

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

Pamela D. Greenlaw

**Environmental Measurements Laboratory
U. S. Department of Energy
New York, NY 10014-4811**

July, 1997

DISCLAIMER

"This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof."

This report has been reproduced directly from the best available copy.

**Available from the National Technical Information Service, U.S. Department of Commerce,
5285 Port Royal Road, Springfield, Virginia 22161.**

ACKNOWLEDGEMENT

This report represents the efforts of the following EML staff: Anna Berne, Karin Decker, Isabel M. Fisenne, Richard Godwin, Marie Lawrence, Pamela M. Perry, William Rivera, Arnold Boyd, Nancy Chieco, Kevin Clancy, Francis DiPasqua, Brenda Jones, Sylvia Kendall and Camille Marinetti.

ABSTRACT

This report presents the results from the soil inorganic analysis of the 46th set of environmental quality assessment samples (QAP XLVI) that were received on or before June 2, 1997.

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 51th 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)	EML-581	(July 1, 1996)
		EML-587	(January 1997)

*Please note this is a corrected report number.

RESULTS

The results from the analysis of QAP-XLVI samples received on or before June 2, 1997 are listed according to the TABLE OF CONTENTS. The data for the different kinds of samples are given in the following units:

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 limit concept was established from percentiles of historic data distributions (1982-1992). The evaluation of this historic data and the development of the control limits are presented in DOE report EML-564. The control limits for QAP-XLVI were developed from percentiles of data distributions for the years 1991-1996.

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.

TABLE OF CONTENTS

Summary Figure of QAP-XLIV Evaluations	1
Table of Statistical Summary	2
Table of Control Limits and Performance Criteria	4
Summary of Matrix Evaluations by Laboratory	6
Summary of Laboratory Evaluations by Matrix	33
Summary of Matrix Evaluations by Radionuclide	44
Results Ordered by Laboratory	
AA (EML)	48
AC	50
AF	51
AG	52
AI	54
AL	56
AM	57
AN	59
AR	61
AU	63
AW	65
BC	66
BE	67
BL	69
BM	71
BN	73
BP	74
BQ	76
BR	77
BS	78
BU	79
BX	80
CA	82
CH	83
CL	85
CN	87
CO	88
CR	89
CS	90
CW	91
CZ	92
DC	93
DH	95
DP	96

EG	.....	97
EI	.....	99
EL	.....	100
EP	.....	101
ES	.....	102
FG	.....	104
FL	.....	105
FM	.....	106
FN	.....	107
FR	.....	108
FS	.....	109
GA	.....	110
GE	.....	112
GP	.....	114
GS	.....	116
GT	.....	117
HC	.....	119
IA	.....	120
ID	.....	121
IE	.....	122
IL	.....	124
IN	.....	125
IR	.....	126
IS	.....	127
IT	.....	129
JP	.....	131
KA	.....	133
KO	.....	134
LA	.....	135
LB	.....	138
LH	.....	139
LL	.....	141
LM	.....	143
LV	.....	144
LW	.....	145
MA	.....	146
ME	.....	147
MI	.....	148
ML	.....	149
MO	.....	150
MS	.....	151
MX	.....	152
NA	.....	153
ND	.....	155
NL	.....	156
NM	.....	157
NP	.....	158
NR	.....	159
NS	.....	160
NZ	.....	161

OB	.....	163
OD	.....	164
OK	.....	165
OL	.....	166
OS	.....	167
OT	.....	168
OU	.....	169
PA	.....	170
PG	.....	171
PI	.....	172
PO	.....	173
PR	.....	174
RA	.....	175
RC	.....	177
RD	.....	178
RE	.....	179
RG	.....	181
RI	.....	182
RK	.....	183
RL	.....	184
RM	.....	185
RO	.....	186
SA	.....	187
SB	.....	188
SK	.....	189
SL	.....	190
SN	.....	191
SR	.....	192
SS	.....	194
SV	.....	195
SW	.....	196
TE	.....	198
TI	.....	200
TM	.....	202
TN	.....	204
TO	.....	206
TP	.....	208
TR	.....	209
TT	.....	210
TW	.....	211
TX	.....	213
UC	.....	215
UK	.....	216
UN	.....	217
UP	.....	218
UY	.....	219
VE	.....	221
WA	.....	222
WC	.....	224
WE	.....	226

WI	227
WP	228
WS	229
WV	230
YA	231
YP	233

Results Ordered by Matrix/Nuclide

Air

²⁴¹ Am	234
¹⁴⁴ Ce	236
⁵⁷ Co	239
⁶⁰ Co	242
¹³⁴ Cs	245
¹³⁷ Cs	248
Gross Alpha (GA)	251
Gross Beta (GB)	253
⁵⁴ Mn	255
²³⁸ Pu	258
²³⁹ Pu	260
¹²⁵ Sb	262
⁹⁰ Sr	265
²³⁴ U	267
²³⁸ U	269
U Bq	271
U µg	272

Soil

²⁴¹ Am	273
²⁴⁴ Cm	275
⁶⁰ Co	276
¹³⁷ Cs	278
⁴⁰ K	281
⁵⁴ Mn	284
²³⁸ Pu	285
²³⁹ Pu	287
⁹⁰ Sr	289
²³⁴ U	291
²³⁸ U	293
U Bq	295
U µg	296

Vegetation

²⁴¹ Am	297
²⁴⁴ Cm	299
⁶⁰ Co	300
¹³⁷ Cs	303
⁴⁰ K	306
²³⁸ Pu	309

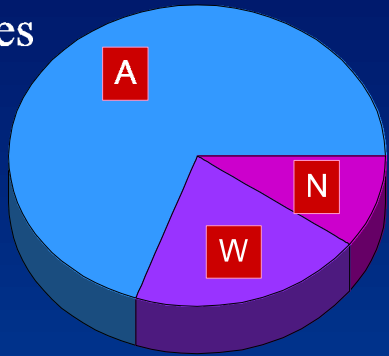
²³⁹ Pu	.....	310
⁹⁰ Sr	.....	312
Water		
²⁴¹ Am	.....	314
⁶⁰ Co	.....	316
¹³⁴ Cs	.....	319
¹³⁷ Cs	.....	320
⁵⁵ Fe	.....	323
Gross Alpha (GA)	.....	324
Gross Beta (GB)	.....	326
³ H	.....	328
⁵⁴ Mn	.....	330
²³⁸ Pu	.....	333
²³⁹ Pu	.....	335
⁹⁰ Sr	.....	337
²³⁴ U	.....	339
²³⁸ U	.....	341
U Bq	.....	343
U µg	.....	344

List of Labcodes of Participating Laboratories for EML QAP XLIII

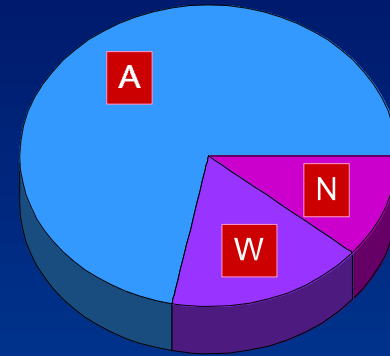
Laboratories Reporting Data	.....	345
Laboratories Not Reporting Data		348

QAP 46 Summary of Evaluations of 3658 Reported Analyses

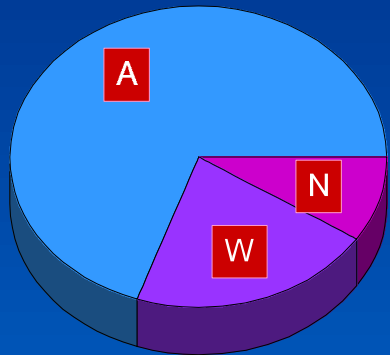
Air Filter:
1277 Analyses



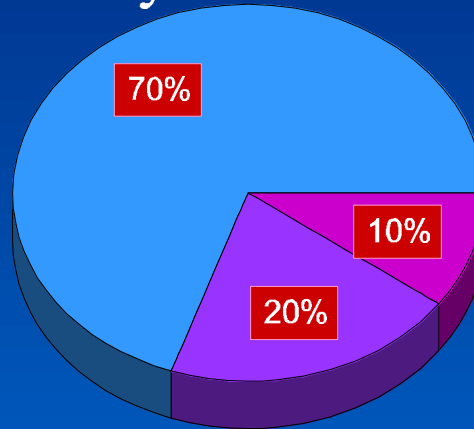
Soil: 768
Analyses



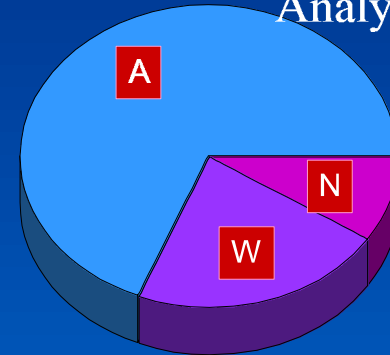
Vegetation:
535 Analyses



Summary: All
Analyses



Water: 1078
Analyses



Acceptable

Warning

Not Acceptable

QAP 46 Statistical Summary

Nuclide	EML Value	EML Error	Reported Values			No. of Reported Values
			Mean	Median	Std. Dev.	
Matrix: AI						
AM241	0.152	0.013	1.094	1.039	0.220	55
SR 90	1.450	0.149	1.027	0.982	0.249	50
U BQ	0.211	0.008	1.206	1.094	0.419	15
U UG	8.448	0.400	1.029	1.009	0.106	30
U234	0.103	0.005	1.084	1.069	0.145	48
U238	0.105	0.004	1.066	1.053	0.179	49
SB125	12.330	1.000	1.089	1.079	0.114	85
PU238	0.100	0.006	1.045	1.053	0.128	62
PU239	0.119	0.006	1.057	1.082	0.121	64
GB	0.450	0.030	1.141	1.133	0.261	69
CE144	15.700	1.000	0.972	0.964	0.127	80
MN 54	7.620	0.600	1.072	1.072	0.111	83
CO 60	5.010	0.300	1.040	1.038	0.075	85
CO 57	10.810	1.000	1.023	1.008	0.098	81
CS137	8.700	0.800	1.051	1.034	0.108	94
GA	0.960	0.050	1.064	1.036	0.170	72
CS134	10.880	1.000	1.026	1.029	0.090	89

Matrix: SO						
U BQ	81.270	4.830	1.044	1.023	0.142	17
U238	42.430	2.500	0.947	0.957	0.144	56
SR 90	40.310	0.420	1.063	1.020	0.334	53
U234	37.570	2.480	1.023	1.034	0.164	52
PU239	134.930	17.100	1.010	1.000	0.158	67
U UG	3.426	0.200	0.950	0.973	0.122	36
K 40	334.250	7.140	1.072	1.070	0.136	106
AM241	5.680	0.500	1.153	1.077	0.321	74
PU238	0.530	0.111	1.021	1.000	0.316	40
CM244	0.233	0.020	1.119	1.073	0.147	3
CS137	825.500	14.100	1.089	1.095	0.106	107
CO 60	1.060	0.120	1.324	1.264	0.305	51

Matrix: VE						
PU239	1.942	0.222	1.035	1.030	0.172	59
SR 90	361.000	43.300	1.026	1.053	0.136	54
PU238	0.182	0.011	0.811	0.768	0.108	6
K 40	811.500	12.200	1.119	1.134	0.125	87
AM241	1.183	0.113	1.225	1.054	0.408	56
CO 60	12.500	0.320	1.105	1.112	0.139	84
CM244	0.900	0.050	0.975	0.989	0.157	32
CS137	189.250	7.270	1.123	1.120	0.128	92

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

QAP 46 Statistical Summary

Nuclide	EML Value	EML Error	Reported Values			No. of Reported Values
			Mean	Median	Std. Dev.	
Matrix: WA						
MN 54	20.850	0.310	1.113	1.122	0.067	92
PU238	1.291	0.063	1.016	1.023	0.088	65
PU239	0.850	0.050	0.994	1.000	0.069	68
U BQ	1.105	0.050	1.113	1.126	0.177	20
U UG	0.044	0.001	1.082	1.075	0.092	34
SR 90	23.200	1.350	1.009	1.009	0.090	56
H 3	250.300	4.200	1.073	1.027	0.185	73
AM241	0.837	0.028	1.107	1.089	0.148	60
GA	1130.000	10.000	0.958	0.990	0.199	77
U234	0.540	0.020	1.111	1.111	0.106	49
CO 60	90.850	1.150	1.067	1.070	0.049	95
CS134	20.550	0.310	1.057	1.068	0.071	28
CS137	69.780	1.230	1.112	1.113	0.064	101
FE 55	235.000	10.000	0.870	0.950	0.078	16
GB	744.000	10.000	0.758	0.759	0.136	67
U238	0.550	0.025	1.085	1.076	0.087	49

Units for matrices: AI=Bq/filter SO=Bq/kg VE=Bq/kg WA=Bq/L. Values for elemental uranium in µg/filter

Conversion from Bq/kg or L to pCi/g or mL:

$$1 \text{ Bq/kg or L} = 0.027 \text{ pCi/g or mL}$$

Example: Convert 3 Bq/kg to pCi/g

$$3 \text{ Bq/kg} \times 27 \text{ pCi/Bq/1000 g/kg} = 0.081 \text{ pCi/g}$$

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

QAP 46 Control Limits* by Matrix

Nuclide	Lower Limit	Lower Middle Limit	Upper Middle Limit	Upper Limit
Matrix: AI				
AM241	0.69	0.84	1.33	1.92
SR 90	0.67	0.85	1.56	2.26
U BQ	0.80	0.90	1.67	3.35
U UG	0.52	0.80	1.27	1.86
U234	0.79	0.89	1.42	2.01
U238	0.76	0.88	1.33	2.41
SB125	0.58	0.81	1.14	1.36
PU238	0.63	0.84	1.14	1.46
PU239	0.67	0.88	1.17	1.59
GB	0.66	0.89	1.48	1.77
CE144	0.58	0.66	1.10	1.26
MN 54	0.76	0.83	1.11	1.32
CO 60	0.75	0.82	1.10	1.27
CO 57	0.62	0.69	1.10	1.28
CS137	0.72	0.82	1.11	1.33
GA	0.45	0.80	1.34	1.57
CS134	0.73	0.81	1.11	1.22
Matrix: SO				
U BQ	0.27	0.42	1.10	1.36
U238	0.35	0.61	1.10	1.55
SR 90	0.46	0.72	1.66	2.84
U234	0.38	0.63	1.10	1.55
PU239	0.66	0.87	1.26	1.93
U UG	0.34	0.53	1.10	1.27
K 40	0.73	0.85	1.27	1.67
AM241	0.52	0.75	1.52	2.65
PU238	0.40	0.73	1.16	1.90
CM244	0.50	0.80	1.40	1.70
CS137	0.80	0.90	1.23	1.34
CO 60	0.80	0.90	1.30	2.00
Matrix: VE				
PU239	0.65	0.85	1.32	1.95
SR 90	0.48	0.67	1.10	1.29
PU238	0.46	0.81	2.10	6.71
K 40	0.79	0.90	1.24	1.50
AM241	0.68	0.86	1.57	2.78
CO 60	0.62	0.81	1.20	1.42
CM244	0.49	0.83	1.41	1.69
CS137	0.80	0.90	1.25	1.45
Matrix: WA				
MN 54	0.80	0.90	1.16	1.22
PU238	0.73	0.90	1.12	1.27
PU239	0.78	0.90	1.18	1.41
U BQ	0.33	0.84	1.23	1.43

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

QAP 46 Control Limits* by Matrix

Nuclide	Lower Limit	Lower Middle Limit	Upper Middle Limit	Upper Limit
U UG	0.73	0.89	1.15	1.34
SR 90	0.71	0.88	1.31	1.65
H 3	0.62	0.79	1.22	1.80
AM241	0.68	0.88	1.23	1.56
GA	0.37	0.82	1.14	1.27
U234	0.75	0.90	1.21	1.44
CO 60	0.80	0.90	1.13	1.18
CS134	0.89	0.90	1.16	1.25
CS137	0.80	0.90	1.18	1.27
FE 55	0.32	0.80	1.29	1.52
GB	0.55	0.73	1.38	1.63
U238	0.77	0.90	1.16	1.34

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: $\text{Lower Middle Limit} \leq A \leq \text{Upper Middle Limit}$

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

Not Acceptable: $N < \text{Lower Limit}$ or $N > \text{Upper Limit}$

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

QAP 46 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
Lab: AA Environmental Measurements Laboratory							
SO	13	0	0	13	100	0	0
VE	8	0	0	8	100	0	0
WA	15	1	0	16	94	6	0
Totals:	36	1	0	37	97%	3%	0%
Lab: AC Analytical Chemistry Laboratory, Argonne National Lab							
AI	10	2	0	12	83	17	0
SO	3	1	0	4	75	25	0
WA	7	2	0	9	78	22	0
Totals:	20	5	0	25	80%	20%	0%
Lab: AF Air Force Analytical Lab, Brooks AFB							
AI	10	1	1	12	83	8	8
SO	5	0	1	6	83	0	17
VE	1	1	1	3	33	33	33
WA	2	3	3	8	25	38	38
Totals:	18	5	6	29	62%	17%	21%
Lab: AG Paragon Analytics, Inc, Fort Collins, CO							
AI	10	6	0	16	63	38	0
SO	10	0	0	10	100	0	0
VE	7	0	0	7	100	0	0
WA	10	3	1	14	71	21	7
Totals:	37	9	1	47	79%	19%	2%
Lab: AI Nuclear Technology Services, Inc., Roswell, GA							
AI	6	3	7	16	38	19	44
SO	2	1	2	5	40	20	40
VE	3	3	1	7	43	43	14
WA	5	3	5	13	38	23	38
Totals:	16	10	15	41	39%	24%	37%
Lab: AL Ames Laboratory, Ames, IA							
AI	4	3	0	7	57	43	0
SO	2	1	0	3	67	33	0
VE	3	0	0	3	100	0	0

