982	0.074	0.980	0.12	A
1	PU239	0.740	0.070	0.772	0.056	0.960	0.11	A
1	SR 90	1.860	0.350	1.450	0.034	1.280	0.24	W
1	U 234	0.284	0.054	0.274	0.019	1.040	0.21	A
1	U 238	0.275	0.054	0.275	0.024	1.000	0.22	A
1	U UG	23.900	0.000	0.022	0.003	****	****	N

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **BK** Brookhaven National Laboratory, Upton, NY

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
1	CO 60	35.300	2.390	32.800	0.580	1.080	0.08	A
1	CS137	45.700	2.390	38.300	0.881	1.190	0.07	W
1	MN 54	45.300	2.090	38.400	1.160	1.180	0.07	W
1	PU239	0.550	0.060	0.772	0.056	0.710	0.09	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **BL** Barringer Laboratories Inc., Golden, CO

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.240	0.020	0.189	0.007	1.270	0.11	W
2		0.240	0.010	0.189	0.007	1.270	0.07	W
1	CE144	26.300	1.300	33.300	3.300	0.790	0.09	A
2		26.300	1.300	33.300	3.300	0.790	0.09	A
3		25.700	1.200	33.300	3.300	0.770	0.08	A
1	CO 57	7.400	0.350	8.900	0.900	0.830	0.09	A
2		7.380	0.350	8.900	0.900	0.830	0.09	A
3		7.230	0.340	8.900	0.900	0.810	0.09	A
1	CO 60	26.900	0.900	29.500	2.900	0.910	0.09	A
2		27.000	0.900	29.500	2.900	0.920	0.10	A
3		26.400	0.900	29.500	2.900	0.900	0.09	A
1	CS134	13.400	0.500	14.700	1.460	0.910	0.10	A
2		13.300	0.500	14.700	1.460	0.910	0.10	A
3		12.800	0.500	14.700	1.460	0.870	0.09	A
1	CS137	5.870	0.240	6.640	0.700	0.880	0.10	A
2		5.870	0.240	6.640	0.700	0.880	0.10	A
3		5.760	0.230	6.640	0.700	0.870	0.10	A
1	GA 1	1.970	0.040	1.620	0.150	1.220	0.12	A
2		1.970	0.040	1.620	0.150	1.220	0.12	A
3		1.900	0.050	1.620	0.150	1.170	0.11	A
4		1.980	0.080	1.620	0.150	1.220	0.12	A
5		1.980	0.080	1.620	0.150	1.220	0.12	A
6		1.940	0.040	1.620	0.150	1.200	0.11	A
1	GB 2	1.700	0.050	1.770	0.150	0.960	0.09	A
2		1.710	0.050	1.770	0.150	0.970	0.09	A
3		1.670	0.060	1.770	0.150	0.940	0.09	A
4		1.660	0.100	1.770	0.150	0.940	0.10	A
5		1.700	0.100	1.770	0.150	0.960	0.10	A
6		2.240	0.050	1.770	0.150	1.270	0.11	A
1	MN 54	3.330	0.160	3.440	0.380	0.970	0.12	A
2		3.260	0.160	3.440	0.380	0.950	0.12	A
3		3.140	0.150	3.440	0.380	0.910	0.11	A
1	PU238	0.110	0.010	0.096	0.002	1.140	0.11	A
2		0.110	0.010	0.096	0.002	1.140	0.11	A
1	PU239	0.110	0.010	0.093	0.003	1.190	0.11	W
2		0.100	0.010	0.093	0.003	1.080	0.11	A
1	RU106	11.300	0.700	11.600	1.440	0.970	0.14	A
2		11.800	0.600	11.600	1.440	1.020	0.14	A
3		11.400	0.600	11.600	1.440	0.980	0.13	A
1	SB125	8.490	0.490	9.780	1.030	0.870	0.10	A
2		8.470	0.490	9.780	1.030	0.870	0.10	A
3		8.070	0.450	9.780	1.030	0.830	0.10	A
1	SR 90	1.190	0.710	1.060	0.037	1.120	0.67	A
2		1.060	0.850	1.060	0.037	1.000	0.80	A
2	U 234	0.074	0.000	0.052	0.002	1.430	0.04	W
3		0.075	0.000	0.052	0.002	1.450	0.04	W
4		0.074	0.000	0.052	0.002	1.430	0.04	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **BL** Barringer Laboratories Inc., Golden, CO

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
2	U 238	0.073	0.000	0.053	0.002	1.370	0.05	A
3		0.072	0.000	0.053	0.002	1.350	0.05	A
1	U UG	6.080	0.110	4.310	0.100	1.410	0.04	W
2		6.110	0.120	4.310	0.100	1.420	0.04	W
3		6.080	0.110	4.310	0.100	1.410	0.04	W
Matrix: SO								
1	AM241	2.630	0.180	3.690	0.454	0.710	0.10	W
1	CS137	372.000	8.000	359.000	10.000	1.040	0.04	A
2		374.000	8.000	359.000	10.000	1.040	0.04	A
3		375.000	8.000	359.000	10.000	1.040	0.04	A
1	K 40	528.000	17.000	465.000	30.000	1.140	0.08	A
2		519.000	18.000	465.000	30.000	1.120	0.08	A
3		522.000	17.000	465.000	30.000	1.120	0.08	A
1	PU238	45.000	0.900	43.000	2.440	1.050	0.06	A
2		46.600	0.020	43.000	2.440	1.080	0.06	A
1	PU239	10.100	0.430	9.230	0.346	1.090	0.06	A
2		12.400	0.010	9.230	0.346	1.340	0.05	W
1	SR 90	958.000	45.000	1340.000	113.000	0.720	0.07	W
2		958.000	34.000	1340.000	113.000	0.720	0.07	W
1	U 234	48.500	0.000	34.200	3.520	1.420	0.15	N
2		49.700	0.000	34.200	3.520	1.450	0.15	N
3		48.500	0.000	34.200	3.520	1.420	0.15	N
1	U 238	47.300	0.000	35.900	3.630	1.320	0.13	W
2		48.500	0.000	35.900	3.630	1.350	0.14	W
3		47.300	0.000	35.900	3.630	1.320	0.13	W
1	U UG	3.970	0.090	2.900	0.290	1.370	0.14	W
2		4.070	0.090	2.900	0.290	1.400	0.14	W
3		3.970	0.090	2.900	0.290	1.370	0.14	W
Matrix: VE								
1	AM241	7.310	0.260	5.600	0.184	1.310	0.06	A
2		8.260	0.290	5.600	0.184	1.480	0.07	A
2		10.900	0.790	5.600	0.184	1.950	0.16	W
3		8.540	0.900	5.600	0.184	1.530	0.17	A
1	CM244	4.860	0.200	4.440	0.202	1.100	0.07	A
2		4.600	0.610	4.440	0.202	1.040	0.15	A
2		4.410	0.190	4.440	0.202	0.990	0.06	A
3		4.770	0.660	4.440	0.202	1.070	0.16	A
1	CO 60	64.000	2.300	59.700	0.963	1.070	0.04	A
2		60.400	2.200	59.700	0.963	1.010	0.04	A
3		62.900	2.400	59.700	0.963	1.050	0.04	A
1	CS137	1030.000	22.000	944.000	16.200	1.090	0.03	A
2		1020.000	21.000	944.000	16.200	1.080	0.03	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **BL** Barringer Laboratories Inc., Golden, CO

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: VE								
3	CS137	1020.000	22.000	944.000	16.200	1.080	0.03	A
1	K 40	1140.000	35.000	1030.000	33.000	1.110	0.05	A
2		1130.000	35.000	1030.000	33.000	1.100	0.05	A
3		1160.000	37.000	1030.000	33.000	1.130	0.05	A
1	PU238	0.940	0.100	0.820	0.104	1.150	0.19	A
2		0.990	0.340	0.820	0.104	1.210	0.44	A
1	PU239	9.590	0.320	9.820	1.220	0.980	0.13	A
2		9.020	0.020	9.820	1.220	0.920	0.11	A
2		9.130	0.660	9.820	1.220	0.930	0.13	A
1	SR 90	1390.000	38.000	1300.000	52.400	1.070	0.05	A
2		1320.000	34.000	1300.000	52.400	1.020	0.05	A
Matrix: WA								
1	AM241	1.030	0.070	0.766	0.013	1.350	0.09	W
2		1.070	0.060	0.766	0.013	1.400	0.08	W
1	CO 60	33.300	1.000	32.800	0.580	1.020	0.04	A
2		33.400	1.000	32.800	0.580	1.020	0.04	A
3		33.600	1.100	32.800	0.580	1.020	0.04	A
1	CS137	39.500	1.100	38.300	0.881	1.030	0.04	A
2		39.200	1.100	38.300	0.881	1.020	0.04	A
3		39.600	1.100	38.300	0.881	1.030	0.04	A
1	FE 55	77.000	4.000	83.000	3.440	0.930	0.06	A
2		76.000	5.000	83.000	3.440	0.920	0.07	A
3		75.000	4.000	83.000	3.440	0.900	0.06	A
1	GA 1	1810.000	61.000	1850.000	185.000	0.980	0.10	A
2		1800.000	43.000	1850.000	185.000	0.970	0.10	A
3		1790.000	43.000	1850.000	185.000	0.970	0.10	A
4		1660.000	42.000	1850.000	185.000	0.900	0.09	A
5		1660.000	59.000	1850.000	185.000	0.900	0.10	A
6		1650.000	42.000	1850.000	185.000	0.890	0.09	A
1	GB 2	397.000	48.000	744.000	74.000	0.530	0.08	N
2		398.000	34.000	744.000	74.000	0.540	0.07	N
3		487.000	32.000	744.000	74.000	0.660	0.08	N
4		525.000	38.000	744.000	74.000	0.710	0.09	N
5		530.000	54.000	744.000	74.000	0.710	0.10	N
6		497.000	31.000	744.000	74.000	0.670	0.08	N
1	H 3	221.000	18.000	251.000	11.400	0.880	0.08	A
2		233.000	18.000	251.000	11.400	0.930	0.08	A
3		248.000	18.000	251.000	11.400	0.990	0.08	A
1	MN 54	41.800	1.100	38.400	1.160	1.090	0.04	A
2		42.600	1.200	38.400	1.160	1.110	0.05	A
3		41.800	1.200	38.400	1.160	1.090	0.05	A
1	PU238	1.130	0.070	0.982	0.074	1.150	0.11	W
2		1.050	0.070	0.982	0.074	1.070	0.11	A
1	PU239	0.790	0.060	0.772	0.056	1.020	0.11	A
2		0.800	0.060	0.772	0.056	1.040	0.11	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **BL** Barringer Laboratories Inc., Golden, CO

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
1	SR 90	1.600	0.650	1.450	0.034	1.100	0.45	A
2		1.640	0.670	1.450	0.034	1.130	0.46	A
1	U 234	0.283	0.000	0.274	0.019	1.030	0.07	A
2		0.290	0.230	0.274	0.019	1.060	0.84	A
2		0.290	0.000	0.274	0.019	1.060	0.07	A
3		0.290	0.000	0.274	0.019	1.060	0.07	A
1	U 238	0.276	0.000	0.275	0.024	1.000	0.09	A
2		0.282	0.000	0.275	0.024	1.030	0.09	A
2		0.280	0.220	0.275	0.024	1.020	0.81	A
3		0.283	0.000	0.275	0.024	1.030	0.09	A
1	U BQ	0.570	0.660	0.559	0.047	1.020	1.18	A
1	U UG	0.023	0.000	0.022	0.003	1.040	0.12	A
2		0.024	0.000	0.022	0.003	1.070	0.13	A
3		0.024	0.000	0.022	0.003	1.070	0.13	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **BM** Battelle Memorial Institute, Columbus, OH

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.260	0.100	0.189	0.007	1.380	0.53	W
1	CE144	28.000	2.000	33.300	3.300	0.840	0.10	A
1	CO 57	8.010	0.560	8.900	0.900	0.900	0.11	A
1	CO 60	26.300	1.800	29.500	2.900	0.890	0.11	A
1	CS134	14.600	0.700	14.700	1.460	0.990	0.11	A
1	CS137	6.390	0.380	6.640	0.700	0.960	0.12	A
1	MN 54	3.260	0.230	3.440	0.380	0.950	0.12	A
1	PU238	0.120	0.030	0.096	0.002	1.250	0.31	W
1	PU239	0.120	0.030	0.093	0.003	1.290	0.33	W
1	RU106	12.500	1.400	11.600	1.440	1.080	0.18	A
1	SB125	9.500	0.700	9.780	1.030	0.970	0.13	A
1	SR 90	0.820	0.090	1.060	0.037	0.770	0.09	W
1	U 234	0.077	0.017	0.052	0.002	1.490	0.33	W
1	U 238	0.066	0.017	0.053	0.002	1.240	0.32	A
Matrix: SO								
1	CS137	306.000	22.000	359.000	10.000	0.850	0.07	W
1	K 40	380.000	60.000	465.000	30.000	0.820	0.14	W
1	SR 90	506.000	60.000	1340.000	113.000	0.380	0.05	N
1	U UG	68.000	12.000	2.900	0.290	****	4.76	N
Matrix: VE								
1	AM241	9.100	4.500	5.600	0.184	1.630	0.81	W
1	CO 60	51.000	3.600	59.700	0.963	0.850	0.06	A
1	CS137	840.000	60.000	944.000	16.200	0.890	0.07	W
1	K 40	870.000	45.000	1030.000	33.000	0.850	0.05	A
1	SR 90	209.000	20.000	1300.000	52.400	0.160	0.02	N
Matrix: WA								
1	CO 60	31.300	2.200	32.800	0.580	0.950	0.07	A
1	CS137	43.500	3.100	38.300	0.881	1.140	0.09	A
1	MN 54	42.000	3.000	38.400	1.160	1.090	0.08	A
1	PU238	0.930	0.160	0.982	0.074	0.950	0.18	A
1	PU239	0.710	0.120	0.772	0.056	0.920	0.17	A
1	SR 90	1.170	0.230	1.450	0.034	0.810	0.16	W
1	U 234	0.300	0.060	0.274	0.019	1.100	0.23	A
1	U 238	0.320	0.060	0.275	0.024	1.160	0.24	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **BN** Brookhaven National Laboratory, Upton, NY

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	32.000	2.260	33.300	3.300	0.960	0.12	A
1	CO 57	9.120	0.600	8.900	0.900	1.030	0.12	A
1	CO 60	26.100	0.170	29.500	2.900	0.890	0.09	A
1	CS134	13.000	0.020	14.700	1.460	0.880	0.09	A
1	CS137	7.940	0.400	6.640	0.700	1.200	0.14	W
1	GA 1	1.940	0.050	1.620	0.150	1.200	0.12	A
1	GB 2	2.290	0.050	1.770	0.150	1.290	0.11	A
1	MN 54	3.860	0.160	3.440	0.380	1.120	0.13	A
1	RU106	12.000	0.350	11.600	1.440	1.030	0.13	A
1	SB125	12.400	0.640	9.780	1.030	1.270	0.15	W
Matrix: SO								
1	CS137	354.000	19.300	359.000	10.000	0.990	0.06	A
1	K 40	414.000	7.940	465.000	30.000	0.890	0.06	A
Matrix: VE								
1	CO 60	46.500	0.940	59.700	0.963	0.780	0.02	W
1	CS137	949.000	31.200	944.000	16.200	1.010	0.04	A
1	K 40	885.000	21.600	1030.000	33.000	0.860	0.03	A
Matrix: WA								
1	CO 60	32.700	0.600	32.800	0.580	1.000	0.03	A
1	CS137	42.500	0.410	38.300	0.881	1.110	0.03	A
1	GA 1	2050.000	24.200	1850.000	185.000	1.110	0.11	A
1	GB 2	924.000	13.700	744.000	74.000	1.240	0.13	A
1	H 3	213.000	7.970	251.000	11.400	0.850	0.05	A
1	MN 54	43.000	0.420	38.400	1.160	1.120	0.04	A
1	SR 90	1.320	0.000	1.450	0.034	0.910	0.02	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **BP** Battelle Pacific Northwest Laboratory

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.201	0.012	0.189	0.007	1.060	0.07	A
1	CE144	26.200	7.000	33.300	3.300	0.790	0.22	A
1	CO 57	5.800	1.200	8.900	0.900	0.650	0.15	W
1	CO 60	24.500	1.700	29.500	2.900	0.830	0.10	A
1	CS134	14.100	1.100	14.700	1.460	0.960	0.12	A
1	CS137	7.400	1.400	6.640	0.700	1.110	0.24	A
1	MN 54	3.100	1.400	3.440	0.380	0.900	0.42	A
1	PU238	0.103	0.006	0.096	0.002	1.070	0.07	A
1	PU239	0.099	0.006	0.093	0.003	1.070	0.07	A
1	SB125	8.900	2.900	9.780	1.030	0.910	0.31	A
1	SR 90	1.010	0.080	1.060	0.037	0.950	0.08	A
Matrix: SO								
1	AM241	3.440	0.320	3.690	0.454	0.930	0.14	A
1	CS137	428.000	7.000	359.000	10.000	1.190	0.04	A
1	K 40	542.000	14.000	465.000	30.000	1.170	0.08	A
1	PU238	45.200	1.900	43.000	2.440	1.050	0.07	A
1	PU239	10.100	0.300	9.230	0.346	1.090	0.05	A
1	SR 90	1210.000	75.000	1340.000	113.000	0.900	0.09	A
1	U UG	3.040	0.000	2.900	0.290	1.050	0.11	A
Matrix: VE								
1	CO 60	69.800	2.200	59.700	0.963	1.170	0.04	A
1	CS137	1850.000	43.000	944.000	16.200	1.960	0.06	N
1	K 40	1330.000	43.000	1030.000	33.000	1.290	0.06	W
Matrix: WA								
1	AM241	0.708	0.020	0.766	0.013	0.920	0.03	A
1	CO 60	34.400	0.580	32.800	0.580	1.050	0.03	A
1	CS137	45.100	1.100	38.300	0.881	1.180	0.04	W
1	H 3	187.000	22.000	251.000	11.400	0.750	0.09	W
1	MN 54	43.800	0.840	38.400	1.160	1.140	0.04	W
1	PU238	0.931	0.063	0.982	0.074	0.950	0.10	A
1	PU239	0.704	0.023	0.772	0.056	0.910	0.07	A
1	SR 90	1.240	0.110	1.450	0.034	0.860	0.08	W
1	U UG	24.300	0.000	0.022	0.003	****	****	N

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in μ g/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **BQ** Becquerel Laboratories Inc., Mississauga, Ontario, Canada

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	30.000	0.900	33.300	3.300	0.900	0.09	A
1	CO 57	7.500	0.100	8.900	0.900	0.840	0.09	A
1	CO 60	24.300	0.600	29.500	2.900	0.820	0.08	W
1	CS134	14.500	0.500	14.700	1.460	0.990	0.10	A
1	CS137	6.800	0.300	6.640	0.700	1.020	0.12	A
1	MN 54	2.900	0.300	3.440	0.380	0.840	0.13	W
1	RU106	12.000	2.000	11.600	1.440	1.030	0.22	A
1	SB125	9.700	0.500	9.780	1.030	0.990	0.12	A
1	U UG	4.300	0.200	4.310	0.100	1.000	0.05	A
Matrix: SO								
1	CS137	396.000	8.000	359.000	10.000	1.100	0.04	A
1	K 40	278.000	5.000	465.000	30.000	0.600	0.04	N
1	U UG	2.800	0.200	2.900	0.290	0.970	0.12	A
Matrix: VE								
1	CO 60	81.900	7.000	59.700	0.963	1.370	0.12	W
1	CS137	1100.000	14.000	944.000	16.200	1.170	0.02	A
1	K 40	371.000	44.000	1030.000	33.000	0.360	0.04	N
Matrix: WA								
1	CO 60	35.000	2.000	32.800	0.580	1.070	0.06	A
1	CS137	42.000	1.000	38.300	0.881	1.100	0.04	A
1	MN 54	44.000	2.000	38.400	1.160	1.150	0.06	W
1	U UG	0.026	0.001	0.022	0.003	1.180	0.14	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **BR** US Army Research Laboratory, Aberdeen Proving Ground

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	29.700	2.940	33.300	3.300	0.890	0.13	A
1	CO 57	7.980	0.480	8.900	0.900	0.900	0.11	A
1	CO 60	29.800	1.310	29.500	2.900	1.010	0.11	A
1	CS134	14.300	0.880	14.700	1.460	0.970	0.11	A
1	CS137	6.640	0.930	6.640	0.700	1.000	0.18	A
1	MN 54	4.450	1.200	3.440	0.380	1.290	0.38	W
1	RU106	13.500	3.460	11.600	1.440	1.160	0.33	A
1	SB125	12.200	1.730	9.780	1.030	1.250	0.22	W
Matrix: SO								
1	AM241	6.000	3.800	3.690	0.454	1.630	1.05	W
1	CS137	427.000	9.000	359.000	10.000	1.190	0.04	A
Matrix: VE								
1	CO 60	80.000	12.000	59.700	0.963	1.340	0.20	W
1	CS137	680.000	30.000	944.000	16.200	0.720	0.03	N
Matrix: WA								
1	CO 60	33.000	1.400	32.800	0.580	1.010	0.05	A
1	CS137	46.300	2.100	38.300	0.881	1.210	0.06	W
1	MN 54	46.000	2.500	38.400	1.160	1.200	0.07	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **BS** B&W Nuclear Envir. Services, Leechburg, PA

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.280	0.040	0.189	0.007	1.480	0.22	W
1	CE144	23.300	0.240	33.300	3.300	0.700	0.07	A
1	CO 57	6.440	0.050	8.900	0.900	0.720	0.07	A
1	CO 60	24.900	0.190	29.500	2.900	0.840	0.08	A
1	CS134	13.100	0.150	14.700	1.460	0.890	0.09	A
1	CS137	5.370	0.090	6.640	0.700	0.810	0.09	W
1	GA 1	2.200	0.010	1.620	0.150	1.360	0.13	W
1	GB 2	1.870	0.010	1.770	0.150	1.060	0.09	A
1	MN 54	2.860	0.100	3.440	0.380	0.830	0.10	W
1	RU106	7.700	0.640	11.600	1.440	0.660	0.10	A
1	SB125	7.630	0.200	9.780	1.030	0.780	0.08	A
Matrix: SO								
1	AM241	4.600	0.100	3.690	0.454	1.250	0.16	A
1	CS137	374.000	0.200	359.000	10.000	1.040	0.03	A
1	K 40	482.000	10.900	465.000	30.000	1.040	0.07	A
1	U BQ	141.000	18.500	71.700	4.150	1.970	0.28	N
Matrix: VE								
1	AM241	9.300	0.100	5.600	0.184	1.660	0.06	W
1	CO 60	45.900	0.100	59.700	0.963	0.770	0.01	W
1	CS137	685.000	2.900	944.000	16.200	0.730	0.01	N
1	K 40	804.000	14.100	1030.000	33.000	0.780	0.03	W
Matrix: WA								
1	AM241	0.870	0.160	0.766	0.013	1.140	0.21	A
1	CO 60	32.500	0.480	32.800	0.580	0.990	0.02	A
1	CS137	41.100	0.480	38.300	0.881	1.070	0.03	A
1	GA 1	1590.000	7.900	1850.000	185.000	0.860	0.09	A
1	GB 2	732.000	4.300	744.000	74.000	0.980	0.10	A
1	MN 54	43.700	0.510	38.400	1.160	1.140	0.04	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: BU Autoridad Regulatoria, Buenos Aires, Argentina

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.580	0.130	0.189	0.007	3.070	0.70	N
1	CE144	33.000	6.000	33.300	3.300	0.990	0.21	A
1	CO 57	8.900	0.900	8.900	0.900	1.000	0.14	A
1	CO 60	29.000	3.000	29.500	2.900	0.980	0.14	A
1	CS134	14.000	1.000	14.700	1.460	0.950	0.12	A
1	CS137	6.900	0.700	6.640	0.700	1.040	0.15	A
1	GA 1	1.600	0.100	1.620	0.150	0.990	0.11	A
1	MN 54	3.400	0.300	3.440	0.380	0.990	0.14	A
1	PU238	0.087	0.005	0.096	0.002	0.900	0.06	A
1	PU239	0.089	0.005	0.093	0.003	0.960	0.06	A
1	RU106	11.000	2.000	11.600	1.440	0.950	0.21	A
1	SB125	10.000	1.000	9.780	1.030	1.020	0.15	A
1	U BQ	5.800	0.400	0.107	0.003	***	3.96	N
Matrix: SO								
1	AM241	2.900	0.700	3.690	0.454	0.790	0.21	A
1	CS137	360.000	30.000	359.000	10.000	1.000	0.09	A
1	K 40	470.000	80.000	465.000	30.000	1.010	0.18	A
1	PU238	39.100	0.900	43.000	2.440	0.910	0.06	A
1	PU239	9.400	0.300	9.230	0.346	1.020	0.05	A
1	U BQ	7.900	0.800	71.700	4.150	0.110	0.01	N
Matrix: VE								
1	AM241	7.400	1.800	5.600	0.184	1.320	0.32	A
1	CO 60	72.000	7.000	59.700	0.963	1.210	0.12	A
1	CS137	1000.000	90.000	944.000	16.200	1.060	0.10	A
1	K 40	1100.000	200.000	1030.000	33.000	1.070	0.20	A
1	PU239	3.000	0.300	9.820	1.220	0.310	0.05	N
Matrix: WA								
1	AM241	0.870	0.200	0.766	0.013	1.140	0.26	A
1	CO 60	31.000	3.000	32.800	0.580	0.950	0.09	A
1	CS137	38.000	3.000	38.300	0.881	0.990	0.08	A
1	GA 1	2040.000	100.000	1850.000	185.000	1.100	0.12	A
1	H 3	226.000	5.000	251.000	11.400	0.900	0.05	A
1	MN 54	37.000	3.000	38.400	1.160	0.960	0.08	A
1	PU238	0.740	0.030	0.982	0.074	0.750	0.06	W
1	PU239	0.780	0.030	0.772	0.056	1.010	0.08	A
1	U BQ	0.024	0.002	0.559	0.047	0.040	0.01	N

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **BX** B&W Nuclear Envir. Services, Lynchburg, VA

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.204	0.010	0.189	0.007	1.080	0.07	A
1	CE144	23.300	0.676	33.300	3.300	0.700	0.07	A
1	CO 57	6.660	0.200	8.900	0.900	0.750	0.08	A
1	CO 60	25.100	0.301	29.500	2.900	0.850	0.08	A
1	CS134	13.300	0.611	14.700	1.460	0.910	0.10	A
1	CS137	5.920	0.320	6.640	0.700	0.890	0.11	A
1	GA 1	1.430	0.053	1.620	0.150	0.880	0.09	W
1	GB 2	2.690	0.077	1.770	0.150	1.520	0.14	A
1	MN 54	3.040	0.164	3.440	0.380	0.880	0.11	A
1	PU238	0.128	0.009	0.096	0.002	1.330	0.09	W
1	PU239	0.097	0.007	0.093	0.003	1.050	0.09	A
1	RU106	11.600	0.822	11.600	1.440	1.000	0.14	A
1	SB125	8.950	0.466	9.780	1.030	0.920	0.11	A
1	SR 90	1.270	0.245	1.060	0.037	1.200	0.24	A
1	U 234	0.067	0.006	0.052	0.002	1.300	0.13	A
1	U 238	0.063	0.008	0.053	0.002	1.180	0.16	A
Matrix: SO								
1	AM241	2.020	0.051	3.690	0.454	0.550	0.07	W
1	CS137	392.000	27.100	359.000	10.000	1.090	0.08	A
1	K 40	437.000	27.100	465.000	30.000	0.940	0.08	A
1	PU238	36.900	0.940	43.000	2.440	0.860	0.05	A
1	PU239	7.220	0.185	9.230	0.346	0.780	0.04	W
1	SR 90	618.000	42.200	1340.000	113.000	0.460	0.05	N
1	U 234	36.700	2.500	34.200	3.520	1.070	0.13	W
1	U 238	32.900	2.090	35.900	3.630	0.920	0.11	A
Matrix: VE								
1	AM241	4.700	0.119	5.600	0.184	0.840	0.03	A
1	CM244	7.030	0.175	4.440	0.202	1.580	0.08	W
1	CO 60	64.400	3.990	59.700	0.963	1.080	0.07	A
1	K 40	1090.000	62.200	1030.000	33.000	1.060	0.07	A
1	PU239	14.900	0.381	9.820	1.220	1.520	0.19	W
1	SR 90	677.000	42.900	1300.000	52.400	0.520	0.04	W
Matrix: WA								
1	AM241	0.796	0.028	0.766	0.013	1.040	0.04	A
1	CO 60	32.600	1.630	32.800	0.580	0.990	0.05	A
1	CS137	42.600	2.850	38.300	0.881	1.110	0.08	A
1	FE 55	57.000	4.660	83.000	3.440	0.690	0.06	W
1	GA 1	2040.000	58.800	1850.000	185.000	1.100	0.12	A
1	GB 2	866.000	27.300	744.000	74.000	1.160	0.12	A
1	H 3	212.000	23.200	251.000	11.400	0.850	0.10	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **BX** B&W Nuclear Envir. Services, Lynchburg, VA

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
1	MN 54	41.800	2.300	38.400	1.160	1.090	0.07	A
1	PU238	0.969	0.039	0.982	0.074	0.990	0.08	A
1	PU239	0.703	0.031	0.772	0.056	0.910	0.08	A
1	SR 90	2.000	0.485	1.450	0.034	1.380	0.34	W
1	U 234	0.334	0.021	0.274	0.019	1.220	0.11	W
1	U 238	0.336	0.026	0.275	0.024	1.220	0.15	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27.

QAP44 Results by Laboratory

Lab: **CA** Atomic Energy Control Board, Ottawa, Canada

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	20.300	0.900	33.300	3.300	0.610	0.07	W
1	CO 57	6.030	0.090	8.900	0.900	0.680	0.07	W
1	CO 60	24.200	0.300	29.500	2.900	0.820	0.08	W
1	CS134	13.200	0.100	14.700	1.460	0.900	0.09	A
1	CS137	5.200	0.500	6.640	0.700	0.780	0.11	W
1	GA 1	1.550	0.020	1.620	0.150	0.960	0.09	A
1	GB 2	1.460	0.030	1.770	0.150	0.830	0.07	W
Matrix: SO								
1	U UG	3.000	0.200	2.900	0.290	1.030	0.12	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: CC Compuchem Environmental Corp., RTP, NC

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.180	0.000	0.189	0.007	0.950	0.03	A
1	CE144	20.400	0.000	33.300	3.300	0.610	0.06	W
1	CO 57	6.150	0.000	8.900	0.900	0.690	0.07	W
1	CO 60	23.800	0.000	29.500	2.900	0.810	0.08	W
1	CS134	12.700	0.000	14.700	1.460	0.860	0.09	A
1	CS137	5.570	0.000	6.640	0.700	0.840	0.09	A
1	MN 54	2.750	0.000	3.440	0.380	0.800	0.09	W
1	PU238	0.090	0.000	0.096	0.002	0.940	0.02	A
1	PU239	0.090	0.000	0.093	0.003	0.970	0.03	A
1	SB125	5.690	0.000	9.780	1.030	0.580	0.06	W
1	SR 90	0.970	0.000	1.060	0.037	0.920	0.03	A
1	U 234	0.050	0.000	0.052	0.002	0.970	0.03	A
1	U 238	0.060	0.000	0.053	0.002	1.130	0.04	A
1	U UG	4.560	0.000	4.310	0.100	1.060	0.02	A
Matrix: SO								
1	AM241	2.510	0.000	3.690	0.454	0.680	0.08	W
1	CS137	441.000	0.000	359.000	10.000	1.230	0.03	A
1	K 40	539.000	0.000	465.000	30.000	1.160	0.07	A
1	PU238	45.500	0.000	43.000	2.440	1.060	0.06	A
1	PU239	10.100	0.000	9.230	0.346	1.090	0.04	A
1	SR 90	994.000	0.000	1340.000	113.000	0.740	0.06	W
1	U 234	35.800	0.000	34.200	3.520	1.050	0.11	A
1	U 238	36.300	0.000	35.900	3.630	1.010	0.10	A
1	U UG	2.910	0.000	2.900	0.290	1.000	0.10	A
Matrix: VE								
1	AM241	6.080	0.000	5.600	0.184	1.090	0.04	A
1	CM244	4.710	0.000	4.440	0.202	1.060	0.05	A
1	CO 60	73.700	0.000	59.700	0.963	1.240	0.02	W
1	CS137	1390.000	0.000	944.000	16.200	1.470	0.03	W
1	K 40	1430.000	0.000	1030.000	33.000	1.390	0.04	W
1	PU239	10.000	0.000	9.820	1.220	1.020	0.13	A
1	SR 90	1320.000	0.000	1300.000	52.400	1.020	0.04	A
Matrix: WA								
1	AM241	0.810	0.000	0.766	0.013	1.060	0.02	A
1	CO 60	32.900	0.000	32.800	0.580	1.000	0.02	A
1	CS137	43.900	0.000	38.300	0.881	1.150	0.03	A
1	H 3	156.000	0.000	251.000	11.400	0.620	0.03	N
1	MN 54	43.400	0.000	38.400	1.160	1.130	0.03	A
1	PU238	1.000	0.000	0.982	0.074	1.020	0.08	A
1	PU239	0.760	0.000	0.772	0.056	0.980	0.07	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **CC** Compuchem Environmental Corp., RTP, NC

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Ratio Error	Evaluation
Matrix: WA								
1	SR 90	1.500	0.000	1.450	0.034	1.030	0.02	A
1	U 234	0.310	0.000	0.274	0.019	1.130	0.08	A
1	U 238	0.300	0.000	0.275	0.024	1.090	0.10	A
1	U UG	0.020	0.000	0.022	0.003	0.900	0.11	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.
 Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **CH** California State Dept. Health Serv., Sanitation & Radiation Laboratory

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.197	0.034	0.189	0.007	1.040	0.19	A
1	CE144	21.100	1.710	33.300	3.300	0.630	0.08	W
1	CO 57	6.370	1.700	8.900	0.900	0.720	0.20	A
1	CO 60	25.000	0.970	29.500	2.900	0.850	0.09	A
1	CS134	12.600	0.552	14.700	1.460	0.860	0.09	A
1	CS137	5.560	0.552	6.640	0.700	0.840	0.12	A
1	GA 1	2.090	0.086	1.620	0.150	1.290	0.13	A
1	GB 2	1.840	0.126	1.770	0.150	1.040	0.11	A
1	MN 54	2.880	0.504	3.440	0.380	0.840	0.17	W
1	PU238	0.097	0.021	0.096	0.002	1.010	0.22	A
1	PU239	0.099	0.022	0.093	0.003	1.060	0.23	A
1	RU106	10.000	3.630	11.600	1.440	0.860	0.33	A
1	SB125	7.850	1.140	9.780	1.030	0.800	0.14	A
1	SR 90	0.860	0.154	1.060	0.037	0.810	0.15	W
1	U 234	0.070	0.024	0.052	0.002	1.360	0.47	A
1	U 238	0.060	0.022	0.053	0.002	1.130	0.41	A
1	U BQ	0.131	0.033	0.107	0.003	1.220	0.31	A
1	U UG	4.150	0.420	4.310	0.100	0.960	0.10	A
Matrix: SO								
1	AM241	4.670	0.852	3.690	0.454	1.270	0.28	A
1	CS137	407.000	889.000	359.000	10.000	1.130	2.48	A
1	K 40	540.000	49.300	465.000	30.000	1.160	0.13	A
1	PU238	45.600	1.480	43.000	2.440	1.060	0.07	A
1	PU239	9.560	0.481	9.230	0.346	1.040	0.07	A
1	SR 90	1040.000	59.300	1340.000	113.000	0.780	0.08	A
1	U 234	35.900	2.040	34.200	3.520	1.050	0.12	A
1	U 238	35.300	2.040	35.900	3.630	0.980	0.12	A
1	U BQ	72.900	2.900	71.700	4.150	1.020	0.07	A
1	U UG	1.420	0.142	2.900	0.290	0.490	0.07	W
Matrix: VE								
1	AM241	6.370	0.444	5.600	0.184	1.140	0.09	A
1	CM244	4.190	0.348	4.440	0.202	0.940	0.09	A
1	CO 60	67.400	10.100	59.700	0.963	1.130	0.17	A
1	CS137	1120.000	24.100	944.000	16.200	1.190	0.03	A
1	K 40	1330.000	138.000	1030.000	33.000	1.290	0.14	W
1	PU238	9.700	0.556	9.820	1.220	0.990	0.14	A
1	SR 90	1310.000	74.100	1300.000	52.400	1.010	0.07	A
Matrix: WA								
1	AM241	0.844	0.064	0.766	0.013	1.100	0.09	A
1	CO 60	33.700	0.496	32.800	0.580	1.030	0.02	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in μg /filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **CH** California State Dept. Health Serv., Sanitation & Radiation Laboratory

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
1	CS137	42.100	0.556	38.300	0.881	1.100	0.03	A
1	GA 1	1650.000	126.000	1850.000	185.000	0.890	0.11	A
1	GB 2	534.000	72.200	744.000	74.000	0.720	0.12	N
1	H 3	227.000	2.610	251.000	11.400	0.900	0.04	A
1	MN 54	42.700	1.360	38.400	1.160	1.110	0.05	A
1	PU238	0.948	0.089	0.982	0.074	0.970	0.12	A
1	PU239	0.726	0.029	0.772	0.056	0.940	0.08	A
1	SR 90	1.510	0.385	1.450	0.034	1.040	0.27	A
1	U 234	0.356	0.019	0.274	0.019	1.300	0.11	W
1	U 238	0.331	0.031	0.275	0.024	1.200	0.16	W
1	U BQ	0.687	0.036	0.559	0.047	1.230	0.12	W
1	U UG	0.023	0.002	0.022	0.003	1.020	0.16	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **CL** Core Laboratories, Casper, WY

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.220	0.040	0.189	0.007	1.160	0.22	A
1	CE144	20.000	1.750	33.300	3.300	0.600	0.08	N
1	CO 57	6.500	0.230	8.900	0.900	0.730	0.08	A
1	CO 60	22.900	0.740	29.500	2.900	0.780	0.08	W
1	CS134	13.100	0.450	14.700	1.460	0.890	0.09	A
1	CS137	5.840	0.370	6.640	0.700	0.880	0.11	A
1	MN 54	2.890	0.400	3.440	0.380	0.840	0.15	W
1	PU238	0.100	0.060	0.096	0.002	1.040	0.62	A
1	PU239	0.140	0.040	0.093	0.003	1.510	0.43	W
1	RU106	11.400	2.080	11.600	1.440	0.980	0.22	A
1	SB125	9.050	0.770	9.780	1.030	0.930	0.13	A
1	SR 90	0.970	0.160	1.060	0.037	0.920	0.15	A
1	U 234	0.070	0.030	0.052	0.002	1.350	0.58	A
1	U 238	0.070	0.030	0.053	0.002	1.310	0.56	A
1	U BQ	0.120	0.020	0.107	0.003	1.120	0.19	A

Matrix: SO								
1	AM241	5.640	3.700	3.690	0.454	1.530	1.02	W
1	CS137	355.000	14.800	359.000	10.000	0.990	0.05	A
1	K 40	419.000	75.500	465.000	30.000	0.900	0.17	A
1	PU238	38.100	6.300	43.000	2.440	0.890	0.16	A
1	PU239	12.300	2.740	9.230	0.346	1.330	0.30	W
1	SR 90	467.000	11.100	1340.000	113.000	0.350	0.03	N
1	U 234	40.200	5.200	34.200	3.520	1.170	0.19	W
1	U 238	38.700	4.700	35.900	3.630	1.080	0.17	A
1	U BQ	79.400	8.000	71.700	4.150	1.110	0.13	W

Matrix: VE								
1	AM241	6.270	1.500	5.600	0.184	1.120	0.27	A
1	CM244	3.880	1.000	4.440	0.202	0.870	0.23	A
1	CO 60	53.800	5.900	59.700	0.963	0.900	0.10	A
1	CS137	949.000	39.200	944.000	16.200	1.010	0.05	A
1	K 40	974.000	118.000	1030.000	33.000	0.950	0.12	A
1	PU239	11.200	1.300	9.820	1.220	1.140	0.19	A
1	SR 90	437.000	11.100	1300.000	52.400	0.340	0.02	N

Matrix: WA								
1	AM241	0.830	0.150	0.766	0.013	1.080	0.20	A
1	CO 60	33.600	1.730	32.800	0.580	1.020	0.06	A
1	CS137	44.000	2.020	38.300	0.881	1.150	0.06	A
1	H 3	201.000	11.500	251.000	11.400	0.800	0.06	W
1	MN 54	40.900	1.800	38.400	1.160	1.070	0.06	A
1	PU238	0.910	0.220	0.982	0.074	0.930	0.24	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **CL** Core Laboratories, Casper, WY

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
1	PU239	0.880	0.160	0.772	0.056	1.140	0.22	A
1	SR 90	1.700	0.470	1.450	0.034	1.170	0.33	A
1	U 234	0.370	0.120	0.274	0.019	1.350	0.45	W
1	U 238	0.360	0.110	0.275	0.024	1.310	0.42	W
1	U BQ	0.730	0.070	0.559	0.047	1.310	0.17	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **CP** Controls for Environmental Pollution, Santa Fe

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	30.600	4.300	33.300	3.300	0.920	0.16	A
1	CO 57	8.770	1.190	8.900	0.900	0.990	0.17	A
1	CO 60	29.400	3.000	29.500	2.900	1.000	0.14	A
1	CS134	13.800	2.000	14.700	1.460	0.940	0.17	A
1	CS137	7.100	0.830	6.640	0.700	1.070	0.17	A
1	GA 1	1.810	0.030	1.620	0.150	1.120	0.11	A
1	GB 2	1.170	0.010	1.770	0.150	0.660	0.06	N
1	MN 54	3.710	0.840	3.440	0.380	1.080	0.27	A
1	RU106	10.400	1.900	11.600	1.440	0.900	0.20	A
1	SB125	10.900	2.000	9.780	1.030	1.120	0.24	A
1	SR 90	0.755	0.057	1.060	0.037	0.710	0.06	W
Matrix: SO								
1	CS137	388.000	42.000	359.000	10.000	1.080	0.12	A
1	K 40	456.000	98.000	465.000	30.000	0.980	0.22	A
1	U BQ	50.100	5.700	71.700	4.150	0.700	0.09	A
Matrix: VE								
1	CO 60	67.900	8.100	59.700	0.963	1.140	0.14	A
1	CS137	1120.000	111.000	944.000	16.200	1.190	0.12	A
1	K 40	1440.000	227.000	1030.000	33.000	1.400	0.23	W
1	SR 90	1040.000	13.000	1300.000	52.400	0.800	0.03	A
Matrix: WA								
1	CO 60	34.100	4.200	32.800	0.580	1.040	0.13	A
1	CS137	39.500	4.800	38.300	0.881	1.030	0.13	A
1	GA 1	1710.000	34.000	1850.000	185.000	0.920	0.09	A
1	GB 2	843.000	16.000	744.000	74.000	1.130	0.12	A
1	MN 54	41.300	15.500	38.400	1.160	1.080	0.41	A
1	SR 90	0.815	0.211	1.450	0.034	0.560	0.15	N

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in μg /filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **CS** Rockwell International Corp., Canoga Park, CA

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.180	0.010	0.189	0.007	0.950	0.06	A
1	CE144	16.000	0.690	33.300	3.300	0.480	0.05	N
1	CO 57	5.040	0.160	8.900	0.900	0.570	0.06	N
1	CO 60	20.900	0.640	29.500	2.900	0.710	0.07	N
1	CS134	8.960	0.190	14.700	1.460	0.610	0.06	N
1	CS137	4.470	0.190	6.640	0.700	0.670	0.08	N
1	MN 54	2.580	0.130	3.440	0.380	0.750	0.09	N
1	RU106	6.900	0.340	11.600	1.440	0.600	0.08	W
1	SB125	5.700	0.130	9.780	1.030	0.580	0.06	W
1	U 234	0.230	0.070	0.052	0.002	4.450	1.36	N
Matrix: WA								
1	AM241	0.830	0.100	0.766	0.013	1.080	0.13	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **CW** Carlsbad Environmental Monitoring Research Center, NM

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.196	0.007	0.189	0.007	1.040	0.05	A
1	PU238	0.099	0.007	0.096	0.002	1.030	0.08	A
1	PU239	0.097	0.010	0.093	0.003	1.050	0.11	A
1	U 234	0.056	0.004	0.052	0.002	1.080	0.08	A
1	U 238	0.056	0.004	0.053	0.002	1.050	0.08	A
Matrix: SO								
1	AM241	3.520	0.170	3.690	0.454	0.950	0.13	A
1	PU238	41.200	2.500	43.000	2.440	0.960	0.08	A
1	PU239	8.840	0.620	9.230	0.346	0.960	0.08	A
1	U 234	32.100	1.500	34.200	3.520	0.940	0.11	A
1	U 238	33.300	1.500	35.900	3.630	0.930	0.10	A
Matrix: VE								
1	AM241	6.160	0.310	5.600	0.184	1.100	0.07	A
1	CM244	4.550	0.330	4.440	0.202	1.030	0.09	A
1	PU239	11.400	0.900	9.820	1.220	1.160	0.17	A
Matrix: WA								
1	AM241	0.827	0.037	0.766	0.013	1.080	0.05	A
1	PU238	1.010	0.100	0.982	0.074	1.030	0.13	A
1	PU239	0.812	0.060	0.772	0.056	1.050	0.11	A
1	U 234	0.278	0.020	0.274	0.019	1.020	0.10	A
1	U 238	0.278	0.020	0.275	0.024	1.010	0.12	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **CZ** ACZ Laboratories, Inc., Steamboat Springs, CO

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Ratio Error	Evaluation
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Matrix: **WA**

1	U UG	0.027	0.000	0.022	0.003	1.220	0.14	A
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Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: DC Datachem Laboratories, Salt Lake City

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.220	0.051	0.189	0.007	1.160	0.27	A
1	CE144	21.300	5.720	33.300	3.300	0.640	0.18	W
1	CO 57	5.500	0.931	8.900	0.900	0.620	0.12	N
1	CO 60	25.300	7.130	29.500	2.900	0.860	0.26	A
1	CS134	16.000	1.910	14.700	1.460	1.090	0.17	W
1	CS137	7.290	3.670	6.640	0.700	1.100	0.56	A
1	GA 1	1.900	0.019	1.620	0.150	1.170	0.11	A
1	GB 2	2.000	0.018	1.770	0.150	1.130	0.10	A
1	MN 54	3.470	0.966	3.440	0.380	1.010	0.30	A
1	PU238	0.087	0.030	0.096	0.002	0.910	0.31	A
1	PU239	0.091	0.030	0.093	0.003	0.980	0.33	A
1	RU106	13.700	4.810	11.600	1.440	1.180	0.44	W
1	SB125	10.900	1.340	9.780	1.030	1.120	0.18	A
1	SR 90	0.984	0.201	1.060	0.037	0.930	0.19	A
1	U 234	0.074	0.033	0.052	0.002	1.440	0.64	W
1	U 238	0.087	0.028	0.053	0.002	1.630	0.54	W
1	U UG	7.000	0.700	4.310	0.100	1.620	0.17	W

Matrix: SO

1	AM241	5.590	0.180	3.690	0.454	1.520	0.19	W
2		5.590	0.180	3.690	0.454	1.520	0.19	W
3		5.590	0.180	3.690	0.454	1.520	0.19	W
1	CS137	399.000	96.300	359.000	10.000	1.110	0.27	A
2		399.000	96.300	359.000	10.000	1.110	0.27	A
1	K 40	418.000	101.000	465.000	30.000	0.900	0.23	A
2		418.000	101.000	465.000	30.000	0.900	0.23	A
1	PU238	44.300	1.800	43.000	2.440	1.030	0.07	A
2		44.300	1.800	43.000	2.440	1.030	0.07	A
1	PU239	9.970	0.400	9.230	0.346	1.080	0.06	A
2		9.970	0.400	9.230	0.346	1.080	0.06	A
1	SR 90	1190.000	144.000	1340.000	113.000	0.890	0.13	A
2		1190.000	144.000	1340.000	113.000	0.890	0.13	A
1	U 234	36.900	3.300	34.200	3.520	1.080	0.15	W
2		36.900	3.300	34.200	3.520	1.080	0.15	W
1	U 238	35.300	1.400	35.900	3.630	0.980	0.11	A
2		35.300	1.400	35.900	3.630	0.980	0.11	A
1	U UG	2.400	0.240	2.900	0.290	0.830	0.12	A
2		2.400	0.240	2.900	0.290	0.830	0.12	A

Matrix: VE

1	AM241	6.360	0.870	5.600	0.184	1.140	0.16	A
1	CM244	4.770	1.700	4.440	0.202	1.070	0.39	A
1	CO 60	54.500	10.400	59.700	0.963	0.910	0.18	A
1	CS137	1100.000	315.000	944.000	16.200	1.170	0.33	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **DC** Datachem Laboratories, Salt Lake City

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: VE								
1	K 40	976.000	300.000	1030.000	33.000	0.950	0.29	A
1	PU239	9.370	0.870	9.820	1.220	0.950	0.15	A
1	SR 90	826.000	149.000	1300.000	52.400	0.640	0.12	W
Matrix: WA								
1	AM241	0.884	0.066	0.766	0.013	1.150	0.09	A
1	CO 60	35.100	5.260	32.800	0.580	1.070	0.16	A
1	CS137	47.800	11.300	38.300	0.881	1.250	0.30	W
1	GA 1	1750.000	15.000	1850.000	185.000	0.950	0.09	A
1	GB 2	790.000	8.400	744.000	74.000	1.060	0.11	A
1	H 3	244.000	27.300	251.000	11.400	0.970	0.12	A
1	MN 54	46.800	10.300	38.400	1.160	1.220	0.27	N
1	PU238	0.897	0.020	0.982	0.074	0.910	0.07	A
2		0.897	0.020	0.982	0.074	0.910	0.07	A
1	PU239	0.694	0.046	0.772	0.056	0.900	0.09	A
2		0.694	0.046	0.772	0.056	0.900	0.09	A
1	SR 90	1.470	0.372	1.450	0.034	1.010	0.26	A
2		1.470	0.372	1.450	0.034	1.010	0.26	A
1	U 234	0.927	0.057	0.274	0.019	3.380	0.31	N
1	U 238	0.327	0.036	0.275	0.024	1.190	0.17	W
1	U UG	0.023	0.002	0.022	0.003	1.040	0.16	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: EG LITCO/INEL, Scoville

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	23.400	0.800	33.300	3.300	0.700	0.07	A
1	CO 57	7.100	0.200	8.900	0.900	0.800	0.08	A
1	CO 60	26.700	0.040	29.500	2.900	0.910	0.09	A
1	CS134	13.800	0.300	14.700	1.460	0.940	0.10	A
1	CS137	5.800	0.200	6.640	0.700	0.870	0.10	A
1	GA 1	2.190	0.150	1.620	0.150	1.350	0.16	W
1	GB 2	2.190	0.140	1.770	0.150	1.240	0.13	A
1	MN 54	3.100	0.200	3.440	0.380	0.900	0.12	A
1	RU106	10.900	1.300	11.600	1.440	0.940	0.16	A
1	SB125	9.200	0.300	9.780	1.030	0.940	0.10	A
Matrix: SO								
1	AM241	4.000	0.600	3.690	0.454	1.080	0.21	A
1	CS137	406.000	14.000	359.000	10.000	1.130	0.05	A
1	K 40	461.000	85.000	465.000	30.000	0.990	0.19	A
1	PU238	40.500	3.300	43.000	2.440	0.940	0.09	A
1	PU239	10.500	1.100	9.230	0.346	1.140	0.13	A
1	SR 90	9900.000	30.000	1340.000	113.000	7.390	0.62	N
1	U 234	14.800	1.800	34.200	3.520	0.430	0.07	W
1	U 238	14.900	1.800	35.900	3.630	0.420	0.07	W
Matrix: VE								
1	CO 60	59.000	5.000	59.700	0.963	0.990	0.09	A
1	CS137	1030.000	30.000	944.000	16.200	1.090	0.04	A
1	K 40	1030.000	130.000	1030.000	33.000	1.000	0.13	A
1	SR 90	1250.000	30.000	1300.000	52.400	0.960	0.05	A
Matrix: WA								
1	AM241	0.640	0.040	0.766	0.013	0.840	0.05	A
1	CO 60	34.000	2.000	32.800	0.580	1.040	0.06	A
1	CS137	43.000	2.000	38.300	0.881	1.120	0.06	A
1	FE 55	62.000	17.000	83.000	3.440	0.750	0.21	W
1	H 3	180.000	30.000	251.000	11.400	0.720	0.12	W
1	MN 54	43.000	2.000	38.400	1.160	1.120	0.06	A
1	PU238	0.830	0.060	0.982	0.074	0.850	0.09	W
1	PU239	0.630	0.050	0.772	0.056	0.820	0.09	A
1	SR 90	1.230	0.060	1.450	0.034	0.850	0.05	W
1	U 234	0.250	0.030	0.274	0.019	0.910	0.13	A
1	U 238	0.240	0.030	0.275	0.024	0.870	0.13	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: EI Eichrom Industries, Inc., Argonne

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.180	0.012	0.189	0.007	0.950	0.07	A
1	PU238	0.110	0.008	0.096	0.002	1.140	0.09	A
1	PU239	0.100	0.008	0.093	0.003	1.080	0.09	A
1	SR 90	1.410	0.110	1.060	0.037	1.330	0.11	A
1	U 234	0.050	0.005	0.052	0.002	0.970	0.10	A
1	U 238	0.053	0.005	0.053	0.002	0.990	0.10	A
Matrix: SO								
1	SR 90	1580.000	216.000	1340.000	113.000	1.180	0.19	A
1	U 234	44.200	3.300	34.200	3.520	1.290	0.16	N
1	U 238	44.200	3.500	35.900	3.630	1.230	0.16	W
2		44.200	3.500	35.900	3.630	1.230	0.16	W
Matrix: VE								
1	AM241	6.100	0.360	5.600	0.184	1.090	0.07	A
1	CM244	5.170	0.320	4.440	0.202	1.160	0.09	A
1	PU239	9.240	0.840	9.820	1.220	0.940	0.15	A
1	SR 90	2060.000	193.000	1300.000	52.400	1.590	0.16	N
Matrix: WA								
1	AM241	0.630	0.035	0.766	0.013	0.820	0.05	W
1	H 3	174.000	4.000	251.000	11.400	0.690	0.04	W
1	PU238	0.880	0.053	0.982	0.074	0.900	0.09	W
1	PU239	0.620	0.039	0.772	0.056	0.800	0.08	A
1	SR 90	2.150	0.190	1.450	0.034	1.480	0.14	W
1	U 234	0.280	0.016	0.274	0.019	1.020	0.09	A
1	U 238	0.220	0.016	0.275	0.024	0.800	0.09	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **EL** Energy Laboratories, Inc., Casper, WY