QAP 46 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
Lab: AL Ames Laboratory, Ames, IA							
WA	3	0	0	3	100	0	0
Totals:	12	4	0	16	75%	25%	0%
Lab: AM American Radiation Services, Inc., Baton Rouge							
AI	3	2	8	13	23	15	62
SO	5	2	2	9	56	22	22
VE	3	2	1	6	50	33	17
WA	4	2	5	11	36	18	45
Totals:	15	8	16	39	38%	21%	41%
Lab: AN Argonne National Laboratory							
AI	12	3	0	15	80	20	0
SO	7	1	0	8	88	13	0
VE	6	1	0	7	86	14	0
WA	9	3	0	12	75	25	0
Totals:	34	8	0	42	81%	19%	0%
Lab: AR Accu-Labs Research Inc., Golden, CO							
AI	8	7	4	19	42	37	21
SO	11	0	2	13	85	0	15
VE	5	1	0	6	83	17	0
WA	8	7	5	20	40	35	25
Totals:	32	15	11	58	55%	26%	19%
Lab: AU ORISE EESD/ESSAP, Oak Ridge							
AI	13	1	0	14	93	7	0
SO	6	1	1	8	75	13	13
VE	5	1	0	6	83	17	0
WA	9	2	0	11	82	18	0
Totals:	33	5	1	39	85%	13%	3%
Lab: AW Argonne National Laboratory, Idaho Falls							
AI	0	0	7	7	0	0	100
WA	0	0	4	4	0	0	100

QAP 46 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
Lab: AW Argonne National Laboratory, Idaho Falls							
Totals:	0	0	11	11	0%	0%	100%
Lab: BC Babcock & Wilcox MC #42, Lynchburg, VA							
AI	11	1	0	12	92	8	0
SO	2	4	0	6	33	67	0
VE	3	1	0	4	75	25	0
WA	5	3	0	8	63	38	0
Totals:	21	9	0	30	70%	30%	0%
Lab: BE RUST Geotech, Grand Junction, CO							
AI	15	0	1	16	94	0	6
SO	8	1	0	9	89	11	0
VE	0	1	5	6	0	17	83
WA	8	4	1	13	62	31	8
Totals:	31	6	7	44	70%	14%	16%
Lab: BL Barringer Laboratories Inc., Golden, CO							
AI	17	2	1	20	85	10	5
SO	12	4	0	16	75	25	0
VE	7	1	0	8	88	13	0
WA	15	9	1	25	60	36	4
Totals:	51	16	2	69	74%	23%	3%
Lab: BM Battelle Memorial Institute, Columbus, OH							
AI	6	4	3	13	46	31	23
SO	6	2	0	8	75	25	0
VE	5	1	0	6	83	17	0
WA	8	1	0	9	89	11	0
Totals:	25	8	3	36	69%	22%	8%
Lab: BN Brookhaven National Laboratory, Upton, NY							
AI	4	0	6	10	40	0	60
SO	3	1	0	4	75	25	0
VE	2	1	0	3	67	33	0
WA	3	2	2	7	43	29	29

QAP 46 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
Lab: BN Brookhaven National Laboratory, Upton, NY							
Totals:	12	4	8	24	50%	17%	33%
Lab: BP Battelle Pacific Northwest National Laboratory							
AI	12	1	0	13	92	8	0
SO	2	3	1	6	33	50	17
VE	3	2	0	5	60	40	0
WA	8	3	0	11	73	27	0
Totals:	25	9	1	35	71%	26%	3%
Lab: BQ Becquerel Laboratories Inc., Mississauga, Ontario, Canada							
AI	5	2	1	8	63	25	13
SO	3	0	0	3	100	0	0
VE	1	1	0	2	50	50	0
WA	3	1	0	4	75	25	0
Totals:	12	4	1	17	71%	24%	6%
Lab: BR US Army Research Laboratory, Aberdeen Proving Ground							
SO	2	0	1	3	67	0	33
WA	1	2	0	3	33	67	0
Totals:	3	2	1	6	50%	33%	17%
Lab: BS B&W Nuclear Envir. Services, Leechburg, PA							
AI	8	2	0	10	80	20	0
SO	4	0	0	4	100	0	0
VE	1	3	0	4	25	75	0
WA	6	1	0	7	86	14	0
Totals:	19	6	0	25	76%	24%	0%
Lab: BU Autoridad Regulatoria, Buenos Aires, Argentina							
AI	7	5	1	13	54	38	8
SO	4	4	0	8	50	50	0
VE	4	2	1	7	57	29	14

QAP 46 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
Lab: BU <u>Autoridad Regulatoria, Buenos Aires, Argentina</u>							
Totals:	15	11	2	28	54%	39%	7%
Lab: BX <u>B&W Nuclear Envir. Services, Lynchburg, VA</u>							
AI	13	2	0	15	87	13	0
SO	2	4	3	9	22	44	33
VE	5	1	1	7	71	14	14
WA	7	6	0	13	54	46	0
Totals:	27	13	4	44	61%	30%	9%
Lab: CA <u>Atomic Energy Control Board, Ottawa, Canada</u>							
AI	16	2	0	18	89	11	0
SO	2	0	0	2	100	0	0
WA	8	2	4	14	57	14	29
Totals:	26	4	4	34	76%	12%	12%
Lab: CH <u>California State Dept. Health Serv., Sanitation & Radiation Laboratory</u>							
AI	16	1	0	17	94	6	0
SO	11	0	0	11	100	0	0
VE	6	1	0	7	86	14	0
WA	11	4	0	15	73	27	0
Totals:	44	6	0	50	88%	12%	0%
Lab: CL <u>Core Laboratories, Casper, WY</u>							
AI	11	3	0	14	79	21	0
SO	5	3	3	11	45	27	27
VE	3	2	2	7	43	29	29
WA	7	4	1	12	58	33	8
Totals:	26	12	6	44	59%	27%	14%
Lab: CN <u>China Institute for Radiation Protection</u>							
AI	2	5	0	7	29	71	0
SO	3	1	0	4	75	25	0
VE	3	1	0	4	75	25	0

QAP 46 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
Lab: CN China Institute for Radiation Protection							
Totals:	8	7	0	15	53%	47%	0%
Lab: CO Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada							
AI	0	2	5	7	0	29	71
SO	2	2	1	5	40	40	20
VE	4	1	0	5	80	20	0
Totals:	6	5	6	17	35%	29%	35%
Lab: CR Laboratorio de Fisica Nuclear Aplicada, Costa Rica							
AI	0	0	7	7	0	0	100
SO	1	1	1	3	33	33	33
VE	3	0	0	3	100	0	0
Totals:	4	1	8	13	31%	8%	62%
Lab: CS Rockwell International Corp., Canoga Park, CA							
AI	8	2	1	11	73	18	9
SO	4	1	0	5	80	20	0
VE	3	0	0	3	100	0	0
WA	4	1	0	5	80	20	0
Totals:	19	4	1	24	79%	17%	4%
Lab: CW Carlsbad Environmental Monitoring Research Center, NM							
AI	3	2	0	5	60	40	0
SO	4	0	1	5	80	0	20
VE	3	0	0	3	100	0	0
WA	6	2	0	8	75	25	0
Totals:	16	4	1	21	76%	19%	5%
Lab: CZ							
SO	1	0	1	2	50	0	50
WA	0	0	2	2	0	0	100
Totals:	1	0	3	4	25%	0%	75%

QAP 46 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
Lab: DC Datachem Laboratories, Salt Lake City							
AI	10	4	2	16	63	25	13
SO	5	5	0	10	50	50	0
VE	5	1	1	7	71	14	14
WA	10	3	0	13	77	23	0
Totals:	30	13	3	46	65%	28%	7%
Lab: DH Duke Engineering Services Hanford							
SO	3	0	0	3	100	0	0
WA	2	1	0	3	67	33	0
Totals:	5	1	0	6	83%	17%	0%
Lab: DP Duke Power Company, Huntersville, NC							
AI	3	2	1	6	50	33	17
WA	16	7	1	24	67	29	4
Totals:	19	9	2	30	63%	30%	7%
Lab: EG LMITCO/INEL, Scoville							
AI	10	4	0	14	71	29	0
SO	4	2	2	8	50	25	25
VE	6	0	3	9	67	0	33
WA	11	1	0	12	92	8	0
Totals:	31	7	5	43	72%	16%	12%
Lab: EI Eichrom Industries, Inc., Argonne							
AI	1	2	4	7	14	29	57
SO	4	1	1	6	67	17	17
VE	2	1	1	4	50	25	25
WA	3	2	2	7	43	29	29
Totals:	10	6	8	24	42%	25%	33%
Lab: EL Energy Laboratories, Inc., Casper, WY							
SO	2	0	2	4	50	0	50
VE	1	0	1	2	50	0	50
WA	5	1	1	7	71	14	14

QAP 46 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
Lab: EL Energy Laboratories, Inc., Casper, WY							
Totals:	8	1	4	13	62%	8%	31%
Lab: EP US EPA, Las Vegas							
AI	2	1	6	9	22	11	67
SO	1	0	0	1	100	0	0
VE	1	0	0	1	100	0	0
WA	6	1	2	9	67	11	22
Totals:	10	2	8	20	50%	10%	40%
Lab: ES Environmental Sci. & Engr., Inc., Gainesville, FL							
AI	16	0	0	16	100	0	0
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:	40	5	0	45	89%	11%	0%
Lab: FG FGL Environmental, Santa Paula, CA							
AI	5	3	2	10	50	30	20
SO	3	0	1	4	75	0	25
WA	4	6	1	11	36	55	9
Totals:	12	9	4	25	48%	36%	16%
Lab: FL Florida Dept of Health & Rehab. Serv., Orlando							
AI	4	7	2	13	31	54	15
SO	5	1	0	6	83	17	0
VE	3	1	0	4	75	25	0
WA	7	2	0	9	78	22	0
Totals:	19	11	2	32	59%	34%	6%
Lab: FM Florida Mobile Emergency Radiological Laboratory, Orlando							
AI	6	1	0	7	86	14	0
WA	4	0	0	4	100	0	0

QAP 46 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
Lab: FM Florida Mobile Emergency Radiological Laboratory, Orlando							
Totals:	10	1	0	11	91%	9%	0%
Lab: FN Fermi Lab, Batavia, IL							
AI	7	0	0	7	100	0	0
SO	4	0	0	4	100	0	0
VE	3	0	0	3	100	0	0
WA	5	0	0	5	100	0	0
Totals:	19	0	0	19	100%	0%	0%
Lab: FR Service Mixte de Surveillance Radiologique et Biologique (SMSRB), France							
AI	8	0	0	8	100	0	0
SO	3	1	2	6	50	17	33
VE	5	0	0	5	100	0	0
Totals:	16	1	2	19	84%	5%	11%
Lab: FS Florida State University, Tallahassee							
SO	7	0	0	7	100	0	0
Totals:	7	0	0	7	100%	0%	0%
Lab: GA Lockheed Martin, Pikton, OH							
AI	11	2	0	13	85	15	0
SO	6	1	1	8	75	13	13
VE	5	1	0	6	83	17	0
WA	10	0	0	10	100	0	0
Totals:	32	4	1	37	86%	11%	3%
Lab: GE Environmental Physics, Inc., Charleston, SC							
AI	16	0	0	16	100	0	0
SO	8	1	0	9	89	11	0
VE	4	3	0	7	57	43	0
WA	11	3	0	14	79	21	0
Totals:	39	7	0	46	85%	15%	0%

QAP 46 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
Lab: GP GPU Nuclear, Inc., Harrisburg, PA							
AI	16	0	0	16	100	0	0
SO	7	2	1	10	70	20	10
VE	7	1	0	8	88	13	0
WA	12	3	0	15	80	20	0
Totals:	42	6	1	49	86%	12%	2%
Lab: GS USGS/NWQL, Arvada, CO							
WA	1	2	0	3	33	67	0
Totals:	1	2	0	3	33%	67%	0%
Lab: GT Georgia Institute of Technology							
AI	14	2	0	16	88	13	0
SO	6	4	0	10	60	40	0
VE	4	0	0	4	100	0	0
WA	11	2	0	13	85	15	0
Totals:	35	8	0	43	81%	19%	0%
Lab: HC Lawrence Livermore Laboratory, California							
AI	1	1	0	2	50	50	0
WA	2	1	0	3	67	33	0
Totals:	3	2	0	5	60%	40%	0%
Lab: IA Bhabha Atomic Research Centre, India							
SO	12	2	4	18	67	11	22
VE	12	0	3	15	80	0	20
Totals:	24	2	7	33	73%	6%	21%
Lab: ID DPRA - IRD/CNEN, Rio de Janeiro, Brazil							
AI	9	3	0	12	75	25	0
SO	5	1	1	7	71	14	14
VE	5	1	0	6	83	17	0
WA	7	1	0	8	88	13	0

QAP 46 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
Lab: ID DPRA - IRD/CNEN, Rio de Janeiro, Brazil							
Totals:	26	6	1	33	79%	18%	3%
Lab: IE IEA, Inc., Morrisville, NC							
AI	13	1	0	14	93	7	0
SO	9	0	0	9	100	0	0
VE	4	2	1	7	57	29	14
WA	12	2	0	14	86	14	0
Totals:	38	5	1	44	86%	11%	2%
Lab: IL ISU Environmental Monitoring Program, Pocatello, ID							
AI	6	3	0	9	67	33	0
SO	0	1	2	3	0	33	67
VE	2	1	0	3	67	33	0
WA	3	1	2	6	50	17	33
Totals:	11	6	4	21	52%	29%	19%
Lab: IN Lockheed Martin Idaho Technical Corp., Analytical Laboratory							
AI	7	0	0	7	100	0	0
SO	5	0	0	5	100	0	0
VE	3	0	0	3	100	0	0
WA	4	3	0	7	57	43	0
Totals:	19	3	0	22	86%	14%	0%
Lab: IR Idaho National Engineering Laboratory							
WA	1	0	2	3	33	0	67
Totals:	1	0	2	3	33%	0%	67%
Lab: IS Quanterra- St. Louis							
AI	9	4	1	14	64	29	7
SO	4	1	3	8	50	13	38
VE	2	3	1	6	33	50	17
WA	7	2	2	11	64	18	18

QAP 46 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
Lab: IS Quanterra- St. Louis							
Totals:	22	10	7	39	56%	26%	18%
Lab: IT Quanterra- Richland Laboratory							
AI	16	0	0	16	100	0	0
SO	7	4	0	11	64	36	0
VE	6	1	0	7	86	14	0
WA	10	1	2	13	77	8	15
Totals:	39	6	2	47	83%	13%	4%
Lab: JP Japan Chemical Analysis Center							
AI	11	3	0	14	79	21	0
SO	7	1	1	9	78	11	11
VE	7	0	0	7	100	0	0
WA	10	1	1	12	83	8	8
Totals:	35	5	2	42	83%	12%	5%
Lab: KA Knolls Atomic Power Lab, Schenectady							
AI	2	0	0	2	100	0	0
SO	5	0	0	5	100	0	0
WA	8	3	0	11	73	27	0
Totals:	15	3	0	18	83%	17%	0%
Lab: KO Korea Institute of Nuclear Safety							
AI	10	6	0	16	63	38	0
SO	8	0	0	8	100	0	0
VE	6	1	0	7	86	14	0
Totals:	24	7	0	31	77%	23%	0%
Lab: LA Los Alamos National Laboratory, NM							
AI	30	8	4	42	71	19	10
SO	17	1	6	24	71	4	25
VE	9	6	3	18	50	33	17
WA	21	9	3	33	64	27	9

QAP 46 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
Lab: LA Los Alamos National Laboratory, NM							
Totals:	77	24	16	117	66%	21%	14%
Lab: LB Lawrence Berkeley Lab UCB							
AI	1	1	5	7	14	14	71
SO	5	1	0	6	83	17	0
VE	2	2	1	5	40	40	20
WA	2	6	0	8	25	75	0
Totals:	10	10	6	26	38%	38%	23%
Lab: LH Lockheed Analytical Laboratory, Las Vegas							
AI	13	2	0	15	87	13	0
SO	8	0	0	8	100	0	0
VE	5	2	0	7	71	29	0
WA	7	6	0	13	54	46	0
Totals:	33	10	0	43	77%	23%	0%
Lab: LL LLNL Chemistry and Material Science/Waste							
AI	14	1	0	15	93	7	0
SO	8	1	0	9	89	11	0
VE	6	0	0	6	100	0	0
WA	11	1	1	13	85	8	8
Totals:	39	3	1	43	91%	7%	2%
Lab: LM Los Alamos National Lab, Mercury, NV							
AI	4	4	1	9	44	44	11
SO	0	1	1	2	0	50	50
WA	1	0	3	4	25	0	75
Totals:	5	5	5	15	33%	33%	33%
Lab: LV UNLV, Dept of Health Physics							
AI	7	1	2	10	70	10	20
SO	4	0	1	5	80	0	20
VE	4	0	0	4	100	0	0
WA	4	1	2	7	57	14	29

QAP 46 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
Lab: LV UNLV, Dept of Health Physics							
Totals:	19	2	5	26	73%	8%	19%
Lab: LW LLNL, Environmental Science Lab							
SO	2	0	0	2	100	0	0
VE	3	0	0	3	100	0	0
WA	5	1	0	6	83	17	0
Totals:	10	1	0	11	91%	9%	0%
Lab: MA ORNL Health Sciences Research Div.							
SO	8	0	2	10	80	0	20
VE	6	0	0	6	100	0	0
Totals:	14	0	2	16	88%	0%	13%
Lab: ME Radiation Control Program, Jamaica Plain, MA							
AI	4	5	0	9	44	56	0
SO	4	0	0	4	100	0	0
VE	0	3	0	3	0	100	0
WA	2	1	0	3	67	33	0
Totals:	10	9	0	19	53%	47%	0%
Lab: MI Massachusetts Institute of Technology							
AI	4	0	1	5	80	0	20
WA	5	4	1	10	50	40	10
Totals:	9	4	2	15	60%	27%	13%
Lab: ML EG&G Mound Applied Technologies, Miamisburg, OH							
AI	4	0	0	4	100	0	0
SO	3	1	0	4	75	25	0
VE	1	0	0	1	100	0	0
WA	5	1	0	6	83	17	0
Totals:	13	2	0	15	87%	13%	0%

QAP 46 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
Lab: MO CNESTEN, Morocco							
SO	3	1	1	5	60	20	20
VE	3	0	0	3	100	0	0
WA	4	0	0	4	100	0	0
Totals:	10	1	1	12	83%	8%	8%
Lab: MS Manufacturing Sciences Corporation, Oak Ridge							
AI	7	0	0	7	100	0	0
SO	2	0	1	3	67	0	33
WA	4	0	0	4	100	0	0
Totals:	13	0	1	14	93%	0%	7%
Lab: MX Centro Nacional de Metrologia (CENAM), Mexico							
AI	2	4	1	7	29	57	14
Totals:	2	4	1	7	29%	57%	14%
Lab: NA US EPA NAREL, Montgomery, AL							
AI	5	7	0	12	42	58	0
SO	5	3	0	8	63	38	0
VE	6	0	0	6	100	0	0
WA	7	1	1	9	78	11	11
Totals:	23	11	1	35	66%	31%	3%
Lab: ND Dept of Environmental Health & Safety, NC State University							
AI	5	2	0	7	71	29	0
Totals:	5	2	0	7	71%	29%	0%
Lab: NL Fluor Daniel Fernald, Inc., Ohio							
AI	12	0	0	12	100	0	0
SO	4	3	0	7	57	43	0
WA	8	0	1	9	89	0	11
Totals:	24	3	1	28	86%	11%	4%

QAP 46 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
Lab: NM Environmental Evaluation Group, Carlsbad, NM							
AI	2	1	1	4	50	25	25
SO	2	0	2	4	50	0	50
WA	4	1	1	6	67	17	17
Totals:	8	2	4	14	57%	14%	29%
Lab: NP JAF Environmental Laboratory, New York Power Authority							
AI	8	0	0	8	100	0	0
SO	0	2	0	2	0	100	0
VE	0	0	2	2	0	0	100
WA	4	1	1	6	67	17	17
Totals:	12	3	3	18	67%	17%	17%
Lab: NR Naval Reactors Facility Chemistry, Scoville, ID							
SO	2	0	0	2	100	0	0
VE	2	1	0	3	67	33	0
Totals:	4	1	0	5	80%	20%	0%
Lab: NS NC State Lab of Public Health, Env. Services Sec. Env. Radiochemistry Branch							
WA	0	1	12	13	0	8	92
Totals:	0	1	12	13	0%	8%	92%
Lab: NZ National Radiation Laboratory, New Zealand							
AI	16	12	0	28	57	43	0
SO	14	3	0	17	82	18	0
VE	8	0	2	10	80	0	20
WA	13	6	1	20	65	30	5
Totals:	51	21	3	75	68%	28%	4%
Lab: OB OBG Laboratories, East Syracuse, NY							
AI	1	1	0	2	50	50	0
WA	1	1	0	2	50	50	0
Totals:	2	2	0	4	50%	50%	0%

QAP 46 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
Lab: OD ORNL, Radiobioassay Lab							
AI	10	8	0	18	56	44	0
WA	20	0	0	20	100	0	0
Totals:	30	8	0	38	79%	21%	0%
Lab: OK Southwest Laboratory of Oklahoma							
AI	2	0	0	2	100	0	0
SO	3	1	0	4	75	25	0
WA	5	2	1	8	63	25	13
Totals:	10	3	1	14	71%	21%	7%
Lab: OL ORNL Environmental Sciences Div.							
AI	3	4	0	7	43	57	0
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	0	16	75%	25%	0%
Lab: OS Oregon Health Division Radiation Controls Section, Portland							
AI	1	3	3	7	14	43	43
SO	0	1	1	2	0	50	50
VE	2	1	0	3	67	33	0
Totals:	3	5	4	12	25%	42%	33%
Lab: OT ORNL Radioactive Material Analysis Lab							
AI	11	3	0	14	79	21	0
SO	2	1	0	3	67	33	0
VE	3	0	0	3	100	0	0
WA	9	2	0	11	82	18	0
Totals:	25	6	0	31	81%	19%	0%
Lab: OU Outreach Laboratory, Broken Arrow, OK							
WA	2	0	0	2	100	0	0

QAP 46 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
Lab: OU Outreach Laboratory, Broken Arrow, OK							
Totals:	2	0	0	2	100%	0%	0%
Lab: PA Mason & Hanger-Silas Mason Co., Inc., Battelle Pantex, Amarillo, TX							
AI	2	0	0	2	100	0	0
Totals:	2	0	0	2	100%	0%	0%
Lab: PI Lockheed Martin Specialty Components, Largo, FL							
AI	2	0	0	2	100	0	0
SO	1	1	0	2	50	50	0
WA	4	0	0	4	100	0	0
Totals:	7	1	0	8	88%	13%	0%
Lab: PO Institute of Oceanology PAN, Poland							
AI	6	0	0	6	100	0	0
SO	3	3	0	6	50	50	0
VE	6	1	0	7	86	14	0
Totals:	15	4	0	19	79%	21%	0%
Lab: PR Princeton Plasma Physics Lab							
WA	1	0	0	1	100	0	0
Totals:	1	0	0	1	100%	0%	0%
Lab: RA V. G. Khlopin Radium Institute, St. Petersburg, Russia							
AI	18	0	0	18	100	0	0
SO	11	3	3	17	65	18	18
VE	8	3	3	14	57	21	21
Totals:	37	6	6	49	76%	12%	12%
Lab: RC US NRC Region I Laboratory, PA							
WA	5	0	0	5	100	0	0

QAP 46 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
Lab: RC US NRC Region I Laboratory, PA							
Totals:	5	0	0	5	100%	0%	0%
Lab: RD Radiation Detection Company, CA							
AI	1	1	0	2	50	50	0
Totals:	1	1	0	2	50%	50%	0%
Lab: RE Bechtel Nevada, Mercury, NV							
AI	30	0	0	30	100	0	0
SO	12	6	0	18	67	33	0
VE	8	4	0	12	67	33	0
WA	20	4	0	24	83	17	0
Totals:	70	14	0	84	83%	17%	0%
Lab: RG EG&G Rocky Flats Plant, Golden							
SO	7	1	0	8	88	13	0
WA	4	5	0	9	44	56	0
Totals:	11	6	0	17	65%	35%	0%
Lab: RI Rust Federal Services of Hanford, Inc., 222S Lab							
AI	9	3	0	12	75	25	0
SO	2	1	0	3	67	33	0
VE	2	2	0	4	50	50	0
WA	9	1	1	11	82	9	9
Totals:	22	7	1	30	73%	23%	3%
Lab: RK Rock Island Arsenal, Illinois							
AI	0	1	0	1	0	100	0
Totals:	0	1	0	1	0%	100%	0%
Lab: RL Thermo Hanford							
AI	2	0	7	9	22	0	78
SO	2	0	0	2	100	0	0

QAP 46 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
Lab: RL Thermo Hanford							
VE	3	0	1	4	75	0	25
WA	4	0	1	5	80	0	20
Totals:	11	0	9	20	55%	0%	45%
Lab: RM Moscow State University, Russia							
AI	2	2	3	7	29	29	43
SO	1	1	1	3	33	33	33
VE	0	2	1	3	0	67	33
Totals:	3	5	5	13	23%	38%	38%
Lab: RO Radiation Hygiene Laboratory, Romania							
SO	2	2	0	4	50	50	0
VE	3	0	1	4	75	0	25
Totals:	5	2	1	8	63%	25%	13%
Lab: SA Sandia Labs Radioactive Sample Diag. Prog., NM							
AI	8	1	0	9	89	11	0
SO	2	0	0	2	100	0	0
WA	4	1	0	5	80	20	0
Totals:	14	2	0	16	88%	13%	0%
Lab: SB SC Dept. of Health and Environment Control Radiological Lab							
AI	1	1	0	2	50	50	0
SO	2	0	0	2	100	0	0
VE	0	1	2	3	0	33	67
WA	0	1	6	7	0	14	86
Totals:	3	3	8	14	21%	21%	57%
Lab: SK Savannah River Plant							
AI	6	1	0	7	86	14	0
SO	1	2	0	3	33	67	0
VE	3	0	0	3	100	0	0
WA	2	1	0	3	67	33	0

QAP 46 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
Lab: SK Savannah River Plant							
Totals:	12	4	0	16	75%	25%	0%
Lab: SL Stanford Linear Accelerator Center							
WA	3	0	1	4	75	0	25
Totals:	3	0	1	4	75%	0%	25%
Lab: SN Sanford Cohen Associates, Inc., Montgomery, AL							
AI	3	0	0	3	100	0	0
SO	4	1	1	6	67	17	17
VE	1	3	0	4	25	75	0
WA	7	1	0	8	88	13	0
Totals:	15	5	1	21	71%	24%	5%
Lab: SR Savannah River Environmental Laboratory							
AI	13	0	0	13	100	0	0
SO	7	0	0	7	100	0	0
VE	7	0	0	7	100	0	0
WA	10	0	0	10	100	0	0
Totals:	37	0	0	37	100%	0%	0%
Lab: SS Savannah River Tech Center							
AI	7	0	0	7	100	0	0
SO	3	0	0	3	100	0	0
VE	3	0	0	3	100	0	0
WA	3	0	0	3	100	0	0
Totals:	16	0	0	16	100%	0%	0%
Lab: SV Savannah Lab & Environmental Services, Inc., Tampa, FL							
WA	1	2	0	3	33	67	0
Totals:	1	2	0	3	33%	67%	0%

QAP 46 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
Lab: SW Southwest Research Institute, San Antonio, TX							
AI	11	2	1	14	79	14	7
SO	2	1	5	8	25	13	63
VE	2	3	2	7	29	43	29
WA	5	3	3	11	45	27	27
Totals:	20	9	11	40	50%	23%	28%
Lab: TE Teledyne Isotopes Midwest Lab, Northbrook, IL							
AI	7	2	3	12	58	17	25
SO	6	2	0	8	75	25	0
VE	4	2	0	6	67	33	0
WA	9	3	0	12	75	25	0
Totals:	26	9	3	38	68%	24%	8%
Lab: TI Teledyne Brown Engineering Environmental Services, Westwood, NJ							
AI	7	7	0	14	50	50	0
SO	7	0	0	7	100	0	0
VE	3	3	1	7	43	43	14
WA	9	3	1	13	69	23	8
Totals:	26	13	2	41	63%	32%	5%
Lab: TM TMA/Eberline-Albuquerque Lab, NM							
AI	8	8	0	16	50	50	0
SO	7	2	0	9	78	22	0
VE	4	3	0	7	57	43	0
WA	10	3	1	14	71	21	7
Totals:	29	16	1	46	63%	35%	2%
Lab: TN TMA/NORCAL, Richmond, CA							
AI	7	1	8	16	44	6	50
SO	8	1	0	9	89	11	0
VE	4	3	0	7	57	43	0
WA	11	3	0	14	79	21	0
Totals:	30	8	8	46	65%	17%	17%
Lab: TO Thermo NUtech Oak Ridge Laboratory							
AI	6	9	1	16	38	56	6

QAP 46 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
Lab: TO Thermo NUtech Oak Ridge Laboratory							
SO	4	3	2	9	44	33	22
VE	1	2	4	7	14	29	57
WA	12	1	1	14	86	7	7
Totals:	23	15	8	46	50%	33%	17%
Lab: TP Taiwan Power Company, Taipei, Taiwan							
AI	9	1	0	10	90	10	0
SO	2	0	1	3	67	0	33
VE	3	1	0	4	75	25	0
WA	6	0	0	6	100	0	0
Totals:	20	2	1	23	87%	9%	4%
Lab: TR University of Istanbul, Turkey							
AI	0	1	6	7	0	14	86
SO	1	0	5	6	17	0	83
VE	2	0	3	5	40	0	60
Totals:	3	1	14	18	17%	6%	78%
Lab: TT Tracer Technologies International, Inc., Cleveland							
SO	4	0	0	4	100	0	0
WA	1	5	1	7	14	71	14
Totals:	5	5	1	11	45%	45%	9%
Lab: TW Taiwan Radiation Monitoring Center							
AI	13	2	0	15	87	13	0
SO	5	2	2	9	56	22	22
VE	6	1	0	7	86	14	0
WA	10	3	0	13	77	23	0
Totals:	34	8	2	44	77%	18%	5%
Lab: TX Texas Dept. of Health/Laboratories, Austin							
AI	11	3	0	14	79	21	0
SO	6	3	0	9	67	33	0
VE	6	0	0	6	100	0	0
WA	7	5	0	12	58	42	0

QAP 46 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
Lab: TX Texas Dept. of Health/Laboratories, Austin							
Totals:	30	11	0	41	73%	27%	0%
Lab: UC Lockheed Martin, Paducah, KY							
AI	3	1	1	5	60	20	20
SO	2	1	0	3	67	33	0
VE	3	0	0	3	100	0	0
WA	2	2	2	6	33	33	33
Totals:	10	4	3	17	59%	24%	18%
Lab: UK Lockheed Martin Energy Systems, Oak Ridge							
AI	12	1	0	13	92	8	0
SO	4	0	2	6	67	0	33
WA	8	1	0	9	89	11	0
Totals:	24	2	2	28	86%	7%	7%
Lab: UN Ministry of Agriculture, Fisheries and Food (MAFF), UK							
AI	12	0	1	13	92	0	8
SO	10	0	0	10	100	0	0
VE	7	1	0	8	88	13	0
Totals:	29	1	1	31	94%	3%	3%
Lab: UP Lockheed Martin Energy Systems, Y-12 Plant, Oak Ridge							
AI	5	0	0	5	100	0	0
SO	1	0	0	1	100	0	0
WA	1	0	0	1	100	0	0
Totals:	7	0	0	7	100%	0%	0%
Lab: UY Lockheed Martin Energy Systems, Y-12 Plant, Oak Ridge							
AI	11	4	0	15	73	27	0
SO	5	1	3	9	56	11	33
VE	5	2	0	7	71	29	0
WA	7	4	1	12	58	33	8

QAP 46 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
Lab: UY Lockheed Martin Energy Systems, Y-12 Plant, Oak Ridge							
Totals:	28	11	4	43	65%	26%	9%
Lab: VE Universidad Simon Bolivar, Venezuela							
SO	2	0	1	3	67	0	33
VE	2	1	0	3	67	33	0
Totals:	4	1	1	6	67%	17%	17%
Lab: WA Environmental Radiation Lab, Off. of Public Health Labs. Seattle							
AI	14	2	0	16	88	13	0
SO	6	3	1	10	60	30	10
VE	6	0	0	6	100	0	0
WA	13	1	0	14	93	7	0
Totals:	39	6	1	46	85%	13%	2%
Lab: WC Westinghouse Hanford Co.							
AI	7	2	5	14	50	14	36
SO	6	1	0	7	86	14	0
VE	2	4	0	6	33	67	0
WA	9	3	0	12	75	25	0
Totals:	24	10	5	39	62%	26%	13%
Lab: WE Westinghouse Electric Corp., Madison, PA							
AI	3	3	3	9	33	33	33
SO	3	4	0	7	43	57	0
VE	1	2	2	5	20	40	40
WA	3	2	2	7	43	29	29
Totals:	10	11	7	28	36%	39%	25%
Lab: WI WIPP Site, Westinghouse Electric Corp.							
AI	12	0	0	12	100	0	0
WA	9	0	0	9	100	0	0
Totals:	21	0	0	21	100%	0%	0%