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.245	0.020	0.189	0.007	1.300	0.12	W
1	CE144	21.600	1.700	33.300	3.300	0.650	0.08	W
1	CO 57	6.800	0.600	8.900	0.900	0.760	0.10	A
1	CO 60	27.400	0.800	29.500	2.900	0.930	0.10	A
1	CS134	12.800	0.500	14.700	1.460	0.870	0.09	A
1	CS137	6.900	0.600	6.640	0.700	1.040	0.14	A
1	MN 54	4.360	0.300	3.440	0.380	1.270	0.17	W
1	RU106	14.100	1.200	11.600	1.440	1.220	0.18	W
1	SB125	9.300	0.300	9.780	1.030	0.950	0.11	A
1	SR 90	0.985	0.050	1.060	0.037	0.930	0.06	A
1	U 234	0.070	0.010	0.052	0.002	1.350	0.20	A
1	U 238	0.080	0.010	0.053	0.002	1.500	0.20	W
1	U BQ	0.148	0.050	0.107	0.003	1.380	0.47	A
Matrix: SO								
1	AM241	4.330	0.300	3.690	0.454	1.170	0.17	A
1	CS137	378.000	20.000	359.000	10.000	1.050	0.06	A
1	SR 90	595.000	45.000	1340.000	113.000	0.440	0.05	N
1	U 234	40.000	4.000	34.200	3.520	1.170	0.17	W
1	U 238	41.000	4.000	35.900	3.630	1.140	0.16	W
1	U BQ	80.400	5.500	71.700	4.150	1.120	0.10	W
Matrix: VE								
1	AM241	7.150	0.700	5.600	0.184	1.280	0.13	A
1	CO 60	27.600	3.000	59.700	0.963	0.460	0.05	N
1	K 40	955.000	59.000	1030.000	33.000	0.930	0.06	A
1	SR 90	873.000	67.000	1300.000	52.400	0.670	0.06	W
Matrix: WA								
1	AM241	1.800	0.300	0.766	0.013	2.350	0.39	N
1	CO 60	37.700	2.500	32.800	0.580	1.150	0.08	W
1	CS137	43.800	2.800	38.300	0.881	1.140	0.08	A
1	H 3	330.000	25.000	251.000	11.400	1.320	0.12	W
1	MN 54	38.200	3.100	38.400	1.160	1.000	0.09	A
1	SR 90	1.550	0.200	1.450	0.034	1.070	0.14	A
1	U 234	0.320	0.030	0.274	0.019	1.170	0.14	A
1	U 238	0.330	0.030	0.275	0.024	1.200	0.15	W
1	U BQ	0.689	0.020	0.559	0.047	1.230	0.11	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: EP US EPA, Las Vegas

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	26.900	0.472	33.300	3.300	0.810	0.08	A
1	CO 57	7.710	0.609	8.900	0.900	0.870	0.11	A
1	CO 60	29.800	1.100	29.500	2.900	1.010	0.11	A
1	CS134	14.400	1.170	14.700	1.460	0.980	0.13	A
1	CS137	6.190	0.515	6.640	0.700	0.930	0.13	A
1	MN 54	3.240	0.437	3.440	0.380	0.940	0.16	A
1	PU238	0.093	0.008	0.096	0.002	0.970	0.09	A
1	PU239	0.099	0.008	0.093	0.003	1.060	0.09	A
1	RU106	11.300	2.860	11.600	1.440	0.970	0.28	A
1	SB125	9.350	1.330	9.780	1.030	0.960	0.17	A
Matrix: SO								
1	PU238	42.200	3.660	43.000	2.440	0.980	0.10	A
1	PU239	8.990	0.946	9.230	0.346	0.970	0.11	A
1	SR 90	1.220	0.023	1340.000	113.000	0.000	0.00	N
Matrix: VE								
1	PU239	8.750	1.000	9.820	1.220	0.890	0.15	A
1	SR 90	1.150	0.025	1300.000	52.400	0.000	0.00	N
Matrix: WA								
1	CO 60	36.100	3.280	32.800	0.580	1.100	0.10	A
1	CS137	46.100	4.470	38.300	0.881	1.200	0.12	W
1	H 3	222.000	7.990	251.000	11.400	0.880	0.05	A
1	MN 54	45.400	5.040	38.400	1.160	1.180	0.14	W
1	PU238	0.990	0.087	0.982	0.074	1.010	0.12	A
1	PU239	0.778	0.074	0.772	0.056	1.010	0.12	A
1	SR 90	1.290	0.343	1.450	0.034	0.890	0.24	A
1	U 234	0.329	0.040	0.274	0.019	1.200	0.17	W
1	U 238	0.313	0.039	0.275	0.024	1.140	0.17	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: ES Environmental Sci. & Engr., Inc., Gainesville, FL

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.159	0.032	0.189	0.007	0.840	0.17	A
1	CE144	20.600	2.970	33.300	3.300	0.620	0.11	W
1	CO 57	6.800	0.830	8.900	0.900	0.760	0.12	A
1	CO 60	25.300	2.880	29.500	2.900	0.860	0.13	A
1	CS134	12.500	1.440	14.700	1.460	0.850	0.13	A
1	CS137	5.140	0.760	6.640	0.700	0.770	0.14	W
1	GA 1	1.660	0.290	1.620	0.150	1.030	0.20	A
1	GB 2	1.260	0.220	1.770	0.150	0.710	0.14	N
1	MN 54	2.450	0.560	3.440	0.380	0.710	0.18	N
1	PU238	0.098	0.020	0.096	0.002	1.020	0.21	A
1	PU239	0.106	0.022	0.093	0.003	1.140	0.24	A
1	RU106	11.000	3.630	11.600	1.440	0.950	0.33	A
1	SB125	8.520	1.280	9.780	1.030	0.870	0.16	A
1	SR 90	1.010	0.200	1.060	0.037	0.950	0.19	A
1	U 234	0.061	0.014	0.052	0.002	1.180	0.27	A
1	U 238	0.062	0.014	0.053	0.002	1.160	0.27	A
1	U BQ	0.126	0.029	0.107	0.003	1.180	0.27	A
1	U UG	4.990	0.490	4.310	0.100	1.160	0.12	A
Matrix: SO								
1	AM241	3.310	0.600	3.690	0.454	0.900	0.20	A
1	CS137	433.000	51.000	359.000	10.000	1.210	0.15	A
1	K 40	516.000	102.000	465.000	30.000	1.110	0.23	A
1	PU238	44.100	7.940	43.000	2.440	1.030	0.19	A
2		44.100	7.840	43.000	2.440	1.030	0.19	A
1	PU239	11.000	2.210	9.230	0.346	1.190	0.24	A
2		9.320	1.780	9.230	0.346	1.010	0.20	A
1	SR 90	1010.000	181.000	1340.000	113.000	0.750	0.15	W
1	U 234	31.300	5.590	34.200	3.520	0.920	0.19	A
1	U 238	31.700	5.650	35.900	3.630	0.880	0.18	A
1	U BQ	64.500	11.600	71.700	4.150	0.900	0.17	A
1	U UG	3.040	0.000	2.900	0.290	1.050	0.11	A
2		2550.000	256.000	2.900	0.290	****	****	N
Matrix: VE								
1	AM241	6.390	1.430	5.600	0.184	1.140	0.26	A
1	CM244	6.250	1.140	4.440	0.202	1.410	0.27	A
1	CO 60	68.200	12.400	59.700	0.963	1.140	0.21	A
1	CS137	1260.000	145.000	944.000	16.200	1.340	0.16	W
1	K 40	1240.000	220.000	1030.000	33.000	1.200	0.22	A
1	PU239	8.790	1.310	9.820	1.220	0.900	0.17	A
1	SR 90	1170.000	164.000	1300.000	52.400	0.900	0.13	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: ES Environmental Sci. & Engr., Inc., Gainesville, FL

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
1	AM241	0.760	0.115	0.766	0.013	0.990	0.15	A
2		0.840	0.139	0.766	0.013	1.100	0.18	A
1	CO 60	36.000	4.790	32.800	0.580	1.100	0.15	A
1	CS137	47.600	6.470	38.300	0.881	1.240	0.17	W
1	H 3	204.000	36.600	251.000	11.400	0.810	0.15	W
1	MN 54	44.500	6.340	38.400	1.160	1.160	0.17	W
1	PU238	0.953	0.141	0.982	0.074	0.970	0.16	A
2		0.883	0.131	0.982	0.074	0.900	0.15	W
1	PU239	0.844	0.125	0.772	0.056	1.090	0.18	A
2		0.740	0.110	0.772	0.056	0.960	0.16	A
1	SR 90	1.760	0.300	1.450	0.034	1.210	0.21	A
1	U 234	0.286	0.047	0.274	0.019	1.040	0.19	A
1	U 238	0.290	0.047	0.275	0.024	1.050	0.20	A
1	U BQ	0.588	0.099	0.559	0.047	1.050	0.20	A
1	U UG	0.023	0.000	0.022	0.003	1.050	0.12	A
2		23.200	2.350	0.022	0.003	****	***	N

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: FG FGL Environmental, Santa Paula, CA

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.170	0.040	0.189	0.007	0.900	0.21	A
1	CE144	33.900	3.300	33.300	3.300	1.020	0.14	A
1	CO 57	9.370	1.060	8.900	0.900	1.050	0.16	A
1	CO 60	32.200	8.090	29.500	2.900	1.090	0.29	A
1	CS134	14.700	2.740	14.700	1.460	1.000	0.21	A
1	CS137	7.420	1.410	6.640	0.700	1.120	0.24	A
1	GA 1	2.010	0.130	1.620	0.150	1.240	0.14	A
1	GB 2	1.480	0.130	1.770	0.150	0.840	0.10	W
1	MN 54	3.210	0.790	3.440	0.380	0.930	0.25	A
1	RU106	12.800	2.560	11.600	1.440	1.100	0.26	A
1	SB125	11.600	2.290	9.780	1.030	1.190	0.27	W
Matrix: SO								
1	AM241	2.500	0.320	3.690	0.454	0.680	0.12	W
1	CS137	370.000	6.600	359.000	10.000	1.030	0.03	A
1	K 40	647.000	9.700	465.000	30.000	1.390	0.09	W
1	U BQ	42.500	5.200	71.700	4.150	0.590	0.08	A
Matrix: WA								
1	AM241	0.765	0.010	0.766	0.013	1.000	0.02	A
1	CO 60	34.100	2.960	32.800	0.580	1.040	0.09	A
1	CS137	38.700	2.640	38.300	0.881	1.010	0.07	A
1	GA 1	1790.000	40.000	1850.000	185.000	0.970	0.10	A
1	GB 2	437.000	32.000	744.000	74.000	0.590	0.07	N
1	H 3	284.000	15.000	251.000	11.400	1.130	0.08	A
1	MN 54	47.000	3.520	38.400	1.160	1.220	0.10	N
1	PU238	0.925	0.010	0.982	0.074	0.940	0.07	A
1	PU239	0.763	0.010	0.772	0.056	0.990	0.07	A
1	SR 90	1.680	0.180	1.450	0.034	1.160	0.13	A
1	U BQ	0.720	0.010	0.559	0.047	1.290	0.11	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in μg /filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: FL Florida Dept of Health & Rehab. Serv., Orlando

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.234	0.054	0.189	0.007	1.240	0.29	A
1	CE144	26.700	1.100	33.300	3.300	0.800	0.09	A
1	CO 57	7.810	0.020	8.900	0.900	0.880	0.09	A
1	CO 60	28.800	0.120	29.500	2.900	0.980	0.10	A
1	CS134	14.100	0.150	14.700	1.460	0.960	0.10	A
1	CS137	6.720	0.110	6.640	0.700	1.010	0.11	A
1	GA 1	1.500	0.070	1.620	0.150	0.930	0.10	A
1	GB 2	2.160	0.070	1.770	0.150	1.220	0.11	A
1	MN 54	3.610	0.250	3.440	0.380	1.050	0.14	A
1	PU238	0.092	0.003	0.096	0.002	0.960	0.04	A
1	PU239	0.091	0.003	0.093	0.003	0.980	0.04	A
1	RU106	12.000	0.060	11.600	1.440	1.030	0.13	A
1	SB125	10.600	0.100	9.780	1.030	1.080	0.12	A
Matrix: SO								
1	AM241	2.800	0.500	3.690	0.454	0.760	0.17	A
1	CS137	379.000	1.000	359.000	10.000	1.060	0.03	A
1	K 40	479.000	2.000	465.000	30.000	1.030	0.07	A
1	PU238	42.000	0.910	43.000	2.440	0.980	0.06	A
1	PU239	9.070	0.360	9.230	0.346	0.980	0.05	A
1	U 238	30.300	3.400	35.900	3.630	0.840	0.13	A
Matrix: VE								
1	AM241	6.300	1.300	5.600	0.184	1.130	0.24	A
1	CO 60	65.000	1.000	59.700	0.963	1.090	0.02	A
1	CS137	1160.000	8.000	944.000	16.200	1.230	0.02	A
1	K 40	1200.000	15.000	1030.000	33.000	1.170	0.04	A
Matrix: WA								
1	AM241	0.910	0.130	0.766	0.013	1.190	0.17	A
1	CO 60	32.100	0.600	32.800	0.580	0.980	0.03	A
1	CS137	42.400	1.000	38.300	0.881	1.110	0.04	A
1	GA 1	2330.000	29.000	1850.000	185.000	1.260	0.13	W
1	GB 2	915.000	13.000	744.000	74.000	1.230	0.12	A
1	H 3	185.000	2.710	251.000	11.400	0.740	0.04	W
1	MN 54	42.100	0.600	38.400	1.160	1.100	0.04	A
1	PU238	0.750	0.017	0.982	0.074	0.760	0.06	W
1	PU239	0.592	0.014	0.772	0.056	0.770	0.06	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **FM** Florida Mobile Emergency Radiological Laboratory, Orlando

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.210	0.040	0.189	0.007	1.110	0.22	A
1	CE144	25.100	0.560	33.300	3.300	0.750	0.08	A
1	CO 57	7.390	0.130	8.900	0.900	0.830	0.09	A
1	CO 60	27.300	0.230	29.500	2.900	0.930	0.09	A
1	CS134	13.700	0.230	14.700	1.460	0.930	0.09	A
1	CS137	6.300	0.140	6.640	0.700	0.950	0.10	A
1	MN 54	3.340	0.120	3.440	0.380	0.970	0.11	A
1	RU106	11.000	0.330	11.600	1.440	0.950	0.12	A
1	SB125	9.480	0.200	9.780	1.030	0.970	0.10	A
Matrix: WA								
1	AM241	1.140	0.200	0.766	0.013	1.490	0.26	W
1	CO 60	32.100	0.510	32.800	0.580	0.980	0.02	A
1	CS137	41.800	0.690	38.300	0.881	1.090	0.03	A
1	MN 54	41.800	0.770	38.400	1.160	1.090	0.04	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: FN Fermi Lab, Batavia, IL

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	41.500	9.800	33.300	3.300	1.250	0.32	W
1	CO 57	7.000	0.750	8.900	0.900	0.790	0.12	A
1	CO 60	27.500	1.600	29.500	2.900	0.930	0.11	A
1	CS134	14.400	0.700	14.700	1.460	0.980	0.11	A
1	CS137	5.870	0.480	6.640	0.700	0.880	0.12	A
1	MN 54	3.070	0.250	3.440	0.380	0.890	0.12	A
1	SB125	9.390	0.500	9.780	1.030	0.960	0.11	A
Matrix: SO								
1	CS137	363.000	36.000	359.000	10.000	1.010	0.10	A
1	K 40	474.000	48.000	465.000	30.000	1.020	0.12	A
1	U 238	29.300	1.800	35.900	3.630	0.820	0.10	A
Matrix: VE								
1	CO 60	56.800	4.100	59.700	0.963	0.950	0.07	A
1	CS137	962.000	96.000	944.000	16.200	1.020	0.10	A
1	K 40	982.000	100.000	1030.000	33.000	0.950	0.10	A
Matrix: WA								
1	CO 60	32.200	2.300	32.800	0.580	0.980	0.07	A
1	CS137	39.300	3.900	38.300	0.881	1.030	0.11	A
1	H 3	228.000	9.000	251.000	11.400	0.910	0.05	A
1	MN 54	41.100	4.100	38.400	1.160	1.070	0.11	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **FS** Florida State University, Tallahassee

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: SO								
1	AM241	3.770	0.260	3.690	0.454	1.020	0.14	A
1	CS137	370.000	3.000	359.000	10.000	1.030	0.03	A
1	K 40	478.000	18.000	465.000	30.000	1.030	0.08	A
1	PU238	40.700	1.400	43.000	2.440	0.950	0.06	A
1	PU239	8.640	0.530	9.230	0.346	0.940	0.07	A
1	U 234	38.800	1.930	34.200	3.520	1.140	0.13	W
1	U 238	39.300	1.340	35.900	3.630	1.100	0.12	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: GA Lockheed Martin, Pikton, OH

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.210	0.000	0.189	0.007	1.110	0.04	A
1	CE144	21.300	0.000	33.300	3.300	0.640	0.06	W
1	CO 57	6.170	0.000	8.900	0.900	0.690	0.07	W
1	CO 60	24.500	0.000	29.500	2.900	0.830	0.08	A
1	CS134	11.900	0.000	14.700	1.460	0.810	0.08	A
1	CS137	5.150	0.000	6.640	0.700	0.780	0.08	W
1	MN 54	2.940	0.000	3.440	0.380	0.860	0.09	A
1	PU238	0.100	0.000	0.096	0.002	1.040	0.02	A
1	PU239	0.100	0.000	0.093	0.003	1.080	0.03	A
1	RU106	9.380	0.000	11.600	1.440	0.810	0.10	A
1	SB125	7.250	0.000	9.780	1.030	0.740	0.08	A
1	SR 90	0.930	0.078	1.060	0.037	0.880	0.08	A
1	U 234	0.059	0.006	0.052	0.002	1.140	0.12	A
1	U 238	0.054	0.007	0.053	0.002	1.010	0.14	A
1	U UG	4.310	0.000	4.310	0.100	1.000	0.02	A
Matrix: SO								
1	AM241	3.300	0.000	3.690	0.454	0.890	0.11	A
1	CS137	380.000	0.000	359.000	10.000	1.060	0.03	A
1	K 40	486.000	0.000	465.000	30.000	1.040	0.07	A
1	PU238	44.000	0.000	43.000	2.440	1.020	0.06	A
1	PU239	9.800	0.000	9.230	0.346	1.060	0.04	A
1	U 234	37.000	2.000	34.200	3.520	1.080	0.13	W
1	U 238	37.000	1.100	35.900	3.630	1.030	0.11	A
1	U UG	3.200	0.000	2.900	0.290	1.100	0.11	A
Matrix: VE								
1	AM241	6.000	0.000	5.600	0.184	1.070	0.04	A
1	CM244	3.700	0.000	4.440	0.202	0.830	0.04	W
1	CO 60	66.000	0.000	59.700	0.963	1.110	0.02	A
1	CS137	1140.000	0.000	944.000	16.200	1.210	0.02	A
1	K 40	1200.000	0.000	1030.000	33.000	1.170	0.04	A
1	PU239	10.900	0.000	9.820	1.220	1.110	0.14	A
Matrix: WA								
1	AM241	0.800	0.000	0.766	0.013	1.040	0.02	A
1	CO 60	36.300	0.000	32.800	0.580	1.110	0.02	A
1	CS137	41.700	0.000	38.300	0.881	1.090	0.03	A
1	MN 54	43.400	0.000	38.400	1.160	1.130	0.03	A
1	PU238	1.120	0.000	0.982	0.074	1.140	0.09	A
1	PU239	0.890	0.000	0.772	0.056	1.150	0.08	A
1	SR 90	1.640	0.310	1.450	0.034	1.130	0.22	A
1	U 234	0.280	0.014	0.274	0.019	1.020	0.09	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **GA** Lockheed Martin, Pikton, OH

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
1	U 238	0.260	0.024	0.275	0.024	0.950	0.12	A
1	U UG	0.021	0.000	0.022	0.003	0.950	0.11	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **GE** Environmental Physics, Inc., Charleston, SC

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.206	0.030	0.189	0.007	1.090	0.16	A
1	CE144	23.700	2.270	33.300	3.300	0.710	0.10	A
1	CO 57	7.110	0.460	8.900	0.900	0.800	0.10	A
1	CO 60	26.300	0.980	29.500	2.900	0.890	0.09	A
1	CS134	13.600	0.600	14.700	1.460	0.930	0.10	A
1	CS137	5.900	0.556	6.640	0.700	0.890	0.13	A
1	GA 1	1.750	0.026	1.620	0.150	1.080	0.10	A
1	GB 2	1.640	0.022	1.770	0.150	0.930	0.08	A
1	MN 54	3.420	0.570	3.440	0.380	0.990	0.20	A
1	PU238	0.088	0.014	0.096	0.002	0.920	0.15	A
1	PU239	0.093	0.014	0.093	0.003	1.000	0.15	A
1	RU106	9.890	4.260	11.600	1.440	0.850	0.38	A
1	SB125	9.030	1.420	9.780	1.030	0.920	0.18	A
1	SR 90	0.788	0.039	1.060	0.037	0.740	0.04	W
1	U 234	0.067	0.011	0.052	0.002	1.300	0.22	A
1	U 238	0.055	0.010	0.053	0.002	1.030	0.19	A
1	U UG	4.360	0.060	4.310	0.100	1.010	0.03	A
Matrix: SO								
1	AM241	4.370	0.850	3.690	0.454	1.180	0.27	A
1	CS137	374.000	3.700	359.000	10.000	1.040	0.03	A
1	K 40	540.000	22.200	465.000	30.000	1.160	0.09	A
1	PU238	50.300	0.890	43.000	2.440	1.170	0.07	A
1	PU239	11.200	0.670	9.230	0.346	1.210	0.09	A
1	SR 90	977.000	25.900	1340.000	113.000	0.730	0.06	W
1	U 234	35.200	4.000	34.200	3.520	1.030	0.16	A
1	U 238	33.200	3.200	35.900	3.630	0.930	0.13	A
1	U UG	2.650	0.040	2.900	0.290	0.910	0.09	A
Matrix: VE								
1	AM241	6.440	0.770	5.600	0.184	1.150	0.14	A
1	CM244	5.000	0.680	4.440	0.202	1.130	0.16	A
1	CO 60	63.600	8.140	59.700	0.963	1.070	0.14	A
1	CS137	1050.000	114.000	944.000	16.200	1.110	0.12	A
1	K 40	1210.000	155.000	1030.000	33.000	1.170	0.16	A
1	PU239	8.030	0.780	9.820	1.220	0.820	0.13	A
1	SR 90	977.000	11.500	1300.000	52.400	0.750	0.03	A
Matrix: WA								
1	AM241	1.130	0.138	0.766	0.013	1.480	0.18	W
1	CO 60	34.900	2.780	32.800	0.580	1.060	0.09	A
1	CS137	46.400	3.920	38.300	0.881	1.210	0.11	W
1	FE 55	112.000	21.900	83.000	3.440	1.350	0.27	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **GE** Environmental Physics, Inc., Charleston, SC

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
1	GA 1	1700.000	27.500	1850.000	185.000	0.920	0.09	A
1	GB 2	733.000	15.200	744.000	74.000	0.990	0.10	A
1	H 3	197.000	7.770	251.000	11.400	0.790	0.05	W
1	MN 54	46.300	3.440	38.400	1.160	1.210	0.10	W
1	PU238	0.890	0.090	0.982	0.074	0.910	0.11	A
1	PU239	0.688	0.078	0.772	0.056	0.890	0.12	A
1	SR 90	1.170	0.084	1.450	0.034	0.810	0.06	W
1	U 234	0.335	0.058	0.274	0.019	1.220	0.23	W
1	U 238	0.315	0.056	0.275	0.024	1.150	0.23	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **GS** USGS/NWQL, Arvada, CO

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
1	U UG	0.017	0.001	0.022	0.003	0.770	0.10	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in μg /filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: HA NUS Laboratory, Pittsburgh

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: SO								
1	CS137	407.000	40.000	359.000	10.000	1.130	0.12	A
1	K 40	593.000	60.000	465.000	30.000	1.280	0.15	W
1	PU238	36.600	4.000	43.000	2.440	0.850	0.11	A
1	PU239	7.400	0.800	9.230	0.346	0.800	0.09	W
1	SR 90	937.000	100.000	1340.000	113.000	0.700	0.10	W
1	U 234	30.700	4.000	34.200	3.520	0.900	0.15	A
1	U 238	31.800	4.000	35.900	3.630	0.890	0.14	A
Matrix: WA								
1	AM241	0.850	0.090	0.766	0.013	1.110	0.12	A
1	CO 60	34.000	4.000	32.800	0.580	1.040	0.12	A
1	CS137	40.700	4.000	38.300	0.881	1.060	0.11	A
1	FE 55	81.400	0.900	83.000	3.440	0.980	0.04	A
1	GA 1	2150.000	215.000	1850.000	185.000	1.160	0.16	A
1	GB 2	629.000	63.000	744.000	74.000	0.850	0.12	W
1	H 3	226.000	30.000	251.000	11.400	0.900	0.13	A
1	MN 54	44.400	5.000	38.400	1.160	1.160	0.14	W
1	PU238	0.810	0.090	0.982	0.074	0.830	0.11	W
1	PU239	0.730	0.080	0.772	0.056	0.950	0.12	A
1	SR 90	1.240	0.200	1.450	0.034	0.860	0.14	W
1	U 234	0.260	0.030	0.274	0.019	0.950	0.13	A
1	U 238	0.300	0.030	0.275	0.024	1.090	0.15	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **HC** Lawrence Livermore Laboratory, California

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	GA 1	1.820	0.200	1.620	0.150	1.120	0.16	A
1	GB 2	1.710	0.200	1.770	0.150	0.970	0.14	A
Matrix: WA								
1	GA 1	1900.000	95.000	1850.000	185.000	1.030	0.12	A
1	GB 2	805.000	40.000	744.000	74.000	1.080	0.12	A
1	H 3	206.000	14.400	251.000	11.400	0.820	0.07	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **HL** Heritage Laboratories, Inc., Romeoville, IL

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: SO								
1	AM241	5.500	1.900	3.690	0.454	1.490	0.55	A
1	CS137	294.000	33.000	359.000	10.000	0.820	0.09	W
1	K 40	600.000	149.000	465.000	30.000	1.290	0.33	W
1	SR 90	1320.000	42.200	1340.000	113.000	0.990	0.09	A
1	U 234	37.100	8.000	34.200	3.520	1.090	0.26	W
1	U 238	37.600	8.100	35.900	3.630	1.050	0.25	A
1	U BQ	74.800	16.100	71.700	4.150	1.040	0.23	A
Matrix: WA								
1	CO 60	35.900	2.200	32.800	0.580	1.100	0.07	A
1	CS137	45.300	4.300	38.300	0.881	1.180	0.12	W
1	H 3	214.000	8.100	251.000	11.400	0.850	0.05	A
1	MN 54	46.100	4.700	38.400	1.160	1.200	0.13	W
1	SR 90	1.560	0.280	1.450	0.034	1.080	0.20	A
1	U 234	0.260	0.110	0.274	0.019	0.950	0.41	A
1	U 238	0.290	0.120	0.275	0.024	1.050	0.45	A
1	U BQ	0.540	0.220	0.559	0.047	0.970	0.40	A

Units for matrices: Al=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: ID DPRA - IRD/CNEN, Rio de Janeiro, Brazil

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	33.700	2.100	33.300	3.300	1.010	0.12	A
1	CO 57	9.270	0.480	8.900	0.900	1.040	0.12	A
1	CO 60	28.300	1.400	29.500	2.900	0.960	0.11	A
1	CS134	15.900	0.800	14.700	1.460	1.080	0.12	A
1	CS137	7.400	0.380	6.640	0.700	1.110	0.13	A
1	MN 54	3.630	0.220	3.440	0.380	1.050	0.13	A
1	RU106	12.400	1.600	11.600	1.440	1.070	0.19	A
1	SB125	11.000	0.600	9.780	1.030	1.130	0.13	W
1	SR 90	2.330	0.130	1.060	0.037	2.200	0.14	W
1	U BQ	0.115	0.006	0.107	0.003	1.080	0.06	A
Matrix: SO								
1	AM241	4.330	0.620	3.690	0.454	1.170	0.22	A
1	CS137	363.000	19.000	359.000	10.000	1.010	0.06	A
1	K 40	411.000	23.000	465.000	30.000	0.880	0.08	A
1	PU238	41.700	3.700	43.000	2.440	0.970	0.10	A
1	PU239	9.070	0.700	9.230	0.346	0.980	0.08	A
1	SR 90	1050.000	124.000	1340.000	113.000	0.780	0.11	A
1	U BQ	69.100	4.600	71.700	4.150	0.960	0.09	A
Matrix: VE								
1	AM241	7.000	1.060	5.600	0.184	1.250	0.19	A
1	CO 60	52.700	2.800	59.700	0.963	0.880	0.05	A
1	CS137	1050.000	53.000	944.000	16.200	1.110	0.06	A
1	K 40	997.000	60.000	1030.000	33.000	0.970	0.07	A
1	PU239	7.590	1.030	9.820	1.220	0.770	0.14	W
1	SR 90	1180.000	90.000	1300.000	52.400	0.910	0.08	A
Matrix: WA								
1	CO 60	27.400	2.300	32.800	0.580	0.840	0.07	N
1	CS137	37.500	2.300	38.300	0.881	0.980	0.06	A
1	H 3	216.000	13.000	251.000	11.400	0.860	0.06	A
1	MN 54	37.800	2.200	38.400	1.160	0.980	0.06	A
1	PU238	0.870	0.130	0.982	0.074	0.890	0.15	W
1	PU239	0.700	0.050	0.772	0.056	0.910	0.09	A
1	SR 90	1.710	0.150	1.450	0.034	1.180	0.11	A
1	U BQ	0.727	0.040	0.559	0.047	1.300	0.13	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: IE IEA, Inc., Morrisville, NC

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.178	0.025	0.189	0.007	0.940	0.14	A
1	CE144	22.000	1.210	33.300	3.300	0.660	0.07	W
1	CO 57	6.410	1.060	8.900	0.900	0.720	0.14	A
1	CO 60	24.700	1.110	29.500	2.900	0.840	0.09	A
1	CS134	12.300	0.180	14.700	1.460	0.840	0.08	A
1	CS137	5.380	0.320	6.640	0.700	0.810	0.10	W
1	MN 54	2.750	0.340	3.440	0.380	0.800	0.13	W
1	PU238	0.094	0.015	0.096	0.002	0.980	0.16	A
1	PU239	0.087	0.006	0.093	0.003	0.940	0.07	A
1	RU106	8.000	0.800	11.600	1.440	0.690	0.11	A
1	SB125	8.450	0.900	9.780	1.030	0.860	0.13	A
1	SR 90	0.993	0.055	1.060	0.037	0.940	0.06	A
1	U 234	0.056	0.012	0.052	0.002	1.080	0.24	A
1	U 238	0.054	0.012	0.053	0.002	1.010	0.22	A
1	U UG	4.400	0.937	4.310	0.100	1.020	0.22	A
Matrix: SO								
1	AM241	2.860	0.199	3.690	0.454	0.780	0.11	A
1	CS137	388.000	18.700	359.000	10.000	1.080	0.06	A
1	K 40	467.000	46.400	465.000	30.000	1.000	0.12	A
1	PU238	40.000	0.620	43.000	2.440	0.930	0.05	A
1	PU239	8.820	0.419	9.230	0.346	0.960	0.06	A
1	SR 90	1140.000	248.000	1340.000	113.000	0.850	0.20	A
1	U 234	35.200	2.240	34.200	3.520	1.030	0.13	A
1	U 238	34.800	2.570	35.900	3.630	0.970	0.12	A
1	U UG	2.820	0.210	2.900	0.290	0.970	0.12	A
Matrix: VE								
1	AM241	5.670	0.530	5.600	0.184	1.010	0.10	A
1	CM244	4.300	0.240	4.440	0.202	0.970	0.07	A
1	CO 60	60.700	6.180	59.700	0.963	1.020	0.11	A
1	CS137	1060.000	74.900	944.000	16.200	1.120	0.08	A
1	K 40	1130.000	208.000	1030.000	33.000	1.100	0.21	A
1	PU239	9.400	0.570	9.820	1.220	0.960	0.13	A
1	SR 90	1220.000	18.500	1300.000	52.400	0.940	0.04	A
Matrix: WA								
1	AM241	0.750	0.113	0.766	0.013	0.980	0.15	A
1	CO 60	34.000	1.450	32.800	0.580	1.040	0.05	A
1	CS137	42.700	0.883	38.300	0.881	1.120	0.03	A
1	GA 1	1970.000	65.300	1850.000	185.000	1.070	0.11	A
1	GB 2	541.000	64.800	744.000	74.000	0.730	0.11	N
1	H 3	208.000	55.200	251.000	11.400	0.830	0.22	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: IE IEA, Inc., Morrisville, NC

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
1	MN 54	43.300	2.820	38.400	1.160	1.130	0.08	A
1	PU238	0.975	0.110	0.982	0.074	0.990	0.13	A
1	PU239	0.730	0.022	0.772	0.056	0.950	0.07	A
1	SR 90	1.330	0.060	1.450	0.034	0.920	0.05	A
1	U 234	0.292	0.031	0.274	0.019	1.070	0.14	A
1	U 238	0.277	0.014	0.275	0.024	1.010	0.10	A
1	U UG	22.500	1.160	0.022	0.003	****	****	N

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **IL** ISU Environmental Monitoring Program, Pocatello, ID

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	GA 1	2.520	0.200	1.620	0.150	1.560	0.19	W
1	GB 2	1.620	0.160	1.770	0.150	0.920	0.12	A
Matrix: SO								
1	CS137	94.300	1.920	359.000	10.000	0.260	0.01	N
1	K 40	133.000	4.450	465.000	30.000	0.290	0.02	N
Matrix: VE								
1	CO 60	9.770	0.430	59.700	0.963	0.160	0.01	N
1	CS137	2140.000	34.300	944.000	16.200	2.270	0.05	N
1	K 40	222.000	122.000	1030.000	33.000	0.220	0.12	N
Matrix: WA								
1	CO 60	38.000	0.980	32.800	0.580	1.160	0.04	W
1	CS137	47.600	1.000	38.300	0.881	1.240	0.04	W
1	GA 1	740.000	35.000	1850.000	185.000	0.400	0.04	N
1	GB 2	1330.000	66.000	744.000	74.000	1.790	0.20	N
1	MN 54	40.800	0.820	38.400	1.160	1.060	0.04	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **IN** WINCO, Idaho Falls

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	21.500	0.630	33.300	3.300	0.650	0.07	W
1	CO 57	6.360	0.160	8.900	0.900	0.720	0.07	A
1	CO 60	23.700	0.220	29.500	2.900	0.800	0.08	W
1	CS134	12.700	0.180	14.700	1.460	0.860	0.09	A
1	CS137	4.950	0.250	6.640	0.700	0.750	0.09	W
1	MN 54	2.580	0.010	3.440	0.380	0.750	0.08	N
1	RU106	10.300	1.300	11.600	1.440	0.890	0.16	A
1	SB125	8.330	0.460	9.780	1.030	0.850	0.10	A
Matrix: SO								
1	AM241	2.400	0.290	3.690	0.454	0.650	0.11	W
1	CS137	376.000	4.970	359.000	10.000	1.050	0.03	A
1	K 40	478.000	43.000	465.000	30.000	1.030	0.11	A
1	PU238	44.000	5.000	43.000	2.440	1.020	0.13	A
1	PU239	9.440	1.070	9.230	0.346	1.020	0.12	A
1	SR 90	1010.000	50.500	1340.000	113.000	0.750	0.07	W
Matrix: VE								
1	CO 60	66.000	2.800	59.700	0.963	1.110	0.05	A
1	CS137	1080.000	27.100	944.000	16.200	1.140	0.03	A
1	K 40	1250.000	60.800	1030.000	33.000	1.210	0.07	W
Matrix: WA								
1	AM241	0.800	0.090	0.766	0.013	1.040	0.12	A
1	CO 60	35.600	0.500	32.800	0.580	1.090	0.02	A
1	CS137	42.800	1.200	38.300	0.881	1.120	0.04	A
1	MN 54	43.700	0.800	38.400	1.160	1.140	0.04	W
1	PU238	0.960	0.110	0.982	0.074	0.980	0.13	A
1	PU239	0.780	0.090	0.772	0.056	1.010	0.14	A
1	SR 90	2.000	0.200	1.450	0.034	1.380	0.14	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **IR** **Idaho National Engineering Laboratory**

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
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Matrix: **AI**

1	U UG	4.270	0.470	4.310	0.100	0.990	0.11	A
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Matrix: **WA**

1	U UG	0.035	0.001	0.022	0.003	1.580	0.19	N
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Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: IS Quanterra- St. Louis

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.156	0.029	0.189	0.007	0.830	0.16	A
1	CE144	22.600	3.700	33.300	3.300	0.680	0.13	W
1	CO 57	6.350	0.530	8.900	0.900	0.710	0.09	W
1	CO 60	2.500	0.120	29.500	2.900	0.090	0.01	N
1	CS134	12.300	0.800	14.700	1.460	0.840	0.10	A
1	CS137	5.510	0.770	6.640	0.700	0.830	0.15	W
1	GA 1	2.490	0.250	1.620	0.150	1.540	0.21	W
1	GB 2	1.580	0.160	1.770	0.150	0.890	0.12	A
1	MN 54	2.470	0.620	3.440	0.380	0.720	0.20	N
1	PU238	0.102	0.029	0.096	0.002	1.060	0.30	A
1	PU239	0.108	0.030	0.093	0.003	1.170	0.33	W
1	RU106	14.700	5.100	11.600	1.440	1.270	0.47	W
1	SB125	8.640	1.130	9.780	1.030	0.880	0.15	A
1	SR 90	1.850	0.320	1.060	0.037	1.750	0.31	W
Matrix: SO								
1	AM241	2.860	0.890	3.690	0.454	0.780	0.26	A
1	CS137	335.000	43.000	359.000	10.000	0.930	0.12	A
1	K 40	450.000	54.000	465.000	30.000	0.970	0.13	A
1	PU238	28.500	5.000	43.000	2.440	0.660	0.12	A
1	PU239	7.670	1.580	9.230	0.346	0.830	0.17	W
1	SR 90	660.000	66.000	1340.000	113.000	0.490	0.06	N
1	U 234	33.100	13.100	34.200	3.520	0.970	0.40	A
1	U 238	38.700	14.800	35.900	3.630	1.080	0.43	A
1	U UG	3.140	1.200	2.900	0.290	1.080	0.43	A
Matrix: VE								
1	AM241	7.090	1.290	5.600	0.184	1.270	0.23	A
1	CO 60	59.800	5.200	59.700	0.963	1.000	0.09	A
1	CS137	1020.000	116.000	944.000	16.200	1.080	0.12	A
1	K 40	1160.000	128.000	1030.000	33.000	1.130	0.13	A
1	PU239	9.540	2.860	9.820	1.220	0.970	0.32	A
1	SR 90	1130.000	113.000	1300.000	52.400	0.870	0.09	A
Matrix: WA								
1	AM241	0.648	0.111	0.766	0.013	0.850	0.15	A
1	CO 60	33.800	1.600	32.800	0.580	1.030	0.05	A
1	CS137	46.100	3.100	38.300	0.881	1.200	0.09	W
1	GA 1	1800.000	***.***	1850.000	185.000	0.970	0.65	A
2		1800.000	180.000	1850.000	185.000	0.970	0.14	A
1	GB 2	466.000	47.000	744.000	74.000	0.630	0.09	N
1	H 3	309.000	31.000	251.000	11.400	1.230	0.14	W
1	MN 54	46.500	4.800	38.400	1.160	1.210	0.13	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **IS** **Quanterra- St. Louis**

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
1	PU238	0.936	0.193	0.982	0.074	0.950	0.21	A
1	PU239	0.822	0.177	0.772	0.056	1.070	0.24	A
1	SR 90	1.540	0.000	1.450	0.034	1.060	0.03	A
2		1.540	0.520	1.450	0.034	1.060	0.36	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: IT Quanterra- Richland Laboratory

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.173	0.006	0.189	0.007	0.920	0.04	A
1	CE144	20.000	0.530	33.300	3.300	0.600	0.06	N
1	CO 57	5.840	0.340	8.900	0.900	0.660	0.08	W
1	CO 60	22.900	0.540	29.500	2.900	0.780	0.08	W
1	CS134	11.400	0.380	14.700	1.460	0.780	0.08	W
1	CS137	5.050	0.180	6.640	0.700	0.760	0.08	W
1	GA 1	1.860	0.030	1.620	0.150	1.150	0.11	A
1	GB 2	2.990	0.073	1.770	0.150	1.690	0.15	W
1	MN 54	2.600	0.230	3.440	0.380	0.760	0.11	W
1	PU238	0.091	0.006	0.096	0.002	0.950	0.07	A
1	PU239	0.095	0.006	0.093	0.003	1.030	0.07	A
1	RU106	9.650	0.800	11.600	1.440	0.830	0.12	A
1	SB125	8.150	0.250	9.780	1.030	0.830	0.09	A
1	SR 90	1.060	0.060	1.060	0.037	1.000	0.07	A
1	U UG	4.690	0.640	4.310	0.100	1.090	0.15	A
Matrix: SO								
1	AM241	3.430	0.830	3.690	0.454	0.930	0.25	A
1	CS137	432.000	12.000	359.000	10.000	1.200	0.05	A
1	K 40	541.000	24.000	465.000	30.000	1.160	0.09	A
1	PU238	30.900	3.950	43.000	2.440	0.720	0.10	A
1	PU239	6.470	0.610	9.230	0.346	0.700	0.07	W
1	SR 90	1100.000	111.000	1340.000	113.000	0.820	0.11	A
1	U UG	2.250	0.060	2.900	0.290	0.780	0.08	A
Matrix: VE								
1	AM241	6.160	0.225	5.600	0.184	1.100	0.05	A
1	CM244	4.490	0.036	4.440	0.202	1.010	0.05	A
1	CO 60	72.800	1.370	59.700	0.963	1.220	0.03	A
1	CS137	1250.000	47.200	944.000	16.200	1.320	0.05	W
1	K 40	1360.000	24.000	1030.000	33.000	1.320	0.05	W
1	PU239	8.990	0.590	9.820	1.220	0.920	0.13	A
1	SR 90	1550.000	18.800	1300.000	52.400	1.190	0.05	W
Matrix: WA								
1	AM241	0.840	0.090	0.766	0.013	1.100	0.12	A
1	CO 60	37.000	3.000	32.800	0.580	1.130	0.09	W
1	CS137	46.200	4.100	38.300	0.881	1.210	0.11	W
1	GA 1	1680.000	217.000	1850.000	185.000	0.910	0.15	A
1	GB 2	886.000	109.000	744.000	74.000	1.190	0.19	A
1	H 3	209.000	6.100	251.000	11.400	0.830	0.05	W
1	MN 54	46.500	5.000	38.400	1.160	1.210	0.14	W
1	PU238	1.000	0.020	0.982	0.074	1.020	0.08	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: IT Quanterra- Richland Laboratory

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
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Matrix: WA

1	PU239	0.945	0.140	0.772	0.056	1.220	0.20	W
1	SR 90	1.460	0.160	1.450	0.034	1.010	0.11	A
1	U UG	22.800	0.190	0.022	0.003	****	****	N

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in μg /filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **JP** Japan Chemical Analysis Center

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.180	0.005	0.189	0.007	0.950	0.04	A
1	CE144	23.000	0.200	33.300	3.300	0.690	0.07	A
1	CO 57	7.100	0.040	8.900	0.900	0.800	0.08	A
1	CO 60	24.000	0.200	29.500	2.900	0.810	0.08	W
1	CS134	13.000	0.100	14.700	1.460	0.880	0.09	A
1	CS137	5.700	0.070	6.640	0.700	0.860	0.09	A
1	GA 1	2.100	0.020	1.620	0.150	1.300	0.12	A
1	MN 54	3.100	0.110	3.440	0.380	0.900	0.11	A
1	PU238	0.088	0.004	0.096	0.002	0.920	0.04	A
1	PU239	0.091	0.004	0.093	0.003	0.980	0.05	A
1	RU106	10.000	0.400	11.600	1.440	0.860	0.11	A
1	SB125	9.200	0.150	9.780	1.030	0.940	0.10	A
1	SR 90	0.670	0.029	1.060	0.037	0.630	0.04	W
1	U 234	0.051	0.003	0.052	0.002	0.990	0.06	A
1	U 238	0.053	0.003	0.053	0.002	0.990	0.07	A
Matrix: SO								
1	AM241	3.700	0.230	3.690	0.454	1.000	0.14	A
1	CS137	390.000	3.000	359.000	10.000	1.090	0.03	A
1	K 40	480.000	12.000	465.000	30.000	1.030	0.07	A
1	PU238	45.000	1.500	43.000	2.440	1.050	0.07	A
1	PU239	9.300	0.340	9.230	0.346	1.010	0.05	A
1	SR 90	1200.000	10.000	1340.000	113.000	0.900	0.08	A
1	U 234	33.000	1.400	34.200	3.520	0.970	0.11	A
1	U 238	33.000	1.400	35.900	3.630	0.920	0.10	A
Matrix: VE								
1	AM241	6.400	0.150	5.600	0.184	1.140	0.05	A
1	CM244	5.000	0.120	4.440	0.202	1.130	0.06	A
1	CO 60	62.000	1.400	59.700	0.963	1.040	0.03	A
1	CS137	1100.000	6.000	944.000	16.200	1.170	0.02	A
1	K 40	1100.000	30.000	1030.000	33.000	1.070	0.04	A
1	PU239	9.600	0.530	9.820	1.220	0.980	0.13	A
1	SR 90	1400.000	10.000	1300.000	52.400	1.080	0.04	A
Matrix: WA								
1	AM241	0.840	0.035	0.766	0.013	1.100	0.05	A
1	CO 60	33.000	0.800	32.800	0.580	1.010	0.03	A
1	CS137	43.000	1.200	38.300	0.881	1.120	0.04	A
1	GA 1	1500.000	10.000	1850.000	185.000	0.810	0.08	A
1	GB 2	850.000	20.000	744.000	74.000	1.140	0.12	A
1	H 3	220.000	1.000	251.000	11.400	0.880	0.04	A
1	MN 54	42.000	1.600	38.400	1.160	1.090	0.05	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **JP** Japan Chemical Analysis Center

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
1	PU238	1.100	0.060	0.982	0.074	1.120	0.10	A
1	PU239	0.840	0.045	0.772	0.056	1.090	0.10	A
1	SR 90	1.600	0.140	1.450	0.034	1.100	0.10	A
1	U 234	0.310	0.015	0.274	0.019	1.130	0.10	A
1	U 238	0.310	0.015	0.275	0.024	1.130	0.11	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **KA** Knolls Atomic Power Lab, Schenectady

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	GA 1	2.420	0.090	1.620	0.150	1.490	0.15	W
1	GB 2	1.970	0.060	1.770	0.150	1.110	0.10	A
Matrix: SO								
1	CS137	434.000	20.000	359.000	10.000	1.210	0.07	A
1	K 40	498.000	45.000	465.000	30.000	1.070	0.12	A
1	PU238	47.000	5.000	43.000	2.440	1.090	0.13	A
1	PU239	10.100	0.500	9.230	0.346	1.090	0.07	A
1	SR 90	1450.000	147.000	1340.000	113.000	1.080	0.14	A
Matrix: WA								
1	CO 60	33.000	1.000	32.800	0.580	1.010	0.04	A
1	CS137	42.000	2.000	38.300	0.881	1.100	0.06	A
1	FE 55	108.000	6.000	83.000	3.440	1.300	0.09	W
1	GA 1	2040.000	167.000	1850.000	185.000	1.100	0.14	A
1	GB 2	912.000	74.000	744.000	74.000	1.230	0.16	A
1	H 3	239.000	13.000	251.000	11.400	0.950	0.07	A
1	MN 54	41.000	2.000	38.400	1.160	1.070	0.06	A
1	PU238	1.010	0.010	0.982	0.074	1.030	0.08	A
1	PU239	0.753	0.025	0.772	0.056	0.980	0.08	A
1	SR 90	1.460	0.240	1.450	0.034	1.010	0.17	A
1	U UG	0.023	0.001	0.022	0.003	1.020	0.12	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: LA Los Alamos National Laboratory, NM

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.212	0.023	0.189	0.007	1.120	0.13	A
2		0.200	0.022	0.189	0.007	1.060	0.12	A
3		0.192	0.021	0.189	0.007	1.020	0.12	A
1	CE144	20.900	1.600	33.300	3.300	0.630	0.08	W
2		21.100	1.600	33.300	3.300	0.630	0.08	W
3		20.800	1.600	33.300	3.300	0.630	0.08	W
1	CO 57	5.800	0.400	8.900	0.900	0.650	0.08	W
2		5.900	0.400	8.900	0.900	0.660	0.08	W
3		5.900	0.400	8.900	0.900	0.660	0.08	W
1	CO 60	23.300	1.600	29.500	2.900	0.790	0.09	W
2		23.400	1.600	29.500	2.900	0.790	0.10	W
3		23.400	1.600	29.500	2.900	0.790	0.10	W
1	CS134	11.700	0.900	14.700	1.460	0.800	0.10	A
2		11.900	0.900	14.700	1.460	0.810	0.10	A
3		12.000	0.900	14.700	1.460	0.820	0.10	A
1	CS137	5.600	0.400	6.640	0.700	0.840	0.11	A
2		5.400	0.400	6.640	0.700	0.810	0.11	W
3		5.500	0.400	6.640	0.700	0.830	0.11	W
1	GA 1	1.850	0.370	1.620	0.150	1.140	0.25	A
2		1.850	0.370	1.620	0.150	1.140	0.25	A
3		1.850	0.370	1.620	0.150	1.140	0.25	A
1	GB 2	1.590	0.220	1.770	0.150	0.900	0.15	A
2		1.630	0.220	1.770	0.150	0.920	0.15	A
3		1.630	0.220	1.770	0.150	0.920	0.15	A
1	MN 54	2.800	0.200	3.440	0.380	0.810	0.11	W
2		2.900	0.300	3.440	0.380	0.840	0.13	W
3		2.800	0.300	3.440	0.380	0.810	0.13	W
1	PU238	0.102	0.012	0.096	0.002	1.060	0.13	A
2		0.090	0.011	0.096	0.002	0.940	0.12	A
3		0.089	0.011	0.096	0.002	0.930	0.12	A
1	PU239	0.098	0.012	0.093	0.003	1.060	0.13	A
2		0.098	0.011	0.093	0.003	1.060	0.12	A
3		0.088	0.010	0.093	0.003	0.950	0.11	A
1	RU106	10.100	1.100	11.600	1.440	0.870	0.14	A
2		10.000	1.300	11.600	1.440	0.860	0.16	A
3		9.100	1.100	11.600	1.440	0.780	0.14	A
1	SB125	9.200	0.800	9.780	1.030	0.940	0.13	A
2		9.300	0.800	9.780	1.030	0.950	0.13	A
3		9.000	0.700	9.780	1.030	0.920	0.12	A
1	SR 90	0.920	0.160	1.060	0.037	0.870	0.15	A
2		0.950	0.200	1.060	0.037	0.900	0.19	A
3		0.880	0.110	1.060	0.037	0.830	0.11	A
1	U UG	4.100	0.400	4.310	0.100	0.950	0.10	A
2		4.100	0.400	4.310	0.100	0.950	0.10	A
3		4.100	0.400	4.310	0.100	0.950	0.10	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **LA** Los Alamos National Laboratory, NM

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: SO								
1	AM241	3.940	0.400	3.690	0.454	1.070	0.17	A
2		3.490	0.400	3.690	0.454	0.950	0.16	A
3		3.810	0.400	3.690	0.454	1.030	0.17	A
1	CS137	316.000	24.000	359.000	10.000	0.880	0.07	A
2		320.000	25.000	359.000	10.000	0.890	0.07	A
3		329.000	26.000	359.000	10.000	0.920	0.08	A
1	K 40	414.000	44.000	465.000	30.000	0.890	0.11	A
2		414.000	44.000	465.000	30.000	0.890	0.11	A
3		411.000	44.000	465.000	30.000	0.880	0.11	A
1	PU238	41.400	1.400	43.000	2.440	0.960	0.06	A
2		38.500	1.400	43.000	2.440	0.900	0.06	A
3		42.700	1.400	43.000	2.440	0.990	0.07	A
1	PU239	9.160	0.420	9.230	0.346	0.990	0.06	A
2		8.630	1.440	9.230	0.346	0.940	0.16	A
3		8.970	0.420	9.230	0.346	0.970	0.06	A
1	SR 90	1300.000	87.000	1340.000	113.000	0.970	0.10	A
2		1400.000	92.000	1340.000	113.000	1.040	0.11	A
3		1210.000	81.000	1340.000	113.000	0.900	0.10	A
1	U UG	2.350	0.240	2.900	0.290	0.810	0.12	A
2		2.540	0.250	2.900	0.290	0.880	0.12	A
3		2.540	0.250	2.900	0.290	0.880	0.12	A
Matrix: VE								
1	AM241	5.670	0.220	5.600	0.184	1.010	0.05	A
2		5.710	0.220	5.600	0.184	1.020	0.05	A
3		5.570	0.220	5.600	0.184	1.000	0.05	A
1	CO 60	55.900	5.180	59.700	0.963	0.940	0.09	A
2		54.800	4.440	59.700	0.963	0.920	0.08	A
3		56.200	4.810	59.700	0.963	0.940	0.08	A
1	CS137	966.000	63.000	944.000	16.200	1.020	0.07	A
2		958.000	63.000	944.000	16.200	1.020	0.07	A
3		962.000	63.000	944.000	16.200	1.020	0.07	A
1	K 40	955.000	78.000	1030.000	33.000	0.930	0.08	A
2		1000.000	81.000	1030.000	33.000	0.970	0.08	A
3		1000.000	81.000	1030.000	33.000	0.970	0.08	A
1	PU239	9.200	0.250	9.820	1.220	0.940	0.12	A
2		9.140	0.240	9.820	1.220	0.930	0.12	A
3		9.170	0.240	9.820	1.220	0.930	0.12	A
1	SR 90	1390.000	85.100	1300.000	52.400	1.070	0.08	A
2		1480.000	92.500	1300.000	52.400	1.140	0.08	W
3		1220.000	77.700	1300.000	52.400	0.940	0.07	A
Matrix: WA								
1	AM241	0.810	0.180	0.766	0.013	1.060	0.24	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **LA** Los Alamos National Laboratory, NM