QAP 46 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
Lab: WP Washington Public Power Supply System, Richland							
AI	6	12	0	18	33	67	0
SO	6	0	0	6	100	0	0
VE	2	6	0	8	25	75	0
WA	10	2	0	12	83	17	0
Totals:	24	20	0	44	55%	45%	0%
Lab: WS Weldon Springs Site, St Charles, MO							
AI	1	0	0	1	100	0	0
SO	4	0	0	4	100	0	0
Totals:	5	0	0	5	100%	0%	0%
Lab: WV West Valley Nuclear Services Co, Inc, NY							
AI	2	0	0	2	100	0	0
WA	5	2	0	7	71	29	0
Totals:	7	2	0	9	78%	22%	0%
Lab: YA Yankee Atomic Electric Company, Westboro, MA							
AI	9	2	0	11	82	18	0
SO	10	0	0	10	100	0	0
VE	7	0	0	7	100	0	0
WA	10	2	0	12	83	17	0
Totals:	36	4	0	40	90%	10%	0%
Lab: YP US Army Proving Ground, Yuma, AZ							
AI	1	0	0	1	100	0	0
SO	1	0	0	1	100	0	0
WA	1	0	0	1	100	0	0
Totals:	3	0	0	3	100%	0%	0%

QAP 46 Summary of Laboratory Evaluations by Matrix

Matrix: AI Air Filter

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
AC	10	2	0	12	83	17	0
AF	10	1	1	12	83	8	8
AG	10	6	0	16	63	38	0
AI	6	3	7	16	38	19	44
AL	4	3	0	7	57	43	0
AM	3	2	8	13	23	15	62
AN	12	3	0	15	80	20	0
AR	8	7	4	19	42	37	21
AU	13	1	0	14	93	7	0
AW	0	0	7	7	0	0	100
BC	11	1	0	12	92	8	0
BE	15	0	1	16	94	0	6
BL	17	2	1	20	85	10	5
BM	6	4	3	13	46	31	23
BN	4	0	6	10	40	0	60
BP	12	1	0	13	92	8	0
BQ	5	2	1	8	63	25	13
BS	8	2	0	10	80	20	0
BU	7	5	1	13	54	38	8
BX	13	2	0	15	87	13	0
CA	16	2	0	18	89	11	0
CH	16	1	0	17	94	6	0
CL	11	3	0	14	79	21	0
CN	2	5	0	7	29	71	0
CO	0	2	5	7	0	29	71
CR	0	0	7	7	0	0	100
CS	8	2	1	11	73	18	9
CW	3	2	0	5	60	40	0
DC	10	4	2	16	63	25	13
DP	3	2	1	6	50	33	17
EG	10	4	0	14	71	29	0
EI	1	2	4	7	14	29	57
EP	2	1	6	9	22	11	67
ES	16	0	0	16	100	0	0
FG	5	3	2	10	50	30	20
FL	4	7	2	13	31	54	15
FM	6	1	0	7	86	14	0
FN	7	0	0	7	100	0	0
FR	8	0	0	8	100	0	0
GA	11	2	0	13	85	15	0
GE	16	0	0	16	100	0	0
GP	16	0	0	16	100	0	0
GT	14	2	0	16	88	13	0
HC	1	1	0	2	50	50	0
ID	9	3	0	12	75	25	0
IE	13	1	0	14	93	7	0
IL	6	3	0	9	67	33	0
IN	7	0	0	7	100	0	0
IS	9	4	1	14	64	29	7
IT	16	0	0	16	100	0	0
JP	11	3	0	14	79	21	0
KA	2	0	0	2	100	0	0
KO	10	6	0	16	63	38	0
LA	30	8	4	42	71	19	10

QAP 46 Summary of Laboratory Evaluations by Matrix

Matrix: AI Air Filter

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
LB	1	1	5	7	14	14	71
LH	13	2	0	15	87	13	0
LL	14	1	0	15	93	7	0
LM	4	4	1	9	44	44	11
LV	7	1	2	10	70	10	20
ME	4	5	0	9	44	56	0
MI	4	0	1	5	80	0	20
ML	4	0	0	4	100	0	0
MS	7	0	0	7	100	0	0
MX	2	4	1	7	29	57	14
NA	5	7	0	12	42	58	0
ND	5	2	0	7	71	29	0
NL	12	0	0	12	100	0	0
NM	2	1	1	4	50	25	25
NP	8	0	0	8	100	0	0
NZ	16	12	0	28	57	43	0
OB	1	1	0	2	50	50	0
OD	10	8	0	18	56	44	0
OK	2	0	0	2	100	0	0
OL	3	4	0	7	43	57	0
OS	1	3	3	7	14	43	43
OT	11	3	0	14	79	21	0
PA	2	0	0	2	100	0	0
PI	2	0	0	2	100	0	0
PO	6	0	0	6	100	0	0
RA	18	0	0	18	100	0	0
RD	1	1	0	2	50	50	0
RE	30	0	0	30	100	0	0
RI	9	3	0	12	75	25	0
RK	0	1	0	1	0	100	0
RL	2	0	7	9	22	0	78
RM	2	2	3	7	29	29	43
SA	8	1	0	9	89	11	0
SB	1	1	0	2	50	50	0
SK	6	1	0	7	86	14	0
SN	3	0	0	3	100	0	0
SR	13	0	0	13	100	0	0
SS	7	0	0	7	100	0	0
SW	11	2	1	14	79	14	7
TE	7	2	3	12	58	17	25
TI	7	7	0	14	50	50	0
TM	8	8	0	16	50	50	0
TN	7	1	8	16	44	6	50
TO	6	9	1	16	38	56	6
TP	9	1	0	10	90	10	0
TR	0	1	6	7	0	14	86
TW	13	2	0	15	87	13	0
TX	11	3	0	14	79	21	0
UC	3	1	1	5	60	20	20
UK	12	1	0	13	92	8	0
UN	12	0	1	13	92	0	8
UP	5	0	0	5	100	0	0
UY	11	4	0	15	73	27	0
WA	14	2	0	16	88	13	0

QAP 46 Summary of Laboratory Evaluations by Matrix

Matrix: AI Air Filter

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
WC	7	2	5	14	50	14	36
WE	3	3	3	9	33	33	33
WI	12	0	0	12	100	0	0
WP	6	12	0	18	33	67	0
WS	1	0	0	1	100	0	0
WV	2	0	0	2	100	0	0
YA	9	2	0	11	82	18	0
YP	1	0	0	1	100	0	0
<hr/>							
Totals							
116 Labs:	896	253	128	1277	70%	20%	10%
<hr/>							

QAP 46 Summary of Laboratory Evaluations by Matrix

Matrix: SOSoil

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
AA	13	0	0	13	100	0	0
AC	3	1	0	4	75	25	0
AF	5	0	1	6	83	0	17
AG	10	0	0	10	100	0	0
AI	2	1	2	5	40	20	40
AL	2	1	0	3	67	33	0
AM	5	2	2	9	56	22	22
AN	7	1	0	8	88	13	0
AR	11	0	2	13	85	0	15
AU	6	1	1	8	75	13	13
BC	2	4	0	6	33	67	0
BE	8	1	0	9	89	11	0
BL	12	4	0	16	75	25	0
BM	6	2	0	8	75	25	0
BN	3	1	0	4	75	25	0
BP	2	3	1	6	33	50	17
BQ	3	0	0	3	100	0	0
BR	2	0	1	3	67	0	33
BS	4	0	0	4	100	0	0
BU	4	4	0	8	50	50	0
BX	2	4	3	9	22	44	33
CA	2	0	0	2	100	0	0
CH	11	0	0	11	100	0	0
CL	5	3	3	11	45	27	27
CN	3	1	0	4	75	25	0
CO	2	2	1	5	40	40	20
CR	1	1	1	3	33	33	33
CS	4	1	0	5	80	20	0
CW	4	0	1	5	80	0	20
CZ	1	0	1	2	50	0	50
DC	5	5	0	10	50	50	0
DH	3	0	0	3	100	0	0
EG	4	2	2	8	50	25	25
EI	4	1	1	6	67	17	17
EL	2	0	2	4	50	0	50
EP	1	0	0	1	100	0	0
ES	8	1	0	9	89	11	0
FG	3	0	1	4	75	0	25
FL	5	1	0	6	83	17	0
FN	4	0	0	4	100	0	0
FR	3	1	2	6	50	17	33
FS	7	0	0	7	100	0	0
GA	6	1	1	8	75	13	13
GE	8	1	0	9	89	11	0
GP	7	2	1	10	70	20	10
GT	6	4	0	10	60	40	0
IA	12	2	4	18	67	11	22
ID	5	1	1	7	71	14	14
IE	9	0	0	9	100	0	0
IL	0	1	2	3	0	33	67
IN	5	0	0	5	100	0	0
IS	4	1	3	8	50	13	38
IT	7	4	0	11	64	36	0
JP	7	1	1	9	78	11	11

QAP 46 Summary of Laboratory Evaluations by Matrix

Matrix: SOSoil

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
KA	5	0	0	5	100	0	0
KO	8	0	0	8	100	0	0
LA	17	1	6	24	71	4	25
LB	5	1	0	6	83	17	0
LH	8	0	0	8	100	0	0
LL	8	1	0	9	89	11	0
LM	0	1	1	2	0	50	50
LV	4	0	1	5	80	0	20
LW	2	0	0	2	100	0	0
MA	8	0	2	10	80	0	20
ME	4	0	0	4	100	0	0
ML	3	1	0	4	75	25	0
MO	3	1	1	5	60	20	20
MS	2	0	1	3	67	0	33
NA	5	3	0	8	63	38	0
NL	4	3	0	7	57	43	0
NM	2	0	2	4	50	0	50
NP	0	2	0	2	0	100	0
NR	2	0	0	2	100	0	0
NZ	14	3	0	17	82	18	0
OK	3	1	0	4	75	25	0
OL	2	0	0	2	100	0	0
OS	0	1	1	2	0	50	50
OT	2	1	0	3	67	33	0
PI	1	1	0	2	50	50	0
PO	3	3	0	6	50	50	0
RA	11	3	3	17	65	18	18
RE	12	6	0	18	67	33	0
RG	7	1	0	8	88	13	0
RI	2	1	0	3	67	33	0
RL	2	0	0	2	100	0	0
RM	1	1	1	3	33	33	33
RO	2	2	0	4	50	50	0
SA	2	0	0	2	100	0	0
SB	2	0	0	2	100	0	0
SK	1	2	0	3	33	67	0
SN	4	1	1	6	67	17	17
SR	7	0	0	7	100	0	0
SS	3	0	0	3	100	0	0
SW	2	1	5	8	25	13	63
TE	6	2	0	8	75	25	0
TI	7	0	0	7	100	0	0
TM	7	2	0	9	78	22	0
TN	8	1	0	9	89	11	0
TO	4	3	2	9	44	33	22
TP	2	0	1	3	67	0	33
TR	1	0	5	6	17	0	83
TT	4	0	0	4	100	0	0
TW	5	2	2	9	56	22	22
TX	6	3	0	9	67	33	0
UC	2	1	0	3	67	33	0
UK	4	0	2	6	67	0	33
UN	10	0	0	10	100	0	0
UP	1	0	0	1	100	0	0

QAP 46 Summary of Laboratory Evaluations by Matrix

Matrix: SOil

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
UY	5	1	3	9	56	11	33
VE	2	0	1	3	67	0	33
WA	6	3	1	10	60	30	10
WC	6	1	0	7	86	14	0
WE	3	4	0	7	43	57	0
WP	6	0	0	6	100	0	0
WS	4	0	0	4	100	0	0
YA	10	0	0	10	100	0	0
YP	1	0	0	1	100	0	0
<hr/>							
Totals							
117 Labs:	553	132	83	768	72%	17%	11%
<hr/>							

QAP 46 Summary of Laboratory Evaluations by Matrix

Matrix: VE Vegetation

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
AA	8	0	0	8	100	0	0
AF	1	1	1	3	33	33	33
AG	7	0	0	7	100	0	0
AI	3	3	1	7	43	43	14
AL	3	0	0	3	100	0	0
AM	3	2	1	6	50	33	17
AN	6	1	0	7	86	14	0
AR	5	1	0	6	83	17	0
AU	5	1	0	6	83	17	0
BC	3	1	0	4	75	25	0
BE	0	1	5	6	0	17	83
BL	7	1	0	8	88	13	0
BM	5	1	0	6	83	17	0
BN	2	1	0	3	67	33	0
BP	3	2	0	5	60	40	0
BQ	1	1	0	2	50	50	0
BS	1	3	0	4	25	75	0
BU	4	2	1	7	57	29	14
BX	5	1	1	7	71	14	14
CH	6	1	0	7	86	14	0
CL	3	2	2	7	43	29	29
CN	3	1	0	4	75	25	0
CO	4	1	0	5	80	20	0
CR	3	0	0	3	100	0	0
CS	3	0	0	3	100	0	0
CW	3	0	0	3	100	0	0
DC	5	1	1	7	71	14	14
EG	6	0	3	9	67	0	33
EI	2	1	1	4	50	25	25
EL	1	0	1	2	50	0	50
EP	1	0	0	1	100	0	0
ES	6	1	0	7	86	14	0
FL	3	1	0	4	75	25	0
FN	3	0	0	3	100	0	0
FR	5	0	0	5	100	0	0
GA	5	1	0	6	83	17	0
GE	4	3	0	7	57	43	0
GP	7	1	0	8	88	13	0
GT	4	0	0	4	100	0	0
IA	12	0	3	15	80	0	20
ID	5	1	0	6	83	17	0
IE	4	2	1	7	57	29	14
IL	2	1	0	3	67	33	0
IN	3	0	0	3	100	0	0
IS	2	3	1	6	33	50	17
IT	6	1	0	7	86	14	0
JP	7	0	0	7	100	0	0
KO	6	1	0	7	86	14	0
LA	9	6	3	18	50	33	17
LB	2	2	1	5	40	40	20
LH	5	2	0	7	71	29	0
LL	6	0	0	6	100	0	0
LV	4	0	0	4	100	0	0
LW	3	0	0	3	100	0	0

QAP 46 Summary of Laboratory Evaluations by Matrix

Matrix: VE Vegetation

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
MA	6	0	0	6	100	0	0
ME	0	3	0	3	0	100	0
ML	1	0	0	1	100	0	0
MO	3	0	0	3	100	0	0
NA	6	0	0	6	100	0	0
NP	0	0	2	2	0	0	100
NR	2	1	0	3	67	33	0
NZ	8	0	2	10	80	0	20
OL	3	0	0	3	100	0	0
OS	2	1	0	3	67	33	0
OT	3	0	0	3	100	0	0
PO	6	1	0	7	86	14	0
RA	8	3	3	14	57	21	21
RE	8	4	0	12	67	33	0
RI	2	2	0	4	50	50	0
RL	3	0	1	4	75	0	25
RM	0	2	1	3	0	67	33
RO	3	0	1	4	75	0	25
SB	0	1	2	3	0	33	67
SK	3	0	0	3	100	0	0
SN	1	3	0	4	25	75	0
SR	7	0	0	7	100	0	0
SS	3	0	0	3	100	0	0
SW	2	3	2	7	29	43	29
TE	4	2	0	6	67	33	0
TI	3	3	1	7	43	43	14
TM	4	3	0	7	57	43	0
TN	4	3	0	7	57	43	0
TO	1	2	4	7	14	29	57
TP	3	1	0	4	75	25	0
TR	2	0	3	5	40	0	60
TW	6	1	0	7	86	14	0
TX	6	0	0	6	100	0	0
UC	3	0	0	3	100	0	0
UN	7	1	0	8	88	13	0
UY	5	2	0	7	71	29	0
VE	2	1	0	3	67	33	0
WA	6	0	0	6	100	0	0
WC	2	4	0	6	33	67	0
WE	1	2	2	5	20	40	40
WP	2	6	0	8	25	75	0
YA	7	0	0	7	100	0	0
Totals							
96 Labs:	373	111	51	535	70%	21%	10%

QAP 46 Summary of Laboratory Evaluations by Matrix

Matrix: WAWater

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
AA	15	1	0	16	94	6	0
AC	7	2	0	9	78	22	0
AF	2	3	3	8	25	38	38
AG	10	3	1	14	71	21	7
AI	5	3	5	13	38	23	38
AL	3	0	0	3	100	0	0
AM	4	2	5	11	36	18	45
AN	9	3	0	12	75	25	0
AR	8	7	5	20	40	35	25
AU	9	2	0	11	82	18	0
AW	0	0	4	4	0	0	100
BC	5	3	0	8	63	38	0
BE	8	4	1	13	62	31	8
BL	15	9	1	25	60	36	4
BM	8	1	0	9	89	11	0
BN	3	2	2	7	43	29	29
BP	8	3	0	11	73	27	0
BQ	3	1	0	4	75	25	0
BR	1	2	0	3	33	67	0
BS	6	1	0	7	86	14	0
BX	7	6	0	13	54	46	0
CA	8	2	4	14	57	14	29
CH	11	4	0	15	73	27	0
CL	7	4	1	12	58	33	8
CS	4	1	0	5	80	20	0
CW	6	2	0	8	75	25	0
CZ	0	0	2	2	0	0	100
DC	10	3	0	13	77	23	0
DH	2	1	0	3	67	33	0
DP	16	7	1	24	67	29	4
EG	11	1	0	12	92	8	0
EI	3	2	2	7	43	29	29
EL	5	1	1	7	71	14	14
EP	6	1	2	9	67	11	22
ES	10	3	0	13	77	23	0
FG	4	6	1	11	36	55	9
FL	7	2	0	9	78	22	0
FM	4	0	0	4	100	0	0
FN	5	0	0	5	100	0	0
GA	10	0	0	10	100	0	0
GE	11	3	0	14	79	21	0
GP	12	3	0	15	80	20	0
GS	1	2	0	3	33	67	0
GT	11	2	0	13	85	15	0
HC	2	1	0	3	67	33	0
ID	7	1	0	8	88	13	0
IE	12	2	0	14	86	14	0
IL	3	1	2	6	50	17	33
IN	4	3	0	7	57	43	0
IR	1	0	2	3	33	0	67
IS	7	2	2	11	64	18	18
IT	10	1	2	13	77	8	15
JP	10	1	1	12	83	8	8
KA	8	3	0	11	73	27	0

QAP 46 Summary of Laboratory Evaluations by Matrix

Matrix: WAWater

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
LA	21	9	3	33	64	27	9
LB	2	6	0	8	25	75	0
LH	7	6	0	13	54	46	0
LL	11	1	1	13	85	8	8
LM	1	0	3	4	25	0	75
LV	4	1	2	7	57	14	29
LW	5	1	0	6	83	17	0
ME	2	1	0	3	67	33	0
MI	5	4	1	10	50	40	10
ML	5	1	0	6	83	17	0
MO	4	0	0	4	100	0	0
MS	4	0	0	4	100	0	0
NA	7	1	1	9	78	11	11
NL	8	0	1	9	89	0	11
NM	4	1	1	6	67	17	17
NP	4	1	1	6	67	17	17
NS	0	1	12	13	0	8	92
NZ	13	6	1	20	65	30	5
OB	1	1	0	2	50	50	0
OD	20	0	0	20	100	0	0
OK	5	2	1	8	63	25	13
OL	4	0	0	4	100	0	0
OT	9	2	0	11	82	18	0
OU	2	0	0	2	100	0	0
PI	4	0	0	4	100	0	0
PR	1	0	0	1	100	0	0
RC	5	0	0	5	100	0	0
RE	20	4	0	24	83	17	0
RG	4	5	0	9	44	56	0
RI	9	1	1	11	82	9	9
RL	4	0	1	5	80	0	20
SA	4	1	0	5	80	20	0
SB	0	1	6	7	0	14	86
SK	2	1	0	3	67	33	0
SL	3	0	1	4	75	0	25
SN	7	1	0	8	88	13	0
SR	10	0	0	10	100	0	0
SS	3	0	0	3	100	0	0
SV	1	2	0	3	33	67	0
SW	5	3	3	11	45	27	27
TE	9	3	0	12	75	25	0
TI	9	3	1	13	69	23	8
TM	10	3	1	14	71	21	7
TN	11	3	0	14	79	21	0
TO	12	1	1	14	86	7	7
TP	6	0	0	6	100	0	0
TT	1	5	1	7	14	71	14
TW	10	3	0	13	77	23	0
TX	7	5	0	12	58	42	0
UC	2	2	2	6	33	33	33
UK	8	1	0	9	89	11	0
UP	1	0	0	1	100	0	0
UY	7	4	1	12	58	33	8
WA	13	1	0	14	93	7	0

QAP 46 Summary of Laboratory Evaluations by Matrix

Matrix: WAWater

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
WC	9	3	0	12	75	25	0
WE	3	2	2	7	43	29	29
WI	9	0	0	9	100	0	0
WP	10	2	0	12	83	17	0
WV	5	2	0	7	71	29	0
YA	10	2	0	12	83	17	0
YP	1	0	0	1	100	0	0
Totals							
115 Labs:	747	232	99	1078	69%	22%	9%

QAP 46 Summary of Matrix Evaluations by Radionuclide

Matrix: AI Air Filter

Radio-Nuclide	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
AM241	49	7	6	62	79	11	10
CE144	69	15	15	99	70	15	15
CO 57	65	21	17	103	63	20	17
CO 60	75	17	16	108	69	16	15
CS134	76	17	12	105	72	16	11
CS137	69	29	9	107	64	27	8
GA	67	11	2	80	84	14	3
GB	51	23	5	79	65	29	6
MN 54	54	34	15	103	52	33	15
PU238	50	13	3	66	76	20	5
PU239	53	13	4	70	76	19	6
SB125	59	32	11	102	58	31	11
SR 90	42	10	4	56	75	18	7
U BQ	13	2	4	19	68	11	21
U UG	29	2	0	31	94	6	0
U234	44	5	2	51	86	10	4
U238	48	2	3	53	91	4	6
Totals:	913	253	128	1294	71%	20%	10%

QAP 46 Summary of Matrix Evaluations by Radionuclide

Matrix: SO Soil

Radio-Nuclide	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
AM241	65	12	8	85	76	14	9
CM244	3	0	1	4	75	0	25
CO 60	28	24	23	75	37	32	31
CS137	98	12	7	117	84	10	6
K 40	96	13	5	114	84	11	4
MN 54	1	0	0	1	100	0	0
PU238	24	18	18	60	40	30	30
PU239	55	14	9	78	71	18	12
SR 90	44	11	6	61	72	18	10
U BQ	13	5	2	20	65	25	10
U UG	36	1	1	38	95	3	3
U234	38	15	0	53	72	28	0
U238	52	7	3	62	84	11	5
Totals:	553	132	83	768	72%	17%	11%

QAP 46 Summary of Matrix Evaluations by Radionuclide

Matrix: VE Vegetation

Radio-Nuclide	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
AM241	46	11	6	63	73	17	10
CM244	27	5	3	35	77	14	9
CO 60	66	22	10	98	67	22	10
CS137	73	22	7	102	72	22	7
K 40	71	19	8	98	72	19	8
PU238	2	4	1	7	29	57	14
PU239	50	10	6	66	76	15	9
SR 90	38	18	10	66	58	27	15
Totals:	373	111	51	535	70%	21%	10%

QAP 46 Summary of Matrix Evaluations by Radionuclide

Matrix: WAWater

Radio-Nuclide	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
AM241	53	11	4	68	78	16	6
CO 60	89	10	13	112	79	9	12
CS134	29	1	8	38	76	3	21
CS137	92	13	9	114	81	11	8
FE 55	0	14	2	16	0	88	13
GA	67	10	2	79	85	13	3
GB	45	24	13	82	55	29	16
H 3	67	9	4	80	84	11	5
MN 54	75	21	15	111	68	19	14
PU238	55	12	3	70	79	17	4
PU239	62	8	4	74	84	11	5
SR 90	52	6	7	65	80	9	11
U BQ	13	7	1	21	62	33	5
U UG	26	9	4	39	67	23	10
U234	44	7	3	54	81	13	6
U238	42	9	4	55	76	16	7
Totals:	811	171	96	1078	75%	16%	9%

QAP 46 Results by Laboratory

Lab: AA Environmental Measurements Laboratory

No. Test	Radio-nuclide	Reported Value	Reported Error
----------	---------------	----------------	----------------

Matrix: AI Bq/filter

1	AM241	0.152	0.013
1	CE144	15.700	1.000
1	CO 57	10.810	1.000
1	CO 60	5.010	0.300
1	CS134	10.880	1.000
1	CS137	8.700	0.800
1	GA 1	0.960	0.050
1	GB 2	0.450	0.030
1	MN 54	7.620	0.600
1	PU238	0.100	0.006
1	PU239	0.119	0.006
1	SB125	12.330	1.000
1	SR 90	1.450	0.149
1	U 234	0.103	0.005
1	U 238	0.105	0.004
1	U BQ	0.211	0.008
1	U UG	8.448	0.400

Matrix: SO Bq/kg

1	AM241	5.680	0.500
1	CM244	0.233	0.020
1	CO 60	1.060	0.120
1	CS137	825.500	14.100
1	K 40	334.250	7.140
1	MN 54	0.518	0.127
1	PU238	0.530	0.111
1	PU239	134.930	17.100
1	SR 90	40.310	0.420
1	U 234	37.570	2.480
1	U 238	42.430	2.500
1	U BQ	81.270	4.830
1	U UG	3.426	0.200

Matrix: VE Bq/kg

1	AM241	1.183	0.113
1	CM244	0.900	0.050
1	CO 60	12.500	0.320
1	CS137	189.250	7.270
1	K 40	811.500	12.200
1	PU238	0.182	0.011
1	PU239	1.942	0.222
1	SR 90	361.000	43.300

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: AA Environmental Measurements Laboratory

No. Test	Radio-nuclide	Reported Value	Reported Error
----------	---------------	----------------	----------------

Matrix:	WA	Bq/L	
1	AM241	0.837	0.028
1	CO 60	90.850	1.150
1	CS134	20.550	0.310
1	CS137	69.780	1.230
1	FE 55	235.000	10.000
1	GA 1	1130.000	10.000
1	GB 2	744.000	10.000
1	H 3	250.300	4.200
1	MN 54	20.850	0.310
1	PU238	1.291	0.063
1	PU239	0.850	0.050
1	SR 90	23.200	1.350
1	U 234	0.540	0.020
1	U 238	0.550	0.025
1	U BQ	1.105	0.050
1	U UG	0.044	0.001

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	QAP 45 Evaluation
Matrix: AI		Bq/filter					
1	AM241	0.176	0.005	0.152	0.013	1.158	A
1	CE144	14.300	1.000	15.700	1.000	0.911	A
1	CO 57	10.600	0.700	10.810	1.000	0.981	A
1	CO 60	5.340	0.310	5.010	0.300	1.066	A
1	CS134	12.200	0.400	10.880	1.000	1.121	W
1	CS137	8.340	0.310	8.700	0.800	0.959	A
1	MN 54	7.860	0.300	7.620	0.600	1.031	A
1	PU238	0.096	0.004	0.100	0.006	0.956	A
1	PU239	0.114	0.004	0.119	0.006	0.960	A
1	SB125	13.700	1.300	12.330	1.000	1.111	A
1	U 234	0.091	0.002	0.103	0.005	0.888	W
1	U 238	0.094	0.002	0.105	0.004	0.902	A
Matrix: SO		Bq/kg					
1	AM241	6.300	0.700	5.680	0.500	1.109	A
1	CS137	889.000	3.000	825.500	14.100	1.077	A
1	K 40	312.000	12.000	334.250	7.140	0.933	A
1	PU239	114.000	5.000	134.930	17.100	0.845	W
Matrix: WA		Bq/L					
1	AM241	0.963	0.032	0.837	0.028	1.151	A
1	CO 60	99.200	1.500	90.850	1.150	1.092	A
1	CS134	25.200	0.700	20.550	0.310	1.226	W
1	CS137	69.400	1.000	69.780	1.230	0.995	A
1	MN 54	25.400	0.800	20.850	0.310	1.218	W
1	PU238	1.250	0.050	1.291	0.063	0.968	A
1	PU239	0.783	0.034	0.850	0.050	0.921	A
1	U 234	0.555	0.021	0.540	0.020	1.028	A
1	U 238	0.549	0.021	0.550	0.025	0.999	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: AF Air Force Analytical Lab, Brooks AFB

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	CE144	12.700	2.140	15.700	1.000	0.809	A	
1	CO 57	9.710	0.960	10.810	1.000	0.898	A	A
1	CO 60	5.290	0.660	5.010	0.300	1.056	A	A
1	CS134	11.140	1.280	10.880	1.000	1.024	A	A
1	CS137	8.010	0.910	8.700	0.800	0.921	A	A
1	GA 1	1.100	0.044	0.960	0.050	1.146	A	W
1	GB 2	0.296	0.444	0.450	0.030	0.658	N	W
1	MN 54	6.700	0.892	7.620	0.600	0.879	A	A
1	PU239	0.130	0.070	0.119	0.006	1.094	A	
1	SB125	10.770	1.680	12.330	1.000	0.873	A	A
1	SR 90	1.460	0.150	1.450	0.149	1.007	A	
1	U UG	11.200	5.890	8.448	0.400	1.326	W	
Matrix: SO		Bq/kg						
1	AM241	7.400	1.480	5.680	0.500	1.303	A	N
1	CO 60	2.220	1.110	1.060	0.120	2.094	N	A
1	CS137	758.500	85.100	825.500	14.100	0.919	A	W
1	K 40	325.600	37.000	334.250	7.140	0.974	A	A
1	PU239	122.100	40.700	134.930	17.100	0.905	A	W
1	U UG	2.270	0.907	3.426	0.200	0.663	A	
Matrix: VE		Bq/kg						
1	CS137	173.900	38.000	189.250	7.270	0.919	A	A
1	K 40	514.000	438.000	811.500	12.200	0.633	N	W
1	SR 90	407.000	33.300	361.000	43.300	1.127	W	
Matrix: WA		Bq/L						
1	CO 60	104.000	11.100	90.850	1.150	1.145	W	A
1	CS137	77.700	7.400	69.780	1.230	1.113	A	A
1	GA 1	1110.000	30.000	1130.000	10.000	0.980	A	N
1	GB 2	303.000	15.000	744.000	10.000	0.400	N	N
1	MN 54	24.130	3.360	20.850	0.310	1.157	A	A
1	PU239	1.250	0.370	0.850	0.050	1.470	N	A
1	SR 90	20.190	0.500	23.200	1.350	0.870	W	A
1	U UG	34.450	13.900	0.044	0.001	*.***	N	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	CE144	14.800	3.200	15.700	1.000	0.943	A	
1	CO 57	11.500	1.300	10.810	1.000	1.064	A	N
1	CO 60	5.340	0.480	5.010	0.300	1.066	A	W
1	CS134	11.300	1.500	10.880	1.000	1.039	A	A
1	CS137	9.340	0.650	8.700	0.800	1.074	A	W
1	GA 1	0.935	0.097	0.960	0.050	0.974	A	N
1	GB 2	0.327	0.039	0.450	0.030	0.727	W	A
1	MN 54	8.470	0.600	7.620	0.600	1.112	W	W
1	PU238	0.072	0.029	0.100	0.006	0.719	W	A
1	PU239	0.124	0.012	0.119	0.006	1.044	A	
1	SB125	14.500	1.000	12.330	1.000	1.176	W	W
1	SR 90	2.820	0.530	1.450	0.149	1.945	W	A
1	U 234	0.119	0.044	0.103	0.005	1.156	A	A
1	U 238	0.115	0.039	0.105	0.004	1.100	A	A
1	U BQ	0.240	0.089	0.211	0.008	1.136	A	A
1	U UG	11.200	1.500	8.448	0.400	1.326	W	A
Matrix: SO		Bq/kg						
1	AM241	6.320	0.830	5.680	0.500	1.113	A	A
1	CO 60	1.370	0.500	1.060	0.120	1.292	A	A
1	CS137	959.000	62.000	825.500	14.100	1.162	A	A
1	K 40	383.000	58.000	334.250	7.140	1.146	A	A
1	PU239	140.000	47.000	134.930	17.100	1.038	A	A
1	SR 90	44.200	8.400	40.310	0.420	1.097	A	A
1	U 234	37.500	4.400	37.570	2.480	0.998	A	W
1	U 238	39.300	4.600	42.430	2.500	0.926	A	A
1	U BQ	79.600	4.400	81.270	4.830	0.979	A	
1	U UG	3.550	0.490	3.426	0.200	1.036	A	A
Matrix: VE		Bq/kg						
1	AM241	1.200	0.210	1.183	0.113	1.014	A	
1	CM244	0.750	0.180	0.900	0.050	0.833	A	
1	CO 60	14.300	1.500	12.500	0.320	1.144	A	A
1	CS137	232.000	15.000	189.250	7.270	1.226	A	A
1	K 40	956.000	70.000	811.500	12.200	1.178	A	A
1	PU239	2.080	0.350	1.942	0.222	1.071	A	
1	SR 90	349.000	63.000	361.000	43.300	0.967	A	A
Matrix: WA		Bq/L						
1	AM241	0.910	0.120	0.837	0.028	1.088	A	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	CO 60	85.900	5.600	90.850	1.150	0.946	A	A
1	CS137	71.000	4.700	69.780	1.230	1.017	A	A
1	GA 1	1080.000	110.000	1130.000	10.000	0.950	A	W
1	GB 2	388.000	45.000	744.000	10.000	0.520	N	N
1	H 3	261.000	39.000	250.300	4.200	1.043	A	N
1	MN 54	20.900	1.600	20.850	0.310	1.002	A	A
1	PU238	1.210	0.200	1.291	0.063	0.937	A	A
1	PU239	0.764	0.094	0.850	0.050	0.899	W	A
1	SR 90	23.600	4.400	23.200	1.350	1.017	A	A
1	U 234	0.513	0.014	0.540	0.020	0.950	A	A
1	U 238	0.563	0.051	0.550	0.025	1.025	A	A
1	U BQ	1.095	0.042	1.105	0.050	0.991	A	A
1	U UG	0.053	0.007	0.044	0.001	1.182	W	N