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
2	AM241	0.950	0.210	0.766	0.013	1.240	0.28	W
3		0.960	0.210	0.766	0.013	1.250	0.28	W
1	CO 60	35.800	3.600	32.800	0.580	1.090	0.11	A
2		37.300	4.000	32.800	0.580	1.140	0.12	W
3		37.100	4.000	32.800	0.580	1.130	0.12	W
1	CS137	50.200	5.100	38.300	0.881	1.310	0.14	N
2		49.400	5.000	38.300	0.881	1.290	0.13	N
3		50.000	5.100	38.300	0.881	1.310	0.14	N
1	GA 1	2190.000	275.000	1850.000	185.000	1.180	0.19	A
2		1800.000	223.000	1850.000	185.000	0.970	0.16	A
3		1810.000	233.000	1850.000	185.000	0.980	0.16	A
1	GB 2	481.000	65.000	744.000	74.000	0.650	0.11	N
2		491.000	66.000	744.000	74.000	0.660	0.11	N
3		520.000	70.000	744.000	74.000	0.700	0.12	N
1	H 3	238.000	11.200	251.000	11.400	0.950	0.06	A
2		221.000	11.000	251.000	11.400	0.880	0.06	A
3		212.000	10.900	251.000	11.400	0.850	0.06	A
1	MN 54	49.400	5.000	38.400	1.160	1.290	0.14	N
2		50.800	5.100	38.400	1.160	1.320	0.14	N
3		49.500	5.000	38.400	1.160	1.290	0.14	N
1	PU238	0.990	0.140	0.982	0.074	1.010	0.16	A
2		0.940	0.130	0.982	0.074	0.960	0.15	A
3		0.930	0.130	0.982	0.074	0.950	0.15	A
1	PU239	0.900	0.130	0.772	0.056	1.170	0.19	W
2		0.790	0.110	0.772	0.056	1.020	0.16	A
3		0.750	0.110	0.772	0.056	0.970	0.16	A
1	SR 90	1.290	0.140	1.450	0.034	0.890	0.10	A
2		1.410	0.160	1.450	0.034	0.970	0.11	A
3		1.540	0.160	1.450	0.034	1.060	0.11	A
1	U UG	0.021	0.000	0.022	0.003	0.930	0.11	A
2		0.021	0.000	0.022	0.003	0.960	0.11	A
3		0.021	0.000	0.022	0.003	0.960	0.11	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in μ g/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **LB** Lawrence Berkeley Lab UCB

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.159	0.012	0.189	0.007	0.840	0.07	A
1	CE144	28.500	2.310	33.300	3.300	0.860	0.11	A
1	CO 57	6.630	0.186	8.900	0.900	0.750	0.08	A
1	CO 60	25.700	6.160	29.500	2.900	0.870	0.23	A
1	CS134	12.900	2.480	14.700	1.460	0.880	0.19	A
1	CS137	5.280	0.940	6.640	0.700	0.800	0.17	W
1	GA 1	1.590	0.160	1.620	0.150	0.980	0.13	A
1	GB 2	1.480	0.150	1.770	0.150	0.840	0.11	W
1	MN 54	2.840	0.550	3.440	0.380	0.830	0.18	W
1	SB125	8.230	0.913	9.780	1.030	0.840	0.13	A
Matrix: SO								
1	AM241	1.940	0.868	3.690	0.454	0.530	0.24	W
1	CS137	332.000	13.700	359.000	10.000	0.930	0.05	A
1	K 40	496.000	33.400	465.000	30.000	1.070	0.10	A
Matrix: VE								
1	AM241	4.720	1.880	5.600	0.184	0.840	0.34	A
1	CO 60	57.400	3.400	59.700	0.963	0.960	0.06	A
1	CS137	80.900	36.300	944.000	16.200	0.090	0.04	N
1	K 40	1120.000	74.000	1030.000	33.000	1.090	0.08	A
Matrix: WA								
1	AM241	0.552	0.215	0.766	0.013	0.720	0.28	W
1	CO 60	36.300	23.100	32.800	0.580	1.110	0.71	A
1	CS137	46.200	22.200	38.300	0.881	1.210	0.58	W
1	MN 54	47.500	25.200	38.400	1.160	1.240	0.66	N

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **LH** Lockheed Analytical Laboratory, Las Vegas

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.140	0.020	0.189	0.007	0.740	0.11	W
1	CE144	20.000	1.900	33.300	3.300	0.600	0.08	N
1	CO 57	5.900	0.600	8.900	0.900	0.660	0.10	W
1	CO 60	21.800	1.600	29.500	2.900	0.740	0.09	W
1	CS134	10.700	0.800	14.700	1.460	0.730	0.09	W
1	CS137	5.200	0.500	6.640	0.700	0.780	0.11	W
1	GA 1	1.990	0.130	1.620	0.150	1.230	0.14	A
1	GB 2	1.740	0.100	1.770	0.150	0.980	0.10	A
1	MN 54	2.700	0.300	3.440	0.380	0.790	0.12	W
1	PU238	0.100	0.020	0.096	0.002	1.040	0.21	A
1	PU239	0.080	0.020	0.093	0.003	0.860	0.22	A
1	RU106	8.100	1.200	11.600	1.440	0.700	0.14	A
1	SB125	7.700	0.500	9.780	1.030	0.790	0.10	A
1	SR 90	0.920	0.110	1.060	0.037	0.870	0.11	A
1	U 234	0.095	0.025	0.052	0.002	1.840	0.49	W
1	U 238	0.086	0.023	0.053	0.002	1.610	0.44	W

Matrix: **SO**

1	AM241	3.400	0.500	3.690	0.454	0.920	0.18	A
1	CS137	419.000	60.000	359.000	10.000	1.170	0.17	A
1	K 40	497.000	82.000	465.000	30.000	1.070	0.19	A
1	PU238	42.900	3.300	43.000	2.440	1.000	0.10	A
1	PU239	9.670	0.940	9.230	0.346	1.050	0.11	A
1	SR 90	1140.000	86.000	1340.000	113.000	0.850	0.10	A
1	U 234	33.800	5.400	34.200	3.520	0.990	0.19	A
1	U 238	32.000	5.300	35.900	3.630	0.890	0.17	A

Matrix: **VE**

1	AM241	5.230	0.440	5.600	0.184	0.930	0.08	A
1	CM244	3.610	0.560	4.440	0.202	0.810	0.13	W
1	CO 60	61.700	7.300	59.700	0.963	1.030	0.12	A
1	CS137	1150.000	163.000	944.000	16.200	1.220	0.17	A
1	K 40	1180.000	184.000	1030.000	33.000	1.150	0.18	A
1	PU239	9.160	0.870	9.820	1.220	0.930	0.15	A
1	SR 90	1220.000	97.000	1300.000	52.400	0.940	0.08	A

Matrix: **WA**

1	AM241	0.790	0.140	0.766	0.013	1.030	0.18	A
1	CO 60	31.600	3.500	32.800	0.580	0.960	0.11	A
1	CS137	41.800	6.400	38.300	0.881	1.090	0.17	A
1	FE 55	68.900	12.400	83.000	3.440	0.830	0.15	A
1	GA 1	1980.000	175.000	1850.000	185.000	1.070	0.14	A
1	GB 2	539.000	63.000	744.000	74.000	0.720	0.11	N

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in μ g/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **LH** Lockheed Analytical Laboratory, Las Vegas

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
1	H 3	214.000	17.000	251.000	11.400	0.850	0.08	A
1	MN 54	41.500	6.400	38.400	1.160	1.080	0.17	A
1	PU238	0.930	0.120	0.982	0.074	0.950	0.14	A
1	PU239	0.800	0.150	0.772	0.056	1.040	0.21	A
1	SR 90	1.420	0.360	1.450	0.034	0.980	0.25	A
1	U 234	0.320	0.080	0.274	0.019	1.170	0.30	A
1	U 238	0.290	0.070	0.275	0.024	1.050	0.27	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **LL** Lawrence Livermore National Lab, CA

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	24.700	4.200	33.300	3.300	0.740	0.15	A
1	CO 57	7.120	3.600	8.900	0.900	0.800	0.41	A
1	CO 60	28.700	1.800	29.500	2.900	0.970	0.11	A
1	CS134	15.800	1.800	14.700	1.460	1.080	0.16	A
1	CS137	6.320	4.000	6.640	0.700	0.950	0.61	A
1	GA 1	1.690	1.110	1.620	0.150	1.040	0.69	A
1	GB 2	2.310	0.860	1.770	0.150	1.310	0.50	A
1	MN 54	3.130	6.400	3.440	0.380	0.910	1.86	A
1	PU238	0.098	0.081	0.096	0.002	1.020	0.84	A
1	PU239	0.098	0.008	0.093	0.003	1.060	0.09	A
1	RU106	14.700	12.400	11.600	1.440	1.270	1.08	W
1	SB125	9.810	4.200	9.780	1.030	1.000	0.44	A
1	U 234	4.330	0.084	0.052	0.002	****	2.92	N
1	U 238	4.290	0.084	0.053	0.002	****	3.54	N
Matrix: SO								
1	CS137	400.000	1.800	359.000	10.000	1.110	0.03	A
1	K 40	496.000	6.800	465.000	30.000	1.070	0.07	A
1	PU238	44.700	3.210	43.000	2.440	1.040	0.10	A
1	PU239	9.660	0.941	9.230	0.346	1.050	0.11	A
Matrix: VE								
1	CO 60	64.000	4.400	59.700	0.963	1.070	0.08	A
1	CS137	1140.000	2.400	944.000	16.200	1.210	0.02	A
1	K 40	1130.000	5.200	1030.000	33.000	1.100	0.04	A
1	PU239	9.480	0.897	9.820	1.220	0.970	0.15	A
Matrix: WA								
1	CO 60	30.800	4.000	32.800	0.580	0.940	0.12	W
1	CS137	40.200	3.870	38.300	0.881	1.050	0.10	A
1	GA 1	2420.000	1.040	1850.000	185.000	1.310	0.13	W
1	GB 2	1000.000	1.210	744.000	74.000	1.340	0.13	A
1	H 3	217.000	1.600	251.000	11.400	0.870	0.04	A
1	MN 54	4.200	3.800	38.400	1.160	0.110	0.10	N
1	PU238	1.040	0.104	0.982	0.074	1.060	0.13	A
1	PU239	0.840	0.090	0.772	0.056	1.090	0.14	A
1	U 234	0.022	0.001	0.274	0.019	0.080	0.01	N
1	U 238	0.022	0.001	0.275	0.024	0.080	0.01	N

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **LM** Los Alamos National Lab, Mercury, NV

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	46.600	1.600	33.300	3.300	1.400	0.15	N
1	CO 57	11.400	0.300	8.900	0.900	1.280	0.13	W
1	CO 60	40.900	0.900	29.500	2.900	1.390	0.14	N
1	CS134	23.700	0.600	14.700	1.460	1.610	0.17	N
1	CS137	9.100	0.500	6.640	0.700	1.370	0.16	N
1	GA 1	1.900	0.500	1.620	0.150	1.170	0.33	A
1	GB 2	2.000	0.500	1.770	0.150	1.130	0.30	A
1	MN 54	5.000	0.500	3.440	0.380	1.450	0.22	N
1	RU106	15.100	3.100	11.600	1.440	1.300	0.31	W
1	SB125	13.700	1.200	9.780	1.030	1.400	0.19	W
Matrix: SO								
1	CS137	850.000	13.000	359.000	10.000	2.370	0.08	N
1	K 40	1030.000	65.000	465.000	30.000	2.210	0.20	N
Matrix: WA								
1	CO 60	45.200	2.600	32.800	0.580	1.380	0.08	N
1	CS137	58.000	2.800	38.300	0.881	1.510	0.08	N
1	H 3	244.000	24.000	251.000	11.400	0.970	0.11	A
1	MN 54	58.500	3.000	38.400	1.160	1.520	0.09	N

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **LV** UNLV, Dept of Health Physics

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.249	0.050	0.189	0.007	1.320	0.27	W
1	CE144	23.500	0.700	33.300	3.300	0.710	0.07	A
1	CO 57	6.600	0.100	8.900	0.900	0.740	0.08	A
1	CO 60	25.100	0.200	29.500	2.900	0.850	0.08	A
1	CS134	13.000	0.200	14.700	1.460	0.880	0.09	A
1	CS137	5.630	0.070	6.640	0.700	0.850	0.09	A
1	MN 54	2.760	0.100	3.440	0.380	0.800	0.09	W
1	RU106	10.400	0.800	11.600	1.440	0.900	0.13	A
1	SB125	7.650	0.220	9.780	1.030	0.780	0.09	A
Matrix: SO								
1	AM241	5.960	0.670	3.690	0.454	1.620	0.27	W
1	CS137	370.000	2.000	359.000	10.000	1.030	0.03	A
1	K 40	403.000	10.000	465.000	30.000	0.870	0.06	A
Matrix: VE								
1	AM241	12.000	2.000	5.600	0.184	2.140	0.36	W
1	CO 60	70.200	2.400	59.700	0.963	1.180	0.04	A
1	CS137	1240.000	7.000	944.000	16.200	1.310	0.02	W
1	K 40	1160.000	20.000	1030.000	33.000	1.130	0.04	A
Matrix: WA								
1	AM241	0.946	0.530	0.766	0.013	1.240	0.69	W
1	CO 60	32.300	0.700	32.800	0.580	0.990	0.03	A
1	CS137	43.300	0.700	38.300	0.881	1.130	0.03	A
1	MN 54	45.500	0.900	38.400	1.160	1.180	0.04	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **LW** Lawrence Livermore National Lab, CA

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: SO								
1	AM241	3.800	53.800	3.690	0.454	1.030	14.60	A
1	CS137	395.000	1.800	359.000	10.000	1.100	0.03	A
1	K 40	468.000	7.400	465.000	30.000	1.010	0.07	A
1	U 238	40.500	29.600	35.900	3.630	1.130	0.83	W
Matrix: VE								
1	AM241	5.300	57.400	5.600	0.184	0.950	10.30	A
1	CO 60	59.600	5.600	59.700	0.963	1.000	0.10	A
1	CS137	1050.000	2.000	944.000	16.200	1.110	0.02	A
1	K 40	1060.000	4.400	1030.000	33.000	1.030	0.03	A
Matrix: WA								
1	CO 60	30.200	3.200	32.800	0.580	0.920	0.10	W
1	CS137	40.800	3.200	38.300	0.881	1.070	0.09	A
1	GA 1	1880.000	2.800	1850.000	185.000	1.020	0.10	A
1	GB 2	784.000	2.000	744.000	74.000	1.050	0.11	A
1	H 3	228.000	6.200	251.000	11.400	0.910	0.05	A
1	MN 54	40.200	3.400	38.400	1.160	1.050	0.09	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: MA ORNL Health Sciences Research Div.

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
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Matrix: SO

1	AM241	5.200	2.200	3.690	0.454	1.410	0.62	A
1	CS137	444.000	33.000	359.000	10.000	1.240	0.10	W
1	K 40	518.000	59.000	465.000	30.000	1.110	0.15	A

Matrix: VE

1	AM241	5.200	1.500	5.600	0.184	0.930	0.27	A
1	CO 60	67.000	7.400	59.700	0.963	1.120	0.13	A
1	CS137	1290.000	93.000	944.000	16.200	1.370	0.10	W
1	K 40	1220.000	150.000	1030.000	33.000	1.180	0.15	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **ME** Radiation Control Program, Jamaica Plain, MA

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	29.400	0.246	33.300	3.300	0.880	0.09	A
1	CO 57	6.700	0.035	8.900	0.900	0.750	0.08	A
1	CO 60	28.500	0.154	29.500	2.900	0.970	0.10	A
1	CS134	13.400	0.094	14.700	1.460	0.910	0.09	A
1	CS137	5.980	0.062	6.640	0.700	0.900	0.10	A
1	GA 1	3.500	0.070	1.620	0.150	2.160	0.21	N
1	GB 2	2.490	0.046	1.770	0.150	1.410	0.12	A
1	MN 54	3.380	0.064	3.440	0.380	0.980	0.11	A
Matrix: SO								
1	CS137	370.000	12.100	359.000	10.000	1.030	0.04	A
1	K 40	622.000	21.400	465.000	30.000	1.340	0.10	W
Matrix: VE								
1	CO 60	64.300	1.660	59.700	0.963	1.080	0.03	A
1	CS137	1170.000	37.600	944.000	16.200	1.240	0.05	A
1	K 40	1390.000	47.400	1030.000	33.000	1.350	0.06	W
Matrix: WA								
1	CO 60	34.700	0.912	32.800	0.580	1.060	0.03	A
1	CS137	44.500	1.750	38.300	0.881	1.160	0.05	W
1	MN 54	46.100	1.560	38.400	1.160	1.200	0.05	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **MI** **Massachusetts Institute of Technology**

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CO 57	5.820	0.181	8.900	0.900	0.650	0.07	W
1	CO 60	26.800	0.865	29.500	2.900	0.910	0.09	A
1	CS134	11.100	0.251	14.700	1.460	0.760	0.08	W
1	CS137	5.210	0.249	6.640	0.700	0.790	0.09	W
1	MN 54	2.980	0.145	3.440	0.380	0.870	0.11	A
Matrix: WA								
1	AM241	0.504	0.000	0.766	0.013	0.660	0.01	W
2		0.475	0.000	0.766	0.013	0.620	0.01	N
1	CO 60	31.200	0.001	32.800	0.580	0.950	0.02	A
2		36.300	0.001	32.800	0.580	1.110	0.02	A
1	CS137	0.337	0.002	38.300	0.881	0.010	0.00	N
2		40.900	0.002	38.300	0.881	1.070	0.02	A
1	H 3	405.000	0.000	251.000	11.400	1.610	0.07	W
2		385.000	0.000	251.000	11.400	1.530	0.07	W
3		385.000	0.000	251.000	11.400	1.530	0.07	W
4		385.000	0.000	251.000	11.400	1.530	0.07	W
1	MN 54	36.100	0.002	38.400	1.160	0.940	0.03	W
2		42.700	0.002	38.400	1.160	1.110	0.03	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **ML** EG&G Mound Applied Technologies, Miamisburg, OH

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	27.600	0.800	33.300	3.300	0.830	0.09	A
1	CO 57	6.700	0.200	8.900	0.900	0.750	0.08	A
1	CO 60	25.800	0.400	29.500	2.900	0.880	0.09	A
1	CS134	13.900	0.400	14.700	1.460	0.950	0.10	A
1	CS137	5.600	0.200	6.640	0.700	0.840	0.09	A
1	MN 54	2.800	0.200	3.440	0.380	0.810	0.11	W
1	PU238	0.091	0.005	0.096	0.002	0.950	0.06	A
1	PU239	0.100	0.005	0.093	0.003	1.080	0.06	A
1	RU106	11.400	1.000	11.600	1.440	0.980	0.15	A
1	SB125	9.300	0.400	9.780	1.030	0.950	0.11	A
1	U 234	0.058	0.004	0.052	0.002	1.120	0.08	A
1	U 238	0.056	0.004	0.053	0.002	1.050	0.09	A
Matrix: SO								
1	CS137	356.000	36.000	359.000	10.000	0.990	0.10	A
1	K 40	473.000	52.000	465.000	30.000	1.020	0.13	A
1	PU238	38.000	1.070	43.000	2.440	0.880	0.06	A
1	PU239	8.660	0.510	9.230	0.346	0.940	0.07	A
1	U 234	34.400	1.520	34.200	3.520	1.010	0.11	A
1	U 238	34.500	1.530	35.900	3.630	0.960	0.11	A
Matrix: VE								
1	CO 60	61.500	12.800	59.700	0.963	1.030	0.22	A
1	CS137	1020.000	20.000	944.000	16.200	1.080	0.03	A
1	K 40	1190.000	244.000	1030.000	33.000	1.160	0.24	A
1	PU239	8.240	0.350	9.820	1.220	0.840	0.11	A
Matrix: WA								
1	CO 60	32.200	6.600	32.800	0.580	0.980	0.20	A
1	CS137	40.000	8.200	38.300	0.881	1.040	0.22	A
1	H 3	197.000	20.700	251.000	11.400	0.790	0.09	W
1	MN 54	41.100	8.400	38.400	1.160	1.070	0.22	A
1	PU238	0.980	0.040	0.982	0.074	1.000	0.09	A
1	PU239	0.790	0.040	0.772	0.056	1.020	0.09	A
1	U 234	0.300	0.020	0.274	0.019	1.100	0.11	A
1	U 238	0.298	0.005	0.275	0.024	1.080	0.10	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **MS** Manufacturing Sciences Corporation, Oak Ridge

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	33.300	3.300	33.300	3.300	1.000	0.14	A
1	CO 57	9.900	0.990	8.900	0.900	1.110	0.16	W
1	CO 60	30.400	3.000	29.500	2.900	1.030	0.14	A
1	CS134	15.800	1.600	14.700	1.460	1.080	0.15	A
1	CS137	6.700	0.670	6.640	0.700	1.010	0.15	A
1	MN 54	3.400	0.340	3.440	0.380	0.990	0.15	A
1	SB125	10.000	1.000	9.780	1.030	1.020	0.15	A
Matrix: SO								
1	CS137	362.000	36.000	359.000	10.000	1.010	0.10	A
1	K 40	458.000	46.000	465.000	30.000	0.990	0.12	A
Matrix: WA								
1	AM241	0.980	0.100	0.766	0.013	1.280	0.13	W
1	CO 60	34.000	3.400	32.800	0.580	1.040	0.11	A
1	CS137	40.900	4.100	38.300	0.881	1.070	0.11	A
1	MN 54	42.500	4.300	38.400	1.160	1.110	0.12	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **NA** US EPA NAREL, Montgomery, AL

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.182	0.015	0.189	0.007	0.960	0.09	A
1	CE144	27.300	0.290	33.300	3.300	0.820	0.08	A
1	CO 57	7.930	0.050	8.900	0.900	0.890	0.09	A
1	CO 60	27.600	0.130	29.500	2.900	0.940	0.09	A
1	CS134	13.800	0.080	14.700	1.460	0.940	0.09	A
1	CS137	6.630	0.090	6.640	0.700	1.000	0.11	A
1	MN 54	3.400	0.080	3.440	0.380	0.990	0.11	A
1	PU238	0.103	0.012	0.096	0.002	1.070	0.13	A
1	PU239	0.098	0.011	0.093	0.003	1.060	0.12	A
1	RU106	10.300	0.560	11.600	1.440	0.890	0.12	A
1	SB125	10.500	0.150	9.780	1.030	1.070	0.11	A
1	SR 90	1.030	0.180	1.060	0.037	0.970	0.17	A
Matrix: SO								
1	CS137	382.000	1.940	359.000	10.000	1.060	0.03	A
1	K 40	480.000	9.460	465.000	30.000	1.030	0.07	A
1	PU238	40.000	3.260	43.000	2.440	0.930	0.09	A
1	PU239	9.640	1.450	9.230	0.346	1.040	0.16	A
1	SR 90	1450.000	78.000	1340.000	113.000	1.080	0.11	A
1	U 234	35.900	2.830	34.200	3.520	1.050	0.14	A
1	U 238	35.400	2.810	35.900	3.630	0.990	0.13	A
Matrix: VE								
1	AM241	5.810	0.570	5.600	0.184	1.040	0.11	A
2		5.810	0.570	5.600	0.184	1.040	0.11	A
1	CO 60	63.000	1.100	59.700	0.963	1.050	0.03	A
1	CS137	1130.000	4.500	944.000	16.200	1.200	0.02	A
1	K 40	1180.000	20.000	1030.000	33.000	1.150	0.04	A
1	PU239	8.410	0.610	9.820	1.220	0.860	0.12	A
1	SR 90	1230.000	27.000	1300.000	52.400	0.950	0.04	A
Matrix: WA								
1	AM241	0.732	0.045	0.766	0.013	0.960	0.06	A
1	CO 60	32.900	0.410	32.800	0.580	1.000	0.02	A
1	CS137	41.000	0.560	38.300	0.881	1.070	0.03	A
1	H 3	199.000	4.200	251.000	11.400	0.790	0.04	W
1	MN 54	41.300	0.580	38.400	1.160	1.080	0.04	A
1	SR 90	1.550	0.260	1.450	0.034	1.070	0.18	A
1	U 234	0.416	0.037	0.274	0.019	1.520	0.17	N
1	U 238	0.355	0.033	0.275	0.024	1.290	0.17	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **NC** Nuclear Services North Carolina State University, Raleigh

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	30.000	1.480	33.300	3.300	0.900	0.10	A
1	CO 57	9.090	0.178	8.900	0.900	1.020	0.11	A
1	CO 60	28.700	0.470	29.500	2.900	0.970	0.10	A
1	CS134	14.100	0.389	14.700	1.460	0.960	0.10	A
1	CS137	6.650	0.251	6.640	0.700	1.000	0.11	A
1	MN 54	3.700	0.245	3.440	0.380	1.080	0.14	A
1	SB125	10.000	0.512	9.780	1.030	1.020	0.12	A
Matrix: SO								
1	CS137	366.000	2.230	359.000	10.000	1.020	0.03	A
Matrix: VE								
1	CO 60	58.300	1.870	59.700	0.963	0.980	0.04	A
1	CS137	1060.000	4.960	944.000	16.200	1.120	0.02	A
Matrix: WA								
1	CO 60	33.700	1.300	32.800	0.580	1.030	0.04	A
1	CS137	39.100	1.020	38.300	0.881	1.020	0.04	A
1	MN 54	40.600	1.350	38.400	1.160	1.060	0.05	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in μg /filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **NL** **FERMCO, Cincinnati, OH**

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	30.900	2.000	33.300	3.300	0.930	0.11	A
1	CO 57	8.640	0.680	8.900	0.900	0.970	0.12	A
1	CO 60	28.400	1.100	29.500	2.900	0.960	0.10	A
1	CS134	13.400	0.600	14.700	1.460	0.910	0.10	A
1	CS137	6.430	0.390	6.640	0.700	0.970	0.12	A
1	MN 54	3.580	0.240	3.440	0.380	1.040	0.13	A
1	PU238	0.084	0.020	0.096	0.002	0.870	0.21	A
1	PU239	0.084	0.020	0.093	0.003	0.910	0.22	A
1	RU106	10.600	1.100	11.600	1.440	0.910	0.15	A
1	SB125	10.600	0.900	9.780	1.030	1.080	0.15	A
1	U 234	0.053	0.010	0.052	0.002	1.030	0.20	A
1	U 238	0.046	0.012	0.053	0.002	0.860	0.23	N
1	U UG	4.300	0.500	4.310	0.100	1.000	0.12	A
Matrix: SO								
1	CS137	399.000	8.000	359.000	10.000	1.110	0.04	A
1	K 40	584.000	80.000	465.000	30.000	1.260	0.19	W
1	PU238	43.600	10.000	43.000	2.440	1.010	0.24	A
1	PU239	9.350	2.100	9.230	0.346	1.010	0.23	A
1	U 234	34.400	5.600	34.200	3.520	1.010	0.19	A
2	U 238	35.500	5.800	35.900	3.630	0.990	0.19	A
Matrix: WA								
1	CO 60	34.600	0.900	32.800	0.580	1.050	0.03	A
1	CS137	42.900	0.800	38.300	0.881	1.120	0.03	A
1	MN 54	46.200	0.200	38.400	1.160	1.200	0.04	W
1	PU238	0.864	0.210	0.982	0.074	0.880	0.22	W
1	PU239	0.726	0.170	0.772	0.056	0.940	0.23	A
1	U 234	0.280	0.051	0.274	0.019	1.020	0.20	A
1	U 238	0.291	0.051	0.275	0.024	1.060	0.21	A
1	U UG	0.023	0.003	0.022	0.003	1.040	0.18	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: NM Environmental Evaluation Group, Carlsbad, NM

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.186	0.012	0.189	0.007	0.980	0.07	A
1	CO 60	20.400	0.600	29.500	2.900	0.690	0.07	N
1	CS137	4.500	0.260	6.640	0.700	0.680	0.08	N
1	GA 1	1.890	0.060	1.620	0.150	1.170	0.11	A
1	GB 2	1.870	0.090	1.770	0.150	1.060	0.10	A
1	PU238	0.108	0.007	0.096	0.002	1.120	0.08	A
1	PU239	0.102	0.007	0.093	0.003	1.100	0.08	A
1	U 234	0.055	0.004	0.052	0.002	1.060	0.08	A
1	U 238	0.060	0.005	0.053	0.002	1.130	0.10	A
Matrix: SO								
1	AM241	4.900	0.800	3.690	0.454	1.330	0.27	A
1	PU238	43.000	2.000	43.000	2.440	1.000	0.07	A
1	PU239	22.000	1.000	9.230	0.346	2.380	0.14	N
1	U 234	36.000	1.000	34.200	3.520	1.050	0.11	A
1	U 238	36.000	1.000	35.900	3.630	1.000	0.11	A
Matrix: WA								
1	AM241	0.735	0.040	0.766	0.013	0.960	0.05	A
1	CO 60	34.500	0.300	32.800	0.580	1.050	0.02	A
1	CS137	46.900	0.500	38.300	0.881	1.230	0.03	W
1	GA 1	1740.000	95.000	1850.000	185.000	0.940	0.11	A
1	GB 2	872.000	43.000	744.000	74.000	1.170	0.13	A
1	PU238	0.940	0.038	0.982	0.074	0.960	0.08	A
1	PU239	0.711	0.031	0.772	0.056	0.920	0.08	A
1	U 234	0.274	0.017	0.274	0.019	1.000	0.09	A
1	U 238	0.294	0.018	0.275	0.024	1.070	0.12	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: NR Naval Reactors Facility Chemistry, Scoville, ID

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Ratio Error	Evaluation
Matrix: SO								
1	CS137	312.000	62.000	359.000	10.000	0.870	0.17	W
1	K 40	407.000	81.000	465.000	30.000	0.880	0.18	A
Matrix: VE								
1	CO 60	47.700	9.500	59.700	0.963	0.800	0.16	W
1	CS137	799.000	160.000	944.000	16.200	0.850	0.17	W
1	K 40	918.000	184.000	1030.000	33.000	0.890	0.18	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **OB** OBG Laboratories, East Syracuse, NY

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	GA 1	1.500	0.181	1.620	0.150	0.930	0.14	A
1	GB 2	1.870	0.207	1.770	0.150	1.060	0.15	A
Matrix: SO								
1	U 234	14.100	0.000	34.200	3.520	0.410	0.04	W
1	U 238	14.100	0.000	35.900	3.630	0.390	0.04	W
Matrix: WA								
1	GA 1	2140.000	81.600	1850.000	185.000	1.160	0.12	A
1	GB 2	561.000	37.600	744.000	74.000	0.750	0.09	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **OD** ORNL, Radiobioassay Lab

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.353	0.057	0.189	0.007	1.870	0.31	W
1	CE144	25.100	0.720	33.300	3.300	0.750	0.08	A
1	CO 57	7.490	0.181	8.900	0.900	0.840	0.09	A
1	CO 60	27.100	0.290	29.500	2.900	0.920	0.09	A
1	CS134	14.000	0.422	14.700	1.460	0.950	0.10	A
1	CS137	6.410	0.379	6.640	0.700	0.970	0.12	A
1	GA 1	1.510	0.050	1.620	0.150	0.930	0.09	A
1	GB 2	2.180	0.060	1.770	0.150	1.230	0.11	A
1	MN 54	3.160	0.214	3.440	0.380	0.920	0.12	A
1	RU106	11.400	0.635	11.600	1.440	0.980	0.13	A
1	SB125	9.560	0.377	9.780	1.030	0.980	0.11	A
Matrix: WA								
1	AM241	0.679	0.072	0.766	0.013	0.890	0.10	A
1	H 3	207.000	15.700	251.000	11.400	0.830	0.07	W
1	PU238	0.881	0.091	0.982	0.074	0.900	0.11	W
1	PU239	0.725	0.075	0.772	0.056	0.940	0.12	A
1	U 234	0.280	0.024	0.274	0.019	1.020	0.11	A
1	U 238	0.278	0.024	0.275	0.024	1.010	0.13	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **OL** ORNL Environmental Sciences Div.

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	23.400	1.720	33.300	3.300	0.700	0.09	A
1	CO 57	6.890	0.190	8.900	0.900	0.770	0.08	A
1	CO 60	25.600	0.400	29.500	2.900	0.870	0.09	A
1	CS134	11.200	0.960	14.700	1.460	0.760	0.10	W
1	CS137	6.060	0.190	6.640	0.700	0.910	0.10	A
1	MN 54	3.140	0.100	3.440	0.380	0.910	0.11	A
1	RU106	9.000	0.930	11.600	1.440	0.780	0.13	A
1	SB125	8.600	0.540	9.780	1.030	0.880	0.11	A
Matrix: SO								
1	CS137	391.000	11.300	359.000	10.000	1.090	0.04	A
1	K 40	524.000	36.500	465.000	30.000	1.130	0.11	A
Matrix: VE								
1	CO 60	64.100	2.620	59.700	0.963	1.070	0.05	A
1	CS137	1110.000	33.000	944.000	16.200	1.180	0.04	A
1	K 40	1200.000	75.400	1030.000	33.000	1.170	0.08	A
Matrix: WA								
1	CO 60	32.800	1.160	32.800	0.580	1.000	0.04	A
1	CS137	42.000	1.370	38.300	0.881	1.100	0.04	A
1	MN 54	42.700	1.250	38.400	1.160	1.110	0.05	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **OR** Oak Ridge National Lab

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.190	0.020	0.189	0.007	1.010	0.11	A
1	CE144	27.000	1.000	33.300	3.300	0.810	0.09	A
1	CO 57	7.800	0.200	8.900	0.900	0.880	0.09	A
1	CO 60	29.000	1.000	29.500	2.900	0.980	0.10	A
1	CS134	13.000	1.000	14.700	1.460	0.880	0.11	A
1	CS137	6.700	0.400	6.640	0.700	1.010	0.12	A
1	MN 54	3.400	0.400	3.440	0.380	0.990	0.16	A
1	PU238	0.093	0.010	0.096	0.002	0.970	0.11	A
1	PU239	0.094	0.010	0.093	0.003	1.010	0.11	A
1	RU106	11.000	3.000	11.600	1.440	0.950	0.28	A
1	SB125	10.000	1.000	9.780	1.030	1.020	0.15	A
1	SR 90	0.830	0.080	1.060	0.037	0.780	0.08	W
1	U BQ	0.133	0.020	0.107	0.003	1.240	0.19	A
Matrix: SO								
1	AM241	1.800	0.900	3.690	0.454	0.490	0.25	N
1	CS137	380.000	10.000	359.000	10.000	1.060	0.04	A
1	K 40	520.000	80.000	465.000	30.000	1.120	0.19	A
1	PU238	44.000	1.000	43.000	2.440	1.020	0.06	A
1	PU239	8.800	0.400	9.230	0.346	0.950	0.06	A
1	SR 90	1100.000	100.000	1340.000	113.000	0.820	0.10	A
1	U BQ	70.000	2.000	71.700	4.150	0.980	0.06	A
Matrix: VE								
1	AM241	5.600	1.100	5.600	0.184	1.000	0.20	A
1	CM244	3.600	1.100	4.440	0.202	0.810	0.25	W
1	CO 60	60.000	10.000	59.700	0.963	1.010	0.17	A
1	CS137	1100.000	100.000	944.000	16.200	1.170	0.11	A
1	K 40	1200.000	100.000	1030.000	33.000	1.170	0.10	A
1	PU239	9.500	0.800	9.820	1.220	0.970	0.15	A
1	SR 90	1060.000	100.000	1300.000	52.400	0.820	0.08	A
Matrix: WA								
1	AM241	0.780	0.080	0.766	0.013	1.020	0.11	A
1	CO 60	32.000	1.000	32.800	0.580	0.980	0.04	A
1	CS137	40.000	1.000	38.300	0.881	1.040	0.04	A
1	H 3	220.000	30.000	251.000	11.400	0.880	0.13	A
1	MN 54	41.000	1.000	38.400	1.160	1.070	0.04	A
1	PU238	0.970	0.050	0.982	0.074	0.990	0.09	A
1	PU239	0.730	0.050	0.772	0.056	0.950	0.09	A
1	SR 90	1.370	0.300	1.450	0.034	0.950	0.21	A
1	U BQ	0.690	0.080	0.559	0.047	1.230	0.18	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: OS Oregon Health Division Radiation Controls Section, Portland

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
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Matrix: SO

1	CS137	384.000	4.300	359.000	10.000	1.070	0.03	A
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Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **OT** ORNL Radioactive Material Analysis Lab

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.280	0.080	0.189	0.007	1.480	0.43	W
1	CE144	27.000	1.000	33.300	3.300	0.810	0.09	A
1	CO 57	7.200	0.100	8.900	0.900	0.810	0.08	A
1	CO 60	26.000	1.000	29.500	2.900	0.880	0.09	A
1	CS134	13.000	1.000	14.700	1.460	0.880	0.11	A
1	CS137	6.200	0.200	6.640	0.700	0.930	0.10	A
1	GA 1	0.630	0.080	1.620	0.150	0.390	0.06	N
1	GB 2	0.970	0.140	1.770	0.150	0.550	0.09	N
1	MN 54	3.100	0.200	3.440	0.380	0.900	0.12	A
1	PU238	0.070	0.026	0.096	0.002	0.730	0.27	W
1	PU239	0.094	0.028	0.093	0.003	1.010	0.30	A
1	RU106	9.800	1.100	11.600	1.440	0.850	0.14	A
1	SB125	9.200	0.400	9.780	1.030	0.940	0.11	A
1	SR 90	0.380	0.190	1.060	0.037	0.360	0.18	N
1	U BQ	0.680	0.070	0.107	0.003	6.360	0.67	N
Matrix: SO								
1	CS137	380.000	10.000	359.000	10.000	1.060	0.04	A
1	K 40	480.000	60.000	465.000	30.000	1.030	0.15	A
1	PU238	50.000	6.000	43.000	2.440	1.160	0.15	A
1	PU239	13.000	3.000	9.230	0.346	1.410	0.33	W
1	SR 90	1200.000	100.000	1340.000	113.000	0.900	0.11	A
Matrix: VE								
1	CO 60	60.000	8.000	59.700	0.963	1.010	0.14	A
1	CS137	1000.000	100.000	944.000	16.200	1.060	0.11	A
1	K 40	1100.000	100.000	1030.000	33.000	1.070	0.10	A
1	PU239	20.000	6.000	9.820	1.220	2.040	0.66	N
1	SR 90	1400.000	100.000	1300.000	52.400	1.080	0.09	A
Matrix: WA								
1	AM241	1.100	0.300	0.766	0.013	1.440	0.39	W
1	CO 60	34.000	1.000	32.800	0.580	1.040	0.04	A
1	CS137	43.000	1.000	38.300	0.881	1.120	0.04	A
1	GA 1	1900.000	100.000	1850.000	185.000	1.030	0.12	A
1	GB 2	910.000	60.000	744.000	74.000	1.220	0.15	A
1	H 3	370.000	30.000	251.000	11.400	1.470	0.14	W
1	MN 54	44.000	1.000	38.400	1.160	1.150	0.04	W
1	PU238	1.000	0.100	0.982	0.074	1.020	0.13	A
1	PU239	0.740	0.110	0.772	0.056	0.960	0.16	A
1	SR 90	2.400	0.600	1.450	0.034	1.660	0.42	N
1	U BQ	0.400	0.160	0.559	0.047	0.720	0.29	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: PA Mason & Hanger-Silas Mason Co., Inc., Battelle Pantex, Amarillo, TX

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	GA 1	1.490	0.040	1.620	0.150	0.920	0.09	A
1	GB 2	1.760	0.030	1.770	0.150	0.990	0.09	A
1	PU239	0.100	0.013	0.093	0.003	1.080	0.14	A
1	U 234	0.027	0.067	0.052	0.002	0.520	1.30	N
1	U 238	0.023	0.067	0.053	0.002	0.440	1.26	N
Matrix: SO								
1	PU239	10.700	1.480	9.230	0.346	1.160	0.17	A
1	U 234	29.300	2.960	34.200	3.520	0.860	0.12	A
1	U 238	27.400	2.590	35.900	3.630	0.760	0.11	A
Matrix: VE								
1	PU239	7.410	3.700	9.820	1.220	0.760	0.39	W
Matrix: WA								
1	GA 1	1930.000	211.000	1850.000	185.000	1.040	0.16	A
1	GB 2	518.000	66.700	744.000	74.000	0.700	0.11	N
1	H 3	222.000	7.040	251.000	11.400	0.880	0.05	A
1	PU239	0.815	0.119	0.772	0.056	1.060	0.17	A
1	U 234	0.310	0.100	0.274	0.019	1.130	0.37	A
1	U 238	0.300	0.096	0.275	0.024	1.090	0.36	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: PB **Mason & Hanger-Silas Mason Co., Inc., Battelle Pantex, Amarillo, TX**

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: SO								
1	PU239	8.890	1.480	9.230	0.346	0.960	0.16	A
1	U 234	34.400	2.590	34.200	3.520	1.010	0.13	A
1	U 238	34.800	2.590	35.900	3.630	0.970	0.12	A
Matrix: VE								
1	PU239	9.630	1.110	9.820	1.220	0.980	0.17	A
Matrix: WA								
2	GA 1	2000.000	64.200	1850.000	185.000	1.080	0.11	A
2	GB 2	506.000	26.900	744.000	74.000	0.680	0.08	N
1	H 3	222.000	11.700	251.000	11.400	0.880	0.06	A
1	PU239	0.731	0.082	0.772	0.056	0.950	0.13	A
1	U 234	0.281	0.039	0.274	0.019	1.030	0.16	A
1	U 238	0.263	0.037	0.275	0.024	0.960	0.16	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **PI** Lockheed Martin Specialty Components, Largo, FL

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	PU238	0.096	0.008	0.096	0.002	1.000	0.09	A
1	PU239	0.100	0.008	0.093	0.003	1.080	0.09	A
Matrix: SO								
1	PU238	47.000	4.500	43.000	2.440	1.090	0.12	A
1	PU239	10.000	1.300	9.230	0.346	1.080	0.15	A
Matrix: WA								
1	H 3	214.000	11.000	251.000	11.400	0.850	0.06	A
1	PU238	0.950	0.070	0.982	0.074	0.970	0.10	A
1	PU239	0.740	0.060	0.772	0.056	0.960	0.10	A
1	U 234	0.290	0.030	0.274	0.019	1.060	0.13	A
1	U 238	0.310	0.030	0.275	0.024	1.130	0.15	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **RA** **V. G. Khlopin Radium Institute, St. Petersburg, Russia**

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	31.300	1.900	33.300	3.300	0.940	0.11	A
1	CO 57	9.250	0.390	8.900	0.900	1.040	0.11	A
1	CO 60	22.900	0.800	29.500	2.900	0.780	0.08	W
1	CS134	14.200	0.600	14.700	1.460	0.970	0.10	A
1	CS137	6.210	0.320	6.640	0.700	0.940	0.11	A
1	MN 54	2.900	0.140	3.440	0.380	0.840	0.10	W
1	PU238	0.100	0.010	0.096	0.002	1.040	0.11	A
1	PU239	0.100	0.010	0.093	0.003	1.080	0.11	A
1	RU106	12.300	1.400	11.600	1.440	1.060	0.18	A
1	SB125	11.000	0.400	9.780	1.030	1.130	0.13	W
1	SR 90	0.300	0.100	1.060	0.037	0.280	0.09	N
Matrix: SO								
1	CS137	368.000	11.000	359.000	10.000	1.030	0.04	A
1	K 40	550.000	50.000	465.000	30.000	1.180	0.13	A
1	PU238	47.000	2.000	43.000	2.440	1.090	0.08	A
2		45.000	2.000	43.000	2.440	1.050	0.08	A
1	PU239	9.000	1.000	9.230	0.346	0.980	0.11	A
2		9.000	1.000	9.230	0.346	0.980	0.11	A
1	SR 90	700.000	100.000	1340.000	113.000	0.520	0.09	N
2		650.000	100.000	1340.000	113.000	0.490	0.09	N
1	U UG	2.500	0.220	2.900	0.290	0.860	0.12	A
Matrix: VE								
1	CO 60	55.400	2.200	59.700	0.963	0.930	0.04	A
1	CS137	1000.000	50.000	944.000	16.200	1.060	0.06	A
1	K 40	1050.000	70.000	1030.000	33.000	1.020	0.08	A
1	PU239	11.000	1.000	9.820	1.220	1.120	0.17	A
2		10.000	1.000	9.820	1.220	1.020	0.16	A
1	SR 90	1700.000	250.000	1300.000	52.400	1.310	0.20	W
2		1900.000	250.000	1300.000	52.400	1.460	0.20	N

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: RE Bechtel Nevada, Mercury, NV

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.139	0.011	0.189	0.007	0.740	0.06	W
1	CE144	24.600	3.200	33.300	3.300	0.740	0.12	A
1	CO 57	6.700	0.740	8.900	0.900	0.750	0.11	A
1	CO 60	24.900	2.370	29.500	2.900	0.840	0.12	A
1	CS134	11.600	1.160	14.700	1.460	0.790	0.11	W
1	CS137	5.470	0.710	6.840	0.700	0.820	0.14	W
1	GA 1	2.640	0.550	1.620	0.150	1.630	0.37	N
1	GB 2	5.350	0.840	1.770	0.150	3.020	0.54	N
1	MN 54	2.920	0.470	3.440	0.380	0.850	0.17	A
1	PU238	0.074	0.008	0.096	0.002	0.770	0.08	W
1	PU239	0.081	0.008	0.093	0.003	0.870	0.09	A
1	SB125	7.860	1.340	9.780	1.030	0.800	0.16	A
1	SR 90	0.947	0.047	1.060	0.037	0.890	0.05	A
1	U 234	0.051	0.006	0.052	0.002	0.990	0.12	A
1	U 238	0.057	0.006	0.053	0.002	1.060	0.13	A
1	U BQ	0.113	0.006	0.107	0.003	1.060	0.06	A
Matrix: SO								
1	CS137	309.000	26.600	359.000	10.000	0.860	0.08	W
1	K 40	392.000	50.900	465.000	30.000	0.840	0.12	A
1	PU238	34.800	4.100	43.000	2.440	0.810	0.11	A
1	PU239	8.470	1.140	9.230	0.346	0.920	0.13	A
1	SR 90	1130.000	210.000	1340.000	113.000	0.840	0.17	A
1	U 234	30.900	2.900	34.200	3.520	0.900	0.13	A
1	U 238	33.100	3.100	35.900	3.630	0.920	0.13	A
Matrix: VE								
1	AM241	7.150	0.650	5.600	0.184	1.280	0.12	A
1	CO 60	62.200	9.330	59.700	0.963	1.040	0.16	A
1	CS137	1080.000	90.000	944.000	16.200	1.140	0.10	A
1	K 40	1120.000	146.000	1030.000	33.000	1.090	0.15	A
1	PU239	8.380	0.730	9.820	1.220	0.850	0.13	A
1	SR 90	1240.000	62.000	1300.000	52.400	0.950	0.06	A
Matrix: WA								
1	AM241	0.750	0.077	0.766	0.013	0.980	0.10	A
1	CO 60	33.200	3.980	32.800	0.580	1.010	0.12	A
1	CS137	41.800	5.010	38.300	0.881	1.090	0.13	A
1	GA 1	1950.000	98.000	1850.000	185.000	1.050	0.12	A
1	GB 2	773.000	39.000	744.000	74.000	1.040	0.12	A
1	H 3	208.000	20.000	251.000	11.400	0.830	0.09	W
1	MN 54	41.300	4.540	38.400	1.160	1.080	0.12	A
1	PU238	0.860	0.090	0.982	0.074	0.880	0.11	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: RE Bechtel Nevada, Mercury, NV

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
1	PU239	0.696	0.075	0.772	0.056	0.900	0.12	A
1	SR 90	1.470	0.150	1.450	0.034	1.010	0.11	A
1	U 234	0.277	0.035	0.274	0.019	1.010	0.15	A
1	U 238	0.290	0.036	0.275	0.024	1.050	0.16	A
1	U BQ	0.510	0.026	0.559	0.047	0.910	0.09	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: RF EG&G Rocky Flats Plant, Golden

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	GA 1	0.926	0.140	1.620	0.150	0.570	0.10	N
1	GB 2	1.180	0.210	1.770	0.150	0.670	0.13	N
Matrix: SO								
1	AM241	4.240	0.460	3.690	0.454	1.150	0.19	A
1	PU239	9.830	0.970	9.230	0.346	1.070	0.11	A
1	U 234	37.800	3.100	34.200	3.520	1.110	0.15	W
1	U 238	37.400	3.100	35.900	3.630	1.040	0.14	A
Matrix: VE								
1	PU239	9.130	0.690	9.820	1.220	0.930	0.14	A
Matrix: WA								
1	AM241	0.784	0.042	0.766	0.013	1.020	0.06	A
1	CO 60	33.900	1.100	32.800	0.580	1.030	0.04	A
1	CS137	42.200	1.600	38.300	0.881	1.100	0.05	A
1	H 3	240.000	5.300	251.000	11.400	0.960	0.05	A
1	MN 54	42.700	1.500	38.400	1.160	1.110	0.05	A
1	PU239	0.763	0.043	0.772	0.056	0.990	0.09	A
1	U 234	0.331	0.023	0.274	0.019	1.210	0.12	W
1	U 238	0.316	0.023	0.275	0.024	1.150	0.13	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **RG** EG&G Rocky Flats Plant, Golden

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: SO								
1	AM241	3.890	0.420	3.690	0.454	1.050	0.17	A
1	PU238	42.300	1.700	43.000	2.440	0.980	0.07	A
1	PU239	8.340	0.570	9.230	0.346	0.900	0.07	A
1	U 234	35.500	1.900	34.200	3.520	1.040	0.12	A
1	U 238	37.000	2.000	35.900	3.630	1.030	0.12	A
1	U BQ	73.900	4.200	71.700	4.150	1.030	0.08	A
Matrix: WA								
1	AM241	0.890	0.027	0.766	0.013	1.160	0.04	A
1	GA 1	2110.000	109.000	1850.000	185.000	1.140	0.13	A
1	GB 2	590.000	29.500	744.000	74.000	0.790	0.09	W
1	H 3	210.000	5.500	251.000	11.400	0.840	0.04	A
1	PU238	0.941	0.027	0.982	0.074	0.960	0.08	A
1	PU239	0.761	0.023	0.772	0.056	0.990	0.08	A
1	U 234	0.328	0.018	0.274	0.019	1.200	0.11	W
1	U 238	0.295	0.017	0.275	0.024	1.070	0.11	A
1	U BQ	0.636	0.038	0.559	0.047	1.140	0.12	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: RI Westinghouse Hanford Co. Analytical Labs

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.175	0.016	0.189	0.007	0.930	0.09	A
1	CE144	18.900	2.000	33.300	3.300	0.570	0.08	N
1	CO 57	5.020	0.340	8.900	0.900	0.560	0.07	N
1	CO 60	2.230	0.700	29.500	2.900	0.080	0.02	N
1	CS134	11.600	0.440	14.700	1.460	0.790	0.08	W
1	CS137	5.210	0.710	6.640	0.700	0.790	0.14	W
1	MN 54	2.220	0.560	3.440	0.380	0.650	0.18	N
1	PU238	0.086	0.008	0.096	0.002	0.900	0.09	A
1	PU239	0.077	0.007	0.093	0.003	0.830	0.08	W
1	RU106	8.780	3.900	11.600	1.440	0.760	0.35	A
1	SB125	8.270	1.100	9.780	1.030	0.850	0.14	A
1	SR 90	1.070	0.064	1.060	0.037	1.010	0.07	A
Matrix: SO								
1	CS137	185.000	5.000	359.000	10.000	0.520	0.02	N
1	K 40	253.000	43.000	465.000	30.000	0.540	0.10	N
Matrix: VE								
1	AM241	5.440	0.510	5.600	0.184	0.970	0.10	A
1	CM244	4.590	0.440	4.440	0.202	1.030	0.11	A
1	CO 60	30.200	2.600	59.700	0.963	0.510	0.04	N
1	CS137	532.000	8.000	944.000	16.200	0.560	0.01	N
1	K 40	517.000	66.000	1030.000	33.000	0.500	0.07	W
1	PU239	8.700	0.670	9.820	1.220	0.890	0.13	A
Matrix: WA								
1	AM241	0.821	0.075	0.766	0.013	1.070	0.10	A
1	CO 60	3.360	0.160	32.800	0.580	0.100	0.01	N
1	CS137	42.300	2.200	38.300	0.881	1.100	0.06	A
1	H 3	304.000	18.000	251.000	11.400	1.210	0.09	W
1	MN 54	38.700	1.700	38.400	1.160	1.010	0.05	A
1	PU238	0.810	0.065	0.982	0.074	0.830	0.09	W
1	PU239	0.633	0.057	0.772	0.056	0.820	0.09	A
1	SR 90	1.740	0.370	1.450	0.034	1.200	0.26	A
1	U UG	0.006	0.000	0.022	0.003	0.270	0.03	N

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in μg /filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **SA** Sandia Labs Radioactive Sample Diag. Prog., NM

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	37.900	3.500	33.300	3.300	1.140	0.15	W
1	CO 57	11.000	1.100	8.900	0.900	1.240	0.18	W
1	CO 60	33.900	1.800	29.500	2.900	1.150	0.13	W
1	CS134	16.900	0.800	14.700	1.460	1.150	0.13	W
1	CS137	8.400	0.400	6.640	0.700	1.270	0.15	W
1	MN 54	4.300	0.300	3.440	0.380	1.250	0.16	W
1	SB125	12.500	1.700	9.780	1.030	1.280	0.22	W
Matrix: SO								
1	CS137	372.000	20.000	359.000	10.000	1.040	0.06	A
1	K 40	472.000	58.000	465.000	30.000	1.020	0.14	A
Matrix: WA								
1	CO 60	32.000	2.000	32.800	0.580	0.980	0.06	A
1	CS137	42.000	3.000	38.300	0.881	1.100	0.08	A
1	GA 1	1650.000	388.000	1850.000	185.000	0.890	0.23	A
1	GB 2	1090.000	200.000	744.000	74.000	1.470	0.31	A
1	MN 54	41.000	3.000	38.400	1.160	1.070	0.08	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **SC** S-Cubed Division Maxwell Labs, La Jolla, CA

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	GA 1	1.620	0.020	1.620	0.150	1.000	0.09	A
1	GB 2	1.920	0.020	1.770	0.150	1.090	0.09	A
Matrix: SO								
1	CS137	256.000	1.000	359.000	10.000	0.710	0.02	N
1	K 40	387.000	4.000	465.000	30.000	0.830	0.05	W
1	PU238	50.000	1.000	43.000	2.440	1.160	0.07	A
1	PU239	8.150	0.500	9.230	0.346	0.880	0.06	A
1	U 234	36.400	1.400	34.200	3.520	1.060	0.12	A
1	U 238	37.300	1.400	35.900	3.630	1.040	0.11	A
1	U BQ	73.700	2.800	71.700	4.150	1.030	0.07	A
Matrix: WA								
1	AM241	0.600	0.050	0.766	0.013	0.780	0.07	W
1	CO 60	34.000	1.000	32.800	0.580	1.040	0.04	A
1	CS137	40.000	1.000	38.300	0.881	1.040	0.04	A
1	GA 1	1880.000	19.000	1850.000	185.000	1.020	0.10	A
1	GB 2	495.000	10.000	744.000	74.000	0.670	0.07	N
1	H 3	227.000	7.000	251.000	11.400	0.900	0.05	A
1	MN 54	41.000	1.000	38.400	1.160	1.070	0.04	A
1	PU238	1.140	0.016	0.982	0.074	1.160	0.09	W
1	PU239	0.814	0.013	0.772	0.056	1.050	0.08	A
1	SR 90	2.570	0.060	1.450	0.034	1.770	0.06	N
1	U 234	0.300	0.020	0.274	0.019	1.100	0.11	A
1	U 238	0.300	0.020	0.275	0.024	1.090	0.12	A
1	U BQ	0.600	0.050	0.559	0.047	1.070	0.13	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **SE** Shealy Environmental Services Inc., Cayce, SC

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.280	0.020	0.189	0.007	1.480	0.12	W
1	CE144	32.700	2.770	33.300	3.300	0.980	0.13	A
1	CO 57	8.470	0.160	8.900	0.900	0.950	0.10	A
1	CO 60	29.200	1.640	29.500	2.900	0.990	0.11	A
1	CS134	15.600	0.500	14.700	1.460	1.060	0.11	A
1	CS137	6.750	0.680	6.640	0.700	1.020	0.15	A
1	MN 54	3.450	0.170	3.440	0.380	1.000	0.12	A
1	RU106	11.000	1.230	11.600	1.440	0.950	0.16	A
1	SB125	10.100	0.420	9.780	1.030	1.030	0.12	A
Matrix: SO								
1	AM241	7.830	1.930	3.690	0.454	2.120	0.59	W
1	CS137	423.000	63.600	359.000	10.000	1.180	0.18	A
1	K 40	693.000	25.300	465.000	30.000	1.490	0.11	W
1	PU238	56.000	2.590	43.000	2.440	1.300	0.10	N
1	PU239	12.400	1.620	9.230	0.346	1.340	0.18	W
1	U UG	1.280	0.060	2.900	0.290	0.440	0.05	W
Matrix: VE								
1	AM241	6.280	0.340	5.600	0.184	1.120	0.07	A
1	CM244	3.070	0.190	4.440	0.202	0.690	0.05	W
1	CO 60	71.100	2.410	59.700	0.963	1.190	0.04	A
1	CS137	1130.000	84.400	944.000	16.200	1.200	0.09	A
1	K 40	1430.000	49.400	1030.000	33.000	1.390	0.07	W
1	PU238	1.160	8.370	0.820	0.104	1.420	10.20	A
1	PU239	8.370	1.160	9.820	1.220	0.850	0.16	A
Matrix: WA								
1	AM241	0.830	0.040	0.766	0.013	1.080	0.06	A
1	CO 60	34.200	1.120	32.800	0.580	1.040	0.04	A
1	CS137	43.600	2.140	38.300	0.881	1.140	0.06	A
1	GA 1	2120.000	101.000	1850.000	185.000	1.150	0.13	A
1	GB 2	881.000	40.900	744.000	74.000	1.180	0.13	A
1	H 3	191.000	88.500	251.000	11.400	0.760	0.35	W
2		191.000	5.960	251.000	11.400	0.760	0.04	W
1	PU238	0.740	0.060	0.982	0.074	0.750	0.08	W
1	PU239	0.480	0.040	0.772	0.056	0.620	0.07	W
1	U BQ	0.260	0.010	0.559	0.047	0.470	0.04	W
1	U UG	0.000	0.000	0.022	0.003	0.000	0.00	N

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **SK** Savannah River Plant

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	22.600	0.800	33.300	3.300	0.680	0.07	W
1	CO 57	6.230	0.090	8.900	0.900	0.700	0.07	W
1	CO 60	27.700	0.900	29.500	2.900	0.940	0.10	A
1	CS134	16.800	0.300	14.700	1.460	1.140	0.12	W
1	CS137	5.070	0.040	6.640	0.700	0.760	0.08	W
1	MN 54	2.410	0.040	3.440	0.380	0.700	0.08	N
1	RU106	12.600	0.400	11.600	1.440	1.090	0.14	A
1	SB125	8.100	0.300	9.780	1.030	0.830	0.09	A
Matrix: SO								
1	CS137	443.000	13.000	359.000	10.000	1.230	0.05	A
1	K 40	525.000	17.000	465.000	30.000	1.130	0.08	A
Matrix: VE								
1	CO 60	66.500	5.100	59.700	0.963	1.110	0.09	A
1	CS137	1140.000	47.000	944.000	16.200	1.210	0.05	A
1	K 40	1120.000	25.000	1030.000	33.000	1.090	0.04	A
Matrix: WA								
1	CO 60	34.300	0.700	32.800	0.580	1.050	0.03	A
1	CS137	42.000	1.000	38.300	0.881	1.100	0.04	A
1	H 3	223.000	3.000	251.000	11.400	0.890	0.04	A
1	MN 54	41.300	1.400	38.400	1.160	1.080	0.05	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in μg /filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **SN** Sanford Cohen Associates, Inc., Montgomery, AL

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	PU238	0.079	0.009	0.096	0.002	0.820	0.10	A
1	PU239	0.087	0.010	0.093	0.003	0.940	0.11	A
1	U 234	0.071	0.010	0.052	0.002	1.370	0.20	A
1	U 238	0.068	0.009	0.053	0.002	1.280	0.18	A
Matrix: SO								
1	CS137	399.000	40.000	359.000	10.000	1.110	0.12	A
1	K 40	528.000	50.900	465.000	30.000	1.140	0.13	A
1	PU238	41.100	8.160	43.000	2.440	0.960	0.20	A
1	PU239	8.460	3.290	9.230	0.346	0.920	0.36	A
1	U 234	57.400	10.400	34.200	3.520	1.680	0.35	N
1	U 238	48.200	9.270	35.900	3.630	1.340	0.29	W
Matrix: VE								
1	CO 60	68.500	6.320	59.700	0.963	1.150	0.11	A
1	CS137	1110.000	111.000	944.000	16.200	1.180	0.12	A
1	K 40	1260.000	117.000	1030.000	33.000	1.220	0.12	W
1	PU239	8.150	2.420	9.820	1.220	0.830	0.27	A
Matrix: WA								
1	CO 60	32.400	2.950	32.800	0.580	0.990	0.09	A
1	CS137	38.000	3.420	38.300	0.881	0.990	0.09	A
1	MN 54	41.100	4.340	38.400	1.160	1.070	0.12	A
1	PU238	0.847	0.094	0.982	0.074	0.860	0.12	W
1	PU239	0.653	0.075	0.772	0.056	0.850	0.12	A
1	U 234	0.314	0.043	0.274	0.019	1.150	0.18	A
1	U 238	0.303	0.041	0.275	0.024	1.100	0.18	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **SR** Savannah River Plant

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.158	0.022	0.189	0.007	0.840	0.12	A
1	CE144	27.000	4.000	33.300	3.300	0.810	0.15	A
1	CO 57	7.600	0.600	8.900	0.900	0.850	0.11	A
1	CO 60	27.000	1.000	29.500	2.900	0.920	0.10	A
1	CS134	13.400	0.400	14.700	1.460	0.910	0.09	A
1	CS137	6.000	2.000	6.640	0.700	0.900	0.32	A
1	GA 1	1.800	0.130	1.620	0.150	1.110	0.13	A
1	GB 2	1.780	0.110	1.770	0.150	1.010	0.11	A
1	MN 54	3.000	1.000	3.440	0.380	0.870	0.31	A
1	PU238	0.085	0.014	0.096	0.002	0.880	0.15	A
1	PU239	0.094	0.016	0.093	0.003	1.010	0.18	A
1	RU106	16.000	11.000	11.600	1.440	1.380	0.96	W
1	SB125	9.700	0.500	9.780	1.030	0.990	0.12	A
1	SR 90	0.630	0.090	1.060	0.037	0.590	0.09	N
1	U 234	0.045	0.009	0.052	0.002	0.870	0.18	W
1	U 238	0.048	0.011	0.053	0.002	0.900	0.21	A
Matrix: SO								
1	CS137	395.000	23.000	359.000	10.000	1.100	0.07	A
1	K 40	502.000	60.000	465.000	30.000	1.080	0.15	A
1	PU238	42.600	7.200	43.000	2.440	0.990	0.18	A
1	PU239	9.290	1.930	9.230	0.346	1.010	0.21	A
1	SR 90	695.000	12.000	1340.000	113.000	0.520	0.04	N
Matrix: VE								
1	CO 60	66.000	6.000	59.700	0.963	1.110	0.10	A
1	CS137	85.000	44.000	944.000	16.200	0.090	0.05	N
1	K 40	166.000	24.000	1030.000	33.000	0.160	0.02	N
1	PU239	9.450	1.370	9.820	1.220	0.960	0.18	A
1	SR 90	806.000	35.000	1300.000	52.400	0.620	0.04	W
Matrix: WA								
1	AM241	0.832	0.116	0.766	0.013	1.090	0.15	A
1	CO 60	34.000	1.000	32.800	0.580	1.040	0.04	A
1	CS137	44.000	1.000	38.300	0.881	1.150	0.04	A
1	GA 1	1820.000	41.000	1850.000	185.000	0.980	0.10	A
1	GB 2	600.000	18.000	744.000	74.000	0.810	0.08	W
1	H 3	214.000	5.400	251.000	11.400	0.850	0.04	A
1	MN 54	44.000	1.000	38.400	1.160	1.150	0.04	W
1	PU238	1.040	0.140	0.982	0.074	1.060	0.16	A
1	PU239	0.810	0.120	0.772	0.056	1.050	0.17	A
1	SR 90	1.630	0.240	1.450	0.034	1.120	0.17	A
1	U 234	0.289	0.052	0.274	0.019	1.050	0.20	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **SR** Savannah River Plant

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
1	U 238	0.285	0.051	0.275	0.024	1.040	0.21	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in μg /filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **SS** Savannah River Tech Center

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	20.400	2.200	33.300	3.300	0.610	0.09	W
1	CO 57	5.740	0.940	8.900	0.900	0.650	0.12	W
1	CO 60	24.600	0.550	29.500	2.900	0.830	0.08	A
1	CS134	13.200	0.500	14.700	1.460	0.900	0.10	A
1	CS137	5.400	0.400	6.640	0.700	0.810	0.11	W
1	MN 54	3.000	0.400	3.440	0.380	0.870	0.15	A
1	RU106	9.500	3.400	11.600	1.440	0.820	0.31	A
1	SB125	7.900	0.700	9.780	1.030	0.810	0.11	A
Matrix: SO								
1	CS137	445.000	23.000	359.000	10.000	1.240	0.07	W
1	K 40	554.000	46.000	465.000	30.000	1.190	0.13	A
Matrix: VE								
1	CO 60	64.900	3.800	59.700	0.963	1.090	0.07	A
1	CS137	1100.000	48.000	944.000	16.200	1.170	0.05	A
1	K 40	1150.000	99.000	1030.000	33.000	1.120	0.10	A
Matrix: WA								
1	CO 60	33.600	1.900	32.800	0.580	1.020	0.06	A
1	CS137	41.800	1.800	38.300	0.881	1.090	0.05	A
1	MN 54	41.700	1.600	38.400	1.160	1.090	0.05	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in μg /filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **SV** Savannah Lab & Environmental Services, Inc., Tampa, FL

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
1	GA 1	2110.000	89.800	1850.000	185.000	1.140	0.12	A
2		1910.000	87.900	1850.000	185.000	1.030	0.11	A
1	GB 2	874.000	41.800	744.000	74.000	1.170	0.13	A
2		930.000	43.100	744.000	74.000	1.250	0.14	A
1	H 3	267.000	10.000	251.000	11.400	1.060	0.06	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **SW** Southwest Research Institute, San Antonio, TX

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.570	0.010	0.189	0.007	3.020	0.12	N
1	CE144	22.000	1.090	33.300	3.300	0.660	0.07	W
1	CO 57	6.510	0.220	8.900	0.900	0.730	0.08	A
1	CO 60	24.000	0.510	29.500	2.900	0.810	0.08	W
1	CS134	11.900	0.290	14.700	1.460	0.810	0.08	A
1	CS137	5.320	0.350	6.640	0.700	0.800	0.10	W
1	MN 54	2.540	0.350	3.440	0.380	0.740	0.13	N
1	PU238	0.090	0.010	0.096	0.002	0.940	0.11	A
1	PU239	0.070	0.010	0.093	0.003	0.760	0.11	W
1	RU106	10.400	2.570	11.600	1.440	0.900	0.25	A
1	SB125	8.510	0.560	9.780	1.030	0.870	0.11	A
1	SR 90	1.030	0.110	1.060	0.037	0.970	0.11	A
1	U UG	5.450	0.960	4.310	0.100	1.270	0.23	W
Matrix: SO								
1	AM241	5.700	1.850	3.690	0.454	1.550	0.54	W
1	CS137	483.000	14.300	359.000	10.000	1.350	0.05	W
1	K 40	848.000	121.000	465.000	30.000	1.820	0.29	N
1	U UG	2.300	0.290	2.900	0.290	0.790	0.13	A
Matrix: VE								
1	AM241	10.300	3.340	5.600	0.184	1.840	0.60	W
1	CM244	4.740	2.070	4.440	0.202	1.070	0.47	A
1	CO 60	58.100	4.750	59.700	0.963	0.970	0.08	A
1	CS137	868.000	14.700	944.000	16.200	0.920	0.02	A
1	K 40	1030.000	129.000	1030.000	33.000	1.000	0.13	A
1	PU239	16.900	1.840	9.820	1.220	1.720	0.28	W
1	SR 90	1320.000	15.300	1300.000	52.400	1.020	0.04	A
Matrix: WA								
1	AM241	2.950	0.270	0.766	0.013	3.850	0.36	N
1	CO 60	31.800	0.570	32.800	0.580	0.970	0.02	A
1	CS137	39.500	0.750	38.300	0.881	1.030	0.03	A
1	H 3	290.000	8.640	251.000	11.400	1.160	0.06	A
1	MN 54	39.900	0.760	38.400	1.160	1.040	0.04	A
1	SR 90	1.650	0.220	1.450	0.034	1.140	0.15	A
1	U UG	2.040	0.230	0.022	0.003	*,***	14.90	N

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **TE** Teledyne Isotopes Midwest Lab, Northbrook, IL

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.270	0.040	0.189	0.007	1.430	0.22	W
1	CE144	23.200	1.020	33.300	3.300	0.700	0.08	A
1	CO 57	6.050	0.130	8.900	0.900	0.680	0.07	W
1	CO 60	26.500	0.430	29.500	2.900	0.900	0.09	A
1	CS134	12.900	0.280	14.700	1.460	0.880	0.09	A
1	CS137	6.200	0.900	6.640	0.700	0.930	0.17	A
1	GA 1	2.210	0.050	1.620	0.150	1.360	0.13	W
1	GB 2	1.950	0.040	1.770	0.150	1.100	0.10	A
1	MN 54	3.270	0.350	3.440	0.380	0.950	0.15	A
1	PU238	0.080	0.020	0.096	0.002	0.830	0.21	A
1	PU239	0.090	0.020	0.093	0.003	0.970	0.22	A
1	RU106	10.200	1.850	11.600	1.440	0.880	0.19	A
1	SB125	10.100	0.750	9.780	1.030	1.030	0.13	A
1	SR 90	1.070	0.230	1.060	0.037	1.010	0.22	A
1	U BQ	0.118	0.020	0.107	0.003	1.100	0.19	A
Matrix: SO								
1	AM241	6.230	2.880	3.690	0.454	1.690	0.81	W
1	CS137	405.000	4.150	359.000	10.000	1.130	0.03	A
1	K 40	525.000	23.300	465.000	30.000	1.130	0.09	A
1	PU238	42.300	1.590	43.000	2.440	0.980	0.07	A
1	PU239	9.000	0.700	9.230	0.346	0.980	0.08	A
1	SR 90	1200.000	32.300	1340.000	113.000	0.900	0.08	A
1	U BQ	68.200	2.400	71.700	4.150	0.950	0.06	A
Matrix: VE								
1	AM241	6.100	1.300	5.600	0.184	1.090	0.24	A
1	CM244	6.000	1.200	4.440	0.202	1.350	0.28	A
1	CO 60	65.600	4.000	59.700	0.963	1.100	0.07	A
1	CS137	1100.000	12.600	944.000	16.200	1.170	0.02	A
1	K 40	1190.000	61.600	1030.000	33.000	1.160	0.07	A
1	PU239	9.200	1.300	9.820	1.220	0.940	0.18	A
1	SR 90	1210.000	32.200	1300.000	52.400	0.930	0.05	A
Matrix: WA								
1	AM241	0.800	0.100	0.766	0.013	1.040	0.13	A
1	CO 60	33.600	1.000	32.800	0.580	1.020	0.04	A
1	CS137	42.800	1.300	38.300	0.881	1.120	0.04	A
1	FE 55	109.000	21.700	83.000	3.440	1.310	0.27	W
1	GA 1	2180.000	53.500	1850.000	185.000	1.180	0.12	A
1	GB 2	872.000	27.000	744.000	74.000	1.170	0.12	A
1	H 3	434.000	34.100	251.000	11.400	1.730	0.16	W
1	MN 54	41.900	1.400	38.400	1.160	1.090	0.05	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **TE** Teledyne Isotopes Midwest Lab, Northbrook, IL

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
1	PU238	0.900	0.100	0.982	0.074	0.920	0.12	A
1	PU239	0.700	0.100	0.772	0.056	0.910	0.15	A
1	SR 90	2.200	0.700	1.450	0.034	1.520	0.48	W
1	U BQ	0.600	0.100	0.559	0.047	1.070	0.20	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in μg /filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **TI** Teledyne Brown Engineering Environmental Services, Westwood, NJ

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.210	0.040	0.189	0.007	1.110	0.22	A
1	CE144	23.000	2.000	33.300	3.300	0.690	0.09	A
1	CO 57	6.700	0.700	8.900	0.900	0.750	0.11	A
1	CO 60	25.000	3.000	29.500	2.900	0.850	0.13	A
1	CS134	12.000	1.000	14.700	1.460	0.820	0.11	A
1	CS137	6.100	0.600	6.640	0.700	0.920	0.13	A
1	GA 1	2.400	0.100	1.620	0.150	1.480	0.15	W
1	GB 2	2.200	0.100	1.770	0.150	1.240	0.12	A
1	MN 54	3.100	0.300	3.440	0.380	0.900	0.13	A
1	PU238	0.098	0.030	0.096	0.002	1.020	0.31	A
1	PU239	0.120	0.030	0.093	0.003	1.290	0.33	W
1	RU106	10.000	1.000	11.600	1.440	0.860	0.14	A
1	SB125	9.100	0.900	9.780	1.030	0.930	0.13	A
1	SR 90	0.990	0.080	1.060	0.037	0.930	0.08	A
1	U 234	0.067	0.027	0.052	0.002	1.300	0.52	A
1	U 238	0.048	0.023	0.053	0.002	0.900	0.43	A
1	U UG	8.800	1.300	4.310	0.100	2.040	0.31	N
Matrix: SO								
1	AM241	5.000	2.100	3.690	0.454	1.360	0.59	A
1	CS137	430.000	40.000	359.000	10.000	1.200	0.12	A
1	K 40	540.000	50.000	465.000	30.000	1.160	0.13	A
1	PU238	44.000	6.000	43.000	2.440	1.020	0.15	A
1	PU239	11.000	2.000	9.230	0.346	1.190	0.22	A
1	SR 90	1300.000	100.000	1340.000	113.000	0.970	0.11	A
1	U 234	28.000	8.000	34.200	3.520	0.820	0.25	A
1	U 238	35.000	9.000	35.900	3.630	0.980	0.27	A
1	U UG	2.500	0.400	2.900	0.290	0.860	0.16	A
Matrix: VE								
1	AM241	3.300	1.000	5.600	0.184	0.590	0.18	W
1	CM244	4.300	1.200	4.440	0.202	0.970	0.27	A
1	CO 60	68.000	7.000	59.700	0.963	1.140	0.12	A
1	CS137	1200.000	100.000	944.000	16.200	1.270	0.11	W
1	K 40	1200.000	100.000	1030.000	33.000	1.170	0.10	A
1	PU239	6.700	1.100	9.820	1.220	0.680	0.14	W
1	SR 90	1400.000	100.000	1300.000	52.400	1.080	0.09	A
Matrix: WA								
1	AM241	0.770	0.160	0.766	0.013	1.010	0.21	A
1	CO 60	31.000	3.000	32.800	0.580	0.950	0.09	A
1	CS137	42.000	4.000	38.300	0.881	1.100	0.11	A
1	FE 55	110.000	20.000	83.000	3.440	1.330	0.25	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **TI** Teledyne Brown Engineering Environmental Services, Westwood, NJ

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
1	GA 1	1900.000	100.000	1850.000	185.000	1.030	0.12	A
1	GB 2	530.000	50.000	744.000	74.000	0.710	0.10	N
1	H 3	210.000	10.000	251.000	11.400	0.840	0.06	A
1	MN 54	41.000	4.000	38.400	1.160	1.070	0.11	A
1	PU238	0.970	0.170	0.982	0.074	0.990	0.19	A
1	PU239	0.810	0.150	0.772	0.056	1.050	0.21	A
1	SR 90	1.600	0.300	1.450	0.034	1.100	0.21	A
1	U 234	0.520	0.280	0.274	0.019	1.900	1.03	N
1	U 238	1.300	0.500	0.275	0.024	4.730	1.87	N
1	U UG	0.040	0.000	0.022	0.003	1.800	0.21	N

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **TM** TMA/Eberline-Albuquerque Lab, NM

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.214	0.009	0.189	0.007	1.130	0.06	A
1	CE144	25.700	0.898	33.300	3.300	0.770	0.08	A
1	CO 57	7.340	0.237	8.900	0.900	0.830	0.09	A
1	CO 60	26.600	0.830	29.500	2.900	0.900	0.09	A
1	CS134	13.800	0.435	14.700	1.460	0.940	0.10	A
1	CS137	6.020	0.360	6.640	0.700	0.910	0.11	A
1	GA 1	2.700	0.300	1.620	0.150	1.670	0.24	N
1	GB 2	1.540	0.118	1.770	0.150	0.870	0.10	W
1	MN 54	2.790	0.188	3.440	0.380	0.810	0.11	W
1	PU238	0.093	0.005	0.096	0.002	0.970	0.05	A
1	PU239	0.092	0.005	0.093	0.003	0.990	0.06	A
1	RU106	11.400	1.130	11.600	1.440	0.980	0.16	A
1	SB125	9.660	0.475	9.780	1.030	0.990	0.12	A
1	SR 90	1.220	0.100	1.060	0.037	1.150	0.10	A
1	U 234	0.061	0.004	0.052	0.002	1.170	0.08	A
1	U 238	0.061	0.003	0.053	0.002	1.140	0.08	A
1	U UG	4.920	0.059	4.310	0.100	1.140	0.03	A
Matrix: SO								
1	AM241	3.480	0.259	3.690	0.454	0.940	0.14	A
1	CS137	413.000	13.300	359.000	10.000	1.150	0.05	A
1	K 40	439.000	47.000	465.000	30.000	0.940	0.12	A
1	PU238	42.800	2.360	43.000	2.440	1.000	0.08	A
1	PU239	8.530	0.888	9.230	0.346	0.920	0.10	A
1	SR 90	887.000	136.000	1340.000	113.000	0.660	0.12	W
1	U 234	35.000	1.880	34.200	3.520	1.020	0.12	A
1	U 238	35.100	1.880	35.900	3.630	0.980	0.11	A
1	U UG	2.620	0.142	2.900	0.290	0.900	0.10	A
Matrix: VE								
1	AM241	6.700	0.506	5.600	0.184	1.200	0.10	A
1	CM244	5.490	0.754	4.440	0.202	1.240	0.18	A
1	CO 60	66.500	6.060	59.700	0.963	1.110	0.10	A
1	CS137	1190.000	36.200	944.000	16.200	1.260	0.04	W
1	K 40	1180.000	77.300	1030.000	33.000	1.150	0.08	A
1	PU239	8.810	0.638	9.820	1.220	0.900	0.13	A
1	SR 90	1370.000	167.000	1300.000	52.400	1.050	0.14	A
Matrix: WA								
1	AM241	0.855	0.420	0.766	0.013	1.120	0.55	A
1	CO 60	34.300	1.250	32.800	0.580	1.050	0.04	A
1	CS137	44.800	1.820	38.300	0.881	1.170	0.05	W
1	GA 1	1950.000	218.000	1850.000	185.000	1.050	0.16	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **TM** TMA/Eberline-Albuquerque Lab, NM

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
1	GB 2	877.000	69.200	744.000	74.000	1.180	0.15	A
1	H 3	206.000	10.900	251.000	11.400	0.820	0.06	W
1	MN 54	44.200	1.490	38.400	1.160	1.150	0.05	W
1	PU238	0.984	0.043	0.982	0.074	1.000	0.09	A
1	PU239	0.761	0.035	0.772	0.056	0.990	0.08	A
1	SR 90	1.450	0.142	1.450	0.034	1.000	0.10	A
1	U 234	0.311	0.026	0.274	0.019	1.140	0.12	A
1	U 238	0.259	0.024	0.275	0.024	0.940	0.12	A
1	U UG	0.025	0.001	0.022	0.003	1.130	0.14	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: TN TMA/NORCAL, Richmond, CA

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.181	0.012	0.189	0.007	0.960	0.07	A
1	CE144	22.900	1.070	33.300	3.300	0.690	0.08	A
1	CO 57	6.800	0.286	8.900	0.900	0.760	0.08	A
1	CO 60	25.400	0.864	29.500	2.900	0.860	0.09	A
1	CS134	14.300	1.340	14.700	1.460	0.970	0.13	A
1	CS137	5.530	0.498	6.640	0.700	0.830	0.12	W
1	GA 1	2.010	0.033	1.620	0.150	1.240	0.12	A
1	GB 2	1.920	0.032	1.770	0.150	1.090	0.09	A
1	MN 54	3.020	0.520	3.440	0.380	0.880	0.18	A
1	PU238	0.095	0.008	0.096	0.002	0.990	0.09	A
1	PU239	0.089	0.008	0.093	0.003	0.960	0.09	A
1	RU106	11.700	3.190	11.600	1.440	1.010	0.30	A
1	SB125	8.230	1.150	9.780	1.030	0.840	0.15	A
1	SR 90	1.060	0.061	1.060	0.037	1.000	0.07	A
1	U 234	0.061	0.008	0.052	0.002	1.180	0.16	A
1	U 238	0.054	0.008	0.053	0.002	1.020	0.16	A
1	U UG	4.560	1.190	4.310	0.100	1.060	0.28	A
Matrix: SO								
1	AM241	3.060	0.358	3.690	0.454	0.830	0.14	A
1	CS137	314.000	44.000	359.000	10.000	0.880	0.13	A
1	K 40	404.000	31.600	465.000	30.000	0.870	0.09	A
1	PU238	43.200	2.500	43.000	2.440	1.010	0.08	A
1	PU239	9.230	0.762	9.230	0.346	1.000	0.09	A
1	SR 90	1360.000	46.600	1340.000	113.000	1.020	0.09	A
1	U 234	37.800	2.080	34.200	3.520	1.110	0.13	W
1	U 238	38.800	2.030	35.900	3.630	1.080	0.12	A
1	U UG	3.180	0.817	2.900	0.290	1.100	0.30	A
Matrix: VE								
1	AM241	5.930	0.479	5.600	0.184	1.060	0.09	A
1	CM244	4.900	0.582	4.440	0.202	1.100	0.14	A
1	CO 60	48.700	3.990	59.700	0.963	0.820	0.07	A
1	CS137	847.000	10.200	944.000	16.200	0.900	0.02	W
1	K 40	884.000	44.200	1030.000	33.000	0.860	0.05	A
1	PU239	9.580	0.700	9.820	1.220	0.980	0.14	A
1	SR 90	1430.000	47.400	1300.000	52.400	1.100	0.06	A
Matrix: WA								
1	AM241	0.731	0.037	0.766	0.013	0.950	0.05	A
1	CO 60	35.600	1.990	32.800	0.580	1.090	0.06	A
1	CS137	44.300	2.040	38.300	0.881	1.160	0.06	W
1	FE 55	94.700	3.440	83.000	3.440	1.140	0.06	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **TN** **TMA/NORCAL, Richmond, CA**

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
1	GA 1	2020.000	40.400	1850.000	185.000	1.090	0.11	A
1	GB 2	590.000	15.200	744.000	74.000	0.790	0.08	W
2		590.000	15.200	744.000	74.000	0.790	0.08	W
1	H 3	221.000	17.000	251.000	11.400	0.880	0.08	A
1	MN 54	45.100	2.160	38.400	1.160	1.170	0.07	W
1	PU238	0.942	0.045	0.982	0.074	0.960	0.09	A
1	PU239	0.770	0.038	0.772	0.056	1.000	0.09	A
1	SR 90	1.620	0.093	1.450	0.034	1.120	0.07	A
1	U 234	0.289	0.022	0.274	0.019	1.050	0.11	A
1	U 238	0.299	0.022	0.275	0.024	1.090	0.13	A
1	U UG	0.013	0.004	0.022	0.003	0.570	0.18	N

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **TO** TMA/Eberline Oak Ridge Laboratory

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.215	0.126	0.189	0.007	1.140	0.67	A
1	CE144	29.600	2.530	33.300	3.300	0.890	0.12	A
1	CO 57	7.990	0.461	8.900	0.900	0.900	0.11	A
1	CO 60	27.800	1.270	29.500	2.900	0.940	0.10	A
1	CS134	15.700	0.448	14.700	1.460	1.070	0.11	A
1	CS137	6.030	0.490	6.640	0.700	0.910	0.12	A
1	GA 1	2.090	0.060	1.620	0.150	1.290	0.13	A
1	GB 2	1.560	0.050	1.770	0.150	0.880	0.08	W
1	MN 54	3.180	0.593	3.440	0.380	0.920	0.20	A
1	PU238	0.104	0.036	0.096	0.002	1.080	0.38	A
1	PU239	0.110	0.037	0.093	0.003	1.190	0.40	W
1	RU106	11.400	3.570	11.600	1.440	0.980	0.33	A
1	SB125	9.650	1.010	9.780	1.030	0.990	0.15	A
1	SR 90	1.080	0.081	1.060	0.037	1.020	0.08	A
1	U 234	0.049	0.003	0.052	0.002	0.950	0.06	A
1	U 238	0.048	0.005	0.053	0.002	0.910	0.10	A
1	U UG	3.980	0.251	4.310	0.100	0.920	0.06	A
Matrix: SO								
1	AM241	3.230	2.210	3.690	0.454	0.880	0.61	A
1	CS137	405.000	7.590	359.000	10.000	1.130	0.04	A
1	K 40	411.000	32.900	465.000	30.000	0.880	0.09	A
1	PU238	43.800	13.700	43.000	2.440	1.020	0.32	A
1	PU239	9.220	3.590	9.230	0.346	1.000	0.39	A
1	SR 90	983.000	41.700	1340.000	113.000	0.730	0.07	W
1	U 234	38.700	0.907	34.200	3.520	1.130	0.12	W
1	U 238	38.300	0.889	35.900	3.630	1.070	0.11	A
1	U UG	3.160	0.073	2.900	0.290	1.090	0.11	A
Matrix: VE								
1	AM241	5.970	0.288	5.600	0.184	1.070	0.06	A
1	CM244	2.250	0.222	4.440	0.202	0.510	0.06	W
1	CO 60	66.600	3.900	59.700	0.963	1.120	0.07	A
1	CS137	1090.000	16.100	944.000	16.200	1.160	0.03	A
1	K 40	1050.000	59.700	1030.000	33.000	1.020	0.07	A
1	PU239	9.830	3.480	9.820	1.220	1.000	0.38	A
1	SR 90	1370.000	45.900	1300.000	52.400	1.050	0.06	A
Matrix: WA								
1	AM241	1.710	0.343	0.766	0.013	2.230	0.45	N
1	CO 60	30.700	0.693	32.800	0.580	0.940	0.03	W
1	CS137	39.500	0.953	38.300	0.881	1.030	0.03	A
1	GA 1	1870.000	45.100	1850.000	185.000	1.010	0.10	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **TO** TMA/Eberline Oak Ridge Laboratory

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
1	GB 2	903.000	25.200	744.000	74.000	1.210	0.13	A
1	H 3	219.000	42.200	251.000	11.400	0.870	0.17	A
1	MN 54	40.100	1.070	38.400	1.160	1.040	0.04	A
1	PU238	1.010	0.332	0.982	0.074	1.030	0.35	A
1	PU239	0.746	0.255	0.772	0.056	0.970	0.34	A
1	SR 90	1.450	0.247	1.450	0.034	1.000	0.17	A
1	U 234	0.257	0.024	0.274	0.019	0.940	0.11	A
1	U 238	0.262	0.024	0.275	0.024	0.950	0.12	A
1	U UG	0.021	0.001	0.022	0.003	0.950	0.12	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: TW Taiwan Radiation Monitoring Center

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.175	0.009	0.189	0.007	0.930	0.06	A
1	CE144	24.000	0.700	33.300	3.300	0.720	0.07	A
1	CO 57	7.400	0.100	8.900	0.900	0.830	0.08	A
1	CO 60	27.000	0.500	29.500	2.900	0.920	0.09	A
1	CS134	12.000	0.100	14.700	1.460	0.820	0.08	A
1	CS137	6.200	0.200	6.640	0.700	0.930	0.10	A
1	GA 1	2.230	0.060	1.620	0.150	1.380	0.13	W
1	GB 2	1.790	0.040	1.770	0.150	1.010	0.09	A
1	MN 54	3.150	0.090	3.440	0.380	0.920	0.10	A
1	PU238	0.095	0.008	0.096	0.002	0.990	0.09	A
1	PU239	0.086	0.008	0.093	0.003	0.930	0.09	A
1	RU106	10.000	0.400	11.600	1.440	0.860	0.11	A
1	SB125	9.300	0.200	9.780	1.030	0.950	0.10	A
1	SR 90	0.900	0.040	1.060	0.037	0.850	0.05	A
1	U BQ	0.430	0.020	0.107	0.003	4.020	0.21	N
1	U UG	17.400	0.900	4.310	0.100	4.040	0.23	N
Matrix: SO								
1	AM241	3.300	0.300	3.690	0.454	0.890	0.14	A
1	CS137	360.000	11.000	359.000	10.000	1.000	0.04	A
1	K 40	470.000	19.000	465.000	30.000	1.010	0.08	A
1	PU238	39.000	2.000	43.000	2.440	0.910	0.07	A
1	PU239	8.500	0.700	9.230	0.346	0.920	0.08	A
1	SR 90	909.000	9.000	1340.000	113.000	0.680	0.06	W
1	U BQ	52.600	0.900	71.700	4.150	0.730	0.04	A
1	U UG	2.110	0.040	2.900	0.290	0.730	0.07	A
Matrix: VE								
1	AM241	5.800	0.200	5.600	0.184	1.040	0.05	A
1	CM244	4.000	0.100	4.440	0.202	0.900	0.05	A
1	CO 60	62.000	1.000	59.700	0.963	1.040	0.02	A
1	CS137	1010.000	30.000	944.000	16.200	1.070	0.04	A
1	K 40	1070.000	43.000	1030.000	33.000	1.040	0.05	A
1	PU239	8.400	0.400	9.820	1.220	0.860	0.11	A
1	SR 90	930.000	10.000	1300.000	52.400	0.720	0.03	A
Matrix: WA								
1	AM241	0.740	0.020	0.766	0.013	0.970	0.03	A
1	CO 60	32.000	0.600	32.800	0.580	0.980	0.03	A
1	CS137	40.000	2.000	38.300	0.881	1.040	0.06	A
1	GA 1	1270.000	46.000	1850.000	185.000	0.690	0.07	W
1	GB 2	610.000	25.000	744.000	74.000	0.820	0.09	W
1	H 3	186.000	1.000	251.000	11.400	0.740	0.03	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: TW Taiwan Radiation Monitoring Center

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
1	MN 54	40.000	0.800	38.400	1.160	1.040	0.04	A
1	PU238	0.930	0.070	0.982	0.074	0.950	0.10	A
1	PU239	0.580	0.060	0.772	0.056	0.750	0.09	W
1	SR 90	1.300	0.100	1.450	0.034	0.900	0.07	A
1	U BQ	1.690	0.080	0.559	0.047	3.020	0.29	N
1	U UG	0.068	0.003	0.022	0.003	3.060	0.38	N

Units for matrices: AI=Bq/filter SD=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: TX Texas Dept. of Health/Laboratories, Austin

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.194	0.014	0.189	0.007	1.030	0.08	A
1	CE144	22.900	0.200	33.300	3.300	0.690	0.07	A
1	CO 57	6.120	0.040	8.900	0.900	0.690	0.07	W
1	CO 60	24.000	0.200	29.500	2.900	0.810	0.08	W
1	CS134	11.800	0.200	14.700	1.460	0.800	0.08	A
1	CS137	5.350	0.080	6.640	0.700	0.810	0.09	W
1	MN 54	3.170	0.110	3.440	0.380	0.920	0.11	A
1	PU238	0.103	0.007	0.096	0.002	1.070	0.08	A
1	PU239	0.105	0.007	0.093	0.003	1.130	0.08	A
1	RU106	8.190	0.490	11.600	1.440	0.710	0.10	A
1	SB125	7.460	0.190	9.780	1.030	0.760	0.08	A
1	U 234	0.072	0.006	0.052	0.002	1.390	0.12	W
1	U 238	0.068	0.004	0.053	0.002	1.280	0.09	A
Matrix: SO								
1	AM241	5.920	0.930	3.690	0.454	1.600	0.32	W
1	CS137	393.000	4.000	359.000	10.000	1.100	0.03	A
1	K 40	505.000	11.000	465.000	30.000	1.090	0.07	A
1	PU238	42.900	2.600	43.000	2.440	1.000	0.08	A
1	PU239	10.300	0.900	9.230	0.346	1.120	0.11	A
1	SR 90	1340.000	52.000	1340.000	113.000	1.000	0.09	A
1	U 234	40.700	3.000	34.200	3.520	1.190	0.15	W
1	U 238	41.600	3.000	35.900	3.630	1.160	0.14	W
Matrix: VE								
1	AM241	6.660	0.370	5.600	0.184	1.190	0.08	A
1	CO 60	73.300	2.200	59.700	0.963	1.230	0.04	A
1	CS137	1260.000	8.000	944.000	16.200	1.340	0.02	W
1	K 40	1350.000	26.000	1030.000	33.000	1.310	0.05	W
1	PU239	10.300	0.600	9.820	1.220	1.050	0.14	A
1	SR 90	1310.000	60.000	1300.000	52.400	1.010	0.06	A
Matrix: WA								
1	AM241	1.000	0.093	0.766	0.013	1.310	0.12	W
1	CO 60	37.600	0.700	32.800	0.580	1.150	0.03	W
1	CS137	47.400	0.700	38.300	0.881	1.240	0.03	W
1	H 3	209.000	11.000	251.000	11.400	0.830	0.06	W
1	MN 54	48.300	0.800	38.400	1.160	1.260	0.04	N
1	PU238	0.970	0.071	0.982	0.074	0.990	0.10	A
1	PU239	0.840	0.069	0.772	0.056	1.090	0.12	A
1	SR 90	1.920	0.620	1.450	0.034	1.320	0.43	W
1	U 234	0.440	0.026	0.274	0.019	1.610	0.15	N
1	U 238	0.440	0.026	0.275	0.024	1.600	0.17	N

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **TY** Scientific Production Association, Russia

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	19.200	0.800	33.300	3.300	0.580	0.06	N
1	CO 57	4.300	0.400	8.900	0.900	0.480	0.07	N
1	CO 60	18.500	0.600	29.500	2.900	0.630	0.06	N
1	CS134	10.200	0.300	14.700	1.460	0.690	0.07	N
1	CS137	5.300	0.300	6.640	0.700	0.800	0.10	W
1	MN 54	2.700	0.200	3.440	0.380	0.790	0.10	W
1	RU106	8.600	0.700	11.600	1.440	0.740	0.11	A
1	SB125	8.200	0.500	9.780	1.030	0.840	0.10	A
Matrix: SO								
1	CS137	359.000	4.000	359.000	10.000	1.000	0.03	A
1	K 40	478.000	15.000	465.000	30.000	1.030	0.07	A
1	U 238	106.000	20.000	35.900	3.630	2.950	0.63	N
Matrix: VE								
1	CO 60	56.000	3.000	59.700	0.963	0.940	0.05	A
1	CS137	978.000	10.000	944.000	16.200	1.040	0.02	A
1	K 40	1120.000	50.000	1030.000	33.000	1.090	0.06	A
1	PU239	8.700	1.400	9.820	1.220	0.890	0.18	A
1	SR 90	1500.000	320.000	1300.000	52.400	1.150	0.25	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **UC** Lockheed Martin, Paducah, KY

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CO 60	25.100	0.130	29.500	2.900	0.850	0.08	A
1	CS137	6.960	0.310	6.640	0.700	1.050	0.12	A
1	GA 1	1.690	0.090	1.620	0.150	1.040	0.11	A
1	GB 2	1.640	0.060	1.770	0.150	0.930	0.09	A
Matrix: SO								
1	CS137	404.000	17.900	359.000	10.000	1.130	0.06	A
1	K 40	552.000	24.900	465.000	30.000	1.190	0.09	A
Matrix: VE								
1	CO 60	66.200	2.370	59.700	0.963	1.110	0.04	A
1	CS137	1160.000	77.200	944.000	16.200	1.230	0.08	A
1	K 40	1210.000	60.200	1030.000	33.000	1.170	0.07	A
Matrix: WA								
1	CO 60	35.100	0.700	32.800	0.580	1.070	0.03	A
1	CS137	41.500	1.690	38.300	0.881	1.080	0.05	A
1	GA 1	1970.000	92.000	1850.000	185.000	1.070	0.12	A
1	GB 2	634.000	28.000	744.000	74.000	0.850	0.09	W
1	PU239	0.780	0.110	0.772	0.056	1.010	0.16	A
1	U UG	0.024	0.002	0.022	0.003	1.080	0.17	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **UK** Lockheed Martin Energy Systems, Oak Ridge

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.208	0.030	0.189	0.007	1.100	0.16	A
1	CE144	21.800	0.720	33.300	3.300	0.660	0.07	W
1	CO 57	6.380	0.130	8.900	0.900	0.720	0.07	A
1	CO 60	24.900	0.370	29.500	2.900	0.840	0.08	A
1	CS134	12.500	0.220	14.700	1.460	0.850	0.09	A
1	CS137	5.190	0.260	6.640	0.700	0.780	0.09	W
1	MN 54	2.770	0.270	3.440	0.380	0.810	0.12	W
1	PU238	0.103	0.032	0.096	0.002	1.070	0.33	A
1	PU239	0.111	0.033	0.093	0.003	1.200	0.36	W
1	U BQ	0.184	0.039	0.107	0.003	1.720	0.37	W
Matrix: SO								
1	AM241	10.100	0.810	3.690	0.454	2.740	0.40	N
1	CS137	375.000	2.600	359.000	10.000	1.040	0.03	A
1	K 40	506.000	15.000	465.000	30.000	1.090	0.08	A
1	PU238	36.900	2.200	43.000	2.440	0.860	0.07	A
1	PU239	7.110	0.980	9.230	0.346	0.770	0.11	W
1	U BQ	48.000	4.100	71.700	4.150	0.670	0.07	A
Matrix: WA								
1	AM241	0.835	0.091	0.766	0.013	1.090	0.12	A
1	CO 60	36.100	0.760	32.800	0.580	1.100	0.03	A
1	CS137	43.200	0.990	38.300	0.881	1.130	0.04	A
1	MN 54	48.100	1.100	38.400	1.160	1.250	0.05	N
1	PU238	0.921	0.100	0.982	0.074	0.940	0.12	A
1	PU239	0.762	0.092	0.772	0.056	0.990	0.14	A
1	U BQ	0.595	0.100	0.559	0.047	1.060	0.20	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in μg /filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **UP** Lockheed Martin Energy Systems, Y-12 Plant, Oak Ridge

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.252	0.056	0.189	0.007	1.330	0.30	W
1	CE144	21.400	3.060	33.300	3.300	0.640	0.11	W
1	CO 57	6.310	0.344	8.900	0.900	0.710	0.08	W
1	CO 60	24.800	0.629	29.500	2.900	0.840	0.09	A
1	CS134	12.700	0.807	14.700	1.460	0.860	0.10	A
1	CS137	5.420	0.457	6.640	0.700	0.820	0.11	W
1	GA 1	1.600	0.000	1.620	0.150	0.990	0.09	A
1	GB 2	1.820	0.000	1.770	0.150	1.030	0.09	A
1	MN 54	2.760	0.342	3.440	0.380	0.800	0.13	W
1	PU238	0.136	0.035	0.096	0.002	1.410	0.37	W
1	PU239	0.085	0.026	0.093	0.003	0.920	0.29	A
1	RU106	6.720	1.990	11.600	1.440	0.580	0.19	W
1	SB125	4.740	0.757	9.780	1.030	0.490	0.09	W
1	SR 90	0.881	0.252	1.060	0.037	0.830	0.24	A
1	U 234	0.137	0.040	0.052	0.002	2.650	0.78	N
1	U 238	0.078	0.028	0.053	0.002	1.460	0.53	W
1	U BQ	0.215	0.049	0.107	0.003	2.010	0.46	W
Matrix: SO								
1	CS137	325.000	34.900	359.000	10.000	0.910	0.10	A
1	PU238	41.400	6.020	43.000	2.440	0.960	0.15	A
1	PU239	8.450	1.590	9.230	0.346	0.920	0.18	A
1	SR 90	1100.000	149.000	1340.000	113.000	0.820	0.13	A
1	U 234	36.800	6.160	34.200	3.520	1.080	0.21	W
1	U 238	37.100	6.220	35.900	3.630	1.030	0.20	A
1	U UG	2.710	0.000	2.900	0.290	0.930	0.09	A
Matrix: WA								
1	AM241	0.908	0.178	0.766	0.013	1.180	0.23	A
1	CO 60	33.600	1.180	32.800	0.580	1.020	0.04	A
1	CS137	43.600	3.020	38.300	0.881	1.140	0.08	A
1	GA 1	1490.000	108.000	1850.000	185.000	0.810	0.10	A
1	GB 2	700.000	67.200	744.000	74.000	0.940	0.13	A
1	H 3	227.000	15.400	251.000	11.400	0.900	0.07	A
1	MN 54	43.300	3.290	38.400	1.160	1.130	0.09	A
1	PU238	0.992	0.205	0.982	0.074	1.010	0.22	A
1	PU239	0.767	0.166	0.772	0.056	0.990	0.23	A
1	SR 90	1.190	0.670	1.450	0.034	0.820	0.46	W
1	U 234	0.349	0.113	0.274	0.019	1.270	0.42	W
1	U 238	0.303	0.157	0.275	0.024	1.100	0.58	A
1	U UG	0.024	0.000	0.022	0.003	1.080	0.13	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: UY Lockheed Martin Energy Systems, Y-12 Plant, Oak Ridge

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.270	0.060	0.189	0.007	1.430	0.32	W
1	CE144	25.300	0.950	33.300	3.300	0.760	0.08	A
1	CO 57	7.200	0.200	8.900	0.900	0.810	0.08	A
1	CO 60	27.000	1.700	29.500	2.900	0.920	0.11	A
1	CS134	14.300	0.510	14.700	1.460	0.970	0.10	A
1	CS137	5.800	0.410	6.640	0.700	0.870	0.11	A
1	GA 1	1.950	0.000	1.620	0.150	1.200	0.11	A
1	GB 2	2.150	0.000	1.770	0.150	1.220	0.10	A
1	MN 54	3.200	0.320	3.440	0.380	0.930	0.14	A
1	PU238	0.100	0.024	0.096	0.002	1.040	0.25	A
1	PU239	0.094	0.023	0.093	0.003	1.010	0.25	A
1	RU106	11.300	1.900	11.600	1.440	0.970	0.20	A
1	SB125	9.530	0.560	9.780	1.030	0.970	0.12	A
1	SR 90	1.120	0.200	1.060	0.037	1.060	0.19	A
1	U 234	0.095	0.030	0.052	0.002	1.840	0.58	W
1	U 238	0.076	0.027	0.053	0.002	1.430	0.51	W

Matrix: SO								
1	CS137	377.000	40.000	359.000	10.000	1.050	0.12	A
1	K 40	544.000	136.000	465.000	30.000	1.170	0.30	A
1	PU238	49.600	10.000	43.000	2.440	1.150	0.24	A
1	PU239	11.000	3.500	9.230	0.346	1.190	0.38	A
1	SR 90	1140.000	300.000	1340.000	113.000	0.850	0.24	A
1	U 234	37.000	9.000	34.200	3.520	1.080	0.29	W
1	U 238	36.000	9.100	35.900	3.630	1.000	0.27	A
1	U UG	2.810	0.000	2.900	0.290	0.970	0.10	A

Matrix: WA								
1	AM241	1.300	0.230	0.766	0.013	1.700	0.30	N
1	CO 60	32.000	2.500	32.800	0.580	0.980	0.08	A
1	CS137	37.700	2.900	38.300	0.881	0.980	0.08	A
1	GA 1	1690.000	219.000	1850.000	185.000	0.910	0.15	A
1	GB 2	794.000	112.000	744.000	74.000	1.070	0.18	A
1	H 3	161.000	23.000	251.000	11.400	0.640	0.10	N
1	MN 54	40.000	2.900	38.400	1.160	1.040	0.08	A
1	PU238	0.970	0.170	0.982	0.074	0.990	0.19	A
1	PU239	0.820	0.160	0.772	0.056	1.060	0.22	A
1	SR 90	1.300	0.480	1.450	0.034	0.900	0.33	A
1	U 234	0.320	0.099	0.274	0.019	1.170	0.37	A
1	U 238	0.310	0.100	0.275	0.024	1.130	0.38	A
1	U UG	0.024	0.000	0.022	0.003	1.080	0.13	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **WA** Environmental Radiation Lab, Off. of Public Health Labs. Seattle

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.162	0.016	0.189	0.007	0.860	0.09	A
1	CE144	25.500	2.400	33.300	3.300	0.770	0.11	A
1	CO 57	7.300	0.370	8.900	0.900	0.820	0.09	A
1	CO 60	27.400	0.700	29.500	2.900	0.930	0.09	A
1	CS134	11.600	0.700	14.700	1.460	0.790	0.09	W
1	CS137	6.200	1.000	6.640	0.700	0.930	0.18	A
1	GA 1	2.200	0.080	1.620	0.150	1.360	0.14	W
1	GB 2	2.170	0.060	1.770	0.150	1.230	0.11	A
1	MN 54	3.420	0.260	3.440	0.380	0.990	0.13	A
1	PU238	0.095	0.023	0.096	0.002	0.990	0.24	A
1	PU239	0.084	0.019	0.093	0.003	0.910	0.21	A
1	RU106	9.300	1.600	11.600	1.440	0.800	0.17	A
1	SB125	10.100	1.000	9.780	1.030	1.030	0.15	A
1	SR 90	1.180	0.150	1.060	0.037	1.110	0.15	A
1	U 234	0.043	0.010	0.052	0.002	0.830	0.20	W
1	U 238	0.052	0.010	0.053	0.002	0.980	0.19	A
1	U BQ	0.106	0.015	0.107	0.003	0.990	0.14	A
Matrix: SO								
1	AM241	2.850	0.320	3.690	0.454	0.770	0.13	A
1	CS137	401.000	31.000	359.000	10.000	1.120	0.09	A
1	K 40	549.000	31.000	465.000	30.000	1.180	0.10	A
1	PU238	43.300	1.200	43.000	2.440	1.010	0.06	A
1	PU239	8.990	0.600	9.230	0.346	0.970	0.07	A
1	SR 90	1540.000	20.000	1340.000	113.000	1.150	0.10	A
1	U 234	45.500	4.100	34.200	3.520	1.330	0.18	N
1	U 238	45.900	4.000	35.900	3.630	1.280	0.17	W
1	U BQ	93.200	5.800	71.700	4.150	1.300	0.11	W
Matrix: VE								
1	AM241	5.620	0.630	5.600	0.184	1.000	0.12	A
1	CO 60	59.900	3.000	59.700	0.963	1.000	0.05	A
1	CS137	99.200	7.400	944.000	16.200	0.110	0.01	N
1	K 40	1090.000	60.000	1030.000	33.000	1.060	0.07	A
1	PU239	9.950	0.520	9.820	1.220	1.010	0.14	A
1	SR 90	1470.000	26.000	1300.000	52.400	1.130	0.05	W
Matrix: WA								
1	AM241	0.730	0.110	0.766	0.013	0.950	0.14	A
1	CO 60	33.800	1.400	32.800	0.580	1.030	0.05	A
1	CS137	43.100	3.700	38.300	0.881	1.130	0.10	A
1	GA 1	111.000	4.000	1850.000	185.000	0.060	0.01	N
1	GB 2	44.900	2.000	744.000	74.000	0.060	0.01	N

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **WA** Environmental Radiation Lab, Off. of Public Health Labs. Seattle

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: WA								
1	H 3	214.000	25.000	251.000	11.400	0.850	0.11	A
1	MN 54	42.700	3.700	38.400	1.160	1.110	0.10	A
1	PU238	0.870	0.120	0.982	0.074	0.890	0.14	W
1	PU239	0.680	0.100	0.772	0.056	0.880	0.14	A
1	SR 90	1.630	0.240	1.450	0.034	1.120	0.17	A
1	U 234	0.290	0.040	0.274	0.019	1.060	0.16	A
1	U 238	0.300	0.050	0.275	0.024	1.090	0.21	A
1	U BQ	0.640	0.070	0.559	0.047	1.150	0.16	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **WC** Westinghouse Hanford Co.