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.140	0.008	0.152	0.013	0.921	A	
1	CE144	19.700	0.440	15.700	1.000	1.255	W	
1	CO 57	14.100	0.085	10.810	1.000	1.304	N	
1	CO 60	6.430	0.080	5.010	0.300	1.283	N	
1	CS134	13.300	0.090	10.880	1.000	1.222	N	
1	CS137	11.000	0.130	8.700	0.800	1.264	W	
1	GA 1	0.853	0.055	0.960	0.050	0.889	A	
1	GB 2	0.522	0.005	0.450	0.030	1.160	A	
1	MN 54	10.200	0.130	7.620	0.600	1.339	N	
1	PU238	0.100	0.005	0.100	0.006	0.998	A	
1	PU239	0.130	0.006	0.119	0.006	1.094	A	
1	SB125	17.000	0.200	12.330	1.000	1.379	N	
1	SR 90	1.300	0.100	1.450	0.149	0.897	A	
1	U 234	0.280	0.030	0.103	0.005	2.721	N	
1	U 238	0.275	0.028	0.105	0.004	2.632	N	
1	U BQ	0.560	0.060	0.211	0.008	2.652	W	
Matrix: SO		Bq/kg						
1	AM241	6.020	0.780	5.680	0.500	1.060	A	
1	CS137	1220.000	12.000	825.500	14.100	1.478	N	
1	K 40	470.000	110.000	334.250	7.140	1.406	W	
1	PU238	1.260	0.530	0.530	0.111	2.379	N	
1	PU239	151.000	7.240	134.930	17.100	1.119	A	
Matrix: VE		Bq/kg						
1	AM241	1.190	0.140	1.183	0.113	1.006	A	
1	CM244	1.110	0.310	0.900	0.050	1.233	A	
1	CO 60	18.000	2.400	12.500	0.320	1.440	N	
1	CS137	265.000	6.000	189.250	7.270	1.400	W	
1	K 40	1100.000	91.000	811.500	12.200	1.356	W	
1	PU239	2.000	0.160	1.942	0.222	1.030	A	
1	SR 90	423.000	26.000	361.000	43.300	1.172	W	
Matrix: WA		Bq/L						
1	AM241	0.890	0.042	0.837	0.028	1.064	A	
1	CO 60	92.100	1.400	90.850	1.150	1.014	A	
1	CS137	78.100	1.600	69.780	1.230	1.119	A	
1	GA 1	1074.000	70.000	1130.000	10.000	0.950	A	
1	GB 2	551.000	42.000	744.000	10.000	0.740	A	
1	H 3	697.000	105.000	250.300	4.200	2.785	N	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	QAP 45 Evaluation
Matrix: WA		Bq/L					
1	MN 54	22.700	1.200	20.850	0.310	1.089	A
1	PU238	1.140	0.030	1.291	0.063	0.883	W
1	PU239	0.730	0.026	0.850	0.050	0.859	W
1	SR 90	14.400	1.000	23.200	1.350	0.621	N
1	U 234	1.560	0.016	0.540	0.020	2.889	N
1	U 238	1.620	0.160	0.550	0.025	2.948	N
1	U BQ	3.200	0.300	1.105	0.050	2.895	N

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: AL Ames Laboratory, Ames, IA

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	CE144	9.139	0.560	15.700	1.000	0.582	W	
1	CO 57	11.030	0.140	10.810	1.000	1.020	A	W
1	CO 60	5.143	0.200	5.010	0.300	1.027	A	W
1	CS134	11.430	0.990	10.880	1.000	1.051	A	W
1	CS137	8.954	0.180	8.700	0.800	1.029	A	A
1	MN 54	8.954	0.210	7.620	0.600	1.175	W	W
1	SB125	14.210	0.370	12.330	1.000	1.152	W	W
Matrix: SO		Bq/kg						
1	CO 60	1.443	0.466	1.060	0.120	1.361	W	A
1	CS137	884.300	5.809	825.500	14.100	1.071	A	W
1	K 40	395.900	15.500	334.250	7.140	1.184	A	A
Matrix: VE		Bq/kg						
1	CO 60	14.950	2.280	12.500	0.320	1.196	A	A
1	CS137	227.900	4.260	189.250	7.270	1.204	A	A
1	K 40	965.700	34.700	811.500	12.200	1.190	A	A
Matrix: WA		Bq/L						
1	CO 60	92.500	0.900	90.850	1.150	1.018	A	N
1	CS137	72.520	0.810	69.780	1.230	1.039	A	N
1	MN 54	21.830	0.540	20.850	0.310	1.047	A	N

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI Bq/filter								
1	AM241	1.590	0.430	0.152	0.013	*.***		N
1	CE144	19.050	0.620	15.700	1.000	1.213		W
1	CO 57	13.840	0.150	10.810	1.000	1.280		N
1	CO 60	7.610	0.340	5.010	0.300	1.519		N
1	CS134	11.660	0.280	10.880	1.000	1.072		A
1	CS137	13.140	0.320	8.700	0.800	1.510		N
1	GA 1	1.040	0.010	0.960	0.050	1.083		A
1	GB 2	0.630	0.010	0.450	0.030	1.400		A
1	MN 54	11.870	0.370	7.620	0.600	1.558		N
1	PU238	0.850	0.020	0.100	0.006	8.483		N
1	PU239	0.640	0.020	0.119	0.006	5.387		N
1	SB125	14.430	0.580	12.330	1.000	1.170		W
1	U BQ	0.020	0.006	0.211	0.008	0.095		N
Matrix: SO Bq/kg								
1	AM241	9.240	2.590	5.680	0.500	1.627		W
1	CS137	990.400	7.030	825.500	14.100	1.200		A
1	K 40	371.800	23.680	334.250	7.140	1.112		A
1	PU238	0.160	0.110	0.530	0.111	0.302		N
1	PU239	5.290	1.360	134.930	17.100	0.039		N
1	SR 90	70.660	6.290	40.310	0.420	1.753		W
1	U 234	34.620	7.830	37.570	2.480	0.921		A
1	U 238	41.020	13.310	42.430	2.500	0.967		A
1	U BQ	79.170	9.620	81.270	4.830	0.974		A
Matrix: VE Bq/kg								
1	AM241	3.030	1.850	1.183	0.113	2.561		W
1	CO 60	13.320	1.480	12.500	0.320	1.066		A
1	CS137	232.000	3.700	189.250	7.270	1.226		A
1	K 40	955.600	29.970	811.500	12.200	1.178		A
1	PU239	2.890	1.110	1.942	0.222	1.488		W
1	SR 90	151.700	8.140	361.000	43.300	0.420		N
Matrix: WA Bq/L								
1	AM241	1.280	0.860	0.837	0.028	1.530		W
1	CO 60	93.010	1.170	90.850	1.150	1.024		A
1	CS137	76.490	1.260	69.780	1.230	1.096		A
1	GA 1	614.100	7.290	1130.000	10.000	0.540		W
1	GB 2	598.300	5.500	744.000	10.000	0.800		A
1	MN 54	23.020	1.570	20.850	0.310	1.104		A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	QAP 45 Evaluation
Matrix: WA		Bq/L					
1	PU238	0.430	0.020	1.291	0.063	0.333	N
1	PU239	0.550	0.040	0.850	0.050	0.647	N
1	U 234	0.300	0.010	0.540	0.020	0.556	N
1	U 238	0.320	0.020	0.550	0.025	0.582	N
1	U BQ	0.730	0.040	1.105	0.050	0.661	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: AN Argonne National Laboratory

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.153	0.015	0.152	0.013	1.007	A	A
1	CE144	16.880	3.100	15.700	1.000	1.075	A	
1	CO 57	12.090	1.010	10.810	1.000	1.118	W	A
1	CO 60	5.580	0.540	5.010	0.300	1.114	W	W
1	CS134	11.500	0.610	10.880	1.000	1.057	A	A
1	CS137	9.520	0.870	8.700	0.800	1.094	A	A
1	GA 1	0.900	0.090	0.960	0.050	0.938	A	N
1	GB 2	0.490	0.050	0.450	0.030	1.089	A	A
1	MN 54	8.480	0.530	7.620	0.600	1.113	W	A
1	PU238	0.097	0.006	0.100	0.006	0.968	A	A
1	PU239	0.125	0.006	0.119	0.006	1.052	A	
1	SB125	13.240	0.850	12.330	1.000	1.074	A	W
1	SR 90	1.514	0.040	1.450	0.149	1.044	A	A
1	U 234	0.109	0.006	0.103	0.005	1.059	A	A
1	U 238	0.110	0.006	0.105	0.004	1.053	A	A
Matrix: SO		Bq/kg						
1	AM241	5.590	0.740	5.680	0.500	0.984	A	A
1	CS137	1024.000	62.000	825.500	14.100	1.240	W	W
1	K 40	393.000	42.000	334.250	7.140	1.176	A	W
1	PU238	0.486	0.094	0.530	0.111	0.918	A	A
1	PU239	150.000	16.000	134.930	17.100	1.112	A	A
1	SR 90	45.020	1.920	40.310	0.420	1.117	A	A
1	U 234	39.400	1.000	37.570	2.480	1.049	A	N
1	U 238	42.800	1.000	42.430	2.500	1.009	A	W
Matrix: VE		Bq/kg						
1	AM241	1.206	0.053	1.183	0.113	1.019	A	A
1	CM244	0.940	0.045	0.900	0.050	1.044	A	A
1	CO 60	14.700	1.800	12.500	0.320	1.176	A	W
1	CS137	213.000	21.000	189.250	7.270	1.125	A	W
1	K 40	951.000	86.000	811.500	12.200	1.172	A	W
1	PU239	1.973	0.117	1.942	0.222	1.016	A	A
1	SR 90	403.000	1.000	361.000	43.300	1.116	W	W
Matrix: WA		Bq/L						
1	AM241	0.936	0.042	0.837	0.028	1.119	A	A
1	CO 60	104.000	9.000	90.850	1.150	1.145	W	A
1	CS137	80.160	7.550	69.780	1.230	1.149	A	A
1	GA 1	1102.000	10.000	1130.000	10.000	0.970	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: AN Argonne National Laboratory

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	GB 2	614.000	7.000	744.000	10.000	0.820	A	A
1	H 3	250.000	3.000	250.300	4.200	0.999	A	A
1	MN 54	24.360	3.570	20.850	0.310	1.168	W	A
1	PU238	1.282	0.049	1.291	0.063	0.993	A	A
1	PU239	0.909	0.175	0.850	0.050	1.069	A	A
1	SR 90	25.580	0.110	23.200	1.350	1.103	A	A
1	U 234	0.599	0.024	0.540	0.020	1.109	A	A
1	U 238	0.591	0.025	0.550	0.025	1.076	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.155	0.060	0.152	0.013	1.020	A	N
1	CE144	31.700	2.200	15.700	1.000	2.019	N	
1	CO 57	13.800	0.400	10.810	1.000	1.277	W	W
1	CO 60	6.510	0.390	5.010	0.300	1.299	N	A
1	CS134	12.800	0.500	10.880	1.000	1.176	W	A
1	CS137	10.400	0.400	8.700	0.800	1.195	W	A
1	GA 1	1.780	0.080	0.960	0.050	1.854	N	N
1	GB 2	0.290	0.030	0.450	0.030	0.644	N	A
1	MN 54	9.660	0.440	7.620	0.600	1.268	W	A
1	PU238	0.076	0.031	0.100	0.006	0.758	W	A
1	PU239	0.119	0.043	0.119	0.006	1.002	A	
1		0.093	0.037	0.119	0.006	0.783	W	
1	SB125	16.300	1.000	12.330	1.000	1.322	W	A
1	SR 90	1.780	0.410	1.450	0.149	1.228	A	A
1	U 234	0.116	0.043	0.103	0.005	1.127	A	A
1		0.118	0.046	0.103	0.005	1.147	A	A
1	U 238	0.130	0.050	0.105	0.004	1.244	A	N
1		0.116	0.043	0.105	0.004	1.110	A	N
1	U UG	9.300	0.800	8.448	0.400	1.101	A	W
Matrix: SO		Bq/kg						
1	AM241	5.200	0.900	5.680	0.500	0.915	A	W
1	CO 60	3.330	1.080	1.060	0.120	3.142	N	N
1	CS137	889.000	26.000	825.500	14.100	1.077	A	A
1	K 40	357.000	26.000	334.250	7.140	1.068	A	A
1	PU238	0.160	0.360	0.530	0.111	0.302	N	W
1	PU239	127.000	30.000	134.930	17.100	0.941	A	A
1	SR 90	46.300	4.400	40.310	0.420	1.149	A	A
1	U 234	33.400	8.300	37.570	2.480	0.889	A	A
1		33.200	7.500	37.570	2.480	0.884	A	A
1	U 238	35.000	8.600	42.430	2.500	0.825	A	A
1		35.000	7.500	42.430	2.500	0.825	A	A
1	U UG	2.470	0.210	3.426	0.200	0.721	A	A
Matrix: VE		Bq/kg						
1	CO 60	12.900	2.000	12.500	0.320	1.032	A	W
1	CS137	209.000	7.000	189.250	7.270	1.104	A	W
1	K 40	998.000	45.000	811.500	12.200	1.230	A	A
1	PU239	1.860	0.520	1.942	0.222	0.958	A	A
1		2.370	0.630	1.942	0.222	1.220	A	A
1	SR 90	432.000	52.000	361.000	43.300	1.197	W	N

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	AM241	1.040	0.260	0.837	0.028	1.243	W	A
1	CO 60	120.000	5.000	90.850	1.150	1.321	N	W
1	CS134	28.200	2.300	20.550	0.310	1.372	N	
1	CS137	92.100	4.000	69.780	1.230	1.320	N	W
1	GA 1	1010.000	193.000	1130.000	10.000	0.890	A	A
1		1100.000	110.000	1130.000	10.000	0.890	A	A
1	GB 2	416.000	92.000	744.000	10.000	0.550	W	A
1		420.000	48.000	744.000	10.000	0.550	W	A
1	H 3	255.000	11.000	250.300	4.200	1.019	A	W
1		242.000	9.000	250.300	4.200	0.967	A	W
1	MN 54	29.500	4.500	20.850	0.310	1.415	N	W
1	PU238	1.100	0.250	1.291	0.063	0.852	W	A
1	PU239	0.812	0.180	0.850	0.050	0.955	A	A
1		0.823	0.185	0.850	0.050	0.968	A	A
1	SR 90	24.500	2.600	23.200	1.350	1.056	A	A
1	U 234	0.600	0.083	0.540	0.020	1.111	A	W
1		0.601	0.148	0.540	0.020	1.113	A	W
1	U 238	0.602	0.125	0.550	0.025	1.096	A	A
1		0.638	0.154	0.550	0.025	1.161	W	A
1	U UG	48.200	2.400	0.044	0.001	***	N	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: AU ORISE EESD/ESSAP, Oak Ridge

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.140	0.010	0.152	0.013	0.921	A	W
1	CE144	16.100	2.500	15.700	1.000	1.025	A	
1	CO 57	11.300	0.600	10.810	1.000	1.045	A	N
1	CO 60	5.400	0.400	5.010	0.300	1.078	A	N
1	CS134	11.800	0.900	10.880	1.000	1.085	A	W
1	CS137	9.300	0.600	8.700	0.800	1.069	A	W
1	GA 1	1.030	0.030	0.960	0.050	1.073	A	A
1	GB 2	0.560	0.020	0.450	0.030	1.244	A	A
1	MN 54	9.200	0.800	7.620	0.600	1.207	W	N
1	PU238	0.110	0.010	0.100	0.006	1.098	A	A
1	PU239	0.130	0.010	0.119	0.006	1.094	A	
1	SB125	12.400	1.400	12.330	1.000	1.006	A	W
1	U 234	0.110	0.010	0.103	0.005	1.069	A	N
1	U 238	0.100	0.010	0.105	0.004	0.957	A	A
Matrix: SO		Bq/kg						
1	AM241	5.840	0.910	5.680	0.500	1.028	A	A
1	CS137	972.300	48.400	825.500	14.100	1.178	A	A
1	K 40	394.800	35.600	334.250	7.140	1.181	A	A
1	PU238	1.120	0.250	0.530	0.111	2.115	N	
1	PU239	144.700	7.700	134.930	17.100	1.072	A	W
1	SR 90	42.600	3.800	40.310	0.420	1.057	A	A
1	U 234	41.400	2.700	37.570	2.480	1.102	W	A
1	U 238	44.300	2.800	42.430	2.500	1.044	A	A
Matrix: VE		Bq/kg						
1	AM241	1.400	0.210	1.183	0.113	1.183	A	N
1	CO 60	15.600	2.200	12.500	0.320	1.248	W	A
1	CS137	220.400	11.400	189.250	7.270	1.165	A	A
1	K 40	974.700	53.600	811.500	12.200	1.201	A	A
1	PU239	2.300	0.300	1.942	0.222	1.184	A	A
1	SR 90	387.400	9.800	361.000	43.300	1.073	A	A
Matrix: WA		Bq/L						
1	AM241	0.900	0.070	0.837	0.028	1.076	A	N
1	CO 60	101.900	3.700	90.850	1.150	1.122	A	W
1	CS137	80.500	4.500	69.780	1.230	1.154	A	A
1	GA 1	912.000	22.000	1130.000	10.000	0.800	W	W
1	GB 2	588.000	14.000	744.000	10.000	0.790	A	A
1	MN 54	25.000	2.500	20.850	0.310	1.199	W	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: AU ORISE EESD/ESSAP, Oak Ridge

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	PU238	1.310	0.090	1.291	0.063	1.015	A	W
1	PU239	0.860	0.060	0.850	0.050	1.012	A	W
1	SR 90	23.910	0.890	23.200	1.350	1.031	A	A
1	U 234	0.590	0.060	0.540	0.020	1.093	A	A
1	U 238	0.550	0.060	0.550	0.025	1.001	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: AW Argonne National Laboratory, Idaho Falls