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.226	0.049	0.189	0.007	1.200	0.26	A
1	CE144	19.900	2.560	33.300	3.300	0.600	0.10	N
1	CO 57	5.820	0.588	8.900	0.900	0.650	0.09	W
1	CO 60	23.400	1.820	29.500	2.900	0.790	0.10	W
1	CS134	11.200	0.825	14.700	1.460	0.760	0.09	W
1	CS137	5.190	0.741	6.640	0.700	0.780	0.14	W
1	GA 1	1.530	0.031	1.620	0.150	0.940	0.09	A
1	GB 2	1.880	0.038	1.770	0.150	1.060	0.09	A
1	MN 54	2.790	0.459	3.440	0.380	0.810	0.16	W
1	PU238	0.094	0.022	0.096	0.002	0.980	0.23	A
1	PU239	0.097	0.023	0.093	0.003	1.050	0.25	A
1	RU106	9.820	2.150	11.600	1.440	0.850	0.21	A
1	SB125	8.260	0.687	9.780	1.030	0.850	0.11	A
1	SR 90	0.768	0.174	1.060	0.037	0.730	0.17	W
1	U 234	0.064	0.020	0.052	0.002	1.250	0.38	A
1	U 238	0.057	0.018	0.053	0.002	1.080	0.34	A
Matrix: SO								
1	CS137	407.000	44.200	359.000	10.000	1.130	0.13	A
1	K 40	518.000	73.600	465.000	30.000	1.110	0.17	A
Matrix: VE								
1	CO 60	65.300	6.190	59.700	0.963	1.090	0.11	A
1	CS137	1140.000	124.000	944.000	16.200	1.210	0.13	A
1	K 40	1230.000	173.000	1030.000	33.000	1.190	0.17	A
Matrix: WA								
1	AM241	0.952	0.185	0.766	0.013	1.240	0.24	W
1	CO 60	34.300	2.660	32.800	0.580	1.050	0.08	A
1	CS137	44.900	6.140	38.300	0.881	1.170	0.16	W
1	GA 1	1400.000	144.000	1850.000	185.000	0.760	0.11	W
1	GB 2	655.000	67.500	744.000	74.000	0.880	0.13	W
1	H 3	186.000	20.500	251.000	11.400	0.740	0.09	W
1	MN 54	44.900	6.470	38.400	1.160	1.170	0.17	W
1	PU238	0.951	0.163	0.982	0.074	0.970	0.18	A
1	PU239	0.782	0.137	0.772	0.056	1.010	0.19	A
1	SR 90	1.010	0.250	1.450	0.034	0.700	0.17	N
1	U 234	0.350	0.081	0.274	0.019	1.280	0.31	W
1	U 238	0.300	0.072	0.275	0.024	1.090	0.28	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **WE** Westinghouse Electric Corp., Madison, PA

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	15.400	1.830	33.300	3.300	0.460	0.07	N
1	CO 57	4.440	0.296	8.900	0.900	0.500	0.06	N
1	CO 60	47.100	1.570	29.500	2.900	1.600	0.17	N
1	CS134	11.000	0.979	14.700	1.460	0.750	0.10	W
1	CS137	4.510	0.663	6.640	0.700	0.680	0.12	N
1	MN 54	4.250	0.799	3.440	0.380	1.240	0.27	W
1	PU238	0.065	0.011	0.096	0.002	0.680	0.11	W
1	PU239	0.057	0.010	0.093	0.003	0.610	0.11	N
1	RU106	12.500	5.970	11.600	1.440	1.080	0.53	A
1	SB125	7.050	1.310	9.780	1.030	0.720	0.15	A
1	SR 90	0.002	0.001	1.060	0.037	0.000	0.00	N
1	U 234	0.047	0.010	0.052	0.002	0.910	0.19	A
1	U 238	0.047	0.009	0.053	0.002	0.880	0.17	N
Matrix: SO								
1	CS137	372.000	9.500	359.000	10.000	1.040	0.04	A
1	K 40	431.000	59.500	465.000	30.000	0.930	0.14	A
1	PU238	17.200	0.926	43.000	2.440	0.400	0.03	W
1	PU239	3.460	0.421	9.230	0.346	0.380	0.05	N
1	SR 90	2.640	0.139	1340.000	113.000	0.000	0.00	N
1	U 234	28.200	1.250	34.200	3.520	0.830	0.09	A
1	U 238	28.800	1.260	35.900	3.630	0.800	0.09	A
Matrix: VE								
1	CO 60	61.300	8.320	59.700	0.963	1.030	0.14	A
1	CS137	1040.000	15.100	944.000	16.200	1.100	0.02	A
1	K 40	1000.000	89.900	1030.000	33.000	0.970	0.09	A
1	PU239	0.529	0.262	9.820	1.220	0.050	0.03	N
1	SR 90	2.810	0.198	1300.000	52.400	0.000	0.00	N
Matrix: WA								
1	CO 60	30.900	1.170	32.800	0.580	0.940	0.04	W
1	CS137	39.000	1.080	38.300	0.881	1.020	0.04	A
1	MN 54	39.700	1.190	38.400	1.160	1.030	0.04	A
1	PU238	0.842	0.079	0.982	0.074	0.860	0.10	W
1	PU239	0.526	0.063	0.772	0.056	0.680	0.10	W
1	SR 90	0.004	0.001	1.450	0.034	0.000	0.00	N
1	U 234	0.278	0.057	0.274	0.019	1.020	0.22	A
1	U 238	0.316	0.059	0.275	0.024	1.150	0.24	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **WI** WIPP Site, Westinghouse Electric Corp.

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	29.000	3.530	33.300	3.300	0.870	0.14	A
1	CO 57	8.630	0.750	8.900	0.900	0.970	0.13	A
1	CO 60	28.800	1.250	29.500	2.900	0.980	0.11	A
1	CS134	13.900	1.140	14.700	1.460	0.950	0.12	A
1	CS137	6.100	0.950	6.640	0.700	0.920	0.17	A
1	MN 54	3.250	0.620	3.440	0.380	0.950	0.21	A
1	SB125	9.860	0.590	9.780	1.030	1.010	0.12	A
Matrix: WA								
1	CO 60	35.500	2.720	32.800	0.580	1.080	0.09	A
1	CS137	44.300	6.230	38.300	0.881	1.160	0.17	W
1	MN 54	44.300	5.440	38.400	1.160	1.150	0.15	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **WN** WINCO, Idaho Chemical Processing Plant, Scoville

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	23.000	0.600	33.300	3.300	0.690	0.07	A
2		23.200	0.600	33.300	3.300	0.700	0.07	A
1	CO 57	7.110	0.120	8.900	0.900	0.800	0.08	A
1	CO 60	26.100	0.200	29.500	2.900	0.890	0.09	A
1	CS134	13.700	0.200	14.700	1.460	0.930	0.09	A
1	CS137	5.820	0.180	6.640	0.700	0.880	0.10	A
1	GA 1	1.500	0.200	1.620	0.150	0.930	0.15	A
1	GB 2	1.680	0.090	1.770	0.150	0.950	0.10	A
1	MN 54	3.000	0.120	3.440	0.380	0.870	0.10	A
1	RU106	10.600	0.800	11.600	1.440	0.910	0.13	A
1	SB125	9.200	0.200	9.780	1.030	0.940	0.10	A
Matrix: SO								
1	CS137	403.000	10.000	359.000	10.000	1.120	0.04	A
1	K 40	500.000	40.000	465.000	30.000	1.080	0.11	A
Matrix: VE								
1	CO 60	60.000	3.000	59.700	0.963	1.010	0.05	A
1	CS137	1050.000	20.000	944.000	16.200	1.110	0.03	A
2		1050.000	20.000	944.000	16.200	1.110	0.03	A
1	K 40	1120.000	80.000	1030.000	33.000	1.090	0.09	A
Matrix: WA								
1	AM241	0.770	0.090	0.766	0.013	1.010	0.12	A
1	CO 60	30.400	0.300	32.800	0.580	0.930	0.02	W
1	CS137	41.200	0.300	38.300	0.881	1.080	0.03	A
1	GA 1	1830.000	500.000	1850.000	185.000	0.990	0.29	A
1	GB 2	960.000	100.000	744.000	74.000	1.290	0.19	A
1	H 3	243.000	21.000	251.000	11.400	0.970	0.09	A
1	MN 54	36.500	0.400	38.400	1.160	0.950	0.03	A
1	PU238	0.910	0.100	0.982	0.074	0.930	0.12	A
1	PU239	0.720	0.080	0.772	0.056	0.930	0.12	A
1	SR 90	2.200	0.400	1.450	0.034	1.520	0.28	W
1	U 238	0.610	0.110	0.275	0.024	2.220	0.45	N

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **WP** Washington Public Power Supply System, Richland

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	CE144	23.900	0.790	33.300	3.300	0.720	0.08	A
1	CO 57	6.630	0.160	8.900	0.900	0.750	0.08	A
1	CO 60	25.200	0.630	29.500	2.900	0.850	0.09	A
1	CS134	12.400	0.400	14.700	1.460	0.840	0.09	A
1	CS137	6.180	0.310	6.640	0.700	0.930	0.11	A
1	MN 54	3.100	0.280	3.440	0.380	0.900	0.13	A
1	RU106	10.800	1.900	11.600	1.440	0.930	0.20	A
1	SB125	9.560	0.630	9.780	1.030	0.980	0.12	A
1	SR 90	1.100	0.110	1.060	0.037	1.040	0.11	A
Matrix: SO								
1	CS137	427.000	7.900	359.000	10.000	1.190	0.04	A
1	K 40	547.000	35.000	465.000	30.000	1.180	0.11	A
1	SR 90	1300.000	37.000	1340.000	113.000	0.970	0.09	A
Matrix: VE								
1	CO 60	72.200	3.300	59.700	0.963	1.210	0.06	A
1	CS137	1250.000	10.000	944.000	16.200	1.320	0.03	W
1	K 40	1270.000	41.000	1030.000	33.000	1.230	0.06	W
1	SR 90	1400.000	37.000	1300.000	52.400	1.080	0.05	A
Matrix: WA								
1	CO 60	32.800	1.400	32.800	0.580	1.000	0.05	A
1	CS137	41.500	1.400	38.300	0.881	1.080	0.04	A
1	H 3	220.000	11.000	251.000	11.400	0.880	0.06	A
1	MN 54	40.600	1.400	38.400	1.160	1.060	0.05	A
1	SR 90	1.600	0.300	1.450	0.034	1.100	0.21	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in μg /filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **WS** Weldon Springs Site, St Charles, MO

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: SO								
1	AM241	4.300	0.900	3.690	0.454	1.170	0.28	A
1	CS137	385.000	13.700	359.000	10.000	1.070	0.05	A
1	K 40	492.000	18.100	465.000	30.000	1.060	0.08	A
1	U 238	27.800	5.600	35.900	3.630	0.770	0.18	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in μg /filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **WV** West Valley Nuclear Services Co, Inc, NY

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	GA 1	1.500	0.040	1.620	0.150	0.930	0.09	A
1	GB 2	1.870	0.040	1.770	0.150	1.060	0.09	A
Matrix: WA								
1	CO 60	32.900	0.880	32.800	0.580	1.000	0.03	A
1	CS137	40.900	0.850	38.300	0.881	1.070	0.03	A
1	GA 1	1800.000	26.000	1850.000	185.000	0.970	0.10	A
1	GB 2	703.000	14.000	744.000	74.000	0.950	0.10	A
1	H 3	218.000	8.300	251.000	11.400	0.870	0.05	A
1	MN 54	42.700	0.960	38.400	1.160	1.110	0.04	A
1	SR 90	1.900	0.360	1.450	0.034	1.310	0.25	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in μg /filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: **YA** Yankee Atomic Electric Company, Westboro, MA

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	AM241	0.180	0.004	0.189	0.007	0.950	0.04	A
1	GA 1	1.560	0.016	1.620	0.150	0.960	0.09	A
1	GB 2	1.700	0.022	1.770	0.150	0.960	0.08	A
1	PU238	0.100	0.002	0.096	0.002	1.040	0.03	A
1	PU239	0.098	0.003	0.093	0.003	1.050	0.04	A
Matrix: SO								
1	AM241	4.360	0.190	3.690	0.454	1.180	0.15	A
1	CS137	373.000	2.700	359.000	10.000	1.040	0.03	A
1	K 40	481.000	4.600	465.000	30.000	1.030	0.07	A
1	PU238	43.000	0.450	43.000	2.440	1.000	0.06	A
1	PU239	9.370	0.250	9.230	0.346	1.020	0.05	A
Matrix: VE								
1	AM241	5.750	0.300	5.600	0.184	1.030	0.06	A
1	CM244	4.590	0.110	4.440	0.202	1.030	0.05	A
1	CO 60	59.600	1.600	59.700	0.963	1.000	0.03	A
1	CS137	1030.000	14.000	944.000	16.200	1.090	0.02	A
1	K 40	1120.000	30.000	1030.000	33.000	1.090	0.05	A
1	PU239	9.760	0.300	9.820	1.220	0.990	0.13	A
Matrix: WA								
1	AM241	0.756	0.021	0.766	0.013	0.990	0.03	A
1	CO 60	32.000	0.450	32.800	0.580	0.980	0.02	A
1	CS137	38.100	0.430	38.300	0.881	1.000	0.03	A
1	GA 1	1740.000	86.000	1850.000	185.000	0.940	0.11	A
1	GB 2	588.000	12.000	744.000	74.000	0.790	0.08	W
1	H 3	237.000	12.000	251.000	11.400	0.940	0.06	A
1	MN 54	39.000	0.750	38.400	1.160	1.020	0.04	A
1	PU238	1.000	0.028	0.982	0.074	1.020	0.08	A
1	PU239	0.763	0.010	0.772	0.056	0.990	0.07	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Laboratory

Lab: YP US Army Proving Ground, Yuma, AZ

No. Test	Radio- nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Ratio Error	Evaluation
Matrix: AI								
1	U UG	3.850	0.650	4.310	0.100	0.890	0.15	A
Matrix: SO								
1	U UG	3.220	0.027	2.900	0.290	1.110	0.11	W
Matrix: WA								
1	U UG	0.020	0.002	0.022	0.003	0.910	0.14	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in μg /filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: AM241

EML Value: 0.189
EML Error: 0.007

Lahcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
AA	1	0.189	0.007	1.00	0.05	A
AC	1	0.174	0.005	0.92	0.04	A
AG	1	0.169	0.022	0.89	0.12	A
AM	1	0.270	0.050	1.43	0.27	W
AN	1	0.192	0.006	1.02	0.05	A
AR	1	0.176	0.013	0.93	0.08	A
AW	1	0.224	0.100	1.18	0.53	A
BE	1	0.180	0.010	0.95	0.06	A
BL	1	0.240	0.020	1.27	0.11	W
BL	2	0.240	0.010	1.27	0.07	W
BM	1	0.260	0.100	1.38	0.53	W
BP	1	0.201	0.012	1.06	0.07	A
BS	1	0.280	0.040	1.48	0.22	W
BU	1	0.580	0.130	3.07	0.70	N
BX	1	0.204	0.010	1.08	0.07	A
CC	1	0.180	0.000	0.95	0.03	A
CH	1	0.197	0.034	1.04	0.19	A
CL	1	0.220	0.040	1.16	0.22	A
CS	1	0.180	0.010	0.95	0.06	A
CW	1	0.196	0.007	1.04	0.05	A
DC	1	0.220	0.051	1.16	0.27	A
EI	1	0.180	0.012	0.95	0.07	A
EL	1	0.245	0.020	1.30	0.12	W
ES	1	0.159	0.032	0.84	0.17	A
FG	1	0.170	0.040	0.90	0.21	A
FL	1	0.234	0.054	1.24	0.29	A
FM	1	0.210	0.040	1.11	0.22	A
GA	1	0.210	0.000	1.11	0.04	A
GE	1	0.206	0.030	1.09	0.16	A
IE	1	0.178	0.025	0.94	0.14	A
IS	1	0.156	0.029	0.83	0.16	A
IT	1	0.173	0.006	0.92	0.04	A
JP	1	0.180	0.005	0.95	0.04	A
LA	1	0.212	0.023	1.12	0.13	A
LA	2	0.200	0.022	1.06	0.12	A
LA	3	0.192	0.021	1.02	0.12	A
LB	1	0.159	0.012	0.84	0.07	A
LH	1	0.140	0.020	0.74	0.11	W
LV	1	0.249	0.050	1.32	0.27	W
NA	1	0.182	0.015	0.96	0.09	A
NM	1	0.186	0.012	0.98	0.07	A
OD	1	0.353	0.057	1.87	0.31	W
OR	1	0.190	0.020	1.01	0.11	A
OT	1	0.280	0.080	1.48	0.43	W
RE	1	0.139	0.011	0.74	0.06	W
RI	1	0.175	0.016	0.93	0.09	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: AM241

EML Value: 0.189
EML Error: 0.007

Lahcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
SE	1	0.280	0.020	1.48	0.12	W
SR	1	0.158	0.022	0.84	0.12	A
SW	1	0.570	0.010	3.02	0.12	N
TE	1	0.270	0.040	1.43	0.22	W
TI	1	0.210	0.040	1.11	0.22	A
TM	1	0.214	0.009	1.13	0.06	A
TN	1	0.181	0.012	0.96	0.07	A
TO	1	0.215	0.126	1.14	0.67	A
TW	1	0.175	0.009	0.93	0.06	A
TX	1	0.194	0.014	1.03	0.08	A
UK	1	0.208	0.030	1.10	0.16	A
UP	1	0.252	0.056	1.33	0.30	W
UY	1	0.270	0.060	1.43	0.32	W
WA	1	0.162	0.016	0.86	0.09	A
WC	1	0.226	0.049	1.20	0.26	A
YA	1	0.180	0.004	0.95	0.04	A

Total Number Reported: 62

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: CE144

EML Value: 33.300
EML Error: 3.300

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
AA	1	33.300	3.300	1.00	0.14	A
AC	1	23.100	2.300	0.69	0.10	A
AG	1	25.300	1.800	0.76	0.09	A
AI	1	6.910	0.360	0.21	0.02	N
AL	1	44.400	1.060	1.33	0.14	N
AM	1	25.600	0.450	0.77	0.08	A
AN	1	23.100	0.700	0.69	0.07	A
AR	1	32.200	2.100	0.97	0.12	A
AW	1	33.400	5.010	1.00	0.18	A
BA	1	30.400	2.600	0.91	0.12	A
BC	1	23.100	0.670	0.69	0.07	A
BE	1	21.300	2.200	0.64	0.09	W
BL	1	26.300	1.300	0.79	0.09	A
BL	2	26.300	1.300	0.79	0.09	A
BL	3	25.700	1.200	0.77	0.08	A
BM	1	28.000	2.000	0.84	0.10	A
BN	1	32.000	2.260	0.96	0.12	A
BP	1	26.200	7.000	0.79	0.22	A
BQ	1	30.000	0.900	0.90	0.09	A
BR	1	29.700	2.940	0.89	0.13	A
BS	1	23.300	0.240	0.70	0.07	A
BU	1	33.000	6.000	0.99	0.21	A
BX	1	23.300	0.676	0.70	0.07	A
CA	1	20.300	0.900	0.61	0.07	W
CC	1	20.400	0.000	0.61	0.06	W
CH	1	21.100	1.710	0.63	0.08	W
CL	1	20.000	1.750	0.60	0.08	N
CP	1	30.600	4.300	0.92	0.16	A
CS	1	16.000	0.690	0.48	0.05	N
DC	1	21.300	5.720	0.64	0.18	W
EG	1	23.400	0.800	0.70	0.07	A
EL	1	21.600	1.700	0.65	0.08	W
EP	1	26.900	0.472	0.81	0.08	A
ES	1	20.600	2.970	0.62	0.11	W
FG	1	33.900	3.300	1.02	0.14	A
FL	1	26.700	1.100	0.80	0.09	A
FM	1	25.100	0.560	0.75	0.08	A
FN	1	41.500	9.800	1.25	0.32	W
GA	1	21.300	0.000	0.64	0.06	W
GE	1	23.700	2.270	0.71	0.10	A
ID	1	33.700	2.100	1.01	0.12	A
IE	1	22.000	1.210	0.66	0.07	W
IN	1	21.500	0.630	0.65	0.07	W
IS	1	22.600	3.700	0.68	0.13	W
IT	1	20.000	0.530	0.60	0.06	N

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: CE144

EML Value: 33.300
EML Error: 3.300

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
JP	1	23.000	0.200	0.69	0.07	A
LA	1	20.900	1.600	0.63	0.08	W
LA	2	21.100	1.600	0.63	0.08	W
LA	3	20.800	1.600	0.63	0.08	W
LB	1	28.500	2.310	0.86	0.11	A
LH	1	20.000	1.900	0.60	0.08	N
LL	1	24.700	4.200	0.74	0.15	A
LM	1	46.600	1.600	1.40	0.15	N
LV	1	23.500	0.700	0.71	0.07	A
ME	1	29.400	0.246	0.88	0.09	A
ML	1	27.600	0.800	0.83	0.09	A
MS	1	33.300	3.300	1.00	0.14	A
NA	1	27.300	0.290	0.82	0.08	A
NC	1	30.000	1.480	0.90	0.10	A
NL	1	30.900	2.000	0.93	0.11	A
OD	1	25.100	0.720	0.75	0.08	A
OL	1	23.400	1.720	0.70	0.09	A
OR	1	27.000	1.000	0.81	0.09	A
OT	1	27.000	1.000	0.81	0.09	A
RA	1	31.300	1.900	0.94	0.11	A
RE	1	24.600	3.200	0.74	0.12	A
RI	1	18.900	2.000	0.57	0.08	N
SA	1	37.900	3.500	1.14	0.15	W
SE	1	32.700	2.770	0.98	0.13	A
SK	1	22.600	0.800	0.68	0.07	W
SR	1	27.000	4.000	0.81	0.15	A
SS	1	20.400	2.200	0.61	0.09	W
SW	1	22.000	1.090	0.66	0.07	W
TE	1	23.200	1.020	0.70	0.08	A
TI	1	23.000	2.000	0.69	0.09	A
TM	1	25.700	0.898	0.77	0.08	A
TN	1	22.900	1.070	0.69	0.08	A
TO	1	29.600	2.530	0.89	0.12	A
TW	1	24.000	0.700	0.72	0.07	A
TX	1	22.900	0.200	0.69	0.07	A
TY	1	19.200	0.800	0.58	0.06	N
UK	1	21.800	0.720	0.66	0.07	W
UP	1	21.400	3.060	0.64	0.11	W
UY	1	25.300	0.950	0.76	0.08	A
WA	1	25.500	2.400	0.77	0.11	A
WC	1	19.900	2.560	0.60	0.10	N
WE	1	15.400	1.830	0.46	0.07	N
WI	1	29.000	3.530	0.87	0.14	A
WN	1	23.000	0.600	0.69	0.07	A
WN	2	23.200	0.600	0.70	0.07	A
WP	1	23.900	0.790	0.72	0.08	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: CE144

EML Value: 33.300
EML Error: 3.300

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
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Total Number Reported: 91

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: CO 57

EML Value: 8.900
EML Error: 0.900

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
AA	1	8.900	0.900	1.00	0.14	A
AC	1	6.240	0.110	0.70	0.07	W
AG	1	7.440	0.490	0.84	0.10	A
AI	1	5.850	0.055	0.66	0.07	W
AM	1	6.220	0.070	0.70	0.07	W
AN	1	6.620	0.200	0.74	0.08	A
AR	1	7.110	0.300	0.80	0.09	A
AW	1	9.390	1.410	1.05	0.19	A
BA	1	8.460	0.620	0.95	0.12	A
BC	1	6.770	0.196	0.76	0.08	A
BE	1	6.160	0.420	0.69	0.08	W
BL	1	7.400	0.350	0.83	0.09	A
BL	2	7.380	0.350	0.83	0.09	A
BL	3	7.230	0.340	0.81	0.09	A
BM	1	8.010	0.560	0.90	0.11	A
BN	1	9.120	0.600	1.03	0.12	A
BP	1	5.800	1.200	0.65	0.15	W
BQ	1	7.500	0.100	0.84	0.09	A
BR	1	7.980	0.480	0.90	0.11	A
BS	1	6.440	0.050	0.72	0.07	A
BU	1	8.900	0.900	1.00	0.14	A
BX	1	6.660	0.200	0.75	0.08	A
CA	1	6.030	0.090	0.68	0.07	W
CC	1	6.150	0.000	0.69	0.07	W
CH	1	6.370	1.700	0.72	0.20	A
CL	1	6.500	0.230	0.73	0.08	A
CP	1	8.770	1.190	0.99	0.17	A
CS	1	5.040	0.160	0.57	0.06	N
DC	1	5.500	0.931	0.62	0.12	N
EG	1	7.100	0.200	0.80	0.08	A
EL	1	6.800	0.600	0.76	0.10	A
EP	1	7.710	0.609	0.87	0.11	A
ES	1	6.800	0.830	0.76	0.12	A
FG	1	9.370	1.060	1.05	0.16	A
FL	1	7.810	0.020	0.88	0.09	A
FM	1	7.390	0.130	0.83	0.09	A
FN	1	7.000	0.750	0.79	0.12	A
GA	1	6.170	0.000	0.69	0.07	W
GE	1	7.110	0.460	0.80	0.10	A
ID	1	9.270	0.480	1.04	0.12	A
IE	1	6.410	1.060	0.72	0.14	A
IN	1	6.360	0.160	0.72	0.07	A
IS	1	6.350	0.530	0.71	0.09	W
IT	1	5.840	0.340	0.66	0.08	W
JP	1	7.100	0.040	0.80	0.08	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: CO 57

EML Value: 8.900
EML Error: 0.900

Lahcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
LA	1	5.800	0.400	0.65	0.08	W
LA	2	5.900	0.400	0.66	0.08	W
LA	3	5.900	0.400	0.66	0.08	W
LB	1	6.630	0.186	0.75	0.08	A
LH	1	5.900	0.600	0.66	0.10	W
LL	1	7.120	3.600	0.80	0.41	A
LM	1	11.400	0.300	1.28	0.13	W
LV	1	6.600	0.100	0.74	0.08	A
ME	1	6.700	0.035	0.75	0.08	A
MI	1	5.820	0.181	0.65	0.07	W
ML	1	6.700	0.200	0.75	0.08	A
MS	1	9.900	0.990	1.11	0.16	W
NA	1	7.930	0.050	0.89	0.09	A
NC	1	9.090	0.178	1.02	0.11	A
NL	1	8.640	0.680	0.97	0.12	A
OD	1	7.490	0.181	0.84	0.09	A
OL	1	6.890	0.190	0.77	0.08	A
OR	1	7.800	0.200	0.88	0.09	A
OT	1	7.200	0.100	0.81	0.08	A
RA	1	9.250	0.390	1.04	0.11	A
RE	1	6.700	0.740	0.75	0.11	A
RI	1	5.020	0.340	0.56	0.07	N
SA	1	11.000	1.100	1.24	0.18	W
SE	1	8.470	0.160	0.95	0.10	A
SK	1	6.230	0.090	0.70	0.07	W
SR	1	7.600	0.600	0.85	0.11	A
SS	1	5.740	0.940	0.65	0.12	W
SW	1	6.510	0.220	0.73	0.08	A
TE	1	6.050	0.130	0.68	0.07	W
TI	1	6.700	0.700	0.75	0.11	A
TM	1	7.340	0.237	0.83	0.09	A
TN	1	6.800	0.286	0.76	0.08	A
TO	1	7.990	0.461	0.90	0.11	A
TW	1	7.400	0.100	0.83	0.08	A
TX	1	6.120	0.040	0.69	0.07	W
TY	1	4.300	0.400	0.48	0.07	N
UK	1	6.380	0.130	0.72	0.07	A
UP	1	6.310	0.344	0.71	0.08	W
UY	1	7.200	0.200	0.81	0.08	A
WA	1	7.300	0.370	0.82	0.09	A
WC	1	5.820	0.588	0.65	0.09	W
WE	1	4.440	0.296	0.50	0.06	N
WI	1	8.630	0.750	0.97	0.13	A
WN	1	7.110	0.120	0.80	0.08	A
WP	1	6.630	0.160	0.75	0.08	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: CO 57

EML Value: 8.900
EML Error: 0.900

Labcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
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Total Number Reported: 90

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: CO 60

EML Value: 29.500
EML Error: 2.900

Labcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
AA	1	29.500	2.900	1.00	0.14	A
AC	1	24.900	0.400	0.84	0.08	A
AG	1	26.500	1.800	0.90	0.11	A
AI	1	19.200	0.110	0.65	0.06	N
AL	1	43.700	0.360	1.48	0.15	N
AM	1	24.500	0.210	0.83	0.08	A
AN	1	26.100	0.800	0.89	0.09	A
AR	1	27.100	0.900	0.92	0.10	A
AW	1	30.200	4.530	1.02	0.18	A
BA	1	31.200	0.920	1.06	0.11	A
BC	1	25.300	0.304	0.86	0.08	A
BE	1	23.600	1.610	0.80	0.10	W
BL	1	26.900	0.900	0.91	0.09	A
BL	2	27.000	0.900	0.92	0.10	A
BL	3	26.400	0.900	0.90	0.09	A
BM	1	26.300	1.800	0.89	0.11	A
BN	1	26.100	0.170	0.89	0.09	A
BP	1	24.500	1.700	0.83	0.10	A
BQ	1	24.300	0.600	0.82	0.08	W
BR	1	29.800	1.310	1.01	0.11	A
BS	1	24.900	0.190	0.84	0.08	A
BU	1	29.000	3.000	0.98	0.14	A
BX	1	25.100	0.301	0.85	0.08	A
CA	1	24.200	0.300	0.82	0.08	W
CC	1	23.800	0.000	0.81	0.08	W
CH	1	25.000	0.970	0.85	0.09	A
CL	1	22.900	0.740	0.78	0.08	W
CP	1	29.400	3.000	1.00	0.14	A
CS	1	20.900	0.640	0.71	0.07	N
DC	1	25.300	7.130	0.86	0.26	A
EG	1	26.700	0.040	0.91	0.09	A
EL	1	27.400	0.800	0.93	0.10	A
EP	1	29.800	1.100	1.01	0.11	A
ES	1	25.300	2.880	0.86	0.13	A
FG	1	32.200	8.090	1.09	0.29	A
FL	1	28.800	0.120	0.98	0.10	A
FM	1	27.300	0.230	0.93	0.09	A
FN	1	27.500	1.600	0.93	0.11	A
GA	1	24.500	0.000	0.83	0.08	A
GE	1	26.300	0.980	0.89	0.09	A
ID	1	28.300	1.400	0.96	0.11	A
IE	1	24.700	1.110	0.84	0.09	A
IN	1	23.700	0.220	0.80	0.08	W
IS	1	2.500	0.120	0.09	0.01	N
IT	1	22.900	0.540	0.78	0.08	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: CO 60

EML Value: 29.500
EML Error: 2.900

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
JP	1	24.000	0.200	0.81	0.08	W
LA	1	23.300	1.600	0.79	0.09	W
LA	2	23.400	1.600	0.79	0.10	W
LA	3	23.400	1.600	0.79	0.10	W
LB	1	25.700	6.160	0.87	0.23	A
LH	1	21.800	1.600	0.74	0.09	W
LL	1	28.700	1.800	0.97	0.11	A
LM	1	40.900	0.900	1.39	0.14	N
LV	1	25.100	0.200	0.85	0.08	A
ME	1	28.500	0.154	0.97	0.10	A
MI	1	26.800	0.865	0.91	0.09	A
ML	1	25.800	0.400	0.88	0.09	A
MS	1	30.400	3.000	1.03	0.14	A
NA	1	27.600	0.130	0.94	0.09	A
NC	1	28.700	0.470	0.97	0.10	A
NL	1	28.400	1.100	0.96	0.10	A
NM	1	20.400	0.600	0.69	0.07	N
OD	1	27.100	0.290	0.92	0.09	A
OL	1	25.600	0.400	0.87	0.09	A
OR	1	29.000	1.000	0.98	0.10	A
OT	1	26.000	1.000	0.88	0.09	A
RA	1	22.900	0.800	0.78	0.08	W
RE	1	24.900	2.370	0.84	0.12	A
RI	1	2.230	0.700	0.08	0.02	N
SA	1	33.900	1.800	1.15	0.13	W
SE	1	29.200	1.640	0.99	0.11	A
SK	1	27.700	0.900	0.94	0.10	A
SR	1	27.000	1.000	0.92	0.10	A
SS	1	24.600	0.550	0.83	0.08	A
SW	1	24.000	0.510	0.81	0.08	W
TE	1	26.500	0.430	0.90	0.09	A
TI	1	25.000	3.000	0.85	0.13	A
TM	1	26.600	0.830	0.90	0.09	A
TN	1	25.400	0.864	0.86	0.09	A
TO	1	27.800	1.270	0.94	0.10	A
TW	1	27.000	0.500	0.92	0.09	A
TX	1	24.000	0.200	0.81	0.08	W
TY	1	18.500	0.600	0.63	0.06	N
UC	1	25.100	0.130	0.85	0.08	A
UK	1	24.900	0.370	0.84	0.08	A
UP	1	24.800	0.629	0.84	0.09	A
UY	1	27.000	1.700	0.92	0.11	A
WA	1	27.400	0.700	0.93	0.09	A
WC	1	23.400	1.820	0.79	0.10	W
WE	1	47.100	1.570	1.60	0.17	N
WI	1	28.800	1.250	0.98	0.11	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: CO 60

EML Value: 29.500
EML Error: 2.900

Lahcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
WN	1	26.100	0.200	0.89	0.09	A
WP	1	25.200	0.630	0.85	0.09	A

Total Number Reported: 93

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: CS134

EML Value: 14.700
EML Error: 1.460

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
AA	1	14.700	1.460	1.00	0.14	A
AC	1	13.500	0.300	0.92	0.09	A
AG	1	14.500	0.940	0.99	0.12	A
AI	1	10.600	0.820	0.72	0.09	W
AL	1	13.500	0.210	0.92	0.09	A
AM	1	9.810	0.130	0.67	0.07	N
AN	1	13.100	0.400	0.89	0.09	A
AR	1	13.000	0.600	0.88	0.10	A
AW	1	14.500	2.180	0.99	0.18	A
BA	1	15.300	0.850	1.04	0.12	A
BC	1	13.300	0.613	0.91	0.10	A
BE	1	11.600	0.820	0.79	0.10	W
BL	1	13.400	0.500	0.91	0.10	A
BL	2	13.300	0.500	0.91	0.10	A
BL	3	12.800	0.500	0.87	0.09	A
BM	1	14.600	0.700	0.99	0.11	A
BN	1	13.000	0.020	0.88	0.09	A
BP	1	14.100	1.100	0.96	0.12	A
BQ	1	14.500	0.500	0.99	0.10	A
BR	1	14.300	0.880	0.97	0.11	A
BS	1	13.100	0.150	0.89	0.09	A
BU	1	14.000	1.000	0.95	0.12	A
BX	1	13.300	0.611	0.91	0.10	A
CA	1	13.200	0.100	0.90	0.09	A
CC	1	12.700	0.000	0.86	0.09	A
CH	1	12.600	0.552	0.86	0.09	A
CL	1	13.100	0.450	0.89	0.09	A
CP	1	13.800	2.000	0.94	0.17	A
CS	1	8.960	0.190	0.61	0.06	N
DC	1	16.000	1.910	1.09	0.17	W
EG	1	13.800	0.300	0.94	0.10	A
EL	1	12.800	0.500	0.87	0.09	A
EP	1	14.400	1.170	0.98	0.13	A
ES	1	12.500	1.440	0.85	0.13	A
FG	1	14.700	2.740	1.00	0.21	A
FL	1	14.100	0.150	0.96	0.10	A
FM	1	13.700	0.230	0.93	0.09	A
FN	1	14.400	0.700	0.98	0.11	A
GA	1	11.900	0.000	0.81	0.08	A
GE	1	13.600	0.600	0.93	0.10	A
ID	1	15.900	0.800	1.08	0.12	A
IE	1	12.300	0.180	0.84	0.08	A
IN	1	12.700	0.180	0.86	0.09	A
IS	1	12.300	0.800	0.84	0.10	A
IT	1	11.400	0.380	0.78	0.08	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: CS134

EML Value: 14.700
EML Error: 1.460

Lahcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
JP	1	13.000	0.100	0.88	0.09	A
LA	1	11.700	0.900	0.80	0.10	A
LA	2	11.900	0.900	0.81	0.10	A
LA	3	12.000	0.900	0.82	0.10	A
LB	1	12.900	2.480	0.88	0.19	A
LH	1	10.700	0.800	0.73	0.09	W
LL	1	15.800	1.800	1.08	0.16	A
LM	1	23.700	0.600	1.61	0.17	N
LV	1	13.000	0.200	0.88	0.09	A
ME	1	13.400	0.094	0.91	0.09	A
MI	1	11.100	0.251	0.76	0.08	W
ML	1	13.900	0.400	0.95	0.10	A
MS	1	15.800	1.600	1.08	0.15	A
NA	1	13.800	0.080	0.94	0.09	A
NC	1	14.100	0.389	0.96	0.10	A
NL	1	13.400	0.600	0.91	0.10	A
OD	1	14.000	0.422	0.95	0.10	A
OL	1	11.200	0.960	0.76	0.10	W
OR	1	13.000	1.000	0.88	0.11	A
OT	1	13.000	1.000	0.88	0.11	A
RA	1	14.200	0.600	0.97	0.10	A
RE	1	11.600	1.160	0.79	0.11	W
RI	1	11.600	0.440	0.79	0.08	W
SA	1	16.900	0.800	1.15	0.13	W
SE	1	15.600	0.500	1.06	0.11	A
SK	1	16.800	0.300	1.14	0.12	W
SR	1	13.400	0.400	0.91	0.09	A
SS	1	13.200	0.500	0.90	0.10	A
SW	1	11.900	0.290	0.81	0.08	A
TE	1	12.900	0.280	0.88	0.09	A
TI	1	12.000	1.000	0.82	0.11	A
TM	1	13.800	0.435	0.94	0.10	A
TN	1	14.300	1.340	0.97	0.13	A
TO	1	15.700	0.448	1.07	0.11	A
TW	1	12.000	0.100	0.82	0.08	A
TX	1	11.800	0.200	0.80	0.08	A
TY	1	10.200	0.300	0.69	0.07	N
UK	1	12.500	0.220	0.85	0.09	A
UP	1	12.700	0.807	0.86	0.10	A
UY	1	14.300	0.510	0.97	0.10	A
WA	1	11.600	0.700	0.79	0.09	W
WC	1	11.200	0.825	0.76	0.09	W
WE	1	11.000	0.979	0.75	0.10	W
WI	1	13.900	1.140	0.95	0.12	A
WN	1	13.700	0.200	0.93	0.09	A
WP	1	12.400	0.400	0.84	0.09	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: CS134

EML Value: 14.700
EML Error: 1.460

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
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Total Number Reported: 91

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: CS137

EML Value: 6.640
EML Error: 0.700

Labcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
AA	1	6.640	0.700	1.00	0.15	A
AC	1	5.530	0.210	0.83	0.09	W
AG	1	6.090	0.440	0.92	0.12	A
AI	1	4.830	0.085	0.73	0.08	W
AL	1	10.500	0.230	1.58	0.17	N
AM	1	5.630	0.150	0.85	0.09	A
AN	1	5.850	0.180	0.88	0.10	A
AR	1	6.000	0.300	0.90	0.11	A
AW	1	6.950	1.040	1.05	0.19	A
BA	1	7.120	0.680	1.07	0.15	A
BC	1	5.850	0.322	0.88	0.11	A
BE	1	5.480	0.390	0.83	0.11	W
BL	1	5.870	0.240	0.88	0.10	A
BL	2	5.870	0.240	0.88	0.10	A
BL	3	5.760	0.230	0.87	0.10	A
BM	1	6.390	0.380	0.96	0.12	A
BN	1	7.940	0.400	1.20	0.14	W
BP	1	7.400	1.400	1.11	0.24	A
BQ	1	6.800	0.300	1.02	0.12	A
BR	1	6.640	0.930	1.00	0.18	A
BS	1	5.370	0.090	0.81	0.09	W
BU	1	6.900	0.700	1.04	0.15	A
BX	1	5.920	0.320	0.89	0.11	A
CA	1	5.200	0.500	0.78	0.11	W
CC	1	5.570	0.000	0.84	0.09	A
CH	1	5.560	0.552	0.84	0.12	A
CL	1	5.840	0.370	0.88	0.11	A
CP	1	7.100	0.830	1.07	0.17	A
CS	1	4.470	0.190	0.67	0.08	N
DC	1	7.290	3.670	1.10	0.56	A
EG	1	5.800	0.200	0.87	0.10	A
EL	1	6.900	0.600	1.04	0.14	A
EP	1	6.190	0.515	0.93	0.13	A
ES	1	5.140	0.760	0.77	0.14	W
FG	1	7.420	1.410	1.12	0.24	A
FL	1	6.720	0.110	1.01	0.11	A
FM	1	6.300	0.140	0.95	0.10	A
FN	1	5.870	0.480	0.88	0.12	A
GA	1	5.150	0.000	0.78	0.08	W
GE	1	5.900	0.556	0.89	0.13	A
ID	1	7.400	0.380	1.11	0.13	A
IE	1	5.380	0.320	0.81	0.10	W
IN	1	4.950	0.250	0.75	0.09	W
IS	1	5.510	0.770	0.83	0.15	W
IT	1	5.050	0.180	0.76	0.08	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in μ g/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: CS137

EML Value: 6.640
EML Error: 0.700

Lahcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
JP	1	5.700	0.070	0.86	0.09	A
LA	1	5.600	0.400	0.84	0.11	A
LA	2	5.400	0.400	0.81	0.11	W
LA	3	5.500	0.400	0.83	0.11	W
LB	1	5.280	0.940	0.80	0.17	W
LH	1	5.200	0.500	0.78	0.11	W
LL	1	6.320	4.000	0.95	0.61	A
LM	1	9.100	0.500	1.37	0.16	N
LV	1	5.630	0.070	0.85	0.09	A
ME	1	5.980	0.062	0.90	0.10	A
MI	1	5.210	0.249	0.79	0.09	W
ML	1	5.600	0.200	0.84	0.09	A
MS	1	6.700	0.670	1.01	0.15	A
NA	1	6.630	0.090	1.00	0.11	A
NC	1	6.650	0.251	1.00	0.11	A
NL	1	6.430	0.390	0.97	0.12	A
NM	1	4.500	0.260	0.68	0.08	N
OD	1	6.410	0.379	0.97	0.12	A
OL	1	6.060	0.190	0.91	0.10	A
OR	1	6.700	0.400	1.01	0.12	A
OT	1	6.200	0.200	0.93	0.10	A
RA	1	6.210	0.320	0.94	0.11	A
RE	1	5.470	0.710	0.82	0.14	W
RI	1	5.210	0.710	0.79	0.14	W
SA	1	8.400	0.400	1.27	0.15	W
SE	1	6.750	0.680	1.02	0.15	A
SK	1	5.070	0.040	0.76	0.08	W
SR	1	6.000	2.000	0.90	0.32	A
SS	1	5.400	0.400	0.81	0.11	W
SW	1	5.320	0.350	0.80	0.10	W
TE	1	6.200	0.900	0.93	0.17	A
TI	1	6.100	0.600	0.92	0.13	A
TM	1	6.020	0.360	0.91	0.11	A
TN	1	5.530	0.498	0.83	0.12	W
TO	1	6.030	0.490	0.91	0.12	A
TW	1	6.200	0.200	0.93	0.10	A
TX	1	5.350	0.080	0.81	0.09	W
TY	1	5.300	0.300	0.80	0.10	W
UC	1	6.960	0.310	1.05	0.12	A
UK	1	5.190	0.260	0.78	0.09	W
UP	1	5.420	0.457	0.82	0.11	W
UY	1	5.800	0.410	0.87	0.11	A
WA	1	6.200	1.000	0.93	0.18	A
WC	1	5.190	0.741	0.78	0.14	W
WE	1	4.510	0.663	0.68	0.12	N
WI	1	6.100	0.950	0.92	0.17	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: CS137

EML Value: 6.640
EML Error: 0.700

Lahcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
WN	1	5.820	0.180	0.88	0.10	A
WP	1	6.180	0.310	0.93	0.11	A

Total Number Reported: 93

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: GA 1

EML Value: 1.620
EML Error: 0.150

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
AA	1	1.620	0.150	1.00	0.13	A
AG	1	1.850	0.082	1.14	0.12	A
AM	1	2.400	0.050	1.48	0.14	W
AN	1	1.980	0.200	1.22	0.17	A
AR	1	1.540	0.030	0.95	0.09	A
AU	1	2.120	0.040	1.31	0.12	W
BC	1	1.690	0.058	1.04	0.10	A
BE	1	2.200	0.200	1.36	0.18	W
BL	1	1.970	0.040	1.22	0.12	A
BL	2	1.970	0.040	1.22	0.12	A
BL	3	1.900	0.050	1.17	0.11	A
BL	4	1.980	0.080	1.22	0.12	A
BL	5	1.980	0.080	1.22	0.12	A
BL	6	1.940	0.040	1.20	0.11	A
BN	1	1.940	0.050	1.20	0.12	A
BS	1	2.200	0.010	1.36	0.13	W
BU	1	1.600	0.100	0.99	0.11	A
BX	1	1.430	0.053	0.88	0.09	W
CA	1	1.550	0.020	0.96	0.09	A
CH	1	2.090	0.086	1.29	0.13	A
CP	1	1.810	0.030	1.12	0.11	A
DC	1	1.900	0.019	1.17	0.11	A
EG	1	2.190	0.150	1.35	0.16	W
ES	1	1.660	0.290	1.03	0.20	A
FG	1	2.010	0.130	1.24	0.14	A
FL	1	1.500	0.070	0.93	0.10	A
GE	1	1.750	0.026	1.08	0.10	A
HC	1	1.820	0.200	1.12	0.16	A
IL	1	2.520	0.200	1.56	0.19	W
IS	1	2.490	0.250	1.54	0.21	W
IT	1	1.860	0.030	1.15	0.11	A
JP	1	2.100	0.020	1.30	0.12	A
KA	1	2.420	0.090	1.49	0.15	W
LA	1	1.850	0.370	1.14	0.25	A
LA	2	1.850	0.370	1.14	0.25	A
LA	3	1.850	0.370	1.14	0.25	A
LB	1	1.590	0.160	0.98	0.13	A
LH	1	1.990	0.130	1.23	0.14	A
LL	1	1.690	1.110	1.04	0.69	A
LM	1	1.900	0.500	1.17	0.33	A
ME	1	3.500	0.070	2.16	0.21	N
NM	1	1.890	0.060	1.17	0.11	A
OB	1	1.500	0.181	0.93	0.14	A
OD	1	1.510	0.050	0.93	0.09	A
OT	1	0.630	0.080	0.39	0.06	N

Units for matrices: AI=Bq/filter SD=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: GA 1

EML Value: 1.620
EML Error: 0.150

Labcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
PA	1	1.490	0.040	0.92	0.09	A
RE	1	2.640	0.550	1.63	0.37	N
RF	1	0.926	0.140	0.57	0.10	N
SC	1	1.620	0.020	1.00	0.09	A
SR	1	1.800	0.130	1.11	0.13	A
TE	1	2.210	0.050	1.36	0.13	W
TI	1	2.400	0.100	1.48	0.15	W
TM	1	2.700	0.300	1.67	0.24	N
TN	1	2.010	0.033	1.24	0.12	A
TO	1	2.090	0.060	1.29	0.13	A
TW	1	2.230	0.060	1.38	0.13	W
UC	1	1.690	0.090	1.04	0.11	A
UP	1	1.600	0.000	0.99	0.09	A
UY	1	1.950	0.000	1.20	0.11	A
WA	1	2.200	0.080	1.36	0.14	W
WC	1	1.530	0.031	0.94	0.09	A
WN	1	1.500	0.200	0.93	0.15	A
WV	1	1.500	0.040	0.93	0.09	A
YA	1	1.560	0.016	0.96	0.09	A

Total Number Reported: 64

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in μg /filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: GB 2

EML Value: 1.770
EML Error: 0.150

Labcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
AA	1	1.770	0.150	1.00	0.12	A
AG	1	1.730	0.066	0.98	0.09	A
AM	1	2.540	0.040	1.44	0.12	A
AN	1	2.250	0.230	1.27	0.17	A
AR	1	1.500	0.030	0.85	0.07	W
AU	1	2.090	0.040	1.18	0.10	A
BC	1	3.050	0.083	1.72	0.15	W
BE	1	1.800	0.100	1.02	0.10	A
BL	1	1.700	0.050	0.96	0.09	A
BL	2	1.710	0.050	0.97	0.09	A
BL	3	1.670	0.060	0.94	0.09	A
BL	4	1.660	0.100	0.94	0.10	A
BL	5	1.700	0.100	0.96	0.10	A
BL	6	2.240	0.050	1.27	0.11	A
BN	1	2.290	0.050	1.29	0.11	A
BS	1	1.870	0.010	1.06	0.09	A
BX	1	2.690	0.077	1.52	0.14	A
CA	1	1.460	0.030	0.83	0.07	W
CH	1	1.840	0.126	1.04	0.11	A
CP	1	1.170	0.010	0.66	0.06	N
DC	1	2.000	0.018	1.13	0.10	A
EG	1	2.190	0.140	1.24	0.13	A
ES	1	1.260	0.220	0.71	0.14	N
FG	1	1.480	0.130	0.84	0.10	W
FL	1	2.160	0.070	1.22	0.11	A
GE	1	1.640	0.022	0.93	0.08	A
HC	1	1.710	0.200	0.97	0.14	A
IL	1	1.620	0.160	0.92	0.12	A
IS	1	1.580	0.160	0.89	0.12	A
IT	1	2.990	0.073	1.69	0.15	W
KA	1	1.970	0.060	1.11	0.10	A
LA	1	1.590	0.220	0.90	0.15	A
LA	2	1.630	0.220	0.92	0.15	A
LA	3	1.630	0.220	0.92	0.15	A
LB	1	1.480	0.150	0.84	0.11	W
LH	1	1.740	0.100	0.98	0.10	A
LL	1	2.310	0.860	1.31	0.50	A
LM	1	2.000	0.500	1.13	0.30	A
ME	1	2.490	0.046	1.41	0.12	A
NM	1	1.870	0.090	1.06	0.10	A
OB	1	1.870	0.207	1.06	0.15	A
OD	1	2.180	0.060	1.23	0.11	A
OT	1	0.970	0.140	0.55	0.09	N
PA	1	1.760	0.030	0.99	0.09	A
RE	1	5.350	0.840	3.02	0.54	N

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: GB 2

EML Value: 1.770
EML Error: 0.150

Lahcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
RF	1	1.180	0.210	0.67	0.13	N
SC	1	1.920	0.020	1.09	0.09	A
SR	1	1.780	0.110	1.01	0.11	A
TE	1	1.950	0.040	1.10	0.10	A
TI	1	2.200	0.100	1.24	0.12	A
TM	1	1.540	0.118	0.87	0.10	W
TN	1	1.920	0.032	1.09	0.09	A
TO	1	1.560	0.050	0.88	0.08	W
TW	1	1.790	0.040	1.01	0.09	A
UC	1	1.640	0.060	0.93	0.09	A
UP	1	1.820	0.000	1.03	0.09	A
UY	1	2.150	0.000	1.22	0.10	A
WA	1	2.170	0.060	1.23	0.11	A
WC	1	1.880	0.038	1.06	0.09	A
WN	1	1.680	0.090	0.95	0.10	A
WV	1	1.870	0.040	1.06	0.09	A
YA	1	1.700	0.022	0.96	0.08	A

Total Number Reported: 62

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: MN 54

EML Value: 3.440
EML Error: 0.380

Lahcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
AA	1	3.440	0.380	1.00	0.16	A
AC	1	2.660	0.140	0.77	0.09	W
AG	1	2.890	0.200	0.84	0.11	W
AI	1	2.300	0.089	0.67	0.08	N
AL	1	3.200	0.120	0.93	0.11	A
AM	1	2.850	0.240	0.83	0.12	W
AN	1	2.890	0.140	0.84	0.10	W
AR	1	3.000	0.180	0.87	0.11	A
AW	1	3.500	0.530	1.02	0.19	A
BA	1	4.170	0.600	1.21	0.22	W
BC	1	2.990	0.156	0.87	0.11	A
BE	1	2.900	0.230	0.84	0.12	W
BL	1	3.330	0.160	0.97	0.12	A
BL	2	3.260	0.160	0.95	0.12	A
BL	3	3.140	0.150	0.91	0.11	A
BM	1	3.260	0.230	0.95	0.12	A
BN	1	3.860	0.160	1.12	0.13	A
BP	1	3.100	1.400	0.90	0.42	A
BQ	1	2.900	0.300	0.84	0.13	W
BR	1	4.450	1.200	1.29	0.38	W
BS	1	2.860	0.100	0.83	0.10	W
BU	1	3.400	0.300	0.99	0.14	A
BX	1	3.040	0.164	0.88	0.11	A
CC	1	2.750	0.000	0.80	0.09	W
CH	1	2.880	0.504	0.84	0.17	W
CL	1	2.890	0.400	0.84	0.15	W
CP	1	3.710	0.840	1.08	0.27	A
CS	1	2.580	0.130	0.75	0.09	N
DC	1	3.470	0.966	1.01	0.30	A
EG	1	3.100	0.200	0.90	0.12	A
EL	1	4.360	0.300	1.27	0.17	W
EP	1	3.240	0.437	0.94	0.16	A
ES	1	2.450	0.560	0.71	0.18	N
FG	1	3.210	0.790	0.93	0.25	A
FL	1	3.610	0.250	1.05	0.14	A
FM	1	3.340	0.120	0.97	0.11	A
FN	1	3.070	0.250	0.89	0.12	A
GA	1	2.940	0.000	0.86	0.09	A
GE	1	3.420	0.570	0.99	0.20	A
ID	1	3.630	0.220	1.05	0.13	A
IE	1	2.750	0.340	0.80	0.13	W
IN	1	2.580	0.010	0.75	0.08	N
IS	1	2.470	0.620	0.72	0.20	N
IT	1	2.600	0.230	0.76	0.11	W
JP	1	3.100	0.110	0.90	0.11	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: MN 54

EML Value: 3.440
EML Error: 0.380

Lahcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
LA	1	2.800	0.200	0.81	0.11	W
LA	2	2.900	0.300	0.84	0.13	W
LA	3	2.800	0.300	0.81	0.13	W
LB	1	2.840	0.550	0.83	0.18	W
LH	1	2.700	0.300	0.79	0.12	W
LL	1	3.130	6.400	0.91	1.86	A
LM	1	5.000	0.500	1.45	0.22	N
LV	1	2.760	0.100	0.80	0.09	W
ME	1	3.380	0.064	0.98	0.11	A
MI	1	2.980	0.145	0.87	0.11	A
ML	1	2.800	0.200	0.81	0.11	W
MS	1	3.400	0.340	0.99	0.15	A
NA	1	3.400	0.080	0.99	0.11	A
NC	1	3.700	0.245	1.08	0.14	A
NL	1	3.580	0.240	1.04	0.13	A
OD	1	3.160	0.214	0.92	0.12	A
OL	1	3.140	0.100	0.91	0.11	A
OR	1	3.400	0.400	0.99	0.16	A
OT	1	3.100	0.200	0.90	0.12	A
RA	1	2.900	0.140	0.84	0.10	W
RE	1	2.920	0.470	0.85	0.17	A
RI	1	2.220	0.560	0.65	0.18	N
SA	1	4.300	0.300	1.25	0.16	W
SE	1	3.450	0.170	1.00	0.12	A
SK	1	2.410	0.040	0.70	0.08	N
SR	1	3.000	1.000	0.87	0.31	A
SS	1	3.000	0.400	0.87	0.15	A
SW	1	2.540	0.350	0.74	0.13	N
TE	1	3.270	0.350	0.95	0.15	A
TI	1	3.100	0.300	0.90	0.13	A
TM	1	2.790	0.188	0.81	0.11	W
TN	1	3.020	0.520	0.88	0.18	A
TO	1	3.180	0.593	0.92	0.20	A
TW	1	3.150	0.090	0.92	0.10	A
TX	1	3.170	0.110	0.92	0.11	A
TY	1	2.700	0.200	0.79	0.10	W
UK	1	2.770	0.270	0.81	0.12	W
UP	1	2.760	0.342	0.80	0.13	W
UY	1	3.200	0.320	0.93	0.14	A
WA	1	3.420	0.260	0.99	0.13	A
WC	1	2.790	0.459	0.81	0.16	W
WE	1	4.250	0.799	1.24	0.27	W
WI	1	3.250	0.620	0.95	0.21	A
WN	1	3.000	0.120	0.87	0.10	A
WP	1	3.100	0.280	0.90	0.13	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: MN 54

EML Value: 3.440
EML Error: 0.380

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
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Total Number Reported: 90

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: PU238

EML Value: 0.096
EML Error: 0.002

Lahcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
AA	1	0.096	0.002	1.00	0.03	A
AC	1	0.098	0.004	1.02	0.05	A
AG	1	0.085	0.011	0.88	0.12	A
AI	1	0.082	0.009	0.85	0.10	A
AN	1	0.096	0.003	1.00	0.04	A
AR	1	0.097	0.013	1.01	0.13	A
AU	1	0.290	0.070	3.02	0.73	N
BA	1	0.087	0.019	0.90	0.20	A
BE	1	0.100	0.010	1.04	0.11	A
BL	1	0.110	0.010	1.14	0.11	A
BL	2	0.110	0.010	1.14	0.11	A
BM	1	0.120	0.030	1.25	0.31	W
BP	1	0.103	0.006	1.07	0.07	A
BU	1	0.087	0.005	0.90	0.06	A
BX	1	0.128	0.009	1.33	0.09	W
CC	1	0.090	0.000	0.94	0.02	A
CH	1	0.097	0.021	1.01	0.22	A
CL	1	0.100	0.060	1.04	0.62	A
CW	1	0.099	0.007	1.03	0.08	A
DC	1	0.087	0.030	0.91	0.31	A
EI	1	0.110	0.008	1.14	0.09	A
EP	1	0.093	0.008	0.97	0.09	A
ES	1	0.098	0.020	1.02	0.21	A
FL	1	0.092	0.003	0.96	0.04	A
GA	1	0.100	0.000	1.04	0.02	A
GE	1	0.088	0.014	0.92	0.15	A
IE	1	0.094	0.015	0.98	0.16	A
IS	1	0.102	0.029	1.06	0.30	A
IT	1	0.091	0.006	0.95	0.07	A
JP	1	0.088	0.004	0.92	0.04	A
LA	1	0.102	0.012	1.06	0.13	A
LA	2	0.090	0.011	0.94	0.12	A
LA	3	0.089	0.011	0.93	0.12	A
LH	1	0.100	0.020	1.04	0.21	A
LL	1	0.098	0.081	1.02	0.84	A
ML	1	0.091	0.005	0.95	0.06	A
NA	1	0.103	0.012	1.07	0.13	A
NL	1	0.084	0.020	0.87	0.21	A
NM	1	0.108	0.007	1.12	0.08	A
OR	1	0.093	0.010	0.97	0.11	A
OT	1	0.070	0.026	0.73	0.27	W
PI	1	0.096	0.008	1.00	0.09	A
RA	1	0.100	0.010	1.04	0.11	A
RE	1	0.074	0.008	0.77	0.08	W
RI	1	0.086	0.008	0.90	0.09	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: Al
Radionuclide: PU238

EML Value: 0.096
EML Error: 0.002

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
SN	1	0.079	0.009	0.82	0.10	A
SR	1	0.085	0.014	0.88	0.15	A
SW	1	0.090	0.010	0.94	0.11	A
TE	1	0.080	0.020	0.83	0.21	A
TI	1	0.098	0.030	1.02	0.31	A
TM	1	0.093	0.005	0.97	0.05	A
TN	1	0.095	0.008	0.99	0.09	A
TO	1	0.104	0.036	1.08	0.38	A
TW	1	0.095	0.008	0.99	0.09	A
TX	1	0.103	0.007	1.07	0.08	A
UK	1	0.103	0.032	1.07	0.33	A
UP	1	0.136	0.035	1.41	0.37	W
UY	1	0.100	0.024	1.04	0.25	A
WA	1	0.095	0.023	0.99	0.24	A
WC	1	0.094	0.022	0.98	0.23	A
WE	1	0.065	0.011	0.68	0.11	W
YA	1	0.100	0.002	1.04	0.03	A

Total Number Reported: 62

Units for matrices: Al=Bq/filter SD=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: PU239

EML Value: 0.093
EML Error: 0.003

Labcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
AA	1	0.093	0.003	1.00	0.04	A
AC	1	0.104	0.004	1.12	0.06	A
AG	1	0.086	0.011	0.93	0.12	A
AI	1	0.097	0.010	1.04	0.11	A
AN	1	0.100	0.003	1.08	0.05	A
AR	1	0.091	0.013	0.98	0.14	A
AU	1	0.340	0.080	3.67	0.87	N
BA	1	0.102	0.020	1.10	0.22	A
BE	1	0.100	0.010	1.08	0.11	A
BL	1	0.110	0.010	1.19	0.11	W
BL	2	0.100	0.010	1.08	0.11	A
BM	1	0.120	0.030	1.29	0.33	W
BP	1	0.099	0.006	1.07	0.07	A
BU	1	0.089	0.005	0.96	0.06	A
BX	1	0.097	0.007	1.05	0.09	A
CC	1	0.090	0.000	0.97	0.03	A
CH	1	0.099	0.022	1.06	0.23	A
CL	1	0.140	0.040	1.51	0.43	W
CW	1	0.097	0.010	1.05	0.11	A
DC	1	0.091	0.030	0.98	0.33	A
EI	1	0.100	0.008	1.08	0.09	A
EP	1	0.099	0.008	1.06	0.09	A
ES	1	0.106	0.022	1.14	0.24	A
FL	1	0.091	0.003	0.98	0.04	A
GA	1	0.100	0.000	1.08	0.03	A
GE	1	0.093	0.014	1.00	0.15	A
IE	1	0.087	0.006	0.94	0.07	A
IS	1	0.108	0.030	1.17	0.33	W
IT	1	0.095	0.006	1.03	0.07	A
JP	1	0.091	0.004	0.98	0.05	A
LA	1	0.098	0.012	1.06	0.13	A
LA	2	0.098	0.011	1.06	0.12	A
LA	3	0.088	0.010	0.95	0.11	A
LH	1	0.080	0.020	0.86	0.22	A
LL	1	0.098	0.008	1.06	0.09	A
ML	1	0.100	0.005	1.08	0.06	A
NA	1	0.098	0.011	1.06	0.12	A
NL	1	0.084	0.020	0.91	0.22	A
NM	1	0.102	0.007	1.10	0.08	A
OR	1	0.094	0.010	1.01	0.11	A
OT	1	0.094	0.028	1.01	0.30	A
PA	1	0.100	0.013	1.08	0.14	A
PI	1	0.100	0.008	1.08	0.09	A
RA	1	0.100	0.010	1.08	0.11	A
RE	1	0.081	0.008	0.87	0.09	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: Al
Radionuclide: PU239

EML Value: 0.093
EML Error: 0.003

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
RI	1	0.077	0.007	0.83	0.08	W
SN	1	0.087	0.010	0.94	0.11	A
SR	1	0.094	0.016	1.01	0.18	A
SW	1	0.070	0.010	0.76	0.11	W
TE	1	0.090	0.020	0.97	0.22	A
TI	1	0.120	0.030	1.29	0.33	W
TM	1	0.092	0.005	0.99	0.06	A
TN	1	0.089	0.008	0.96	0.09	A
TO	1	0.110	0.037	1.19	0.40	W
TW	1	0.086	0.008	0.93	0.09	A
TX	1	0.105	0.007	1.13	0.08	A
UK	1	0.111	0.033	1.20	0.36	W
UP	1	0.085	0.026	0.92	0.29	A
UY	1	0.094	0.023	1.01	0.25	A
WA	1	0.084	0.019	0.91	0.21	A
WC	1	0.097	0.023	1.05	0.25	A
WE	1	0.057	0.010	0.61	0.11	N
YA	1	0.098	0.003	1.05	0.04	A

Total Number Reported: 63

Units for matrices: Al=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: RU106

EML Value: 11.600
EML Error: 1.440

Labcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
AA	1	11.600	1.440	1.00	0.18	A
AG	1	11.400	1.800	0.98	0.20	A
AI	1	8.770	0.710	0.76	0.11	A
AM	1	8.910	0.660	0.77	0.11	A
AN	1	10.700	0.300	0.92	0.12	A
AR	1	10.300	1.400	0.89	0.16	A
AW	1	11.100	1.670	0.96	0.19	A
BA	1	16.100	4.600	1.39	0.43	W
BC	1	11.200	0.877	0.97	0.14	A
BE	1	8.280	1.020	0.71	0.13	A
BL	1	11.300	0.700	0.97	0.14	A
BL	2	11.800	0.600	1.02	0.14	A
BL	3	11.400	0.600	0.98	0.13	A
BM	1	12.500	1.400	1.08	0.18	A
BN	1	12.000	0.350	1.03	0.13	A
BQ	1	12.000	2.000	1.03	0.22	A
BR	1	13.500	3.460	1.16	0.33	A
BS	1	7.700	0.640	0.66	0.10	A
BU	1	11.000	2.000	0.95	0.21	A
BX	1	11.600	0.822	1.00	0.14	A
CH	1	10.000	3.630	0.86	0.33	A
CL	1	11.400	2.080	0.98	0.22	A
CP	1	10.400	1.900	0.90	0.20	A
CS	1	6.900	0.340	0.60	0.08	W
DC	1	13.700	4.810	1.18	0.44	W
EG	1	10.900	1.300	0.94	0.16	A
EL	1	14.100	1.200	1.22	0.18	W
EP	1	11.300	2.860	0.97	0.28	A
ES	1	11.000	3.630	0.95	0.33	A
FG	1	12.800	2.560	1.10	0.26	A
FL	1	12.000	0.060	1.03	0.13	A
FM	1	11.000	0.330	0.95	0.12	A
GA	1	9.380	0.000	0.81	0.10	A
GE	1	9.890	4.260	0.85	0.38	A
ID	1	12.400	1.600	1.07	0.19	A
IE	1	8.000	0.800	0.69	0.11	A
IN	1	10.300	1.300	0.89	0.16	A
IS	1	14.700	5.100	1.27	0.47	W
IT	1	9.650	0.800	0.83	0.12	A
JP	1	10.000	0.400	0.86	0.11	A
LA	1	10.100	1.100	0.87	0.14	A
LA	2	10.000	1.300	0.86	0.16	A
LA	3	9.100	1.100	0.78	0.14	A
LH	1	8.100	1.200	0.70	0.14	A
LL	1	14.700	12.400	1.27	1.08	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: RU106

EML Value: 11.600
EML Error: 1.440

Labcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
LM	1	15.100	3.100	1.30	0.31	W
LV	1	10.400	0.800	0.90	0.13	A
ML	1	11.400	1.000	0.98	0.15	A
NA	1	10.300	0.560	0.89	0.12	A
NL	1	10.600	1.100	0.91	0.15	A
OD	1	11.400	0.635	0.98	0.13	A
OL	1	9.000	0.930	0.78	0.13	A
OR	1	11.000	3.000	0.95	0.28	A
OT	1	9.800	1.100	0.85	0.14	A
RA	1	12.300	1.400	1.06	0.18	A
RI	1	8.780	3.900	0.76	0.35	A
SE	1	11.000	1.230	0.95	0.16	A
SK	1	12.600	0.400	1.09	0.14	A
SR	1	16.000	11.000	1.38	0.96	W
SS	1	9.500	3.400	0.82	0.31	A
SW	1	10.400	2.570	0.90	0.25	A
TE	1	10.200	1.850	0.88	0.19	A
TI	1	10.000	1.000	0.86	0.14	A
TM	1	11.400	1.130	0.98	0.16	A
TN	1	11.700	3.190	1.01	0.30	A
TO	1	11.400	3.570	0.98	0.33	A
TW	1	10.000	0.400	0.86	0.11	A
TX	1	8.190	0.490	0.71	0.10	A
TY	1	8.600	0.700	0.74	0.11	A
UP	1	6.720	1.990	0.58	0.19	W
UY	1	11.300	1.900	0.97	0.20	A
WA	1	9.300	1.600	0.80	0.17	A
WC	1	9.820	2.150	0.85	0.21	A
WE	1	12.500	5.970	1.08	0.53	A
WN	1	10.600	0.800	0.91	0.13	A
WP	1	10.800	1.900	0.93	0.20	A

Total Number Reported: 76

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: SB125

EML Value: 9.780
EML Error: 1.030

Lahcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
AA	1	9.780	1.030	1.00	0.15	A
AC	1	9.530	0.800	0.97	0.13	A
AG	1	9.780	0.710	1.00	0.13	A
AI	1	7.660	0.160	0.78	0.08	A
AL	1	14.700	0.390	1.50	0.16	N
AM	1	6.080	0.230	0.62	0.07	W
AN	1	8.760	0.260	0.90	0.10	A
AR	1	10.100	0.900	1.03	0.14	A
AW	1	10.200	1.530	1.04	0.19	A
BA	1	11.600	0.990	1.19	0.16	W
BC	1	9.030	0.478	0.92	0.11	A
BE	1	7.020	0.560	0.72	0.09	A
BL	1	8.490	0.490	0.87	0.10	A
BL	2	8.470	0.490	0.87	0.10	A
BL	3	8.070	0.450	0.83	0.10	A
BM	1	9.500	0.700	0.97	0.13	A
BN	1	12.400	0.640	1.27	0.15	W
BP	1	8.900	2.900	0.91	0.31	A
BQ	1	9.700	0.500	0.99	0.12	A
BR	1	12.200	1.730	1.25	0.22	W
BS	1	7.630	0.200	0.78	0.08	A
BU	1	10.000	1.000	1.02	0.15	A
BX	1	8.950	0.466	0.92	0.11	A
CC	1	5.690	0.000	0.58	0.06	W
CH	1	7.850	1.140	0.80	0.14	A
CL	1	9.050	0.770	0.93	0.13	A
CP	1	10.900	2.000	1.12	0.24	A
CS	1	5.700	0.130	0.58	0.06	W
DC	1	10.900	1.340	1.12	0.18	A
EG	1	9.200	0.300	0.94	0.10	A
EL	1	9.300	0.300	0.95	0.11	A
EP	1	9.350	1.330	0.96	0.17	A
ES	1	8.520	1.280	0.87	0.16	A
FG	1	11.600	2.290	1.19	0.27	W
FL	1	10.600	0.100	1.08	0.12	A
FM	1	9.480	0.200	0.97	0.10	A
FN	1	9.390	0.500	0.96	0.11	A
GA	1	7.250	0.000	0.74	0.08	A
GE	1	9.030	1.420	0.92	0.18	A
ID	1	11.000	0.600	1.13	0.13	W
IE	1	8.450	0.900	0.86	0.13	A
IN	1	8.330	0.460	0.85	0.10	A
IS	1	8.640	1.130	0.88	0.15	A
IT	1	8.150	0.250	0.83	0.09	A
JP	1	9.200	0.150	0.94	0.10	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: SB125

EML Value: 9.780
EML Error: 1.030

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
LA	1	9.200	0.800	0.94	0.13	A
LA	2	9.300	0.800	0.95	0.13	A
LA	3	9.000	0.700	0.92	0.12	A
LB	1	8.230	0.913	0.84	0.13	A
LH	1	7.700	0.500	0.79	0.10	A
LL	1	9.810	4.200	1.00	0.44	A
LM	1	13.700	1.200	1.40	0.19	W
LV	1	7.650	0.220	0.78	0.09	A
ML	1	9.300	0.400	0.95	0.11	A
MS	1	10.000	1.000	1.02	0.15	A
NA	1	10.500	0.150	1.07	0.11	A
NC	1	10.000	0.512	1.02	0.12	A
NL	1	10.600	0.900	1.08	0.15	A
OD	1	9.560	0.377	0.98	0.11	A
OL	1	8.600	0.540	0.88	0.11	A
OR	1	10.000	1.000	1.02	0.15	A
OT	1	9.200	0.400	0.94	0.11	A
RA	1	11.000	0.400	1.13	0.13	W
RE	1	7.860	1.340	0.80	0.16	A
RI	1	8.270	1.100	0.85	0.14	A
SA	1	12.500	1.700	1.28	0.22	W
SE	1	10.100	0.420	1.03	0.12	A
SK	1	8.100	0.300	0.83	0.09	A
SR	1	9.700	0.500	0.99	0.12	A
SS	1	7.900	0.700	0.81	0.11	A
SW	1	8.510	0.560	0.87	0.11	A
TE	1	10.100	0.750	1.03	0.13	A
TI	1	9.100	0.900	0.93	0.13	A
TM	1	9.660	0.475	0.99	0.12	A
TN	1	8.230	1.150	0.84	0.15	A
TO	1	9.650	1.010	0.99	0.15	A
TW	1	9.300	0.200	0.95	0.10	A
TX	1	7.460	0.190	0.76	0.08	A
TY	1	8.200	0.500	0.84	0.10	A
UP	1	4.740	0.757	0.49	0.09	W
UY	1	9.530	0.560	0.97	0.12	A
WA	1	10.100	1.000	1.03	0.15	A
WC	1	8.260	0.687	0.85	0.11	A
WE	1	7.050	1.310	0.72	0.15	A
WI	1	9.860	0.590	1.01	0.12	A
WN	1	9.200	0.200	0.94	0.10	A
WP	1	9.560	0.630	0.98	0.12	A

Total Number Reported: 87

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: SR 90

EML Value: 1.060
EML Error: 0.037

Labcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
AA	1	1.060	0.037	1.00	0.05	A
AG	1	0.870	0.160	0.82	0.15	W
AN	1	1.120	0.030	1.06	0.05	A
AR	1	0.730	0.192	0.69	0.18	W
BA	1	1.010	0.120	0.95	0.12	A
BC	1	1.220	0.244	1.15	0.23	A
BE	1	1.060	0.090	1.00	0.09	A
BL	1	1.190	0.710	1.12	0.67	A
BL	2	1.060	0.850	1.00	0.80	A
BM	1	0.820	0.090	0.77	0.09	W
BP	1	1.010	0.080	0.95	0.08	A
BX	1	1.270	0.245	1.20	0.24	A
CC	1	0.970	0.000	0.92	0.03	A
CH	1	0.860	0.154	0.81	0.15	W
CL	1	0.970	0.160	0.92	0.15	A
CP	1	0.755	0.057	0.71	0.06	W
DC	1	0.984	0.201	0.93	0.19	A
EI	1	1.410	0.110	1.33	0.11	A
EL	1	0.985	0.050	0.93	0.06	A
ES	1	1.010	0.200	0.95	0.19	A
GA	1	0.930	0.078	0.88	0.08	A
GE	1	0.788	0.039	0.74	0.04	W
ID	1	2.330	0.130	2.20	0.14	W
IE	1	0.993	0.055	0.94	0.06	A
IS	1	1.850	0.320	1.75	0.31	W
IT	1	1.060	0.060	1.00	0.07	A
JP	1	0.670	0.029	0.63	0.04	W
LA	1	0.920	0.160	0.87	0.15	A
LA	2	0.950	0.200	0.90	0.19	A
LA	3	0.880	0.110	0.83	0.11	A
LH	1	0.920	0.110	0.87	0.11	A
NA	1	1.030	0.180	0.97	0.17	A
OR	1	0.830	0.080	0.78	0.08	W
OT	1	0.380	0.190	0.36	0.18	N
RA	1	0.300	0.100	0.28	0.09	N
RE	1	0.947	0.047	0.89	0.05	A
RI	1	1.070	0.064	1.01	0.07	A
SR	1	0.630	0.090	0.59	0.09	N
SW	1	1.030	0.110	0.97	0.11	A
TE	1	1.070	0.230	1.01	0.22	A
TI	1	0.990	0.080	0.93	0.08	A
TM	1	1.220	0.100	1.15	0.10	A
TN	1	1.060	0.061	1.00	0.07	A
TO	1	1.080	0.081	1.02	0.08	A
TW	1	0.900	0.040	0.85	0.05	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: SR 90

EML Value: 1.060
EML Error: 0.037

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
UP	1	0.881	0.252	0.83	0.24	A
UY	1	1.120	0.200	1.06	0.19	A
WA	1	1.180	0.150	1.11	0.15	A
WC	1	0.768	0.174	0.73	0.17	W
WE	1	0.002	0.001	0.00	0.00	N
WP	1	1.100	0.110	1.04	0.11	A

Total Number Reported: 51

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: U 234

EML Value: 0.052
EML Error: 0.002

Lahcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
AA	1	0.052	0.002	1.00	0.04	A
AC	1	0.050	0.002	0.97	0.05	A
AG	1	0.080	0.012	1.55	0.24	W
AI	1	0.054	0.003	1.04	0.07	A
AN	1	0.056	0.003	1.08	0.06	A
AR	1	0.060	0.011	1.16	0.21	A
AU	1	0.180	0.040	3.48	0.78	N
BC	1	0.064	0.004	1.23	0.09	A
BE	1	0.052	0.010	1.01	0.20	A
BL	2	0.074	0.000	1.43	0.04	W
BL	3	0.075	0.000	1.45	0.04	W
BL	4	0.074	0.000	1.43	0.04	W
BM	1	0.077	0.017	1.49	0.33	W
BX	1	0.067	0.006	1.30	0.13	A
CC	1	0.050	0.000	0.97	0.03	A
CH	1	0.070	0.024	1.36	0.47	A
CL	1	0.070	0.030	1.35	0.58	A
CS	1	0.230	0.070	4.45	1.36	N
CW	1	0.056	0.004	1.08	0.08	A
DC	1	0.074	0.033	1.44	0.64	W
EI	1	0.050	0.005	0.97	0.10	A
EL	1	0.070	0.010	1.35	0.20	A
ES	1	0.061	0.014	1.18	0.27	A
GA	1	0.059	0.006	1.14	0.12	A
GE	1	0.067	0.011	1.30	0.22	A
IE	1	0.056	0.012	1.08	0.24	A
JP	1	0.051	0.003	0.99	0.06	A
LH	1	0.095	0.025	1.84	0.49	W
LL	1	4.330	0.084	83.80	2.92	N
ML	1	0.058	0.004	1.12	0.08	A
NL	1	0.053	0.010	1.03	0.20	A
NM	1	0.055	0.004	1.06	0.08	A
PA	1	0.027	0.067	0.52	1.30	N
RE	1	0.051	0.006	0.99	0.12	A
SN	1	0.071	0.010	1.37	0.20	A
SR	1	0.045	0.009	0.87	0.18	W
TI	1	0.067	0.027	1.30	0.52	A
TM	1	0.061	0.004	1.17	0.08	A
TN	1	0.061	0.008	1.18	0.16	A
TO	1	0.049	0.003	0.95	0.06	A
TX	1	0.072	0.006	1.39	0.12	W
UP	1	0.137	0.040	2.65	0.78	N
UY	1	0.095	0.030	1.84	0.58	W
WA	1	0.043	0.010	0.83	0.20	W
WC	1	0.064	0.020	1.25	0.38	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: U 234

EML Value: 0.052
EML Error: 0.002

Labcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
WE	1	0.047	0.010	0.91	0.19	A

Total Number Reported: 46

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: U 238

EML Value: 0.053
EML Error: 0.002

Lahcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
AA	1	0.053	0.002	1.00	0.06	A
AC	1	0.048	0.002	0.90	0.05	A
AG	1	0.068	0.010	1.28	0.19	A
AI	1	0.055	0.004	1.04	0.08	A
AN	1	0.060	0.003	1.13	0.06	A
AR	1	0.055	0.011	1.04	0.20	A
AU	1	0.160	0.030	3.00	0.58	N
BC	2	0.071	0.006	1.33	0.13	A
BE	1	0.055	0.010	1.03	0.19	A
BL	2	0.073	0.000	1.37	0.05	A
BL	3	0.072	0.000	1.35	0.05	A
BM	1	0.066	0.017	1.24	0.32	A
BX	1	0.063	0.008	1.18	0.16	A
CC	1	0.060	0.000	1.13	0.04	A
CH	1	0.060	0.022	1.13	0.41	A
CL	1	0.070	0.030	1.31	0.56	A
CW	1	0.056	0.004	1.05	0.08	A
DC	1	0.087	0.028	1.63	0.54	W
EI	1	0.053	0.005	0.99	0.10	A
EL	1	0.080	0.010	1.50	0.20	W
ES	1	0.062	0.014	1.16	0.27	A
GA	1	0.054	0.007	1.01	0.14	A
GE	1	0.055	0.010	1.03	0.19	A
IE	1	0.054	0.012	1.01	0.22	A
JP	1	0.053	0.003	0.99	0.07	A
LH	1	0.086	0.023	1.61	0.44	W
LL	1	4.290	0.084	80.50	3.54	N
ML	1	0.056	0.004	1.05	0.09	A
NL	1	0.046	0.012	0.86	0.23	N
NM	1	0.060	0.005	1.13	0.10	A
PA	1	0.023	0.067	0.44	1.26	N
RE	1	0.057	0.006	1.06	0.13	A
SN	1	0.068	0.009	1.28	0.18	A
SR	1	0.048	0.011	0.90	0.21	A
TI	1	0.048	0.023	0.90	0.43	A
TM	1	0.061	0.003	1.14	0.08	A
TN	1	0.054	0.008	1.02	0.16	A
TO	1	0.048	0.005	0.91	0.10	A
TX	1	0.068	0.004	1.28	0.09	A
UP	1	0.078	0.028	1.46	0.53	W
UY	1	0.076	0.027	1.43	0.51	W
WA	1	0.052	0.010	0.98	0.19	A
WC	1	0.057	0.018	1.08	0.34	A
WE	1	0.047	0.009	0.88	0.17	N

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: U 238

EML Value: 0.053
EML Error: 0.002

Lahcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
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Total Number Reported: 44

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: U BQ

EML Value: 0.107
EML Error: 0.003

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
AA	1	0.107	0.003	1.00	0.03	A
AR	1	0.115	0.015	1.08	0.14	A
BU	1	5.800	0.400	54.20	3.96	N
CH	1	0.131	0.033	1.22	0.31	A
CL	1	0.120	0.020	1.12	0.19	A
EL	1	0.148	0.050	1.38	0.47	A
ES	1	0.126	0.029	1.18	0.27	A
ID	1	0.115	0.006	1.08	0.06	A
OR	1	0.133	0.020	1.24	0.19	A
OT	1	0.680	0.070	6.36	0.67	N
RE	1	0.113	0.006	1.06	0.06	A
TE	1	0.118	0.020	1.10	0.19	A
TW	1	0.430	0.020	4.02	0.21	N
UK	1	0.184	0.039	1.72	0.37	W
UP	1	0.215	0.049	2.01	0.46	W
WA	1	0.106	0.015	0.99	0.14	A

Total Number Reported: 16

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: AI
Radionuclide: U UG

EML Value: 4.310
EML Error: 0.100

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
AA	1	4.310	0.100	1.00	0.03	A
AR	1	4.400	0.060	1.02	0.03	A
BE	1	4.500	0.000	1.04	0.02	A
BL	1	6.080	0.110	1.41	0.04	W
BL	2	6.110	0.120	1.42	0.04	W
BL	3	6.080	0.110	1.41	0.04	W
BQ	1	4.300	0.200	1.00	0.05	A
CC	1	4.560	0.000	1.06	0.02	A
CH	1	4.150	0.420	0.96	0.10	A
DC	1	7.000	0.700	1.62	0.17	W
ES	1	4.990	0.490	1.16	0.12	A
GA	1	4.310	0.000	1.00	0.02	A
GE	1	4.360	0.060	1.01	0.03	A
IE	1	4.400	0.937	1.02	0.22	A
IR	1	4.270	0.470	0.99	0.11	A
IT	1	4.690	0.640	1.09	0.15	A
LA	1	4.100	0.400	0.95	0.10	A
LA	2	4.100	0.400	0.95	0.10	A
LA	3	4.100	0.400	0.95	0.10	A
NL	1	4.300	0.500	1.00	0.12	A
SW	1	5.450	0.960	1.27	0.23	W
TI	1	8.800	1.300	2.04	0.31	N
TM	1	4.920	0.059	1.14	0.03	A
TN	1	4.560	1.190	1.06	0.28	A
TO	1	3.980	0.251	0.92	0.06	A
TW	1	17.400	0.900	4.04	0.23	N
YP	1	3.850	0.650	0.89	0.15	A

Total Number Reported: 27

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: SO
Radionuclide: AM241

EML Value: 3.690
EML Error: 0.454

Lahcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
AA	1	3.690	0.454	1.00	0.17	A
AC	1	4.550	0.440	1.23	0.19	A
AE	1	2.660	0.510	0.72	0.16	W
AG	1	3.330	0.440	0.90	0.16	A
AM	1	3.290	1.660	0.89	0.46	A
AN	1	3.460	0.120	0.94	0.12	A
AR	1	2.320	0.310	0.63	0.11	W
AU	1	2.960	1.480	0.80	0.41	A
BE	1	3.530	0.320	0.96	0.15	A
BL	1	2.630	0.180	0.71	0.10	W
BP	1	3.440	0.320	0.93	0.14	A
BR	1	6.000	3.800	1.63	1.05	W
BS	1	4.600	0.100	1.25	0.16	A
BU	1	2.900	0.700	0.79	0.21	A
BX	1	2.020	0.051	0.55	0.07	W
CC	1	2.510	0.000	0.68	0.08	W
CH	1	4.670	0.852	1.27	0.28	A
CL	1	5.640	3.700	1.53	1.02	W
CW	1	3.520	0.170	0.95	0.13	A
DC	1	5.590	0.180	1.52	0.19	W
DC	2	5.590	0.180	1.52	0.19	W
DC	3	5.590	0.180	1.52	0.19	W
EG	1	4.000	0.600	1.08	0.21	A
EL	1	4.330	0.300	1.17	0.17	A
ES	1	3.310	0.600	0.90	0.20	A
FG	1	2.500	0.320	0.68	0.12	W
FL	1	2.800	0.500	0.76	0.17	A
FS	1	3.770	0.260	1.02	0.14	A
GA	1	3.300	0.000	0.89	0.11	A
GE	1	4.370	0.850	1.18	0.27	A
HL	1	5.500	1.900	1.49	0.55	A
ID	1	4.330	0.620	1.17	0.22	A
IE	1	2.860	0.199	0.78	0.11	A
IN	1	2.400	0.290	0.65	0.11	W
IS	1	2.860	0.890	0.78	0.26	A
IT	1	3.430	0.830	0.93	0.25	A
JP	1	3.700	0.230	1.00	0.14	A
LA	1	3.940	0.400	1.07	0.17	A
LA	2	3.490	0.400	0.95	0.16	A
LA	3	3.810	0.400	1.03	0.17	A
LB	1	1.940	0.868	0.53	0.24	W
LH	1	3.400	0.500	0.92	0.18	A
LV	1	5.960	0.670	1.62	0.27	W
LW	1	3.800	53.800	1.03	14.60	A
MA	1	5.200	2.200	1.41	0.62	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: SO
Radionuclide: AM241

EML Value: 3.690
EML Error: 0.454

Lahcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
NM	1	4.900	0.800	1.33	0.27	A
OR	1	1.800	0.900	0.49	0.25	N
RF	1	4.240	0.460	1.15	0.19	A
RG	1	3.890	0.420	1.05	0.17	A
SE	1	7.830	1.930	2.12	0.59	W
SW	1	5.700	1.850	1.55	0.54	W
TE	1	6.230	2.880	1.69	0.81	W
TI	1	5.000	2.100	1.36	0.59	A
TM	1	3.480	0.259	0.94	0.14	A
TN	1	3.060	0.358	0.83	0.14	A
TO	1	3.230	2.210	0.88	0.61	A
TW	1	3.300	0.300	0.89	0.14	A
TX	1	5.920	0.930	1.60	0.32	W
UK	1	10.100	0.810	2.74	0.40	N
WA	1	2.850	0.320	0.77	0.13	A
WS	1	4.300	0.900	1.17	0.28	A
YA	1	4.360	0.190	1.18	0.15	A

Total Number Reported: 62

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: SO
Radionuclide: CS137

EML Value: 359.000
EML Error: 10.000

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
AA	1	359.000	10.000	1.00	0.04	A
AC	1	382.000	2.000	1.06	0.03	A
AE	1	405.000	25.700	1.13	0.08	A
AG	1	452.000	29.000	1.26	0.09	W
AI	1	267.000	4.600	0.74	0.02	W
AL	1	319.000	3.660	0.89	0.03	A
AM	1	398.000	4.070	1.11	0.03	A
AN	1	410.000	12.000	1.14	0.05	A
AR	1	327.000	11.000	0.91	0.04	A
BA	1	337.000	21.000	0.94	0.06	A
BC	1	411.000	35.300	1.15	0.10	A
BE	1	407.000	24.000	1.13	0.07	A
BL	1	372.000	8.000	1.04	0.04	A
BL	2	374.000	8.000	1.04	0.04	A
BL	3	375.000	8.000	1.04	0.04	A
BM	1	306.000	22.000	0.85	0.07	W
BN	1	354.000	19.300	0.99	0.06	A
BP	1	428.000	7.000	1.19	0.04	A
BQ	1	396.000	8.000	1.10	0.04	A
BR	1	427.000	9.000	1.19	0.04	A
BS	1	374.000	0.200	1.04	0.03	A
BU	1	360.000	30.000	1.00	0.09	A
BX	1	392.000	27.100	1.09	0.08	A
CC	1	441.000	0.000	1.23	0.03	A
CH	1	407.000	889.000	1.13	2.48	A
CL	1	355.000	14.800	0.99	0.05	A
CP	1	388.000	42.000	1.08	0.12	A
DC	1	399.000	96.300	1.11	0.27	A
DC	2	399.000	96.300	1.11	0.27	A
EG	1	406.000	14.000	1.13	0.05	A
EL	1	378.000	20.000	1.05	0.06	A
ES	1	433.000	51.000	1.21	0.15	A
FG	1	370.000	6.600	1.03	0.03	A
FL	1	379.000	1.000	1.06	0.03	A
FN	1	363.000	36.000	1.01	0.10	A
FS	1	370.000	3.000	1.03	0.03	A
GA	1	380.000	0.000	1.06	0.03	A
GE	1	374.000	3.700	1.04	0.03	A
HA	1	407.000	40.000	1.13	0.12	A
HL	1	294.000	33.000	0.82	0.09	W
ID	1	363.000	19.000	1.01	0.06	A
IE	1	388.000	18.700	1.08	0.06	A
IL	1	94.300	1.920	0.26	0.01	N
IN	1	376.000	4.970	1.05	0.03	A
IS	1	335.000	43.000	0.93	0.12	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: SO
Radionuclide: CS137

EML Value: 359.000
EML Error: 10.000

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
IT	1	432.000	12.000	1.20	0.05	A
JP	1	390.000	3.000	1.09	0.03	A
KA	1	434.000	20.000	1.21	0.07	A
LA	1	316.000	24.000	0.88	0.07	A
LA	2	320.000	25.000	0.89	0.07	A
LA	3	329.000	26.000	0.92	0.08	A
LB	1	332.000	13.700	0.93	0.05	A
LH	1	419.000	60.000	1.17	0.17	A
LL	1	400.000	1.800	1.11	0.03	A
LM	1	850.000	13.000	2.37	0.08	N
LV	1	370.000	2.000	1.03	0.03	A
LW	1	395.000	1.800	1.10	0.03	A
MA	1	444.000	33.000	1.24	0.10	W
ME	1	370.000	12.100	1.03	0.04	A
ML	1	356.000	36.000	0.99	0.10	A
MS	1	362.000	36.000	1.01	0.10	A
NA	1	382.000	1.940	1.06	0.03	A
NC	1	366.000	2.230	1.02	0.03	A
NL	1	399.000	8.000	1.11	0.04	A
NR	1	312.000	62.000	0.87	0.17	W
OL	1	391.000	11.300	1.09	0.04	A
OR	1	380.000	10.000	1.06	0.04	A
OS	1	384.000	4.300	1.07	0.03	A
OT	1	380.000	10.000	1.06	0.04	A
RA	1	368.000	11.000	1.03	0.04	A
RE	1	309.000	26.600	0.86	0.08	W
RI	1	185.000	5.000	0.52	0.02	N
SA	1	372.000	20.000	1.04	0.06	A
SC	1	256.000	1.000	0.71	0.02	N
SE	1	423.000	63.600	1.18	0.18	A
SK	1	443.000	13.000	1.23	0.05	A
SN	1	399.000	40.000	1.11	0.12	A
SR	1	395.000	23.000	1.10	0.07	A
SS	1	445.000	23.000	1.24	0.07	W
SW	1	483.000	14.300	1.35	0.05	W
TE	1	405.000	4.150	1.13	0.03	A
TI	1	430.000	40.000	1.20	0.12	A
TM	1	413.000	13.300	1.15	0.05	A
TN	1	314.000	44.000	0.88	0.13	A
TO	1	405.000	7.590	1.13	0.04	A
TW	1	360.000	11.000	1.00	0.04	A
TX	1	393.000	4.000	1.10	0.03	A
TY	1	359.000	4.000	1.00	0.03	A
UC	1	404.000	17.900	1.13	0.06	A
UK	1	375.000	2.600	1.04	0.03	A
UP	1	325.000	34.900	0.91	0.10	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: SO
Radionuclide: CS137

EML Value: 359.000
EML Error: 10.000

Lahcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
UY	1	377.000	40.000	1.05	0.12	A
WA	1	401.000	31.000	1.12	0.09	A
WC	1	407.000	44.200	1.13	0.13	A
WE	1	372.000	9.500	1.04	0.04	A
WN	1	403.000	10.000	1.12	0.04	A
WP	1	427.000	7.900	1.19	0.04	A
WS	1	385.000	13.700	1.07	0.05	A
YA	1	373.000	2.700	1.04	0.03	A

Total Number Reported: 99

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: SO
Radionuclide: K 40

EML Value: 465.000
EML Error: 30.000

Labcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
AA	1	465.000	30.000	1.00	0.09	A
AC	1	472.000	12.000	1.02	0.07	A
AE	1	534.000	72.000	1.15	0.17	A
AG	1	585.000	45.000	1.26	0.13	W
AI	1	308.000	35.900	0.66	0.09	N
AM	1	537.000	22.600	1.16	0.09	A
AN	1	519.000	16.000	1.12	0.08	A
AR	1	369.000	22.000	0.79	0.07	W
BC	1	451.000	25.700	0.97	0.08	A
BE	1	473.000	35.500	1.02	0.10	A
BL	1	528.000	17.000	1.14	0.08	A
BL	2	519.000	18.000	1.12	0.08	A
BL	3	522.000	17.000	1.12	0.08	A
BM	1	380.000	60.000	0.82	0.14	W
BN	1	414.000	7.940	0.89	0.06	A
BP	1	542.000	14.000	1.17	0.08	A
BQ	1	278.000	5.000	0.60	0.04	N
BS	1	482.000	10.900	1.04	0.07	A
BU	1	470.000	80.000	1.01	0.18	A
BX	1	437.000	27.100	0.94	0.08	A
CC	1	539.000	0.000	1.16	0.07	A
CH	1	540.000	49.300	1.16	0.13	A
CL	1	419.000	75.500	0.90	0.17	A
CP	1	456.000	98.000	0.98	0.22	A
DC	1	418.000	101.000	0.90	0.23	A
DC	2	418.000	101.000	0.90	0.23	A
EG	1	461.000	85.000	0.99	0.19	A
ES	1	516.000	102.000	1.11	0.23	A
FG	1	647.000	9.700	1.39	0.09	W
FL	1	479.000	2.000	1.03	0.07	A
FN	1	474.000	48.000	1.02	0.12	A
FS	1	478.000	18.000	1.03	0.08	A
GA	1	486.000	0.000	1.04	0.07	A
GE	1	540.000	22.200	1.16	0.09	A
HA	1	593.000	60.000	1.28	0.15	W
HL	1	600.000	149.000	1.29	0.33	W
ID	1	411.000	23.000	0.88	0.08	A
IE	1	467.000	46.400	1.00	0.12	A
IL	1	133.000	4.450	0.29	0.02	N
IN	1	478.000	43.000	1.03	0.11	A
IS	1	450.000	54.000	0.97	0.13	A
IT	1	541.000	24.000	1.16	0.09	A
JP	1	480.000	12.000	1.03	0.07	A
KA	1	498.000	45.000	1.07	0.12	A
LA	1	414.000	44.000	0.89	0.11	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: SO
Radionuclide: K 40

EML Value: 465.000
EML Error: 30.000

Lahcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
LA	2	414.000	44.000	0.89	0.11	A
LA	3	411.000	44.000	0.88	0.11	A
LB	1	496.000	33.400	1.07	0.10	A
LH	1	497.000	82.000	1.07	0.19	A
LL	1	496.000	6.800	1.07	0.07	A
LM	1	1030.000	65.000	2.21	0.20	N
LV	1	403.000	10.000	0.87	0.06	A
LW	1	468.000	7.400	1.01	0.07	A
MA	1	518.000	59.000	1.11	0.15	A
ME	1	622.000	21.400	1.34	0.10	W
ML	1	473.000	52.000	1.02	0.13	A
MS	1	458.000	46.000	0.99	0.12	A
NA	1	480.000	9.460	1.03	0.07	A
NL	1	584.000	80.000	1.26	0.19	W
NR	1	407.000	81.000	0.88	0.18	A
OL	1	524.000	36.500	1.13	0.11	A
OR	1	520.000	80.000	1.12	0.19	A
OT	1	480.000	60.000	1.03	0.15	A
RA	1	550.000	50.000	1.18	0.13	A
RE	1	392.000	50.900	0.84	0.12	A
RI	1	253.000	43.000	0.54	0.10	N
SA	1	472.000	58.000	1.02	0.14	A
SC	1	387.000	4.000	0.83	0.05	W
SE	1	693.000	25.300	1.49	0.11	W
SK	1	525.000	17.000	1.13	0.08	A
SN	1	528.000	50.900	1.14	0.13	A
SR	1	502.000	60.000	1.08	0.15	A
SS	1	554.000	46.000	1.19	0.13	A
SW	1	848.000	121.000	1.82	0.29	N
TE	1	525.000	23.300	1.13	0.09	A
TI	1	540.000	50.000	1.16	0.13	A
TM	1	439.000	47.000	0.94	0.12	A
TN	1	404.000	31.600	0.87	0.09	A
TO	1	411.000	32.900	0.88	0.09	A
TW	1	470.000	19.000	1.01	0.08	A
TX	1	505.000	11.000	1.09	0.07	A
TY	1	478.000	15.000	1.03	0.07	A
UC	1	552.000	24.900	1.19	0.09	A
UK	1	506.000	15.000	1.09	0.08	A
UY	1	544.000	136.000	1.17	0.30	A
WA	1	549.000	31.000	1.18	0.10	A
WC	1	518.000	73.600	1.11	0.17	A
WE	1	431.000	59.500	0.93	0.14	A
WN	1	500.000	40.000	1.08	0.11	A
WP	1	547.000	35.000	1.18	0.11	A
WS	1	492.000	18.100	1.06	0.08	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: SO
Radionuclide: K 40

EML Value: 465.000
EML Error: 30.000

Labcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
YA	1	481.000	4.600	1.03	0.07	A

Total Number Reported: 92

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: SO
Radionuclide: PU238

EML Value: 43.000
EML Error: 2.440

Lahcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
AA	1	43.000	2.440	1.00	0.08	A
AC	1	44.800	1.500	1.04	0.07	A
AE	1	42.800	1.620	1.00	0.07	A
AG	1	41.000	4.800	0.95	0.12	A
AI	1	42.300	2.500	0.98	0.08	A
AN	1	46.000	1.400	1.07	0.07	A
AR	1	44.200	3.300	1.03	0.10	A
AU	1	114.000	21.000	2.65	0.51	N
BE	1	42.900	1.760	1.00	0.07	A
BL	1	45.000	0.900	1.05	0.06	A
BL	2	46.600	0.020	1.08	0.06	A
BP	1	45.200	1.900	1.05	0.07	A
BU	1	39.100	0.900	0.91	0.06	A
BX	1	36.900	0.940	0.86	0.05	A
CC	1	45.500	0.000	1.06	0.06	A
CH	1	45.600	1.480	1.06	0.07	A
CL	1	38.100	6.300	0.89	0.16	A
CW	1	41.200	2.500	0.96	0.08	A
DC	1	44.300	1.800	1.03	0.07	A
DC	2	44.300	1.800	1.03	0.07	A
EG	1	40.500	3.300	0.94	0.09	A
EP	1	42.200	3.660	0.98	0.10	A
ES	1	44.100	7.940	1.03	0.19	A
ES	2	44.100	7.840	1.03	0.19	A
FL	1	42.000	0.910	0.98	0.06	A
FS	1	40.700	1.400	0.95	0.06	A
GA	1	44.000	0.000	1.02	0.06	A
GE	1	50.300	0.890	1.17	0.07	A
HA	1	36.600	4.000	0.85	0.11	A
ID	1	41.700	3.700	0.97	0.10	A
IE	1	40.000	0.620	0.93	0.05	A
IN	1	44.000	5.000	1.02	0.13	A
IS	1	28.500	5.000	0.66	0.12	A
IT	1	30.900	3.950	0.72	0.10	A
JP	1	45.000	1.500	1.05	0.07	A
KA	1	47.000	5.000	1.09	0.13	A
LA	1	41.400	1.400	0.96	0.06	A
LA	2	38.500	1.400	0.90	0.06	A
LA	3	42.700	1.400	0.99	0.07	A
LH	1	42.900	3.300	1.00	0.10	A
LL	1	44.700	3.210	1.04	0.10	A
ML	1	38.000	1.070	0.88	0.06	A
NA	1	40.000	3.260	0.93	0.09	A
NL	1	43.600	10.000	1.01	0.24	A
NM	1	43.000	2.000	1.00	0.07	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: SO
Radionuclide: PU238

EML Value: 43.000
EML Error: 2.440

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
OR	1	44.000	1.000	1.02	0.06	A
OT	1	50.000	6.000	1.16	0.15	A
PI	1	47.000	4.500	1.09	0.12	A
RA	1	47.000	2.000	1.09	0.08	A
RA	2	45.000	2.000	1.05	0.08	A
RE	1	34.800	4.100	0.81	0.11	A
RG	1	42.300	1.700	0.98	0.07	A
SC	1	50.000	1.000	1.16	0.07	A
SE	1	56.000	2.590	1.30	0.10	N
SN	1	41.100	8.160	0.96	0.20	A
SR	1	42.600	7.200	0.99	0.18	A
TE	1	42.300	1.590	0.98	0.07	A
TI	1	44.000	6.000	1.02	0.15	A
TM	1	42.800	2.360	1.00	0.08	A
TN	1	43.200	2.500	1.01	0.08	A
TO	1	43.800	13.700	1.02	0.32	A
TW	1	39.000	2.000	0.91	0.07	A
TX	1	42.900	2.600	1.00	0.08	A
UK	1	36.900	2.200	0.86	0.07	A
UP	1	41.400	6.020	0.96	0.15	A
UY	1	49.600	10.000	1.15	0.24	A
WA	1	43.300	1.200	1.01	0.06	A
WE	1	17.200	0.926	0.40	0.03	W
YA	1	43.000	0.450	1.00	0.06	A

Total Number Reported: 69

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

OAP44 Results by Nuclide

Matrix: SO
Radionuclide: PU239

EML Value: 9.230
EML Error: 0.346

Labcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
AA	1	9.230	0.346	1.00	0.05	A
AC	1	9.250	0.460	1.00	0.06	A
AE	1	8.510	0.740	0.92	0.09	A
AG	1	9.200	1.100	1.00	0.13	A
AI	1	9.580	0.850	1.04	0.10	A
AM	1	12.200	1.660	1.32	0.19	W
AN	1	10.300	0.300	1.12	0.05	A
AR	1	11.300	1.700	1.22	0.19	A
AU	1	24.000	5.000	2.60	0.55	N
BE	1	9.510	0.560	1.03	0.07	A
BL	1	10.100	0.430	1.09	0.06	A
BL	2	12.400	0.010	1.34	0.05	W
BP	1	10.100	0.300	1.09	0.05	A
BU	1	9.400	0.300	1.02	0.05	A
BX	1	7.220	0.185	0.78	0.04	W
CC	1	10.100	0.000	1.09	0.04	A
CH	1	9.560	0.481	1.04	0.07	A
CL	1	12.300	2.740	1.33	0.30	W
CW	1	8.840	0.620	0.96	0.08	A
DC	1	9.970	0.400	1.08	0.06	A
DC	2	9.970	0.400	1.08	0.06	A
EG	1	10.500	1.100	1.14	0.13	A
EP	1	8.990	0.946	0.97	0.11	A
ES	1	11.000	2.210	1.19	0.24	A
ES	2	9.320	1.780	1.01	0.20	A
FL	1	9.070	0.360	0.98	0.05	A
FS	1	8.640	0.530	0.94	0.07	A
GA	1	9.800	0.000	1.06	0.04	A
GE	1	11.200	0.670	1.21	0.09	A
HA	1	7.400	0.800	0.80	0.09	W
ID	1	9.070	0.700	0.98	0.08	A
IE	1	8.820	0.419	0.96	0.06	A
IN	1	9.440	1.070	1.02	0.12	A
IS	1	7.670	1.580	0.83	0.17	W
IT	1	6.470	0.610	0.70	0.07	W
JP	1	9.300	0.340	1.01	0.05	A
KA	1	10.100	0.500	1.09	0.07	A
LA	1	9.160	0.420	0.99	0.06	A
LA	2	8.630	1.440	0.94	0.16	A
LA	3	8.970	0.420	0.97	0.06	A
LH	1	9.670	0.940	1.05	0.11	A
LL	1	9.660	0.941	1.05	0.11	A
ML	1	8.660	0.510	0.94	0.07	A
NA	1	9.640	1.450	1.04	0.16	A
NL	1	9.350	2.100	1.01	0.23	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: SO
Radionuclide: PU239

EML Value: 9.230
EML Error: 0.346

Lahcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
NM	1	22.000	1.000	2.38	0.14	N
OR	1	8.800	0.400	0.95	0.06	A
OT	1	13.000	3.000	1.41	0.33	W
PA	1	10.700	1.480	1.16	0.17	A
PB	1	8.890	1.480	0.96	0.16	A
PI	1	10.000	1.300	1.08	0.15	A
RA	1	9.000	1.000	0.98	0.11	A
RA	2	9.000	1.000	0.98	0.11	A
RE	1	8.470	1.140	0.92	0.13	A
RF	1	9.830	0.970	1.07	0.11	A
RG	1	8.340	0.570	0.90	0.07	A
SC	1	8.150	0.500	0.88	0.06	A
SE	1	12.400	1.620	1.34	0.18	W
SN	1	8.460	3.290	0.92	0.36	A
SR	1	9.290	1.930	1.01	0.21	A
TE	1	9.000	0.700	0.98	0.08	A
TI	1	11.000	2.000	1.19	0.22	A
TM	1	8.530	0.888	0.92	0.10	A
TN	1	9.230	0.762	1.00	0.09	A
TO	1	9.220	3.590	1.00	0.39	A
TW	1	8.500	0.700	0.92	0.08	A
TX	1	10.300	0.900	1.12	0.11	A
UK	1	7.110	0.980	0.77	0.11	W
UP	1	8.450	1.590	0.92	0.18	A
UY	1	11.000	3.500	1.19	0.38	A
WA	1	8.990	0.600	0.97	0.07	A
WE	1	3.460	0.421	0.38	0.05	N
YA	1	9.370	0.250	1.02	0.05	A