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	CE144	23.300	3.500	15.700	1.000	1.484	N	
1	CO 57	16.100	2.400	10.810	1.000	1.489	N	
1	CO 60	6.500	1.000	5.010	0.300	1.297	N	
1	CS134	14.200	2.100	10.880	1.000	1.305	N	
1	CS137	12.000	1.800	8.700	0.800	1.379	N	
1	MN 54	10.900	1.600	7.620	0.600	1.430	N	
1	SB125	18.500	2.800	12.330	1.000	1.500	N	
Matrix: WA		Bq/L						
1	CO 60	122.300	18.300	90.850	1.150	1.346	N	
1	CS134	29.300	4.400	20.550	0.310	1.426	N	
1	CS137	99.500	14.900	69.780	1.230	1.426	N	
1	MN 54	34.900	5.200	20.850	0.310	1.674	N	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	CE144	14.800	0.733	15.700	1.000	0.943	A	
1	CO 57	10.800	0.518	10.810	1.000	0.999	A	W
1	CO 60	5.030	0.278	5.010	0.300	1.004	A	A
1	CS134	10.900	0.659	10.880	1.000	1.002	A	A
1	CS137	8.700	0.577	8.700	0.800	1.000	A	A
1	GA 1	0.962	0.112	0.960	0.050	1.002	A	W
1	GB 2	0.710	0.066	0.450	0.030	1.578	W	A
1	MN 54	7.650	0.440	7.620	0.600	1.004	A	W
1	SB125	12.400	0.655	12.330	1.000	1.006	A	W
1	SR 90	1.460	0.302	1.450	0.149	1.007	A	A
1	U 234	0.141	0.012	0.103	0.005	1.370	A	A
1	U 238	0.115	0.014	0.105	0.004	1.100	A	A
Matrix: SO		Bq/kg						
1	CO 60	1.980	0.426	1.060	0.120	1.868	W	A
1	CS137	980.000	64.800	825.500	14.100	1.187	A	W
1	K 40	355.000	20.300	334.250	7.140	1.062	A	A
1	SR 90	26.000	8.180	40.310	0.420	0.645	W	W
1	U 234	46.600	3.270	37.570	2.480	1.240	W	W
1	U 238	50.700	4.370	42.430	2.500	1.195	W	A
Matrix: VE		Bq/kg						
1	CO 60	14.500	1.090	12.500	0.320	1.160	A	A
1	CS137	239.000	18.400	189.250	7.270	1.263	W	W
1	K 40	926.000	49.200	811.500	12.200	1.141	A	A
1	SR 90	396.000	66.600	361.000	43.300	1.097	A	A
Matrix: WA		Bq/L						
1	CO 60	99.900	3.180	90.850	1.150	1.100	A	A
1	CS137	79.700	2.440	69.780	1.230	1.142	A	A
1	GA 1	951.000	107.000	1130.000	10.000	0.840	A	A
1	GB 2	584.000	14.400	744.000	10.000	0.780	A	A
1	MN 54	24.100	0.742	20.850	0.310	1.156	A	W
1	SR 90	24.900	2.080	23.200	1.350	1.073	A	A
1	U 234	0.710	0.037	0.540	0.020	1.315	W	A
1	U 238	0.685	0.043	0.550	0.025	1.247	W	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: BE RUST Geotech, Grand Junction, CO

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.140	0.010	0.152	0.013	0.921	A	A
1	CE144	25.820	2.760	15.700	1.000	1.645	N	
1	CO 57	10.590	0.720	10.810	1.000	0.980	A	W
1	CO 60	4.990	0.390	5.010	0.300	0.996	A	N
1	CS134	10.510	0.740	10.880	1.000	0.966	A	W
1	CS137	9.100	0.670	8.700	0.800	1.046	A	W
1	GA 1	1.075	0.090	0.960	0.050	1.120	A	W
1	GB 2	0.452	0.043	0.450	0.030	1.004	A	A
1	MN 54	8.010	0.570	7.620	0.600	1.051	A	N
1	PU238	0.106	0.010	0.100	0.006	1.058	A	A
1	PU239	0.128	0.012	0.119	0.006	1.077	A	
1	SB125	12.170	1.040	12.330	1.000	0.987	A	A
1	SR 90	1.400	0.110	1.450	0.149	0.966	A	A
1	U 234	0.097	0.012	0.103	0.005	0.943	A	A
1	U 238	0.098	0.012	0.105	0.004	0.938	A	A
1	U UG	8.670	0.000	8.448	0.400	1.026	A	A
Matrix: SO		Bq/kg						
1	AM241	5.740	0.450	5.680	0.500	1.011	A	A
1	CS137	834.000	119.100	825.500	14.100	1.010	A	A
1	K 40	392.000	82.800	334.250	7.140	1.173	A	W
1	PU238	0.480	0.120	0.530	0.111	0.906	A	A
1	PU239	148.500	7.900	134.930	17.100	1.101	A	A
1	SR 90	44.000	4.300	40.310	0.420	1.092	A	A
1	U 234	41.900	4.600	37.570	2.480	1.115	W	A
1	U 238	44.900	4.800	42.430	2.500	1.058	A	A
1	U UG	3.620	0.000	3.426	0.200	1.057	A	A
Matrix: VE		Bq/kg						
1	AM241	3.290	0.440	1.183	0.113	2.780	N	A
1	CM244	2.770	0.360	0.900	0.050	3.078	N	A
1	CS137	88.600	13.700	189.250	7.270	0.468	N	A
1	K 40	1088.000	171.300	811.500	12.200	1.341	W	A
1	PU239	5.620	0.510	1.942	0.222	2.894	N	N
1	SR 90	1056.000	56.000	361.000	43.300	2.925	N	W
Matrix: WA		Bq/L						
1	AM241	0.840	0.070	0.837	0.028	1.004	A	A
1	CO 60	104.400	7.360	90.850	1.150	1.149	W	A
1	CS137	85.450	6.120	69.780	1.230	1.225	W	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: BE RUST Geotech, Grand Junction, CO

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	GA 1	1316.000	103.000	1130.000	10.000	1.160	A	A
1	GB 2	500.000	46.000	744.000	10.000	0.670	W	A
1	H 3	260.000	12.000	250.300	4.200	1.039	A	A
1	MN 54	26.260	1.950	20.850	0.310	1.259	N	A
1	PU238	1.320	0.110	1.291	0.063	1.023	A	A
1	PU239	0.820	0.080	0.850	0.050	0.964	A	A
1	SR 90	22.900	1.500	23.200	1.350	0.987	A	A
1	U 234	0.550	0.070	0.540	0.020	1.019	A	A
1	U 238	0.560	0.070	0.550	0.025	1.019	A	A
1	U UG	0.048	0.000	0.044	0.001	1.072	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: BL Barringer Laboratories Inc., Golden, CO

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.170	0.020	0.152	0.013	1.118	A	A
1	CE144	16.600	0.900	15.700	1.000	1.057	A	
1	CO 57	11.800	0.500	10.810	1.000	1.092	A	W
1	CO 60	5.220	0.210	5.010	0.300	1.042	A	W
1	CS134	11.000	0.400	10.880	1.000	1.011	A	A
1	CS137	9.190	0.360	8.700	0.800	1.056	A	N
1	GA 1	0.730	0.063	0.960	0.050	0.760	W	W
1	GB 2	0.404	0.085	0.450	0.030	0.898	A	
1	MN 54	8.420	0.330	7.620	0.600	1.105	A	W
1	PU238	0.110	0.010	0.100	0.006	1.098	A	A
1	PU239	0.130	0.010	0.119	0.006	1.094	A	
1		0.150	0.010	0.119	0.006	1.263	W	
1	SB125	12.400	0.600	12.330	1.000	1.006	A	A
1	SR 90	1.500	0.180	1.450	0.149	1.034	A	N
1	U 234	0.110	0.010	0.103	0.005	1.069	A	A
1		0.100	0.080	0.103	0.005	0.972	A	A
1	U 238	0.110	0.010	0.105	0.004	1.053	A	A
1		0.100	0.080	0.105	0.004	0.957	A	A
1	U BQ	0.250	0.000	0.211	0.008	1.184	A	
1		1.160	0.030	0.211	0.008	5.492	N	
Matrix: SO		Bq/kg						
1	AM241	3.780	1.130	5.680	0.500	0.665	W	W
1	CO 60	1.200	0.300	1.060	0.120	1.132	A	A
1	CS137	860.000	20.000	825.500	14.100	1.042	A	A
1	K 40	331.000	13.000	334.250	7.140	0.990	A	A
1	PU238	0.710	0.210	0.530	0.111	1.341	W	A
1	PU239	147.000	2.000	134.930	17.100	1.089	A	A
1		225.000	4.000	134.930	17.100	1.668	W	A
1	SR 90	47.100	3.600	40.310	0.420	1.168	A	A
1	U 234	42.800	0.900	37.570	2.480	1.139	W	A
1		32.900	6.400	37.570	2.480	0.876	A	A
1	U 238	41.700	0.900	42.430	2.500	0.983	A	A
1		36.600	6.400	42.430	2.500	0.863	A	A
1	U BQ	82.000	0.000	81.270	4.830	1.009	A	
1		86.500	1.900	81.270	4.830	1.064	A	
1	U UG	3.460	0.070	3.426	0.200	1.010	A	A
1		3.270	0.000	3.426	0.200	0.954	A	A
Matrix: VE		Bq/kg						
1	AM241	1.520	0.200	1.183	0.113	1.285	A	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

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

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: VE		Bq/kg						
1	CM244	0.880	0.200	0.900	0.050	0.978	A	
1	CO 60	13.900	1.000	12.500	0.320	1.112	A	A
1	CS137	202.000	5.000	189.250	7.270	1.067	A	A
1	K 40	953.000	31.000	811.500	12.200	1.174	A	A
1	PU239	1.660	0.160	1.942	0.222	0.855	A	A
1		2.820	0.200	1.942	0.222	1.452	W	A
1	SR 90	371.000	7.000	361.000	43.300	1.028	A	A
Matrix: WA		Bq/L						
1	AM241	1.170	0.080	0.837	0.028	1.399	W	W
1	CO 60	96.800	2.300	90.850	1.150	1.065	A	A
1	CS137	76.900	1.900	69.780	1.230	1.102	A	A
1	FE 55	256.000	7.000	235.000	20.000	1.090	A	A
1	GA 1	1112.000	21.000	1130.000	10.000	0.980	A	A
1		1293.000	27.000	1130.000	10.000	1.140	A	A
1		1162.000	21.000	1130.000	10.000	0.980	A	A
1	GB 2	410.000	17.000	744.000	10.000	0.540	W	W
1		408.000	21.000	744.000	10.000	0.540	N	W
1		411.000	19.000	744.000	10.000	0.540	W	W
1	H 3	303.000	15.000	250.300	4.200	1.211	A	A
1		318.000	11.000	250.300	4.200	1.270	W	A
1	MN 54	22.700	0.800	20.850	0.310	1.089	A	A
1	PU238	1.350	0.070	1.291	0.063	1.046	A	A
1	PU239	0.930	0.060	0.850	0.050	1.094	A	A
1		0.850	0.070	0.850	0.050	1.000	A	A
1	SR 90	24.700	0.700	23.200	1.350	1.065	A	A
1	U 234	0.610	0.120	0.540	0.020	1.130	A	A
1		0.550	0.010	0.540	0.020	1.019	A	A
1	U 238	0.540	0.010	0.550	0.025	0.983	A	A
1		0.620	0.120	0.550	0.025	1.128	A	A
1	U BQ	1.290	0.000	1.105	0.050	1.167	A	
1		1.120	0.020	1.105	0.050	1.013	A	
1	U UG	0.045	0.001	0.044	0.001	1.005	A	A
1		0.051	0.000	0.044	0.001	1.155	W	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: BM Battelle Memorial Institute, Columbus, OH

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.150	0.023	0.152	0.013	0.987	A	A
1	CE144	20.400	0.630	15.700	1.000	1.299	N	
1	CO 57	14.500	0.180	10.810	1.000	1.341	N	W
1	CO 60	5.840	0.200	5.010	0.300	1.166	W	W
1	CS134	13.700	0.220	10.880	1.000	1.259	N	W
1	CS137	10.800	0.240	8.700	0.800	1.241	W	A
1	MN 54	9.570	0.240	7.620	0.600	1.256	W	W
1	PU238	0.087	0.010	0.100	0.006	0.868	A	A
1	PU239	0.122	0.013	0.119	0.006	1.027	A	
1	SB125	15.500	0.520	12.330	1.000	1.257	W	A
1	SR 90	1.460	0.040	1.450	0.149	1.007	A	W
1	U 234	0.092	0.018	0.103	0.005	0.894	A	A
1	U 238	0.098	0.018	0.105	0.004	0.938	A	A
Matrix: SO		Bq/kg						
1	AM241	3.980	1.380	5.680	0.500	0.701	W	A
1	CS137	868.000	5.200	825.500	14.100	1.051	A	W
1	K 40	350.000	29.400	334.250	7.140	1.047	A	W
1	PU238	1.000	0.360	0.530	0.111	1.888	W	A
1	PU239	134.000	13.500	134.930	17.100	0.993	A	W
1	SR 90	41.800	3.310	40.310	0.420	1.037	A	A
1	U 234	32.370	5.080	37.570	2.480	0.862	A	A
1	U 238	35.700	5.570	42.430	2.500	0.841	A	A
Matrix: VE		Bq/kg						
1	AM241	1.760	0.260	1.183	0.113	1.487	A	W
1	CO 60	12.000	1.700	12.500	0.320	0.960	A	A
1	CS137	188.500	4.060	189.250	7.270	0.996	A	W
1	K 40	789.000	35.000	811.500	12.200	0.972	A	W
1	PU239	2.180	0.260	1.942	0.222	1.123	A	A
1	SR 90	425.000	6.400	361.000	43.300	1.177	W	A
Matrix: WA		Bq/L						
1	AM241	0.840	0.140	0.837	0.028	1.004	A	A
1	CO 60	92.800	3.250	90.850	1.150	1.021	A	A
1	CS137	75.100	3.040	69.780	1.230	1.076	A	A
1	MN 54	23.800	2.480	20.850	0.310	1.141	A	A
1	PU238	1.180	0.130	1.291	0.063	0.914	A	W
1	PU239	0.760	0.088	0.850	0.050	0.894	W	W
1	SR 90	25.700	0.580	23.200	1.350	1.108	A	N

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: BM Battelle Memorial Institute, Columbus, OH

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	U 234	0.580	0.140	0.540	0.020	1.074	A	W
1	U 238	0.560	0.120	0.550	0.025	1.019	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: BN Brookhaven National Laboratory, Upton, NY

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.400	0.199	0.152	0.013	2.632	N	W
1	CE144	20.400	1.096	15.700	1.000	1.299	N	
1	CO 57	14.700	0.553	10.810	1.000	1.360	N	N
1	CO 60	5.200	0.091	5.010	0.300	1.038	A	W
1	CS134	10.800	0.168	10.880	1.000	0.993	A	A
1	CS137	11.900	0.402	8.700	0.800	1.368	N	W
1	GA 1	0.900	0.023	0.960	0.050	0.938	A	A
1	GB 2	0.440	0.038	0.450	0.030	0.978	A	W
1	MN 54	10.400	0.376	7.620	0.600	1.365	N	N
1	SB125	17.600	0.859	12.330	1.000	1.427	N	W
Matrix: SO		Bq/kg						
1	AM241	9.100	2.738	5.680	0.500	1.602	W	W
1	CO 60	1.100	0.202	1.060	0.120	1.038	A	A
1	CS137	846.100	17.442	825.500	14.100	1.025	A	A
1	K 40	295.600	2.581	334.250	7.140	0.884	A	A
Matrix: VE		Bq/kg						
1	CO 60	13.000	0.349	12.500	0.320	1.040	A	A
1	CS137	241.600	5.955	189.250	7.270	1.277	W	A
1	K 40	888.100	2.807	811.500	12.200	1.094	A	W
Matrix: WA		Bq/L						
1	CO 60	98.400	2.281	90.850	1.150	1.083	A	A
1	CS137	91.100	0.923	69.780	1.230	1.306	N	A
1	GA 1	1153.300	14.327	1130.000	10.000	1.020	A	A
1	GB 2	639.900	25.181	744.000	10.000	0.860	A	A
1	H 3	255.700	13.933	250.300	4.200	1.022	A	N
1	MN 54	26.500	0.198	20.850	0.310	1.271	N	A
1	SR 90	20.300	0.449	23.200	1.350	0.875	W	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: BP Battelle Pacific Northwest National Laboratory