Total Number Reported: 73

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. $\text{pCi} = \text{Bq} \times 27$

QAP44 Results by Nuclide

Matrix: SO
Radionuclide: SR 90

EML Value: 1340.000
EML Error: 113.000

Lahcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
AA	1	1340.000	113.000	1.00	0.12	A
AG	1	1040.000	140.000	0.78	0.12	A
AN	1	1310.000	39.000	0.98	0.09	A
AR	1	1340.000	60.000	1.00	0.10	A
AU	1	1280.000	25.000	0.96	0.08	A
BC	1	936.000	71.400	0.70	0.08	W
BE	1	1210.000	74.000	0.90	0.09	A
BL	1	958.000	45.000	0.72	0.07	W
BL	2	958.000	34.000	0.72	0.07	W
BM	1	506.000	60.000	0.38	0.05	N
BP	1	1210.000	75.000	0.90	0.09	A
BX	1	618.000	42.200	0.46	0.05	N
CC	1	994.000	0.000	0.74	0.06	W
CH	1	1040.000	59.300	0.78	0.08	A
CL	1	467.000	11.100	0.35	0.03	N
DC	1	1190.000	144.000	0.89	0.13	A
DC	2	1190.000	144.000	0.89	0.13	A
EG	1	9900.000	30.000	7.39	0.62	N
EI	1	1580.000	216.000	1.18	0.19	A
EL	1	595.000	45.000	0.44	0.05	N
EP	1	1.220	0.023	0.00	0.00	N
ES	1	1010.000	181.000	0.75	0.15	W
GE	1	977.000	25.900	0.73	0.06	W
HA	1	937.000	100.000	0.70	0.10	W
HL	1	1320.000	42.200	0.99	0.09	A
ID	1	1050.000	124.000	0.78	0.11	A
IE	1	1140.000	248.000	0.85	0.20	A
IN	1	1010.000	50.500	0.75	0.07	W
IS	1	660.000	66.000	0.49	0.06	N
IT	1	1100.000	111.000	0.82	0.11	A
JP	1	1200.000	10.000	0.90	0.08	A
KA	1	1450.000	147.000	1.08	0.14	A
LA	1	1300.000	87.000	0.97	0.10	A
LA	2	1400.000	92.000	1.04	0.11	A
LA	3	1210.000	81.000	0.90	0.10	A
LH	1	1140.000	86.000	0.85	0.10	A
NA	1	1450.000	78.000	1.08	0.11	A
OR	1	1100.000	100.000	0.82	0.10	A
OT	1	1200.000	100.000	0.90	0.11	A
RA	1	700.000	100.000	0.52	0.09	N
RA	2	650.000	100.000	0.49	0.09	N
RE	1	1130.000	210.000	0.84	0.17	A
SR	1	695.000	12.000	0.52	0.04	N
TE	1	1200.000	32.300	0.90	0.08	A
TI	1	1300.000	100.000	0.97	0.11	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: SO
Radionuclide: SR 90

EML Value: 1340.000
EML Error: 113.000

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
TM	1	887.000	136.000	0.66	0.12	W
TN	1	1360.000	46.600	1.02	0.09	A
TO	1	983.000	41.700	0.73	0.07	W
TW	1	909.000	9.000	0.68	0.06	W
TX	1	1340.000	52.000	1.00	0.09	A
UP	1	1100.000	149.000	0.82	0.13	A
UY	1	1140.000	300.000	0.85	0.24	A
WA	1	1540.000	20.000	1.15	0.10	A
WE	1	2.640	0.139	0.00	0.00	N
WP	1	1300.000	37.000	0.97	0.09	A

Total Number Reported: 55

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: SO
Radionuclide: U 234

EML Value: 34.200
EML Error: 3.520

Labcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
AA	1	34.200	3.520	1.00	0.15	A
AE	1	32.300	2.180	0.94	0.12	A
AG	1	31.400	3.700	0.92	0.14	A
AI	1	40.500	11.000	1.18	0.34	W
AN	1	37.900	1.100	1.11	0.12	W
AR	1	37.800	3.300	1.11	0.15	W
AU	1	82.000	13.000	2.40	0.45	N
BC	1	42.200	2.460	1.23	0.15	W
BE	1	37.700	4.160	1.10	0.17	W
BL	1	48.500	0.000	1.42	0.15	N
BL	2	49.700	0.000	1.45	0.15	N
BL	3	48.500	0.000	1.42	0.15	N
BX	1	36.700	2.500	1.07	0.13	W
CC	1	35.800	0.000	1.05	0.11	A
CH	1	35.900	2.040	1.05	0.12	A
CL	1	40.200	5.200	1.17	0.19	W
CW	1	32.100	1.500	0.94	0.11	A
DC	1	36.900	3.300	1.08	0.15	W
DC	2	36.900	3.300	1.08	0.15	W
EG	1	14.800	1.800	0.43	0.07	W
EI	1	44.200	3.300	1.29	0.16	N
EL	1	40.000	4.000	1.17	0.17	W
ES	1	31.300	5.590	0.92	0.19	A
FS	1	38.800	1.930	1.14	0.13	W
GA	1	37.000	2.000	1.08	0.13	W
GE	1	35.200	4.000	1.03	0.16	A
HA	1	30.700	4.000	0.90	0.15	A
HL	1	37.100	8.000	1.09	0.26	W
IE	1	35.200	2.240	1.03	0.13	A
IS	1	33.100	13.100	0.97	0.40	A
JP	1	33.000	1.400	0.97	0.11	A
LH	1	33.800	5.400	0.99	0.19	A
ML	1	34.400	1.520	1.01	0.11	A
NA	1	35.900	2.830	1.05	0.14	A
NL	1	34.400	5.600	1.01	0.19	A
NM	1	36.000	1.000	1.05	0.11	A
OB	1	14.100	0.000	0.41	0.04	W
PA	1	29.300	2.960	0.86	0.12	A
PB	1	34.400	2.590	1.01	0.13	A
RE	1	30.900	2.900	0.90	0.13	A
RF	1	37.800	3.100	1.11	0.15	W
RG	1	35.500	1.900	1.04	0.12	A
SC	1	36.400	1.400	1.06	0.12	A
SN	1	57.400	10.400	1.68	0.35	N
TI	1	28.000	8.000	0.82	0.25	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: SO
Radionuclide: U 234

EML Value: 34.200
EML Error: 3.520

Lahcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
TM	1	35.000	1.880	1.02	0.12	A
TN	1	37.800	2.080	1.11	0.13	W
TO	1	38.700	0.907	1.13	0.12	W
TX	1	40.700	3.000	1.19	0.15	W
UP	1	36.800	6.160	1.08	0.21	W
UY	1	37.000	9.000	1.08	0.29	W
WA	1	45.500	4.100	1.33	0.18	N
WE	1	28.200	1.250	0.83	0.09	A

Total Number Reported: 53

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: SO
Radionuclide: U 238

EML Value: 35.900
EML Error: 3.630

Labcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
AA	1	35.900	3.630	1.00	0.14	A
AE	1	31.400	2.120	0.88	0.11	A
AG	1	32.200	4.000	0.90	0.14	A
AI	1	50.700	13.000	1.41	0.39	W
AM	1	55.900	11.500	1.56	0.36	W
AN	1	37.800	1.100	1.05	0.11	A
AR	1	31.800	3.000	0.89	0.12	A
AU	1	91.000	14.000	2.54	0.47	N
BC	1	42.600	2.210	1.19	0.14	W
BE	1	39.300	4.390	1.10	0.17	W
BL	1	47.300	0.000	1.32	0.13	W
BL	2	48.500	0.000	1.35	0.14	W
BL	3	47.300	0.000	1.32	0.13	W
BX	1	32.900	2.090	0.92	0.11	A
CC	1	36.300	0.000	1.01	0.10	A
CH	1	35.300	2.040	0.98	0.12	A
CL	1	38.700	4.700	1.08	0.17	A
CW	1	33.300	1.500	0.93	0.10	A
DC	1	35.300	1.400	0.98	0.11	A
DC	2	35.300	1.400	0.98	0.11	A
EG	1	14.900	1.800	0.42	0.07	W
EI	1	44.200	3.500	1.23	0.16	W
EI	2	44.200	3.500	1.23	0.16	W
EL	1	41.000	4.000	1.14	0.16	W
ES	1	31.700	5.650	0.88	0.18	A
FL	1	30.300	3.400	0.84	0.13	A
FN	1	29.300	1.800	0.82	0.10	A
FS	1	39.300	1.340	1.10	0.12	W
GA	1	37.000	1.100	1.03	0.11	A
GE	1	33.200	3.200	0.93	0.13	A
HA	1	31.800	4.000	0.89	0.14	A
HL	1	37.600	8.100	1.05	0.25	A
IE	1	34.800	2.570	0.97	0.12	A
IS	1	38.700	14.800	1.08	0.43	A
JP	1	33.000	1.400	0.92	0.10	A
LH	1	32.000	5.300	0.89	0.17	A
LW	1	40.500	29.600	1.13	0.83	W
ML	1	34.500	1.530	0.96	0.11	A
NA	1	35.400	2.810	0.99	0.13	A
NL	2	35.500	5.800	0.99	0.19	A
NM	1	36.000	1.000	1.00	0.11	A
OB	1	14.100	0.000	0.39	0.04	W
PA	1	27.400	2.590	0.76	0.11	A
PB	1	34.800	2.590	0.97	0.12	A
RE	1	33.100	3.100	0.92	0.13	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: SO
Radionuclide: U 238

EML Value: 35.900
EML Error: 3.630

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
RF	1	37.400	3.100	1.04	0.14	A
RG	1	37.000	2.000	1.03	0.12	A
SC	1	37.300	1.400	1.04	0.11	A
SN	1	48.200	9.270	1.34	0.29	W
TI	1	35.000	9.000	0.98	0.27	A
TM	1	35.100	1.880	0.98	0.11	A
TN	1	38.800	2.030	1.08	0.12	A
TO	1	38.300	0.889	1.07	0.11	A
TX	1	41.600	3.000	1.16	0.14	W
TY	1	106.000	20.000	2.95	0.63	N
UP	1	37.100	6.220	1.03	0.20	A
UY	1	36.000	9.100	1.00	0.27	A
WA	1	45.900	4.000	1.28	0.17	W
WE	1	28.800	1.260	0.80	0.09	A
WS	1	27.800	5.600	0.77	0.18	A

Total Number Reported: 60

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: SO
Radionuclide: U BQ

EML Value: 71.700
EML Error: 4.150

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
AA	1	71.700	4.150	1.00	0.08	A
AR	1	69.600	4.500	0.97	0.08	A
BS	1	141.000	18.500	1.97	0.28	N
BU	1	7.900	0.800	0.11	0.01	N
CH	1	72.900	2.900	1.02	0.07	A
CL	1	79.400	8.000	1.11	0.13	W
CP	1	50.100	5.700	0.70	0.09	A
EL	1	80.400	5.500	1.12	0.10	W
ES	1	64.500	11.600	0.90	0.17	A
FG	1	42.500	5.200	0.59	0.08	A
HL	1	74.800	16.100	1.04	0.23	A
ID	1	69.100	4.600	0.96	0.09	A
OR	1	70.000	2.000	0.98	0.06	A
RG	1	73.900	4.200	1.03	0.08	A
SC	1	73.700	2.800	1.03	0.07	A
TE	1	68.200	2.400	0.95	0.06	A
TW	1	52.600	0.900	0.73	0.04	A
UK	1	48.000	4.100	0.67	0.07	A
WA	1	93.200	5.800	1.30	0.11	W

Total Number Reported: 19

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: SO
Radionuclide: U UG

EML Value: 2.900
EML Error: 0.290

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
AA	1	2.900	0.290	1.00	0.14	A
AR	1	2.340	0.030	0.81	0.08	A
BE	1	3.400	0.000	1.17	0.12	W
BL	1	3.970	0.090	1.37	0.14	W
BL	2	4.070	0.090	1.40	0.14	W
BL	3	3.970	0.090	1.37	0.14	W
BM	1	68.000	12.000	23.50	4.76	N
BP	1	3.040	0.000	1.05	0.11	A
BQ	1	2.800	0.200	0.97	0.12	A
CA	1	3.000	0.200	1.03	0.12	A
CC	1	2.910	0.000	1.00	0.10	A
CH	1	1.420	0.142	0.49	0.07	W
DC	1	2.400	0.240	0.83	0.12	A
DC	2	2.400	0.240	0.83	0.12	A
ES	1	3.040	0.000	1.05	0.11	A
ES	2	2550.000	256.000	***	***	N
GA	1	3.200	0.000	1.10	0.11	A
GE	1	2.650	0.040	0.91	0.09	A
IE	1	2.820	0.210	0.97	0.12	A
IS	1	3.140	1.200	1.08	0.43	A
IT	1	2.250	0.060	0.78	0.08	A
LA	1	2.350	0.240	0.81	0.12	A
LA	2	2.540	0.250	0.88	0.12	A
LA	3	2.540	0.250	0.88	0.12	A
RA	1	2.500	0.220	0.86	0.12	A
SE	1	1.280	0.060	0.44	0.05	W
SW	1	2.300	0.290	0.79	0.13	A
TI	1	2.500	0.400	0.86	0.16	A
TM	1	2.620	0.142	0.90	0.10	A
TN	1	3.180	0.817	1.10	0.30	A
TO	1	3.160	0.073	1.09	0.11	A
TW	1	2.110	0.040	0.73	0.07	A
UP	1	2.710	0.000	0.93	0.09	A
UY	1	2.810	0.000	0.97	0.10	A
YP	1	3.220	0.027	1.11	0.11	W

Total Number Reported: 35

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: VE
Radionuclide: AM241

EML Value: 5.600
EML Error: 0.184

Lahcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
AA	1	5.600	0.184	1.00	0.05	A
AG	1	6.170	0.740	1.10	0.14	A
AN	1	5.850	0.180	1.04	0.05	A
AR	1	5.580	0.260	1.00	0.06	A
AU	1	5.700	1.000	1.02	0.18	A
BE	1	6.170	0.580	1.10	0.11	A
BL	1	7.310	0.260	1.31	0.06	A
BL	2	10.900	0.790	1.95	0.16	W
BL	2	8.260	0.290	1.48	0.07	A
BL	3	8.540	0.900	1.53	0.17	A
BM	1	9.100	4.500	1.63	0.81	W
BS	1	9.300	0.100	1.66	0.06	W
BU	1	7.400	1.800	1.32	0.32	A
BX	1	4.700	0.119	0.84	0.03	A
CC	1	6.080	0.000	1.09	0.04	A
CH	1	6.370	0.444	1.14	0.09	A
CL	1	6.270	1.500	1.12	0.27	A
CW	1	6.160	0.310	1.10	0.07	A
DC	1	6.360	0.870	1.14	0.16	A
EI	1	6.100	0.360	1.09	0.07	A
EL	1	7.150	0.700	1.28	0.13	A
ES	1	6.390	1.430	1.14	0.26	A
FL	1	6.300	1.300	1.13	0.24	A
GA	1	6.000	0.000	1.07	0.04	A
GE	1	6.440	0.770	1.15	0.14	A
ID	1	7.000	1.060	1.25	0.19	A
IE	1	5.670	0.530	1.01	0.10	A
IS	1	7.090	1.290	1.27	0.23	A
IT	1	6.160	0.225	1.10	0.05	A
JP	1	6.400	0.150	1.14	0.05	A
LA	1	5.670	0.220	1.01	0.05	A
LA	2	5.710	0.220	1.02	0.05	A
LA	3	5.570	0.220	1.00	0.05	A
LB	1	4.720	1.880	0.84	0.34	A
LH	1	5.230	0.440	0.93	0.08	A
LV	1	12.000	2.000	2.14	0.36	W
LW	1	5.300	57.400	0.95	10.30	A
MA	1	5.200	1.500	0.93	0.27	A
NA	1	5.810	0.570	1.04	0.11	A
NA	2	5.810	0.570	1.04	0.11	A
OR	1	5.600	1.100	1.00	0.20	A
RE	1	7.150	0.650	1.28	0.12	A
RI	1	5.440	0.510	0.97	0.10	A
SE	1	6.280	0.340	1.12	0.07	A
SW	1	10.300	3.340	1.84	0.60	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: VE
Radionuclide: AM241

EML Value: 5.600
EML Error: 0.184

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
TE	1	6.100	1.300	1.09	0.24	A
TI	1	3.300	1.000	0.59	0.18	W
TM	1	6.700	0.506	1.20	0.10	A
TN	1	5.930	0.479	1.06	0.09	A
TO	1	5.970	0.288	1.07	0.06	A
TW	1	5.800	0.200	1.04	0.05	A
TX	1	6.660	0.370	1.19	0.08	A
WA	1	5.620	0.630	1.00	0.12	A
YA	1	5.750	0.300	1.03	0.06	A

Total Number Reported: 54

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: VE
Radionuclide: CM244

EML Value: 4.440
EML Error: 0.202

Labcode	Test #	Reported Value	Reported Error	Reported FMI	Ratio Error	Evaluation
AA	1	4.440	0.202	1.00	0.06	A
AG	1	3.950	0.370	0.89	0.09	A
AN	1	4.400	0.130	0.99	0.05	A
AR	1	4.390	0.230	0.99	0.07	A
AU	1	3.300	0.700	0.74	0.16	W
BE	1	3.670	0.410	0.83	0.10	W
BL	1	4.860	0.200	1.10	0.07	A
BL	2	4.410	0.190	0.99	0.06	A
BL	2	4.600	0.610	1.04	0.15	A
BL	3	4.770	0.660	1.07	0.16	A
BX	1	7.030	0.175	1.58	0.08	W
CC	1	4.710	0.000	1.06	0.05	A
CH	1	4.190	0.348	0.94	0.09	A
CL	1	3.880	1.000	0.87	0.23	A
CW	1	4.550	0.330	1.03	0.09	A
DC	1	4.770	1.700	1.07	0.39	A
EI	1	5.170	0.320	1.16	0.09	A
ES	1	6.250	1.140	1.41	0.27	A
GA	1	3.700	0.000	0.83	0.04	W
GE	1	5.000	0.680	1.13	0.16	A
IE	1	4.300	0.240	0.97	0.07	A
IT	1	4.490	0.036	1.01	0.05	A
JP	1	5.000	0.120	1.13	0.06	A
LH	1	3.610	0.560	0.81	0.13	W
OR	1	3.600	1.100	0.81	0.25	W
RI	1	4.590	0.440	1.03	0.11	A
SE	1	3.070	0.190	0.69	0.05	W
SW	1	4.740	2.070	1.07	0.47	A
TE	1	6.000	1.200	1.35	0.28	A
TI	1	4.300	1.200	0.97	0.27	A
TM	1	5.490	0.754	1.24	0.18	A
TN	1	4.900	0.582	1.10	0.14	A
TO	1	2.250	0.222	0.51	0.06	W
TW	1	4.000	0.100	0.90	0.05	A
YA	1	4.590	0.110	1.03	0.05	A

Total Number Reported: 35

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: VE
Radionuclide: CO 60

EML Value: 59.700
EML Error: 0.963

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
AA	1	59.700	0.963	1.00	0.02	A
AG	1	61.800	4.100	1.04	0.07	A
AI	1	39.900	2.400	0.67	0.04	W
AL	1	56.200	2.070	0.94	0.04	A
AN	1	64.400	1.900	1.08	0.04	A
AR	1	44.100	2.600	0.74	0.05	W
BC	1	61.800	3.520	1.04	0.06	A
BE	1	55.400	4.000	0.93	0.07	A
BL	1	64.000	2.300	1.07	0.04	A
BL	2	60.400	2.200	1.01	0.04	A
BL	3	62.900	2.400	1.05	0.04	A
BM	1	51.000	3.600	0.85	0.06	A
BN	1	46.500	0.940	0.78	0.02	W
BP	1	69.800	2.200	1.17	0.04	A
BQ	1	81.900	7.000	1.37	0.12	W
BR	1	80.000	12.000	1.34	0.20	W
BS	1	45.900	0.100	0.77	0.01	W
BU	1	72.000	7.000	1.21	0.12	A
BX	1	64.400	3.990	1.08	0.07	A
CC	1	73.700	0.000	1.24	0.02	W
CH	1	67.400	10.100	1.13	0.17	A
CL	1	53.800	5.900	0.90	0.10	A
CP	1	67.900	8.100	1.14	0.14	A
DC	1	54.500	10.400	0.91	0.18	A
EG	1	59.000	5.000	0.99	0.09	A
EL	1	27.600	3.000	0.46	0.05	N
ES	1	68.200	12.400	1.14	0.21	A
FL	1	65.000	1.000	1.09	0.02	A
FN	1	56.800	4.100	0.95	0.07	A
GA	1	66.000	0.000	1.11	0.02	A
GE	1	63.600	8.140	1.07	0.14	A
ID	1	52.700	2.800	0.88	0.05	A
IE	1	60.700	6.180	1.02	0.11	A
IL	1	9.770	0.430	0.16	0.01	N
IN	1	66.000	2.800	1.11	0.05	A
IS	1	59.800	5.200	1.00	0.09	A
IT	1	72.800	1.370	1.22	0.03	A
JP	1	62.000	1.400	1.04	0.03	A
LA	1	55.900	5.180	0.94	0.09	A
LA	2	54.800	4.440	0.92	0.08	A
LA	3	56.200	4.810	0.94	0.08	A
LB	1	57.400	3.400	0.96	0.06	A
LH	1	61.700	7.300	1.03	0.12	A
LL	1	64.000	4.400	1.07	0.08	A
LV	1	70.200	2.400	1.18	0.04	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: VE
Radionuclide: CO 60

EML Value: 59.700
EML Error: 0.963

Lahcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
LW	1	59.600	5.600	1.00	0.10	A
MA	1	67.000	7.400	1.12	0.13	A
ME	1	64.300	1.660	1.08	0.03	A
ML	1	61.500	12.800	1.03	0.22	A
NA	1	63.000	1.100	1.05	0.03	A
NC	1	58.300	1.870	0.98	0.04	A
NR	1	47.700	9.500	0.80	0.16	W
OL	1	64.100	2.620	1.07	0.05	A
OR	1	60.000	10.000	1.01	0.17	A
OT	1	60.000	8.000	1.01	0.14	A
RA	1	55.400	2.200	0.93	0.04	A
RE	1	62.200	9.330	1.04	0.16	A
RI	1	30.200	2.600	0.51	0.04	N
SE	1	71.100	2.410	1.19	0.04	A
SK	1	66.500	5.100	1.11	0.09	A
SN	1	68.500	6.320	1.15	0.11	A
SR	1	66.000	6.000	1.11	0.10	A
SS	1	64.900	3.800	1.09	0.07	A
SW	1	58.100	4.750	0.97	0.08	A
TE	1	65.600	4.000	1.10	0.07	A
TI	1	68.000	7.000	1.14	0.12	A
TM	1	66.500	6.060	1.11	0.10	A
TN	1	48.700	3.990	0.82	0.07	A
TO	1	66.600	3.900	1.12	0.07	A
TW	1	62.000	1.000	1.04	0.02	A
TX	1	73.300	2.200	1.23	0.04	A
TY	1	56.000	3.000	0.94	0.05	A
UC	1	66.200	2.370	1.11	0.04	A
WA	1	59.900	3.000	1.00	0.05	A
WC	1	65.300	6.190	1.09	0.11	A
WE	1	61.300	8.320	1.03	0.14	A
WN	1	60.000	3.000	1.01	0.05	A
WP	1	72.200	3.300	1.21	0.06	A
YA	1	59.600	1.600	1.00	0.03	A

Total Number Reported: 79 .

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: VE
Radionuclide: CS137

EML Value: 944.000
EML Error: 16.200

Labcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
AA	1	944.000	16.200	1.00	0.02	A
AG	1	1180.000	75.000	1.25	0.08	A
AI	1	700.000	7.700	0.74	0.02	N
AL	1	980.000	9.010	1.04	0.02	A
AN	1	1130.000	34.000	1.20	0.04	A
AR	1	854.000	28.000	0.91	0.03	W
BA	1	954.000	59.000	1.01	0.06	A
BE	1	1190.000	59.800	1.26	0.07	W
BL	1	1030.000	22.000	1.09	0.03	A
BL	2	1020.000	21.000	1.08	0.03	A
BL	3	1020.000	22.000	1.08	0.03	A
BM	1	840.000	60.000	0.89	0.07	W
BN	1	949.000	31.200	1.01	0.04	A
BP	1	1850.000	43.000	1.96	0.06	N
BQ	1	1100.000	14.000	1.17	0.02	A
BR	1	680.000	30.000	0.72	0.03	N
BS	1	685.000	2.900	0.73	0.01	N
BU	1	1000.000	90.000	1.06	0.10	A
CC	1	1390.000	0.000	1.47	0.03	W
CH	1	1120.000	24.100	1.19	0.03	A
CL	1	949.000	39.200	1.01	0.05	A
CP	1	1120.000	111.000	1.19	0.12	A
DC	1	1100.000	315.000	1.17	0.33	A
EG	1	1030.000	30.000	1.09	0.04	A
ES	1	1260.000	145.000	1.34	0.16	W
FL	1	1160.000	8.000	1.23	0.02	A
FN	1	962.000	96.000	1.02	0.10	A
GA	1	1140.000	0.000	1.21	0.02	A
GE	1	1050.000	114.000	1.11	0.12	A
ID	1	1050.000	53.000	1.11	0.06	A
IE	1	1060.000	74.900	1.12	0.08	A
IL	1	2140.000	34.300	2.27	0.05	N
IN	1	1080.000	27.100	1.14	0.03	A
IS	1	1020.000	116.000	1.08	0.12	A
IT	1	1250.000	47.200	1.32	0.05	W
JP	1	1100.000	6.000	1.17	0.02	A
LA	1	966.000	63.000	1.02	0.07	A
LA	2	958.000	63.000	1.02	0.07	A
LA	3	962.000	63.000	1.02	0.07	A
LB	1	80.900	36.300	0.09	0.04	N
LH	1	1150.000	163.000	1.22	0.17	A
LL	1	1140.000	2.400	1.21	0.02	A
LV	1	1240.000	7.000	1.31	0.02	W
LW	1	1050.000	2.000	1.11	0.02	A
MA	1	1290.000	93.000	1.37	0.10	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: VE
Radionuclide: CS137

EML Value: 944.000
EML Error: 16.200

Lahcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
ME	1	1170.000	37.600	1.24	0.05	A
ML	1	1020.000	20.000	1.08	0.03	A
NA	1	1130.000	4.500	1.20	0.02	A
NC	1	1060.000	4.960	1.12	0.02	A
NR	1	799.000	160.000	0.85	0.17	W
OL	1	1110.000	33.000	1.18	0.04	A
OR	1	1100.000	100.000	1.17	0.11	A
OT	1	1000.000	100.000	1.06	0.11	A
RA	1	1000.000	50.000	1.06	0.06	A
RE	1	1080.000	90.000	1.14	0.10	A
RI	1	532.000	8.000	0.56	0.01	N
SE	1	1130.000	84.400	1.20	0.09	A
SK	1	1140.000	47.000	1.21	0.05	A
SN	1	1110.000	111.000	1.18	0.12	A
SR	1	85.000	44.000	0.09	0.05	N
SS	1	1100.000	48.000	1.17	0.05	A
SW	1	868.000	14.700	0.92	0.02	A
TE	1	1100.000	12.600	1.17	0.02	A
TI	1	1200.000	100.000	1.27	0.11	W
TM	1	1190.000	36.200	1.26	0.04	W
TN	1	847.000	10.200	0.90	0.02	W
TO	1	1090.000	16.100	1.16	0.03	A
TW	1	1010.000	30.000	1.07	0.04	A
TX	1	1260.000	8.000	1.34	0.02	W
TY	1	978.000	10.000	1.04	0.02	A
UC	1	1160.000	77.200	1.23	0.08	A
WA	1	99.200	7.400	0.11	0.01	N
WC	1	1140.000	124.000	1.21	0.13	A
WE	1	1040.000	15.100	1.10	0.02	A
WN	1	1050.000	20.000	1.11	0.03	A
WN	2	1050.000	20.000	1.11	0.03	A
WP	1	1250.000	10.000	1.32	0.03	W
YA	1	1030.000	14.000	1.09	0.02	A

Total Number Reported: 78

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: VE
Radionuclide: K 40

EML Value: 1030.000
EML Error: 33.000

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
AA	1	1030.000	33.000	1.00	0.05	A
AG	1	1220.000	84.000	1.18	0.09	A
AN	1	1170.000	35.000	1.14	0.05	A
AR	1	746.000	38.000	0.72	0.04	W
BC	1	1130.000	62.300	1.10	0.07	A
BE	1	1080.000	73.000	1.05	0.08	A
BL	1	1140.000	35.000	1.11	0.05	A
BL	2	1130.000	35.000	1.10	0.05	A
BL	3	1160.000	37.000	1.13	0.05	A
BM	1	870.000	45.000	0.85	0.05	A
BN	1	885.000	21.600	0.86	0.03	A
BP	1	1330.000	43.000	1.29	0.06	W
BQ	1	371.000	44.000	0.36	0.04	N
BS	1	804.000	14.100	0.78	0.03	W
BU	1	1100.000	200.000	1.07	0.20	A
BX	1	1090.000	62.200	1.06	0.07	A
CC	1	1430.000	0.000	1.39	0.04	W
CH	1	1330.000	138.000	1.29	0.14	W
CL	1	974.000	118.000	0.95	0.12	A
CP	1	1440.000	227.000	1.40	0.23	W
DC	1	976.000	300.000	0.95	0.29	A
EG	1	1030.000	130.000	1.00	0.13	A
EL	1	955.000	59.000	0.93	0.06	A
ES	1	1240.000	220.000	1.20	0.22	A
FL	1	1200.000	15.000	1.17	0.04	A
FN	1	982.000	100.000	0.95	0.10	A
GA	1	1200.000	0.000	1.17	0.04	A
GE	1	1210.000	155.000	1.17	0.16	A
ID	1	997.000	60.000	0.97	0.07	A
IE	1	1130.000	208.000	1.10	0.21	A
IL	1	222.000	122.000	0.22	0.12	N
IN	1	1250.000	60.800	1.21	0.07	W
IS	1	1160.000	128.000	1.13	0.13	A
IT	1	1360.000	24.000	1.32	0.05	W
JP	1	1100.000	30.000	1.07	0.04	A
LA	1	955.000	78.000	0.93	0.08	A
LA	2	1000.000	81.000	0.97	0.08	A
LA	3	1000.000	81.000	0.97	0.08	A
LB	1	1120.000	74.000	1.09	0.08	A
LH	1	1180.000	184.000	1.15	0.18	A
LL	1	1130.000	5.200	1.10	0.04	A
LV	1	1160.000	20.000	1.13	0.04	A
LW	1	1060.000	4.400	1.03	0.03	A
MA	1	1220.000	150.000	1.18	0.15	A
ME	1	1390.000	47.400	1.35	0.06	W

Units for matrices: AI=Bq/filter SD=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: VE
Radionuclide: K 40

EML Value: 1030.000
EML Error: 33.000

Labcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
ML	1	1190.000	244.000	1.16	0.24	A
NA	1	1180.000	20.000	1.15	0.04	A
NR	1	918.000	184.000	0.89	0.18	A
OL	1	1200.000	75.400	1.17	0.08	A
OR	1	1200.000	100.000	1.17	0.10	A
OT	1	1100.000	100.000	1.07	0.10	A
RA	1	1050.000	70.000	1.02	0.08	A
RE	1	1120.000	146.000	1.09	0.15	A
RI	1	517.000	66.000	0.50	0.07	W
SE	1	1430.000	49.400	1.39	0.07	W
SK	1	1120.000	25.000	1.09	0.04	A
SN	1	1260.000	117.000	1.22	0.12	W
SR	1	166.000	24.000	0.16	0.02	N
SS	1	1150.000	99.000	1.12	0.10	A
SW	1	1030.000	129.000	1.00	0.13	A
TE	1	1190.000	61.600	1.16	0.07	A
TI	1	1200.000	100.000	1.17	0.10	A
TM	1	1180.000	77.300	1.15	0.08	A
TN	1	884.000	44.200	0.86	0.05	A
TO	1	1050.000	59.700	1.02	0.07	A
TW	1	1070.000	43.000	1.04	0.05	A
TX	1	1350.000	26.000	1.31	0.05	W
TY	1	1120.000	50.000	1.09	0.06	A
UC	1	1210.000	60.200	1.17	0.07	A
WA	1	1090.000	60.000	1.06	0.07	A
WC	1	1230.000	173.000	1.19	0.17	A
WE	1	1000.000	89.900	0.97	0.09	A
WN	1	1120.000	80.000	1.09	0.09	A
WP	1	1270.000	41.000	1.23	0.06	W
YA	1	1120.000	30.000	1.09	0.05	A

Total Number Reported: 75

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: VE
Radionuclide: PU238

EML Value: 0.820
EML Error: 0.104

Lahcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
AA	1	0.820	0.104	1.00	0.18	A
AN	1	0.701	0.028	0.86	0.11	A
AR	1	0.604	0.069	0.74	0.13	W
AU	1	9.000	2.000	11.00	2.81	N
BA	1	1.030	0.210	1.26	0.30	A
BL	1	0.940	0.100	1.15	0.19	A
BL	2	0.990	0.340	1.21	0.44	A
SE	1	1.160	8.370	1.42	10.20	A

Total Number Reported: 8

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: VE
Radionuclide: PU239

EML Value: 9.820
EML Error: 1.220

Lahcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
AA	1	9.820	1.220	1.00	0.18	A
AG	1	9.400	1.100	0.96	0.16	A
AI	1	6.170	1.200	0.63	0.15	W
AN	1	9.450	0.280	0.96	0.12	A
AR	1	8.050	0.230	0.82	0.11	A
AU	1	29.000	6.000	2.95	0.71	N
BA	1	9.960	1.600	1.01	0.21	A
BE	1	9.290	1.050	0.95	0.16	A
BL	1	9.590	0.320	0.98	0.13	A
BL	2	9.020	0.020	0.92	0.11	A
BL	2	9.130	0.660	0.93	0.13	A
BU	1	3.000	0.300	0.31	0.05	N
BX	1	14.900	0.381	1.52	0.19	W
CC	1	10.000	0.000	1.02	0.13	A
CH	1	9.700	0.556	0.99	0.14	A
CL	1	11.200	1.300	1.14	0.19	A
CW	1	11.400	0.900	1.16	0.17	A
DC	1	9.370	0.870	0.95	0.15	A
EI	1	9.240	0.840	0.94	0.15	A
EP	1	8.750	1.000	0.89	0.15	A
ES	1	8.790	1.310	0.90	0.17	A
GA	1	10.900	0.000	1.11	0.14	A
GE	1	8.030	0.780	0.82	0.13	A
ID	1	7.590	1.030	0.77	0.14	W
IE	1	9.400	0.570	0.96	0.13	A
IS	1	9.540	2.860	0.97	0.32	A
IT	1	8.990	0.590	0.92	0.13	A
JP	1	9.600	0.530	0.98	0.13	A
LA	1	9.200	0.250	0.94	0.12	A
LA	2	9.140	0.240	0.93	0.12	A
LA	3	9.170	0.240	0.93	0.12	A
LH	1	9.160	0.870	0.93	0.15	A
LL	1	9.480	0.897	0.97	0.15	A
ML	1	8.240	0.350	0.84	0.11	A
NA	1	8.410	0.610	0.86	0.12	A
OR	1	9.500	0.800	0.97	0.15	A
OT	1	20.000	6.000	2.04	0.66	N
PA	1	7.410	3.700	0.76	0.39	W
PB	1	9.630	1.110	0.98	0.17	A
RA	1	11.000	1.000	1.12	0.17	A
RA	2	10.000	1.000	1.02	0.16	A
RE	1	8.380	0.730	0.85	0.13	A
RF	1	9.130	0.690	0.93	0.14	A
RI	1	8.700	0.670	0.89	0.13	A
SE	1	8.370	1.160	0.85	0.16	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: VE
Radionuclide: PU239

EML Value: 9.820
EML Error: 1.220

Lahcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
SN	1	8.150	2.420	0.83	0.27	A
SR	1	9.450	1.370	0.96	0.18	A
SW	1	16.900	1.840	1.72	0.28	W
TE	1	9.200	1.300	0.94	0.18	A
TI	1	6.700	1.100	0.68	0.14	W
TM	1	8.810	0.638	0.90	0.13	A
TN	1	9.580	0.700	0.98	0.14	A
TO	1	9.830	3.480	1.00	0.38	A
TW	1	8.400	0.400	0.86	0.11	A
TX	1	10.300	0.600	1.05	0.14	A
TY	1	8.700	1.400	0.89	0.18	A
WA	1	9.950	0.520	1.01	0.14	A
WE	1	0.529	0.262	0.05	0.03	N
YA	1	9.760	0.300	0.99	0.13	A

Total Number Reported: 59

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: VE
Radionuclide: SR 90

EML Value: 1300.000
EML Error: 52.400

Labcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
AA	1	1300.000	52.400	1.00	0.06	A
AG	1	1220.000	220.000	0.94	0.17	A
AN	1	1450.000	44.000	1.12	0.06	W
AR	1	202.000	6.000	0.16	0.01	N
AU	1	1200.000	18.000	0.92	0.04	A
BA	1	1130.000	12.000	0.87	0.04	A
BC	1	707.000	42.200	0.54	0.04	W
BE	1	1120.000	62.000	0.86	0.06	A
BL	1	1390.000	38.000	1.07	0.05	A
BL	2	1320.000	34.000	1.02	0.05	A
BM	1	209.000	20.000	0.16	0.02	N
BX	1	677.000	42.900	0.52	0.04	W
CC	1	1320.000	0.000	1.02	0.04	A
CH	1	1310.000	74.100	1.01	0.07	A
CL	1	437.000	11.100	0.34	0.02	N
CP	1	1040.000	13.000	0.80	0.03	A
DC	1	826.000	149.000	0.64	0.12	W
EG	1	1250.000	30.000	0.96	0.05	A
EI	1	2060.000	193.000	1.59	0.16	N
EL	1	873.000	67.000	0.67	0.06	W
EP	1	1.150	0.025	0.00	0.00	N
ES	1	1170.000	164.000	0.90	0.13	A
GE	1	977.000	11.500	0.75	0.03	A
ID	1	1180.000	90.000	0.91	0.08	A
IE	1	1220.000	18.500	0.94	0.04	A
IS	1	1130.000	113.000	0.87	0.09	A
IT	1	1550.000	18.800	1.19	0.05	W
JP	1	1400.000	10.000	1.08	0.04	A
LA	1	1390.000	85.100	1.07	0.08	A
LA	2	1480.000	92.500	1.14	0.08	W
LA	3	1220.000	77.700	0.94	0.07	A
LH	1	1220.000	97.000	0.94	0.08	A
NA	1	1230.000	27.000	0.95	0.04	A
OR	1	1060.000	100.000	0.82	0.08	A
OT	1	1400.000	100.000	1.08	0.09	A
RA	1	1700.000	250.000	1.31	0.20	W
RA	2	1900.000	250.000	1.46	0.20	N
RE	1	1240.000	62.000	0.95	0.06	A
SR	1	806.000	35.000	0.62	0.04	W
SW	1	1320.000	15.300	1.02	0.04	A
TE	1	1210.000	32.200	0.93	0.05	A
TI	1	1400.000	100.000	1.08	0.09	A
TM	1	1370.000	167.000	1.05	0.14	A
TN	1	1430.000	47.400	1.10	0.06	A
TO	1	1370.000	45.900	1.05	0.06	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: VE
Radionuclide: SR 90

EML Value: 1300.000
EML Error: 52.400

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
TW	1	930.000	10.000	0.72	0.03	A
TX	1	1310.000	60.000	1.01	0.06	A
TY	1	1500.000	320.000	1.15	0.25	W
WA	1	1470.000	26.000	1.13	0.05	W
WE	1	2.810	0.198	0.00	0.00	N
WP	1	1400.000	37.000	1.08	0.05	A

Total Number Reported: 51

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: AM241

EML Value: 0.766
EML Error: 0.013

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
AA	1	0.766	0.013	1.00	0.02	A
AC	1	0.815	0.044	1.06	0.06	A
AE	1	0.665	0.090	0.87	0.12	A
AG	1	0.788	0.097	1.03	0.13	A
AI	1	0.652	0.067	0.85	0.09	A
AM	1	1.060	0.590	1.38	0.77	W
AN	1	0.804	0.024	1.05	0.04	A
AR	1	0.808	0.114	1.05	0.15	A
AU	1	0.790	0.100	1.03	0.13	A
BE	1	0.800	0.060	1.04	0.08	A
BL	1	1.030	0.070	1.35	0.09	W
BL	2	1.070	0.060	1.40	0.08	W
BP	1	0.708	0.020	0.92	0.03	A
BS	1	0.870	0.160	1.14	0.21	A
BU	1	0.870	0.200	1.14	0.26	A
BX	1	0.796	0.028	1.04	0.04	A
CC	1	0.810	0.000	1.06	0.02	A
CH	1	0.844	0.064	1.10	0.09	A
CL	1	0.830	0.150	1.08	0.20	A
CS	1	0.830	0.100	1.08	0.13	A
CW	1	0.827	0.037	1.08	0.05	A
DC	1	0.884	0.066	1.15	0.09	A
EG	1	0.640	0.040	0.84	0.05	A
EI	1	0.630	0.035	0.82	0.05	W
EL	1	1.800	0.300	2.35	0.39	N
ES	1	0.760	0.115	0.99	0.15	A
ES	2	0.840	0.139	1.10	0.18	A
FG	1	0.765	0.010	1.00	0.02	A
FL	1	0.910	0.130	1.19	0.17	A
FM	1	1.140	0.200	1.49	0.26	W
GA	1	0.800	0.000	1.04	0.02	A
GE	1	1.130	0.138	1.48	0.18	W
HA	1	0.850	0.090	1.11	0.12	A
IE	1	0.750	0.113	0.98	0.15	A
IN	1	0.800	0.090	1.04	0.12	A
IS	1	0.648	0.111	0.85	0.15	A
IT	1	0.840	0.090	1.10	0.12	A
JP	1	0.840	0.035	1.10	0.05	A
LA	1	0.810	0.180	1.06	0.24	A
LA	2	0.950	0.210	1.24	0.28	W
LA	3	0.960	0.210	1.25	0.28	W
LB	1	0.552	0.215	0.72	0.28	W
LH	1	0.790	0.140	1.03	0.18	A
LV	1	0.946	0.530	1.24	0.69	W
MI	1	0.504	0.000	0.66	0.01	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: AM241

EML Value: 0.766
EML Error: 0.013

Labcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
MI	2	0.475	0.000	0.62	0.01	N
MS	1	0.980	0.100	1.28	0.13	W
NA	1	0.732	0.045	0.96	0.06	A
NM	1	0.735	0.040	0.96	0.05	A
OD	1	0.679	0.072	0.89	0.10	A
OR	1	0.780	0.080	1.02	0.11	A
OT	1	1.100	0.300	1.44	0.39	W
RE	1	0.750	0.077	0.98	0.10	A
RF	1	0.784	0.042	1.02	0.06	A
RG	1	0.890	0.027	1.16	0.04	A
RI	1	0.821	0.075	1.07	0.10	A
SC	1	0.600	0.050	0.78	0.07	W
SE	1	0.830	0.040	1.08	0.06	A
SR	1	0.832	0.116	1.09	0.15	A
SW	1	2.950	0.270	3.85	0.36	N
TE	1	0.800	0.100	1.04	0.13	A
TI	1	0.770	0.160	1.01	0.21	A
TM	1	0.855	0.420	1.12	0.55	A
TN	1	0.731	0.037	0.95	0.05	A
TO	1	1.710	0.343	2.23	0.45	N
TW	1	0.740	0.020	0.97	0.03	A
TX	1	1.000	0.093	1.31	0.12	W
UK	1	0.835	0.091	1.09	0.12	A
UP	1	0.908	0.178	1.18	0.23	A
UY	1	1.300	0.230	1.70	0.30	N
WA	1	0.730	0.110	0.95	0.14	A
WC	1	0.952	0.185	1.24	0.24	W
WN	1	0.770	0.090	1.01	0.12	A
YA	1	0.756	0.021	0.99	0.03	A

Total Number Reported: 74

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: CO 60

EML Value: 32.800
EML Error: 0.580

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
AA	1	32.800	0.580	1.00	0.03	A
AC	1	34.000	0.900	1.04	0.03	A
AE	1	29.500	2.010	0.90	0.06	W
AG	1	31.900	2.600	0.97	0.08	A
AI	1	27.600	0.750	0.84	0.03	N
AL	1	31.400	0.650	0.96	0.03	A
AM	1	31.300	0.610	0.95	0.03	A
AN	1	33.200	1.000	1.01	0.04	A
AR	1	36.900	2.600	1.13	0.08	W
AW	1	30.600	4.600	0.93	0.14	W
BA	1	34.800	2.200	1.06	0.07	A
BC	1	32.800	1.570	1.00	0.05	A
BE	1	35.500	1.470	1.08	0.05	A
BK	1	35.300	2.390	1.08	0.08	A
BL	1	33.300	1.000	1.02	0.04	A
BL	2	33.400	1.000	1.02	0.04	A
BL	3	33.600	1.100	1.02	0.04	A
BM	1	31.300	2.200	0.95	0.07	A
BN	1	32.700	0.600	1.00	0.03	A
BP	1	34.400	0.580	1.05	0.03	A
BQ	1	35.000	2.000	1.07	0.06	A
BR	1	33.000	1.400	1.01	0.05	A
BS	1	32.500	0.480	0.99	0.02	A
BU	1	31.000	3.000	0.95	0.09	A
BX	1	32.600	1.630	0.99	0.05	A
CC	1	32.900	0.000	1.00	0.02	A
CH	1	33.700	0.496	1.03	0.02	A
CL	1	33.600	1.730	1.02	0.06	A
CP	1	34.100	4.200	1.04	0.13	A
DC	1	35.100	5.260	1.07	0.16	A
EG	1	34.000	2.000	1.04	0.06	A
EL	1	37.700	2.500	1.15	0.08	W
EP	1	36.100	3.280	1.10	0.10	A
ES	1	36.000	4.790	1.10	0.15	A
FG	1	34.100	2.960	1.04	0.09	A
FL	1	32.100	0.600	0.98	0.03	A
FM	1	32.100	0.510	0.98	0.02	A
FN	1	32.200	2.300	0.98	0.07	A
GA	1	36.300	0.000	1.11	0.02	A
GE	1	34.900	2.780	1.06	0.09	A
HA	1	34.000	4.000	1.04	0.12	A
HL	1	35.900	2.200	1.10	0.07	A
ID	1	27.400	2.300	0.84	0.07	N
IE	1	34.000	1.450	1.04	0.05	A
IL	1	38.000	0.980	1.16	0.04	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: CO 60

EML Value: 32.800
EML Error: 0.580

Lahcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
IN	1	35.600	0.500	1.09	0.02	A
IS	1	33.800	1.600	1.03	0.05	A
IT	1	37.000	3.000	1.13	0.09	W
JP	1	33.000	0.800	1.01	0.03	A
KA	1	33.000	1.000	1.01	0.04	A
LA	1	35.800	3.600	1.09	0.11	A
LA	2	37.300	4.000	1.14	0.12	W
LA	3	37.100	4.000	1.13	0.12	W
LB	1	36.300	23.100	1.11	0.71	A
LH	1	31.600	3.500	0.96	0.11	A
LL	1	30.800	4.000	0.94	0.12	W
LM	1	45.200	2.600	1.38	0.08	N
LV	1	32.300	0.700	0.99	0.03	A
LW	1	30.200	3.200	0.92	0.10	W
ME	1	34.700	0.912	1.06	0.03	A
MI	1	31.200	0.001	0.95	0.02	A
MI	2	36.300	0.001	1.11	0.02	A
ML	1	32.200	6.600	0.98	0.20	A
MS	1	34.000	3.400	1.04	0.11	A
NA	1	32.900	0.410	1.00	0.02	A
NC	1	33.700	1.300	1.03	0.04	A
NL	1	34.600	0.900	1.05	0.03	A
NM	1	34.500	0.300	1.05	0.02	A
OL	1	32.800	1.160	1.00	0.04	A
OR	1	32.000	1.000	0.98	0.04	A
OT	1	34.000	1.000	1.04	0.04	A
RE	1	33.200	3.980	1.01	0.12	A
RF	1	33.900	1.100	1.03	0.04	A
RI	1	3.360	0.160	0.10	0.01	N
SA	1	32.000	2.000	0.98	0.06	A
SC	1	34.000	1.000	1.04	0.04	A
SE	1	34.200	1.120	1.04	0.04	A
SK	1	34.300	0.700	1.05	0.03	A
SN	1	32.400	2.950	0.99	0.09	A
SR	1	34.000	1.000	1.04	0.04	A
SS	1	33.600	1.900	1.02	0.06	A
SW	1	31.800	0.570	0.97	0.02	A
TE	1	33.600	1.000	1.02	0.04	A
TI	1	31.000	3.000	0.95	0.09	A
TM	1	34.300	1.250	1.05	0.04	A
TN	1	35.600	1.990	1.09	0.06	A
TO	1	30.700	0.693	0.94	0.03	W
TW	1	32.000	0.600	0.98	0.03	A
TX	1	37.600	0.700	1.15	0.03	W
UC	1	35.100	0.700	1.07	0.03	A
UK	1	36.100	0.760	1.10	0.03	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: CO 60

EML Value: 32.800
EML Error: 0.580

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
UP	1	33.600	1.180	1.02	0.04	A
UY	1	32.000	2.500	0.98	0.08	A
WA	1	33.800	1.400	1.03	0.05	A
WC	1	34.300	2.660	1.05	0.08	A
WE	1	30.900	1.170	0.94	0.04	W
WI	1	35.500	2.720	1.08	0.09	A
WN	1	30.400	0.300	0.93	0.02	W
WP	1	32.800	1.400	1.00	0.05	A
WV	1	32.900	0.880	1.00	0.03	A
YA	1	32.000	0.450	0.98	0.02	A

Total Number Reported: 101

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: CS137

EML Value: 38.300
EML Error: 0.881

Labcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
AA	1	38.300	0.881	1.00	0.03	A
AC	1	40.200	0.800	1.05	0.03	A
AE	1	40.600	3.380	1.06	0.09	A
AG	1	40.500	3.300	1.06	0.09	A
AI	1	36.100	1.120	0.94	0.04	W
AL	1	41.100	0.640	1.07	0.03	A
AM	1	40.700	1.060	1.06	0.04	A
AN	1	40.900	1.200	1.07	0.04	A
AR	1	45.600	3.600	1.19	0.10	W
AW	1	39.500	5.900	1.03	0.16	A
BA	1	43.900	4.200	1.15	0.11	A
BC	1	43.700	3.100	1.14	0.09	A
BE	1	46.000	1.850	1.20	0.06	W
BK	1	45.700	2.390	1.19	0.07	W
BL	1	39.500	1.100	1.03	0.04	A
BL	2	39.200	1.100	1.02	0.04	A
BL	3	39.600	1.100	1.03	0.04	A
BM	1	43.500	3.100	1.14	0.09	A
BN	1	42.500	0.410	1.11	0.03	A
BP	1	45.100	1.100	1.18	0.04	W
BQ	1	42.000	1.000	1.10	0.04	A
BR	1	46.300	2.100	1.21	0.06	W
BS	1	41.100	0.480	1.07	0.03	A
BU	1	38.000	3.000	0.99	0.08	A
BX	1	42.600	2.850	1.11	0.08	A
CC	1	43.900	0.000	1.15	0.03	A
CH	1	42.100	0.556	1.10	0.03	A
CL	1	44.000	2.020	1.15	0.06	A
CP	1	39.500	4.800	1.03	0.13	A
DC	1	47.800	11.300	1.25	0.30	W
EG	1	43.000	2.000	1.12	0.06	A
EL	1	43.800	2.800	1.14	0.08	A
EP	1	46.100	4.470	1.20	0.12	W
ES	1	47.600	6.470	1.24	0.17	W
FG	1	38.700	2.640	1.01	0.07	A
FL	1	42.400	1.000	1.11	0.04	A
FM	1	41.800	0.690	1.09	0.03	A
FN	1	39.300	3.900	1.03	0.11	A
GA	1	41.700	0.000	1.09	0.03	A
GE	1	46.400	3.920	1.21	0.11	W
HA	1	40.700	4.000	1.06	0.11	A
HL	1	45.300	4.300	1.18	0.12	W
ID	1	37.500	2.300	0.98	0.06	A
IE	1	42.700	0.883	1.12	0.03	A
IL	1	47.600	1.000	1.24	0.04	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: CS137

EML Value: 38.300
EML Error: 0.881

Lahcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
IN	1	42.800	1.200	1.12	0.04	A
IS	1	46.100	3.100	1.20	0.09	W
IT	1	46.200	4.100	1.21	0.11	W
JP	1	43.000	1.200	1.12	0.04	A
KA	1	42.000	2.000	1.10	0.06	A
LA	1	50.200	5.100	1.31	0.14	N
LA	2	49.400	5.000	1.29	0.13	N
LA	3	50.000	5.100	1.31	0.14	N
LB	1	46.200	22.200	1.21	0.58	W
LH	1	41.800	6.400	1.09	0.17	A
LL	1	40.200	3.870	1.05	0.10	A
LM	1	58.000	2.800	1.51	0.08	N
LV	1	43.300	0.700	1.13	0.03	A
LW	1	40.800	3.200	1.07	0.09	A
ME	1	44.500	1.750	1.16	0.05	W
MI	1	0.337	0.002	0.01	0.00	N
MI	2	40.900	0.002	1.07	0.02	A
ML	1	40.000	8.200	1.04	0.22	A
MS	1	40.900	4.100	1.07	0.11	A
NA	1	41.000	0.560	1.07	0.03	A
NC	1	39.100	1.020	1.02	0.04	A
NL	1	42.900	0.800	1.12	0.03	A
NM	1	46.900	0.500	1.23	0.03	W
OL	1	42.000	1.370	1.10	0.04	A
OR	1	40.000	1.000	1.04	0.04	A
OT	1	43.000	1.000	1.12	0.04	A
RE	1	41.800	5.010	1.09	0.13	A
RF	1	42.200	1.600	1.10	0.05	A
RI	1	42.300	2.200	1.10	0.06	A
SA	1	42.000	3.000	1.10	0.08	A
SC	1	40.000	1.000	1.04	0.04	A
SE	1	43.600	2.140	1.14	0.06	A
SK	1	42.000	1.000	1.10	0.04	A
SN	1	38.000	3.420	0.99	0.09	A
SR	1	44.000	1.000	1.15	0.04	A
SS	1	41.800	1.800	1.09	0.05	A
SW	1	39.500	0.750	1.03	0.03	A
TE	1	42.800	1.300	1.12	0.04	A
TI	1	42.000	4.000	1.10	0.11	A
TM	1	44.800	1.820	1.17	0.05	W
TN	1	44.300	2.040	1.16	0.06	W
TO	1	39.500	0.953	1.03	0.03	A
TW	1	40.000	2.000	1.04	0.06	A
TX	1	47.400	0.700	1.24	0.03	W
UC	1	41.500	1.690	1.08	0.05	A
UK	1	43.200	0.990	1.13	0.04	A

Units for matrices: AI=Bq/filter SD=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: CS137

EML Value: 38.300
EML Error: 0.881

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
UP	1	43.600	3.020	1.14	0.08	A
UY	1	37.700	2.900	0.98	0.08	A
WA	1	43.100	3.700	1.13	0.10	A
WC	1	44.900	6.140	1.17	0.16	W
WE	1	39.000	1.080	1.02	0.04	A
WI	1	44.300	6.230	1.16	0.17	W
WN	1	41.200	0.300	1.08	0.03	A
WP	1	41.500	1.400	1.08	0.04	A
WV	1	40.900	0.850	1.07	0.03	A
YA	1	38.100	0.430	1.00	0.03	A

Total Number Reported: 101

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: FE 55

EML Value: 83.000
EML Error: 3.440

Labcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
AA	1	83.000	3.440	1.00	0.06	A
BL	1	77.000	4.000	0.93	0.06	A
BL	2	76.000	5.000	0.92	0.07	A
BL	3	75.000	4.000	0.90	0.06	A
BX	1	57.000	4.660	0.69	0.06	W
EG	1	62.000	17.000	0.75	0.21	W
GE	1	112.000	21.900	1.35	0.27	W
HA	1	81.400	0.900	0.98	0.04	A
KA	1	108.000	6.000	1.30	0.09	W
LH	1	68.900	12.400	0.83	0.15	A
TE	1	109.000	21.700	1.31	0.27	W
TI	1	110.000	20.000	1.33	0.25	W
TN	1	94.700	3.440	1.14	0.06	A

Total Number Reported: 13

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: GA 1

EML Value: 1850.000
EML Error: 185.000

Lahcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
AA	1	1850.000	185.000	1.00	0.14	A
AG	1	1850.000	233.000	1.00	0.16	A
AM	1	709.000	15.900	0.38	0.04	N
AN	1	2040.000	200.000	1.10	0.15	A
AR	1	1820.000	200.000	0.98	0.15	A
AU	1	150.000	1.880	0.08	0.01	N
AW	1	1700.000	170.000	0.92	0.13	A
BC	1	2330.000	62.900	1.26	0.13	W
BE	1	1840.000	34.000	1.00	0.10	A
BL	1	1810.000	61.000	0.98	0.10	A
BL	2	1800.000	43.000	0.97	0.10	A
BL	3	1790.000	43.000	0.97	0.10	A
BL	4	1660.000	42.000	0.90	0.09	A
BL	5	1660.000	59.000	0.90	0.10	A
BL	6	1650.000	42.000	0.89	0.09	A
BN	1	2050.000	24.200	1.11	0.11	A
BS	1	1590.000	7.900	0.86	0.09	A
BU	1	2040.000	100.000	1.10	0.12	A
BX	1	2040.000	58.800	1.10	0.12	A
CH	1	1650.000	126.000	0.89	0.11	A
CP	1	1710.000	34.000	0.92	0.09	A
DC	1	1750.000	15.000	0.95	0.09	A
FG	1	1790.000	40.000	0.97	0.10	A
FL	1	2330.000	29.000	1.26	0.13	W
GE	1	1700.000	27.500	0.92	0.09	A
HA	1	2150.000	215.000	1.16	0.16	A
HC	1	1900.000	95.000	1.03	0.12	A
IE	1	1970.000	65.300	1.07	0.11	A
IL	1	740.000	35.000	0.40	0.04	N
IS	1	1800.000	*** **	0.97	0.65	A
IS	2	1800.000	180.000	0.97	0.14	A
IT	1	1680.000	217.000	0.91	0.15	A
JP	1	1500.000	10.000	0.81	0.08	A
KA	1	2040.000	167.000	1.10	0.14	A
LA	1	2190.000	275.000	1.18	0.19	A
LA	2	1800.000	223.000	0.97	0.16	A
LA	3	1810.000	233.000	0.98	0.16	A
LH	1	1980.000	175.000	1.07	0.14	A
LL	1	2420.000	1.040	1.31	0.13	W
LW	1	1880.000	2.800	1.02	0.10	A
NM	1	1740.000	95.000	0.94	0.11	A
OB	1	2140.000	81.600	1.16	0.12	A
OT	1	1900.000	100.000	1.03	0.12	A
PA	1	1930.000	211.000	1.04	0.16	A
PB	2	2000.000	64.200	1.08	0.11	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: GA 1

EML Value: 1850.000
EML Error: 185.000

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
RE	1	1950.000	98.000	1.05	0.12	A
RG	1	2110.000	109.000	1.14	0.13	A
SA	1	1650.000	388.000	0.89	0.23	A
SC	1	1880.000	19.000	1.02	0.10	A
SE	1	2120.000	101.000	1.15	0.13	A
SR	1	1820.000	41.000	0.98	0.10	A
SV	1	2110.000	89.800	1.14	0.12	A
SV	2	1910.000	87.900	1.03	0.11	A
TE	1	2180.000	53.500	1.18	0.12	A
TI	1	1900.000	100.000	1.03	0.12	A
TM	1	1950.000	218.000	1.05	0.16	A
TN	1	2020.000	40.400	1.09	0.11	A
TO	1	1870.000	45.100	1.01	0.10	A
TW	1	1270.000	46.000	0.69	0.07	W
UC	1	1970.000	92.000	1.07	0.12	A
UP	1	1490.000	108.000	0.81	0.10	A
UY	1	1690.000	219.000	0.91	0.15	A
WA	1	111.000	4.000	0.06	0.01	N
WC	1	1400.000	144.000	0.76	0.11	W
WN	1	1830.000	500.000	0.99	0.29	A
WV	1	1800.000	26.000	0.97	0.10	A
YA	1	1740.000	86.000	0.94	0.11	A

Total Number Reported: 67

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: GB 2

EML Value: 744.000
EML Error: 74.000

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
AA	1	744.000	74.000	1.00	0.14	A
AG	1	474.000	59.000	0.64	0.10	N
AM	1	833.000	12.300	1.12	0.11	A
AN	1	570.000	57.000	0.77	0.11	W
AR	1	528.000	66.000	0.71	0.11	N
AU	1	79.800	1.140	0.11	0.01	N
AW	1	980.000	98.000	1.32	0.19	A
BC	1	951.000	28.600	1.28	0.13	A
BE	1	578.000	6.800	0.78	0.08	W
BL	1	397.000	48.000	0.53	0.08	N
BL	2	398.000	34.000	0.54	0.07	N
BL	3	487.000	32.000	0.66	0.08	N
BL	4	525.000	38.000	0.71	0.09	N
BL	5	530.000	54.000	0.71	0.10	N
BL	6	497.000	31.000	0.67	0.08	N
BN	1	924.000	13.700	1.24	0.13	A
BS	1	732.000	4.300	0.98	0.10	A
BX	1	866.000	27.300	1.16	0.12	A
CH	1	534.000	72.200	0.72	0.12	N
CP	1	843.000	16.000	1.13	0.12	A
DC	1	790.000	8.400	1.06	0.11	A
FG	1	437.000	32.000	0.59	0.07	N
FL	1	915.000	13.000	1.23	0.12	A
GE	1	733.000	15.200	0.99	0.10	A
HA	1	629.000	63.000	0.85	0.12	W
HC	1	805.000	40.000	1.08	0.12	A
IE	1	541.000	64.800	0.73	0.11	N
IL	1	1330.000	66.000	1.79	0.20	N
IS	1	466.000	47.000	0.63	0.09	N
IT	1	886.000	109.000	1.19	0.19	A
JP	1	850.000	20.000	1.14	0.12	A
KA	1	912.000	74.000	1.23	0.16	A
LA	1	481.000	65.000	0.65	0.11	N
LA	2	491.000	66.000	0.66	0.11	N
LA	3	520.000	70.000	0.70	0.12	N
LH	1	539.000	63.000	0.72	0.11	N
LL	1	1000.000	1.210	1.34	0.13	A
LW	1	784.000	2.000	1.05	0.11	A
NM	1	872.000	43.000	1.17	0.13	A
OB	1	561.000	37.600	0.75	0.09	W
OT	1	910.000	60.000	1.22	0.15	A
PA	1	518.000	66.700	0.70	0.11	N
PB	2	506.000	26.900	0.68	0.08	N
RE	1	773.000	39.000	1.04	0.12	A
RG	1	590.000	29.500	0.79	0.09	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: GB 2

EML Value: 744.000
EML Error: 74.000

Lahcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
SA	1	1090.000	200.000	1.47	0.31	A
SC	1	495.000	10.000	0.67	0.07	N
SE	1	881.000	40.900	1.18	0.13	A
SR	1	600.000	18.000	0.81	0.08	W
SV	1	874.000	41.800	1.17	0.13	A
SV	2	930.000	43.100	1.25	0.14	A
TE	1	872.000	27.000	1.17	0.12	A
TI	1	530.000	50.000	0.71	0.10	N
TM	1	877.000	69.200	1.18	0.15	A
TN	1	590.000	15.200	0.79	0.08	W
TN	2	590.000	15.200	0.79	0.08	W
TO	1	903.000	25.200	1.21	0.13	A
TW	1	610.000	25.000	0.82	0.09	W
UC	1	634.000	28.000	0.85	0.09	W
UP	1	700.000	67.200	0.94	0.13	A
UY	1	794.000	112.000	1.07	0.18	A
WA	1	44.900	2.000	0.06	0.01	N
WC	1	655.000	67.500	0.88	0.13	W
WN	1	960.000	100.000	1.29	0.19	A
WV	1	703.000	14.000	0.95	0.10	A
YA	1	588.000	12.000	0.79	0.08	W

Total Number Reported: 66

Units for matrices: AI=Bq/filter SD=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: H 3

EML Value: 251.000
EML Error: 11.400

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
AA	1	251.000	11.400	1.00	0.06	A
AE	1	212.000	13.800	0.85	0.07	A
AG	1	195.000	29.000	0.78	0.12	W
AI	1	400.000	45.000	1.59	0.19	W
AN	1	220.000	7.000	0.88	0.05	A
AR	1	224.000	9.000	0.89	0.05	A
AU	1	246.000	18.000	0.98	0.08	A
AW	1	220.000	22.000	0.88	0.10	A
BE	1	206.000	20.500	0.82	0.09	W
BL	1	221.000	18.000	0.88	0.08	A
BL	2	233.000	18.000	0.93	0.08	A
BL	3	248.000	18.000	0.99	0.08	A
BN	1	213.000	7.970	0.85	0.05	A
BP	1	187.000	22.000	0.75	0.09	W
BU	1	226.000	5.000	0.90	0.05	A
BX	1	212.000	23.200	0.85	0.10	A
CC	1	156.000	0.000	0.62	0.03	N
CH	1	227.000	2.610	0.90	0.04	A
CL	1	201.000	11.500	0.80	0.06	W
DC	1	244.000	27.300	0.97	0.12	A
EG	1	180.000	30.000	0.72	0.12	W
EI	1	174.000	4.000	0.69	0.04	W
EL	1	330.000	25.000	1.32	0.12	W
EP	1	222.000	7.990	0.88	0.05	A
ES	1	204.000	36.600	0.81	0.15	W
FG	1	284.000	15.000	1.13	0.08	A
FL	1	185.000	2.710	0.74	0.04	W
FN	1	228.000	9.000	0.91	0.05	A
GE	1	197.000	7.770	0.79	0.05	W
HA	1	226.000	30.000	0.90	0.13	A
HC	1	206.000	14.400	0.82	0.07	W
HL	1	214.000	8.100	0.85	0.05	A
ID	1	216.000	13.000	0.86	0.06	A
IE	1	208.000	55.200	0.83	0.22	W
IS	1	309.000	31.000	1.23	0.14	W
IT	1	209.000	6.100	0.83	0.05	W
JP	1	220.000	1.000	0.88	0.04	A
KA	1	239.000	13.000	0.95	0.07	A
LA	1	238.000	11.200	0.95	0.06	A
LA	2	221.000	11.000	0.88	0.06	A
LA	3	212.000	10.900	0.85	0.06	A
LH	1	214.000	17.000	0.85	0.08	A
LL	1	217.000	1.600	0.87	0.04	A
LM	1	244.000	24.000	0.97	0.11	A
LW	1	228.000	6.200	0.91	0.05	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: H 3

EML Value: 251.000
EML Error: 11.400

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
MI	1	405.000	0.000	1.61	0.07	W
MI	2	385.000	0.000	1.53	0.07	W
MI	3	385.000	0.000	1.53	0.07	W
MI	4	385.000	0.000	1.53	0.07	W
ML	1	197.000	20.700	0.79	0.09	W
NA	1	199.000	4.200	0.79	0.04	W
OD	1	207.000	15.700	0.83	0.07	W
OR	1	220.000	30.000	0.88	0.13	A
OT	1	370.000	30.000	1.47	0.14	W
PA	1	222.000	7.040	0.88	0.05	A
PB	1	222.000	11.700	0.88	0.06	A
PI	1	214.000	11.000	0.85	0.06	A
RE	1	208.000	20.000	0.83	0.09	W
RF	1	240.000	5.300	0.96	0.05	A
RG	1	210.000	5.500	0.84	0.04	A
RI	1	304.000	18.000	1.21	0.09	W
SC	1	227.000	7.000	0.90	0.05	A
SE	1	191.000	88.500	0.76	0.35	W
SE	2	191.000	5.960	0.76	0.04	W
SK	1	223.000	3.000	0.89	0.04	A
SR	1	214.000	5.400	0.85	0.04	A
SV	1	267.000	10.000	1.06	0.06	A
SW	1	290.000	8.640	1.16	0.06	A
TE	1	434.000	34.100	1.73	0.16	W
TI	1	210.000	10.000	0.84	0.06	A
TM	1	206.000	10.900	0.82	0.06	W
TN	1	221.000	17.000	0.88	0.08	A
TO	1	219.000	42.200	0.87	0.17	A
TW	1	186.000	1.000	0.74	0.03	W
TX	1	209.000	11.000	0.83	0.06	W
UP	1	227.000	15.400	0.90	0.07	A
UY	1	161.000	23.000	0.64	0.10	N
WA	1	214.000	25.000	0.85	0.11	A
WC	1	186.000	20.500	0.74	0.09	W
WN	1	243.000	21.000	0.97	0.09	A
WP	1	220.000	11.000	0.88	0.06	A
WV	1	218.000	8.300	0.87	0.05	A
YA	1	237.000	12.000	0.94	0.06	A

Total Number Reported: 83

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: MN 54

EML Value: 38.400
EML Error: 1.160

Lahcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
AA	1	38.400	1.160	1.00	0.04	A
AC	1	50.300	1.200	1.31	0.05	N
AE	1	38.400	3.050	1.00	0.09	A
AG	1	40.000	3.400	1.04	0.09	A
AI	1	34.300	1.130	0.89	0.04	W
AL	1	40.000	0.670	1.04	0.04	A
AM	1	41.100	1.020	1.07	0.04	A
AN	1	41.900	1.300	1.09	0.05	A
AR	1	44.100	3.600	1.15	0.10	W
AW	1	39.100	5.900	1.02	0.16	A
BA	1	42.000	4.300	1.09	0.12	A
BC	1	43.300	2.510	1.13	0.07	A
BE	1	47.500	1.860	1.24	0.06	N
BK	1	45.300	2.090	1.18	0.07	W
BL	1	41.800	1.100	1.09	0.04	A
BL	2	42.600	1.200	1.11	0.05	A
BL	3	41.800	1.200	1.09	0.05	A
BM	1	42.000	3.000	1.09	0.08	A
BN	1	43.000	0.420	1.12	0.04	A
BP	1	43.800	0.840	1.14	0.04	W
BQ	1	44.000	2.000	1.15	0.06	W
BR	1	46.000	2.500	1.20	0.07	W
BS	1	43.700	0.510	1.14	0.04	W
BU	1	37.000	3.000	0.96	0.08	A
BX	1	41.800	2.300	1.09	0.07	A
CC	1	43.400	0.000	1.13	0.03	A
CH	1	42.700	1.360	1.11	0.05	A
CL	1	40.900	1.800	1.07	0.06	A
CP	1	41.300	15.500	1.08	0.41	A
DC	1	46.800	10.300	1.22	0.27	N
EG	1	43.000	2.000	1.12	0.06	A
EL	1	38.200	3.100	1.00	0.09	A
EP	1	45.400	5.040	1.18	0.14	W
ES	1	44.500	6.340	1.16	0.17	W
FG	1	47.000	3.520	1.22	0.10	N
FL	1	42.100	0.600	1.10	0.04	A
FM	1	41.800	0.770	1.09	0.04	A
FN	1	41.100	4.100	1.07	0.11	A
GA	1	43.400	0.000	1.13	0.03	A
GE	1	46.300	3.440	1.21	0.10	W
HA	1	44.400	5.000	1.16	0.14	W
HL	1	46.100	4.700	1.20	0.13	W
ID	1	37.800	2.200	0.98	0.06	A
IE	1	43.300	2.820	1.13	0.08	A
IL	1	40.800	0.820	1.06	0.04	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: MN 54

EML Value: 38.400
EML Error: 1.160

Lahcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
IN	1	43.700	0.800	1.14	0.04	W
IS	1	46.500	4.800	1.21	0.13	W
IT	1	46.500	5.000	1.21	0.14	W
JP	1	42.000	1.600	1.09	0.05	A
KA	1	41.000	2.000	1.07	0.06	A
LA	1	49.400	5.000	1.29	0.14	N
LA	2	50.800	5.100	1.32	0.14	N
LA	3	49.500	5.000	1.29	0.14	N
LB	1	47.500	25.200	1.24	0.66	N
LH	1	41.500	6.400	1.08	0.17	A
LL	1	4.200	3.800	0.11	0.10	N
LM	1	58.500	3.000	1.52	0.09	N
LV	1	45.500	0.900	1.18	0.04	W
LW	1	40.200	3.400	1.05	0.09	A
ME	1	46.100	1.560	1.20	0.05	W
MI	1	36.100	0.002	0.94	0.03	W
MI	2	42.700	0.002	1.11	0.03	A
ML	1	41.100	8.400	1.07	0.22	A
MS	1	42.500	4.300	1.11	0.12	A
NA	1	41.300	0.580	1.08	0.04	A
NC	1	40.600	1.350	1.06	0.05	A
NL	1	46.200	0.200	1.20	0.04	W
OL	1	42.700	1.250	1.11	0.05	A
OR	1	41.000	1.000	1.07	0.04	A
OT	1	44.000	1.000	1.15	0.04	W
RE	1	41.300	4.540	1.08	0.12	A
RF	1	42.700	1.500	1.11	0.05	A
RI	1	38.700	1.700	1.01	0.05	A
SA	1	41.000	3.000	1.07	0.08	A
SC	1	41.000	1.000	1.07	0.04	A
SK	1	41.300	1.400	1.08	0.05	A
SN	1	41.100	4.340	1.07	0.12	A
SR	1	44.000	1.000	1.15	0.04	W
SS	1	41.700	1.600	1.09	0.05	A
SW	1	39.900	0.760	1.04	0.04	A
TE	1	41.900	1.400	1.09	0.05	A
TI	1	41.000	4.000	1.07	0.11	A
TM	1	44.200	1.490	1.15	0.05	W
TN	1	45.100	2.160	1.17	0.07	W
TO	1	40.100	1.070	1.04	0.04	A
TW	1	40.000	0.800	1.04	0.04	A
TX	1	48.300	0.800	1.26	0.04	N
UK	1	48.100	1.100	1.25	0.05	N
UP	1	43.300	3.290	1.13	0.09	A
UY	1	40.000	2.900	1.04	0.08	A
WA	1	42.700	3.700	1.11	0.10	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: MN 54

EML Value: 38.400
EML Error: 1.160

Labcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
WC	1	44.900	6.470	1.17	0.17	W
WE	1	39.700	1.190	1.03	0.04	A
WI	1	44.300	5.440	1.15	0.15	W
WN	1	36.500	0.400	0.95	0.03	A
WP	1	40.600	1.400	1.06	0.05	A
WV	1	42.700	0.960	1.11	0.04	A
YA	1	39.000	0.750	1.02	0.04	A

Total Number Reported: 98

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: PU238

EML Value: 0.982
EML Error: 0.074

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
AA	1	0.982	0.074	1.00	0.11	A
AC	1	1.010	0.060	1.03	0.10	A
AE	1	0.950	0.070	0.97	0.10	A
AG	1	0.940	0.120	0.96	0.14	A
AI	1	1.020	0.073	1.04	0.11	A
AN	1	0.920	0.028	0.94	0.08	A
AR	1	0.853	0.122	0.87	0.14	W
AU	1	1.360	0.360	1.39	0.38	N
BA	1	1.040	0.170	1.06	0.19	A
BE	1	0.960	0.090	0.98	0.12	A
BL	1	1.130	0.070	1.15	0.11	W
BL	2	1.050	0.070	1.07	0.11	A
BM	1	0.930	0.160	0.95	0.18	A
BP	1	0.931	0.063	0.95	0.10	A
BU	1	0.740	0.030	0.75	0.06	W
BX	1	0.969	0.039	0.99	0.08	A
CC	1	1.000	0.000	1.02	0.08	A
CH	1	0.948	0.089	0.97	0.12	A
CL	1	0.910	0.220	0.93	0.24	A
CW	1	1.010	0.100	1.03	0.13	A
DC	1	0.897	0.020	0.91	0.07	A
DC	2	0.897	0.020	0.91	0.07	A
EG	1	0.830	0.060	0.85	0.09	W
EI	1	0.880	0.053	0.90	0.09	W
EP	1	0.990	0.087	1.01	0.12	A
ES	1	0.953	0.141	0.97	0.16	A
ES	2	0.883	0.131	0.90	0.15	W
FG	1	0.925	0.010	0.94	0.07	A
FL	1	0.750	0.017	0.76	0.06	W
GA	1	1.120	0.000	1.14	0.09	A
GE	1	0.890	0.090	0.91	0.11	A
HA	1	0.810	0.090	0.83	0.11	W
ID	1	0.870	0.130	0.89	0.15	W
IE	1	0.975	0.110	0.99	0.13	A
IN	1	0.960	0.110	0.98	0.13	A
IS	1	0.936	0.193	0.95	0.21	A
IT	1	1.000	0.020	1.02	0.08	A
JP	1	1.100	0.060	1.12	0.10	A
KA	1	1.010	0.010	1.03	0.08	A
LA	1	0.990	0.140	1.01	0.16	A
LA	2	0.940	0.130	0.96	0.15	A
LA	3	0.930	0.130	0.95	0.15	A
LH	1	0.930	0.120	0.95	0.14	A
LL	1	1.040	0.104	1.06	0.13	A
ML	1	0.980	0.040	1.00	0.09	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: PU238

EML Value: 0.982
EML Error: 0.074

Lahcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
NL	1	0.864	0.210	0.88	0.22	W
NM	1	0.940	0.038	0.96	0.08	A
OD	1	0.881	0.091	0.90	0.11	W
OR	1	0.970	0.050	0.99	0.09	A
OT	1	1.000	0.100	1.02	0.13	A
PI	1	0.950	0.070	0.97	0.10	A
RE	1	0.860	0.090	0.88	0.11	W
RG	1	0.941	0.027	0.96	0.08	A
RI	1	0.810	0.065	0.83	0.09	W
SC	1	1.140	0.016	1.16	0.09	W
SE	1	0.740	0.060	0.75	0.08	W
SN	1	0.847	0.094	0.86	0.12	W
SR	1	1.040	0.140	1.06	0.16	A
TE	1	0.900	0.100	0.92	0.12	A
TI	1	0.970	0.170	0.99	0.19	A
TM	1	0.984	0.043	1.00	0.09	A
TN	1	0.942	0.045	0.96	0.09	A
TO	1	1.010	0.332	1.03	0.35	A
TW	1	0.930	0.070	0.95	0.10	A
TX	1	0.970	0.071	0.99	0.10	A
UK	1	0.921	0.100	0.94	0.12	A
UP	1	0.992	0.205	1.01	0.22	A
UY	1	0.970	0.170	0.99	0.19	A
WA	1	0.870	0.120	0.89	0.14	W
WC	1	0.951	0.163	0.97	0.18	A
WE	1	0.842	0.079	0.86	0.10	W
WN	1	0.910	0.100	0.93	0.12	A
YA	1	1.000	0.028	1.02	0.08	A

Total Number Reported: 73

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: PU239

EML Value: 0.772
EML Error: 0.056

Labcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
AA	1	0.772	0.056	1.00	0.10	A
AC	1	0.813	0.048	1.05	0.10	A
AE	1	0.750	0.060	0.97	0.11	A
AG	1	0.715	0.089	0.93	0.13	A
AI	1	0.824	0.065	1.07	0.11	A
AN	1	0.723	0.022	0.94	0.07	A
AR	1	0.839	0.120	1.09	0.17	A
AU	1	1.060	0.300	1.37	0.40	W
BA	1	0.766	0.120	0.99	0.17	A
BE	1	0.740	0.070	0.96	0.11	A
BK	1	0.550	0.060	0.71	0.09	W
BL	1	0.790	0.060	1.02	0.11	A
BL	2	0.800	0.060	1.04	0.11	A
BM	1	0.710	0.120	0.92	0.17	A
BP	1	0.704	0.023	0.91	0.07	A
BU	1	0.780	0.030	1.01	0.08	A
BX	1	0.703	0.031	0.91	0.08	A
CC	1	0.760	0.000	0.98	0.07	A
CH	1	0.726	0.029	0.94	0.08	A
CL	1	0.880	0.160	1.14	0.22	A
CW	1	0.812	0.060	1.05	0.11	A
DC	1	0.694	0.046	0.90	0.09	A
DC	2	0.694	0.046	0.90	0.09	A
EG	1	0.630	0.050	0.82	0.09	A
EI	1	0.620	0.039	0.80	0.08	A
EP	1	0.778	0.074	1.01	0.12	A
ES	1	0.844	0.125	1.09	0.18	A
ES	2	0.740	0.110	0.96	0.16	A
FG	1	0.763	0.010	0.99	0.07	A
FL	1	0.592	0.014	0.77	0.06	W
GA	1	0.890	0.000	1.15	0.08	A
GE	1	0.688	0.078	0.89	0.12	A
HA	1	0.730	0.080	0.95	0.12	A
ID	1	0.700	0.050	0.91	0.09	A
IE	1	0.730	0.022	0.95	0.07	A
IN	1	0.780	0.090	1.01	0.14	A
IS	1	0.822	0.177	1.07	0.24	A
IT	1	0.945	0.140	1.22	0.20	W
JP	1	0.840	0.045	1.09	0.10	A
KA	1	0.753	0.025	0.98	0.08	A
LA	1	0.900	0.130	1.17	0.19	W
LA	2	0.790	0.110	1.02	0.16	A
LA	3	0.750	0.110	0.97	0.16	A
LH	1	0.800	0.150	1.04	0.21	A
LL	1	0.840	0.090	1.09	0.14	A

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: PU239

EML Value: 0.772
EML Error: 0.056

Labcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
ML	1	0.790	0.040	1.02	0.09	A
NL	1	0.726	0.170	0.94	0.23	A
NM	1	0.711	0.031	0.92	0.08	A
OD	1	0.725	0.075	0.94	0.12	A
OR	1	0.730	0.050	0.95	0.09	A
OT	1	0.740	0.110	0.96	0.16	A
PA	1	0.815	0.119	1.06	0.17	A
PB	1	0.731	0.082	0.95	0.13	A
PI	1	0.740	0.060	0.96	0.10	A
RE	1	0.696	0.075	0.90	0.12	A
RF	1	0.763	0.043	0.99	0.09	A
RG	1	0.761	0.023	0.99	0.08	A
RI	1	0.633	0.057	0.82	0.09	A
SC	1	0.814	0.013	1.05	0.08	A
SE	1	0.480	0.040	0.62	0.07	W
SN	1	0.653	0.075	0.85	0.12	A
SR	1	0.810	0.120	1.05	0.17	A
TE	1	0.700	0.100	0.91	0.15	A
TI	1	0.810	0.150	1.05	0.21	A
TM	1	0.761	0.035	0.99	0.08	A
TN	1	0.770	0.038	1.00	0.09	A
TO	1	0.746	0.255	0.97	0.34	A
TW	1	0.580	0.060	0.75	0.09	W
TX	1	0.840	0.069	1.09	0.12	A
UC	1	0.780	0.110	1.01	0.16	A
UK	1	0.762	0.092	0.99	0.14	A
UP	1	0.767	0.166	0.99	0.23	A
UY	1	0.820	0.160	1.06	0.22	A
WA	1	0.680	0.100	0.88	0.14	A
WC	1	0.782	0.137	1.01	0.19	A
WE	1	0.526	0.063	0.68	0.10	W
WN	1	0.720	0.080	0.93	0.12	A
YA	1	0.763	0.010	0.99	0.07	A

Total Number Reported: 78

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: SR 90

EML Value: 1.450
EML Error: 0.034

Lahcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
AA	1	1.450	0.034	1.00	0.03	A
AE	1	1.500	0.340	1.03	0.24	A
AG	1	1.500	0.300	1.03	0.21	A
AN	1	1.580	0.050	1.09	0.04	A
AR	1	1.520	0.190	1.05	0.13	A
AU	1	2.300	0.370	1.59	0.26	W
BC	1	2.180	0.518	1.50	0.36	W
BE	1	1.860	0.350	1.28	0.24	W
BL	1	1.600	0.650	1.10	0.45	A
BL	2	1.640	0.670	1.13	0.46	A
BM	1	1.170	0.230	0.81	0.16	W
BN	1	1.320	0.000	0.91	0.02	A
BP	1	1.240	0.110	0.86	0.08	W
BX	1	2.000	0.485	1.38	0.34	W
CC	1	1.500	0.000	1.03	0.02	A
CH	1	1.510	0.385	1.04	0.27	A
CL	1	1.700	0.470	1.17	0.33	A
CP	1	0.815	0.211	0.56	0.15	N
DC	1	1.470	0.372	1.01	0.26	A
DC	2	1.470	0.372	1.01	0.26	A
EG	1	1.230	0.060	0.85	0.05	W
EI	1	2.150	0.190	1.48	0.14	W
EL	1	1.550	0.200	1.07	0.14	A
EP	1	1.290	0.343	0.89	0.24	A
ES	1	1.760	0.300	1.21	0.21	A
FG	1	1.680	0.180	1.16	0.13	A
GA	1	1.640	0.310	1.13	0.22	A
GE	1	1.170	0.084	0.81	0.06	W
HA	1	1.240	0.200	0.86	0.14	W
HL	1	1.560	0.280	1.08	0.20	A
ID	1	1.710	0.150	1.18	0.11	A
IE	1	1.330	0.060	0.92	0.05	A
IN	1	2.000	0.200	1.38	0.14	W
IS	1	1.540	0.000	1.06	0.03	A
IS	2	1.540	0.520	1.06	0.36	A
IT	1	1.460	0.160	1.01	0.11	A
JP	1	1.600	0.140	1.10	0.10	A
KA	1	1.460	0.240	1.01	0.17	A
LA	1	1.290	0.140	0.89	0.10	A
LA	2	1.410	0.160	0.97	0.11	A
LA	3	1.540	0.160	1.06	0.11	A
LH	1	1.420	0.360	0.98	0.25	A
NA	1	1.550	0.260	1.07	0.18	A
OR	1	1.370	0.300	0.95	0.21	A
OT	1	2.400	0.600	1.66	0.42	N

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: SR 90

EML Value: 1.450
EML Error: 0.034

Lahcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
RE	1	1.470	0.150	1.01	0.11	A
RI	1	1.740	0.370	1.20	0.26	A
SC	1	2.570	0.060	1.77	0.06	N
SR	1	1.630	0.240	1.12	0.17	A
SW	1	1.650	0.220	1.14	0.15	A
TE	1	2.200	0.700	1.52	0.48	W
TI	1	1.600	0.300	1.10	0.21	A
TM	1	1.450	0.142	1.00	0.10	A
TN	1	1.620	0.093	1.12	0.07	A
TO	1	1.450	0.247	1.00	0.17	A
TW	1	1.300	0.100	0.90	0.07	A
TX	1	1.920	0.620	1.32	0.43	W
UP	1	1.190	0.670	0.82	0.46	W
UY	1	1.300	0.480	0.90	0.33	A
WA	1	1.630	0.240	1.12	0.17	A
WC	1	1.010	0.250	0.70	0.17	N
WE	1	0.004	0.001	0.00	0.00	N
WN	1	2.200	0.400	1.52	0.28	W
WP	1	1.600	0.300	1.10	0.21	A
WV	1	1.900	0.360	1.31	0.25	W

Total Number Reported: 65

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: U 234

EML Value: 0.274
EML Error: 0.019

Labcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
AA	1	0.274	0.019	1.00	0.10	A
AC	1	0.241	0.013	0.88	0.08	W
AE	1	0.280	0.030	1.02	0.13	A
AG	1	0.293	0.037	1.07	0.15	A
AI	1	0.290	0.030	1.06	0.13	A
AN	1	0.291	0.009	1.06	0.08	A
AR	1	0.328	0.042	1.20	0.17	W
AU	1	0.370	0.100	1.35	0.38	W
BA	1	0.342	0.062	1.25	0.24	W
BC	1	0.335	0.021	1.22	0.11	W
BE	1	0.284	0.054	1.04	0.21	A
BL	1	0.283	0.000	1.03	0.07	A
BL	2	0.290	0.000	1.06	0.07	A
BL	2	0.290	0.230	1.06	0.84	A
BL	3	0.290	0.000	1.06	0.07	A
BM	1	0.300	0.060	1.10	0.23	A
BX	1	0.334	0.021	1.22	0.11	W
CC	1	0.310	0.000	1.13	0.08	A
CH	1	0.356	0.019	1.30	0.11	W
CL	1	0.370	0.120	1.35	0.45	W
CW	1	0.278	0.020	1.02	0.10	A
DC	1	0.927	0.057	3.38	0.31	N
EG	1	0.250	0.030	0.91	0.13	A
EI	1	0.280	0.016	1.02	0.09	A
EL	1	0.320	0.030	1.17	0.14	A
EP	1	0.329	0.040	1.20	0.17	W
ES	1	0.286	0.047	1.04	0.19	A
GA	1	0.280	0.014	1.02	0.09	A
GE	1	0.335	0.058	1.22	0.23	W
HA	1	0.260	0.030	0.95	0.13	A
HL	1	0.260	0.110	0.95	0.41	A
IE	1	0.292	0.031	1.07	0.14	A
JP	1	0.310	0.015	1.13	0.10	A
LH	1	0.320	0.080	1.17	0.30	A
LL	1	0.022	0.001	0.08	0.01	N
ML	1	0.300	0.020	1.10	0.11	A
NA	1	0.416	0.037	1.52	0.17	N
NL	1	0.280	0.051	1.02	0.20	A
NM	1	0.274	0.017	1.00	0.09	A
OD	1	0.280	0.024	1.02	0.11	A
PA	1	0.310	0.100	1.13	0.37	A
PB	1	0.281	0.039	1.03	0.16	A
PI	1	0.290	0.030	1.06	0.13	A
RE	1	0.277	0.035	1.01	0.15	A
RF	1	0.331	0.023	1.21	0.12	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: U 234

EML Value: 0.274
EML Error: 0.019

Lahcode	Test #	Reported Value	Reported Error	Reported EMI	Ratio Error	Evaluation
RG	1	0.328	0.018	1.20	0.11	W
SC	1	0.300	0.020	1.10	0.11	A
SN	1	0.314	0.043	1.15	0.18	A
SR	1	0.289	0.052	1.05	0.20	A
TI	1	0.520	0.280	1.90	1.03	N
TM	1	0.311	0.026	1.14	0.12	A
TN	1	0.289	0.022	1.05	0.11	A
TO	1	0.257	0.024	0.94	0.11	A
TX	1	0.440	0.026	1.61	0.15	N
UP	1	0.349	0.113	1.27	0.42	W
UY	1	0.320	0.099	1.17	0.37	A
WA	1	0.290	0.040	1.06	0.16	A
WC	1	0.350	0.081	1.28	0.31	W
WE	1	0.278	0.057	1.02	0.22	A

Total Number Reported: 59

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: U 238

EML Value: 0.275
EML Error: 0.024

Labcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
AA	1	0.275	0.024	1.00	0.13	A
AC	1	0.246	0.014	0.90	0.09	A
AE	1	0.280	0.030	1.02	0.14	A
AG	1	0.283	0.037	1.03	0.16	A
AI	1	0.260	0.030	0.95	0.14	A
AN	1	0.299	0.009	1.09	0.10	A
AR	1	0.320	0.040	1.16	0.18	W
AU	1	0.340	0.100	1.24	0.38	W
BA	1	0.346	0.063	1.26	0.26	W
BC	1	0.336	0.026	1.22	0.14	W
BE	1	0.275	0.054	1.00	0.22	A
BL	1	0.276	0.000	1.00	0.09	A
BL	2	0.280	0.220	1.02	0.81	A
BL	2	0.282	0.000	1.03	0.09	A
BL	3	0.283	0.000	1.03	0.09	A
BM	1	0.320	0.060	1.16	0.24	W
BX	1	0.336	0.026	1.22	0.15	W
CC	1	0.300	0.000	1.09	0.10	A
CH	1	0.331	0.031	1.20	0.16	W
CL	1	0.360	0.110	1.31	0.42	W
CW	1	0.278	0.020	1.01	0.12	A
DC	1	0.327	0.036	1.19	0.17	W
EG	1	0.240	0.030	0.87	0.13	W
EI	1	0.220	0.016	0.80	0.09	W
EL	1	0.330	0.030	1.20	0.15	W
EP	1	0.313	0.039	1.14	0.17	A
ES	1	0.290	0.047	1.05	0.20	A
GA	1	0.260	0.024	0.95	0.12	A
GE	1	0.315	0.056	1.15	0.23	W
HA	1	0.300	0.030	1.09	0.15	A
HL	1	0.290	0.120	1.05	0.45	A
IE	1	0.277	0.014	1.01	0.10	A
JP	1	0.310	0.015	1.13	0.11	A
LH	1	0.290	0.070	1.05	0.27	A
LL	1	0.022	0.001	0.08	0.01	N
ML	1	0.298	0.005	1.08	0.10	A
NA	1	0.355	0.033	1.29	0.17	W
NL	1	0.291	0.051	1.06	0.21	A
NM	1	0.294	0.018	1.07	0.12	A
OD	1	0.278	0.024	1.01	0.13	A
PA	1	0.300	0.096	1.09	0.36	A
PB	1	0.263	0.037	0.96	0.16	A
PI	1	0.310	0.030	1.13	0.15	A
RE	1	0.290	0.036	1.05	0.16	A
RF	1	0.316	0.023	1.15	0.13	W

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: U 238

EML Value: 0.275
EML Error: 0.024

Labcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
RG	1	0.295	0.017	1.07	0.11	A
SC	1	0.300	0.020	1.09	0.12	A
SN	1	0.303	0.041	1.10	0.18	A
SR	1	0.285	0.051	1.04	0.21	A
TI	1	1.300	0.500	4.73	1.87	N
TM	1	0.259	0.024	0.94	0.12	A
TN	1	0.299	0.022	1.09	0.13	A
TO	1	0.262	0.024	0.95	0.12	A
TX	1	0.440	0.026	1.60	0.17	N
UP	1	0.303	0.157	1.10	0.58	A
UY	1	0.310	0.100	1.13	0.38	A
WA	1	0.300	0.050	1.09	0.21	A
WC	1	0.300	0.072	1.09	0.28	A
WE	1	0.316	0.059	1.15	0.24	W
WN	1	0.610	0.110	2.22	0.45	N

Total Number Reported: 60

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: U BQ

EML Value: 0.559
EML Error: 0.047

Labcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
AA	1	0.559	0.047	1.00	0.12	A
AG	1	0.147	0.012	0.26	0.03	N
AM	1	0.360	0.070	0.64	0.14	W
AR	1	0.648	0.058	1.16	0.14	A
BL	1	0.570	0.660	1.02	1.18	A
BU	1	0.024	0.002	0.04	0.01	N
CH	1	0.687	0.036	1.23	0.12	W
CL	1	0.730	0.070	1.31	0.17	W
EL	1	0.689	0.020	1.23	0.11	W
ES	1	0.588	0.099	1.05	0.20	A
FG	1	0.720	0.010	1.29	0.11	W
HL	1	0.540	0.220	0.97	0.40	A
ID	1	0.727	0.040	1.30	0.13	W
OR	1	0.690	0.080	1.23	0.18	W
OT	1	0.400	0.160	0.72	0.29	W
RE	1	0.510	0.026	0.91	0.09	A
RG	1	0.636	0.038	1.14	0.12	A
SC	1	0.600	0.050	1.07	0.13	A
SE	1	0.260	0.010	0.47	0.04	W
TE	1	0.600	0.100	1.07	0.20	A
TW	1	1.690	0.080	3.02	0.29	N
UK	1	0.595	0.100	1.06	0.20	A
WA	1	0.640	0.070	1.15	0.16	A

Total Number Reported: 23

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in $\mu\text{g}/\text{filter}$, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

QAP44 Results by Nuclide

Matrix: WA
Radionuclide: U UG

EML Value: 0.022
EML Error: 0.003

Lahcode	Test #	Reported Value	Reported Error	Reported EML	Ratio Error	Evaluation
AA	1	0.022	0.003	1.00	0.17	A
AR	1	25.700	1.100	***	***	N
AW	1	0.016	0.002	0.72	0.11	N
BE	1	23.900	0.000	***	***	N
BL	1	0.023	0.000	1.04	0.12	A
BL	2	0.024	0.000	1.07	0.13	A
BL	3	0.024	0.000	1.07	0.13	A
BP	1	24.300	0.000	***	***	N
BQ	1	0.026	0.001	1.18	0.14	A
CC	1	0.020	0.000	0.90	0.11	A
CH	1	0.023	0.002	1.02	0.16	A
CZ	1	0.027	0.000	1.22	0.14	A
DC	1	0.023	0.002	1.04	0.16	A
ES	1	0.023	0.000	1.05	0.12	A
ES	2	23.200	2.350	***	***	N
GA	1	0.021	0.000	0.95	0.11	A
GS	1	0.017	0.001	0.77	0.10	W
IE	1	22.500	1.160	***	***	N
IR	1	0.035	0.001	1.58	0.19	N
IT	1	22.800	0.190	***	***	N
KA	1	0.023	0.001	1.02	0.12	A
LA	1	0.021	0.000	0.93	0.11	A
LA	2	0.021	0.000	0.96	0.11	A
LA	3	0.021	0.000	0.96	0.11	A
NL	1	0.023	0.003	1.04	0.18	A
RI	1	0.006	0.000	0.27	0.03	N
SE	1	0.000	0.000	0.00	0.00	N
SW	1	2.040	0.230	91.90	14.90	N
TI	1	0.040	0.000	1.80	0.21	N
TM	1	0.025	0.001	1.13	0.14	A
TN	1	0.013	0.004	0.57	0.18	N
TO	1	0.021	0.001	0.95	0.12	A
TW	1	0.068	0.003	3.06	0.38	N
UC	1	0.024	0.002	1.08	0.17	A
UP	1	0.024	0.000	1.08	0.13	A
UY	1	0.024	0.000	1.08	0.13	A
YP	1	0.020	0.002	0.91	0.14	A

Total Number Reported: 37

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium are reported in µg/filter, g, or mL.

Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable.

pCi = Bq x 27

Participating Laboratories in EML QAP44

Laboratories Reporting Data

Code	Laboratory Name
AC	Analytical Chemistry Laboratory Chemical Technology Div., Argonne, IL
AE	Analytical Resources, Inc. , Seattle, WA
AG	Paragon Analytics, Inc. , Fort Collins, CO
AI	Nuclear Technology Services, Inc. Radiochemistry Lab, Roswell, GA
AL	Ames Laboratory Safety, Health & Env. G40TASF, Ames, IA
AM	American Radiation Services, Inc. , Baton Rouge, LA
AN	Argonne Nat'l Laboratory ESH, Bldg 200, Rm. F109, Argonne, IL
AR	Accu-Labs Research Inc. , Golden, CO
AU	ORISE EESD/ESSAP PO Box 117, Oak Ridge, TN
AW	Argonne National Laboratory , Idaho Falls, ID
BA	Westinghouse Electric Corp. Bettis Atomic Power Lab, West Mifflin, PA
BC	Babcock & Wilcox MC #42 Naval Nuclear Fuel Division, Lynchburg, VA
BE	RUST Geotech , Grand Junction, CO
BK	Brookhaven Nat'l Laboratory Dept of Adv Tech., Upton, NY
BL	Barringer Laboratories Inc. , Golden, CO
BM	Battelle Memorial Institute , Columbus, OH
BN	Brookhaven Nat'l Laboratory Bldg. #535 A, Upton, NY
BP	Battelle PNL, Bldg. 325 BRM 8547 c/o Westinghouse Hanford CO., Richland, WA
BQ	Becquerel Laboratories Inc. , Mississauga, Ontario, Canada
BR	US Army Research Laboratory Attn: AMSRL-OP-AP-RK(Richard M, Aberdeen Proving Ground, MD
BS	B&W Nuclear Envir. Services , Vandergraft, PA
BU	Autoridad Regulatoria , Buenos Aires, Argentina
BX	B&W Nuclear Envir. Services Nuclear Envir. Lab, Lynchburg, VA
CA	Atomic Energy Control Board , Ottawa, Canada
CC	Compuchem Environmental Corp. , Research Triangle Park, NC
CH	California State Dept. Health Serv. Sanitation & Radiation Laborat, Berkeley, CA
CL	Core Laboratories , Casper, WY
CP	Controls for Envir. Pollution , Santa Fe, NM
CS	Rockwell Internat'l Corp. Rad. Protection T100, Canoga Park, CA
CW	Carlsbad Environmental Monitoring Res , Carlsbad, NM
CZ	ACZ Laboratories, Inc. , Steamboat Springs, CO
DC	Datachem Laboratories , Salt Lake City, UT
EG	TRA-MTR604 LAB 124 ATTN: Jodie Doherty 208-533-41, Scoville, ID
EI	Argonne National Laboratory Building 211, Argonne, IL
EL	Energy Laboratories, Inc. Radiochemistry Department, Casper, WY
EP	US EPA-LV Mail Stop/ RSD , Las Vegas, NV
ES	Environmental Sci. & Engr., Inc. Inorganic Analyt.Chem., Gainesville, FL
FG	FGL Environmental , Santa Paula, CA
FL	Dept of Health & Rehab. Serv. Office of Rad. Control, Orlando, FL
FM	Office of Radiation Control Mobile Emergency Radiological, Orlando, FL
FN	Shipping and Receiving Department ATTN: Steve Benesch, 21 S Shab, Batavia, IL
FS	Florida State University Department of Oceanography, Tallahassee, FL
GA	Lockheed Martin Rm. 333 Bldg X710, Pikton, OH
GE	General Engineering Labs Environmental Physics, Inc., Charleston, SC
GS	USGS/NWQL , Arvada, CO
HA	NUS Laboratory , Pittsburgh, PA
HC	Lawrence Livermore Laboratory Hazards Control, L383, Livermore, CA
HL	Heritage Laboratories, Inc. , Romeoville, IL
ID	DPRA - IRD/CNEN Av. Salvador Allende S/N, Jaca, Rio De Janeiro, RJBrasil
IE	IEA, Inc. , Morrisville, NC
IL	ISU Environmental Monitoring Program Physical Science 103, Pocatello, ID

Participating Laboratories in EML QAP44

Laboratories Reporting Data

Code	Laboratory Name
IN	WINCO MS 5202 , Idaho Falls, ID
IR	Idaho National Engineering Laboratory , Scoville, ID
IS	Quanterra- St. Louis , Earth City, MO
IT	Quanterra- Richland Laboratory , Richland, WA
JP	Japan Chemical Analysis Center 295-3 Sanno-Cho, Chiba 263, Japan
KA	Knolls Atomic Power Lab, Bldg A-3 Rm 2401 River Road, Schenectady, NY
LA	Analytical Services, CST-3 MS K484, Los Alamos, NM
LB	Lawrence Berkeley Lab UCB Bldg 75, Room 124, Berkeley, CA
LH	Lockheed Analytical Laboratory , Las Vegas, NV
LL	Lawrence Livermore Nat'l Lab Nuclear Chem. Div., Livermore, CA
LM	Los Alamos Nat'l Lab , Mercury, NV
LV	UNLV, Dept of Health Physics Bigelow H. S. BLDG, RM 350, Las Vegas, NV
LW	Lawrence Livermore Nat'l Lab Nuclear Chem. Div., Livermore, CA
MA	ORNL Health Sciences Research Div. BLDG 7710 MS 6379, Oak Ridge, TN
ME	Radiation Control Program , Jamaica Plain, MA
MI	Massachusetts Inst. of Tech. , Middleton, MA
ML	EG&G Mound Applied Technologies , Miamisburg, OH
MS	Manufacturing Sciences Corporation , Oak Ridge, TN
NA	USEPA NAREL , Montgomery, AL
NC	Head, Nuclear Services North Carolina State Universit, Raleigh, NC
NL	FERMCO BLDG 15, room C-11, Cincinnati, OH
NM	Environmental Evaluation Group 505 North Main Street, Carlsbad, NM
NR	NRF Chemistry, S1W2 , Scoville, ID
OB	OBG Laboratories , East Syracuse, NY
OD	ORNL, Radiobiology Lab Bldg 4500-S Rm H-249 MS 6105, Oak Ridge, TN
OL	Oak Ridge National Laboratory Environmental Sciences Div., Oak Ridge, TN
OR	Oak Ridge National Lab Bldg 4500-N Rm G-5, Oak Ridge, TN
OS	Oregon Health Division Radiation Controls Section, Portland, OR
OT	ORNL Radioactive Material Analysis Lab BLDG 2026, Room 129, Oak Ridge, TN
PA	Mason & Hanger-Silas Mason Co., Inc. , Amarillo, TX
PB	Mason & Hanger-Silas Mason Co., Inc. , Amarillo, TX
PI	Lockheed Martin Specialty Components , Largo, FL
RA	V. G. Khlopin Radium Institute , St. Petersburg, Russia
RE	Bechtel Nevada Building 650, Warehouse 160, Mercury, NV
RF	EG&G Rocky Flats Plant Bldg 123, Golden, CO
RG	EG&G Rocky Flats Plant , Golden, CO
RI	Westinghouse Hanford Co. Analytical Labs, Dept. T6-16, Richland, WA
SA	Sandia Labs - Organization 7715 Radioactive Sample Diag. Prog., Albuquerque, NM
SC	S-3 Division Maxwell Labs , La Jolla, CA
SE	Shealy Environmental Services Inc. Overlook Business Center, Cayce, SC
SK	Savannah River Plant Bldg 735-7A Rm 110, Aiken, SC
SN	Sanford Cohen Associates, Inc. , Montgomery, AL
SR	Savannah River Plant , Aiken, SC
SS	Savannah River Tech Center , Aiken, SC
SV	Savannah Lab & Env't Serv., Inc. , Tampa, FL
SW	Southwest Research Institute, Div. 01 P.O. Drawer 28510, San Antonio, TX
TE	Teledyne Isotopes Midwest Lab , Northbrook, IL
TI	Teledyne Brown Engineering Environmental Services, Westwood, NJ
TM	TMA/Eberline-Albuquerque Lab , Albuquerque, NM
TN	TMA/NORCAL , Richmond, CA
TO	TMA/Eberline Oak Ridge Laboratory, Oak Ridge, TN

Participating Laboratories in EML QAP44

Laboratories Reporting Data

Code	Laboratory Name
TW	Taiwan Radiation Monitoring Center Atomic Energy Council, Executive, Kaohsiung, Taiwan, ROC
TX	TDH/Laboratories , Austin, TX
TY	Scientific Production Association 82, Lenin Street, Kaluga Region, RUSSIA
UC	Lockheed Martin RM 60 BLDG C-710, Paducah, KY
UK	K-25 Plant Lockheed Martin Energy Systems, Oak Ridge, TN
UP	Y-12 Plant, ASO, QC Laboratory 113C Union Valley Road, Oak Ridge, TN
UY	Y-12 Plant, ASO, QC Laboratory 113C Union Valley Road, Oak Ridge, TN
WA	Environmental Radiation Lab Off. of Public Health Labs., Seattle, WA
WC	Westinghouse Hanford Co. MSIN S3-28, Richland, WA
WE	Westinghouse Electric Corp. Chemical & Materials Tech., Madison, PA
WI	Westinghouse Electric Corp. WIPP Site, Carlsbad, NM
WN	WINCO CPP-609 , Scoville, ID
WP	Washington Public Power Supply System , Richland, WA
WS	Weldon Springs Site , St. Charles, MO
WV	West Valley Nuclear Services Co, Inc MS 307, West Valley, NY
YA	Yankee Atomic Electric Company , Westboro, MA
YP	US Army Proving Ground ATTN: STEYP-RS-LS-MP, Yuma, AZ

Total Reporting Labs: 119

Participating Laboratories in EML QAP44

Laboratories Not Reporting Data

Code	Laboratory Name
ED	Maxim Technologies , St. Louis, MO
HI	Heritage Laboratories, Inc. , Indianapolis, IN
HS	RESL - USDOE , Idaho Falls, ID
OI	Oak Ridge Research Institute, Inc. , Oak Ridge, TN
PR	Princeton Plasma Physics Lab , Princeton, NJ
RD	Radiation Detection Company , Sunnyvale, CA
RL	Thermo Hanford 2440 Stevens Center MSIN: H6-0, Richland, WA
SL	Stanford Linear Accelerator Center Off. of Hlth Physics, MS 84, Menlow Park, CA

Total Non-Reporting Labs: 8