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.161	0.008	0.152	0.013	1.059	A	A
1	CE144	14.000	1.000	15.700	1.000	0.892	A	
1	CO 57	10.700	0.200	10.810	1.000	0.990	A	A
1	CO 60	5.300	0.200	5.010	0.300	1.058	A	A
1	CS134	12.200	0.200	10.880	1.000	1.121	W	W
1	CS137	9.500	0.300	8.700	0.800	1.092	A	A
1	GA 1	1.020	0.050	0.960	0.050	1.063	A	W
1	GB 2	0.560	0.031	0.450	0.030	1.244	A	A
1	MN 54	7.400	0.300	7.620	0.600	0.971	A	A
1	PU238	0.102	0.004	0.100	0.006	1.018	A	A
1	PU239	0.125	0.005	0.119	0.006	1.052	A	
1	SB125	13.300	0.400	12.330	1.000	1.079	A	N
1	SR 90	1.350	0.060	1.450	0.149	0.931	A	A
Matrix: SO		Bq/kg						
1	AM241	5.470	0.240	5.680	0.500	0.963	A	A
1	CO 60	2.100	0.300	1.060	0.120	1.981	W	W
1	CS137	1045.000	14.000	825.500	14.100	1.266	W	A
1	K 40	430.000	26.000	334.250	7.140	1.286	W	A
1	PU239	83.500	6.800	134.930	17.100	0.619	N	A
1	SR 90	36.400	1.600	40.310	0.420	0.903	A	A
Matrix: VE		Bq/kg						
1	AM241	1.100	0.200	1.183	0.113	0.930	A	A
1	CO 60	15.600	0.300	12.500	0.320	1.248	W	W
1	CS137	227.000	3.000	189.250	7.270	1.199	A	W
1	K 40	1023.000	12.000	811.500	12.200	1.261	W	W
1	SR 90	369.000	34.000	361.000	43.300	1.022	A	W
Matrix: WA		Bq/L						
1	AM241	0.912	0.026	0.837	0.028	1.090	A	A
1	CO 60	102.000	1.000	90.850	1.150	1.123	A	A
1	CS137	82.000	1.000	69.780	1.230	1.175	A	A
1	FE 55	284.000	31.000	235.000	20.000	1.209	A	
1	GA 1	1181.000	126.000	1130.000	10.000	1.040	A	
1	GB 2	641.000	41.000	744.000	10.000	0.860	A	
1	H 3	260.500	6.300	250.300	4.200	1.041	A	A
1	MN 54	24.500	0.400	20.850	0.310	1.175	W	A
1	PU238	1.290	0.059	1.291	0.063	0.999	A	A
1	PU239	0.862	0.020	0.850	0.050	1.014	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: BP Battelle Pacific Northwest National Laboratory

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	SR 90	22.800	0.930	23.200	1.350	0.983	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI Bq/filter								
1	CE144	18.900	0.500	15.700	1.000	1.204	W	
1	CO 57	12.000	0.100	10.810	1.000	1.110	W	W
1	CO 60	5.000	0.200	5.010	0.300	0.998	A	A
1	CS134	11.200	0.200	10.880	1.000	1.029	A	W
1	CS137	9.500	0.200	8.700	0.800	1.092	A	N
1	MN 54	7.580	0.200	7.620	0.600	0.995	A	A
1	SB125	22.500	0.700	12.330	1.000	1.825	N	W
1	U UG	8.800	0.300	8.448	0.400	1.042	A	N
Matrix: SO Bq/kg								
1	CS137	960.000	20.000	825.500	14.100	1.163	A	A
1	K 40	313.900	0.400	334.250	7.140	0.939	A	A
1	U UG	3.700	0.200	3.426	0.200	1.080	A	A
Matrix: VE Bq/kg								
1	CS137	226.000	6.000	189.250	7.270	1.194	A	A
1	K 40	724.000	14.000	811.500	12.200	0.892	W	A
Matrix: WA Bq/L								
1	CO 60	98.000	2.000	90.850	1.150	1.079	A	N
1	CS137	71.000	1.000	69.780	1.230	1.017	A	A
1	MN 54	20.600	0.800	20.850	0.310	0.988	A	A
1	U UG	0.053	0.001	0.044	0.001	1.194	W	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: SO		Bq/kg						
1	AM241	4.900	2.500	5.680	0.500	0.863	A	
1	CS137	98.000	12.500	825.500	14.100	0.119	N	
1	K 40	376.500	31.550	334.250	7.140	1.126	A	
Matrix: WA		Bq/L						
1	CO 60	95.240	2.200	90.850	1.150	1.048	A	
1	CS137	85.000	2.700	69.780	1.230	1.218	W	
1	MN 54	25.200	2.000	20.850	0.310	1.209	W	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.290	0.040	0.152	0.013	1.908	W	W
1	CE144	15.630	0.210	15.700	1.000	0.996	A	
1	CO 57	11.410	0.050	10.810	1.000	1.056	A	A
1	CO 60	5.150	0.100	5.010	0.300	1.028	A	A
1	CS134	11.370	0.110	10.880	1.000	1.045	A	A
1	CS137	8.930	0.090	8.700	0.800	1.026	A	A
1	GA 1	1.140	0.010	0.960	0.050	1.188	A	A
1	GB 2	0.510	0.010	0.450	0.030	1.133	A	A
1	MN 54	8.520	0.110	7.620	0.600	1.118	W	W
1	SB125	11.670	0.210	12.330	1.000	0.946	A	A
Matrix: SO		Bq/kg						
1	AM241	6.150	0.840	5.680	0.500	1.083	A	A
1	CO 60	1.200	0.480	1.060	0.120	1.132	A	A
1	CS137	874.100	3.400	825.500	14.100	1.059	A	A
1	K 40	341.100	11.100	334.250	7.140	1.020	A	A
Matrix: VE		Bq/kg						
1	AM241	2.170	0.550	1.183	0.113	1.834	W	
1	CO 60	11.520	1.310	12.500	0.320	0.922	A	A
1	CS137	170.000	1.930	189.250	7.270	0.898	W	W
1	K 40	729.600	20.400	811.500	12.200	0.899	W	W
Matrix: WA		Bq/L						
1	AM241	0.930	0.280	0.837	0.028	1.112	A	A
1	CO 60	93.330	0.940	90.850	1.150	1.027	A	A
1	CS134	21.440	0.640	20.550	0.310	1.043	A	
1	CS137	74.070	0.760	69.780	1.230	1.061	A	A
1	GA 1	1090.000	6.550	1130.000	10.000	0.960	A	A
1	GB 2	579.100	3.890	744.000	10.000	0.770	A	A
1	MN 54	22.600	0.750	20.850	0.310	1.084	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: **BU** Autoridad Regulatoria, Buenos Aires, Argentina

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.170	0.020	0.152	0.013	1.118	A	A
1	CO 57	14.000	0.700	10.810	1.000	1.295	N	N
1	CO 60	5.700	0.300	5.010	0.300	1.138	W	N
1	CS134	12.000	0.600	10.880	1.000	1.103	A	W
1	CS137	10.000	0.500	8.700	0.800	1.149	W	W
1	MN 54	8.800	0.400	7.620	0.600	1.155	W	N
1	PU238	0.100	0.010	0.100	0.006	0.998	A	A
1	PU239	0.120	0.010	0.119	0.006	1.010	A	
1	SB125	14.000	0.700	12.330	1.000	1.135	A	A
1	U 234	0.091	0.009	0.103	0.005	0.884	W	
1	U 238	0.100	0.010	0.105	0.004	0.957	A	
1	U BQ	0.190	0.020	0.211	0.008	0.900	W	A
1	U UG	7.600	0.800	8.448	0.400	0.900	A	
Matrix: SO		Bq/kg						
1	CS137	770.000	40.000	825.500	14.100	0.933	A	A
1	K 40	300.000	60.000	334.250	7.140	0.898	A	A
1	PU238	0.400	0.200	0.530	0.111	0.755	A	
1	PU239	146.000	7.000	134.930	17.100	1.082	A	
1	U 234	54.000	5.000	37.570	2.480	1.437	W	
1	U 238	54.000	5.000	42.430	2.500	1.273	W	
1	U BQ	108.000	11.000	81.270	4.830	1.329	W	
1	U UG	4.200	0.400	3.426	0.200	1.226	W	W
Matrix: VE		Bq/kg						
1	AM241	1.200	0.100	1.183	0.113	1.014	A	
1	CM244	0.900	0.060	0.900	0.050	1.000	A	
1	CO 60	16.000	2.000	12.500	0.320	1.280	W	A
1	CS137	250.000	10.000	189.250	7.270	1.321	W	A
1	K 40	600.000	130.000	811.500	12.200	0.739	N	A
1	PU239	1.800	0.100	1.942	0.222	0.927	A	
1	SR 90	397.000	40.000	361.000	43.300	1.100	A	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

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

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI Bq/filter								
1	AM241	0.226	0.028	0.152	0.013	1.487	W	A
1	CE144	14.800	0.718	15.700	1.000	0.943	A	
1	CO 57	10.900	0.522	10.810	1.000	1.008	A	A
1	CO 60	5.020	0.266	5.010	0.300	1.002	A	A
1	CS134	11.400	0.677	10.880	1.000	1.048	A	A
1	CS137	8.800	0.581	8.700	0.800	1.011	A	A
1	GA 1	1.210	0.125	0.960	0.050	1.260	A	N
1	GB 2	0.747	0.067	0.450	0.030	1.660	W	A
1	MN 54	7.720	0.437	7.620	0.600	1.013	A	A
1	PU238	0.105	0.008	0.100	0.006	1.048	A	W
1	PU239	0.107	0.008	0.119	0.006	0.901	A	
1	SB125	12.800	0.655	12.330	1.000	1.038	A	A
1	SR 90	1.640	0.429	1.450	0.149	1.131	A	W
1	U 234	0.124	0.010	0.103	0.005	1.205	A	A
1	U 238	0.123	0.013	0.105	0.004	1.177	A	A
Matrix: SO Bq/kg								
1	AM241	195.000	10.900	5.680	0.500	*.***	N	A
1	CO 60	1.850	0.582	1.060	0.120	1.745	W	A
1	CS137	973.000	67.300	825.500	14.100	1.179	A	W
1	K 40	353.000	19.900	334.250	7.140	1.056	A	A
1	PU238	1.640	0.330	0.530	0.111	3.097	N	
1	PU239	201.000	6.070	134.930	17.100	1.490	W	A
1	SR 90	10.100	3.740	40.310	0.420	0.251	N	A
1	U 234	46.300	3.010	37.570	2.480	1.232	W	W
1	U 238	49.200	3.960	42.430	2.500	1.160	W	W
Matrix: VE Bq/kg								
1	AM241	4.880	0.688	1.183	0.113	4.124	N	W
1	CM244	0.847	0.283	0.900	0.050	0.941	A	
1	CO 60	14.900	0.899	12.500	0.320	1.192	A	A
1	CS137	244.000	18.800	189.250	7.270	1.289	W	W
1	K 40	940.000	49.200	811.500	12.200	1.158	A	A
1	PU239	1.830	0.400	1.942	0.222	0.942	A	A
1	SR 90	392.000	47.400	361.000	43.300	1.086	A	A
Matrix: WA Bq/L								
1	AM241	1.180	0.046	0.837	0.028	1.410	W	W
1	CO 60	98.800	4.920	90.850	1.150	1.088	A	A
1	CS137	82.300	5.480	69.780	1.230	1.179	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

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

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	FE 55	202.000	16.500	235.000	20.000	0.859	A	W
1	GA 1	999.000	110.000	1130.000	10.000	0.880	A	A
1	GB 2	655.000	47.700	744.000	10.000	0.880	A	A
1	H 3	250.000	26.400	250.300	4.200	0.999	A	W
1	MN 54	24.300	1.400	20.850	0.310	1.165	W	A
1	PU238	1.240	0.046	1.291	0.063	0.961	A	A
1	PU239	0.851	0.036	0.850	0.050	1.001	A	A
1	SR 90	25.600	2.290	23.200	1.350	1.103	A	A
1	U 234	0.759	0.050	0.540	0.020	1.406	W	A
1	U 238	0.696	0.057	0.550	0.025	1.267	W	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	CE144	14.700	0.700	15.700	1.000	0.936	A	
1	CO 57	10.600	0.100	10.810	1.000	0.981	A	A
1	CO 60	4.950	0.500	5.010	0.300	0.988	A	A
1	CS134	12.100	0.400	10.880	1.000	1.112	W	W
1	CS137	9.100	0.100	8.700	0.800	1.046	A	A
1	GA 1	0.930	0.030	0.960	0.050	0.969	A	N
1	GB 2	0.610	0.090	0.450	0.030	1.356	A	A
1	MN 54	7.800	0.300	7.620	0.600	1.024	A	A
1	SB125	12.700	1.000	12.330	1.000	1.030	A	A
Matrix: SO		Bq/kg						
1	U UG	3.550	0.130	3.426	0.200	1.036	A	A
Matrix: WA		Bq/L						
1	CO 60	97.040	0.318	90.850	1.150	1.068	A	A
1	CS134	22.010	0.057	20.550	0.310	1.071	A	
1	CS137	78.120	0.600	69.780	1.230	1.120	A	A
1	GA 1	225.000	20.000	1130.000	10.000	0.190	N	N
1	GB 2	323.000	127.000	744.000	10.000	0.430	N	A
1	MN 54	23.400	1.300	20.850	0.310	1.122	A	A
1	U UG	0.054	0.003	0.044	0.001	1.216	W	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.169	0.015	0.152	0.013	1.112	A	
1	CE144	14.900	0.526	15.700	1.000	0.949	A	
1	CO 57	10.700	0.396	10.810	1.000	0.990	A	
1	CO 60	5.110	0.180	5.010	0.300	1.020	A	
1	CS134	11.200	0.415	10.880	1.000	1.029	A	
1	CS137	8.370	0.241	8.700	0.800	0.962	A	
1	GA 1	1.030	0.016	0.960	0.050	1.073	A	
1	GB 2	0.392	0.021	0.450	0.030	0.871	W	
1	MN 54	7.670	0.173	7.620	0.600	1.007	A	
1	PU238	0.110	0.008	0.100	0.006	1.098	A	
1	PU239	0.129	0.010	0.119	0.006	1.086	A	
1	SB125	13.200	0.459	12.330	1.000	1.071	A	
1	SR 90	1.490	0.100	1.450	0.149	1.028	A	
1	U 234	0.116	0.004	0.103	0.005	1.127	A	
1	U 238	0.110	0.006	0.105	0.004	1.053	A	
1	U BQ	0.224	0.008	0.211	0.008	1.061	A	
1	U UG	8.490	0.125	8.448	0.400	1.005	A	
Matrix: SO		Bq/kg						
1	AM241	6.530	0.400	5.680	0.500	1.150	A	
1	CO 60	1.330	0.300	1.060	0.120	1.255	A	
1	CS137	887.000	23.000	825.500	14.100	1.075	A	
1	K 40	345.000	13.000	334.250	7.140	1.032	A	
1	PU238	0.520	0.120	0.530	0.111	0.982	A	
1	PU239	142.000	10.600	134.930	17.100	1.052	A	
1	SR 90	33.100	7.100	40.310	0.420	0.821	A	
1	U 234	34.600	1.330	37.570	2.480	0.921	A	
1	U 238	37.800	1.340	42.430	2.500	0.891	A	
1	U BQ	72.500	2.300	81.270	4.830	0.892	A	
1	U UG	2.940	0.099	3.426	0.200	0.858	A	
Matrix: VE		Bq/kg						
1	AM241	1.260	0.017	1.183	0.113	1.065	A	
1	CM244	0.944	0.067	0.900	0.050	1.049	A	
1	CO 60	16.800	1.540	12.500	0.320	1.344	W	
1	CS137	213.000	3.080	189.250	7.270	1.125	A	
1	K 40	980.000	80.300	811.500	12.200	1.208	A	
1	PU239	1.910	0.180	1.942	0.222	0.984	A	
1	SR 90	367.000	12.400	361.000	43.300	1.017	A	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	QAP 45 Evaluation
Matrix: WA		Bq/L					
1	AM241	1.010	0.088	0.837	0.028	1.207	A
1	CO 60	93.800	1.700	90.850	1.150	1.032	A
1	CS137	72.700	1.580	69.780	1.230	1.042	A
1	FE 55	223.000	0.220	235.000	20.000	0.949	A
1	GA 1	1130.000	26.000	1130.000	10.000	1.000	A
1	GB 2	483.000	5.800	744.000	10.000	0.640	W
1	H 3	257.000	1.400	250.300	4.200	1.027	A
1	MN 54	21.600	0.320	20.850	0.310	1.036	A
1	PU238	1.380	0.060	1.291	0.063	1.069	A
1	PU239	0.872	0.031	0.850	0.050	1.026	A
1	SR 90	19.900	0.260	23.200	1.350	0.858	W
1	U 234	0.572	0.021	0.540	0.020	1.059	A
1	U 238	0.570	0.040	0.550	0.025	1.037	A
1	U BQ	1.140	0.057	1.105	0.050	1.031	A
1	U UG	0.047	0.001	0.044	0.001	1.050	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

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

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.290	0.100	0.152	0.013	1.908	W	A
1	CE144	10.600	0.800	15.700	1.000	0.675	A	
1	CO 57	8.800	0.200	10.810	1.000	0.814	A	A
1	CO 60	5.000	0.200	5.010	0.300	0.998	A	A
1	CS134	10.300	0.300	10.880	1.000	0.947	A	A
1	CS137	9.000	0.500	8.700	0.800	1.034	A	A
1	MN 54	7.300	0.300	7.620	0.600	0.958	A	A
1	PU238	0.120	0.090	0.100	0.006	1.198	W	W
1	PU239	0.130	0.060	0.119	0.006	1.094	A	
1	SB125	12.700	0.700	12.330	1.000	1.030	A	A
1	SR 90	2.150	0.400	1.450	0.149	1.483	A	A
1	U 234	0.160	0.090	0.103	0.005	1.555	W	A
1	U 238	0.120	0.070	0.105	0.004	1.148	A	N
1	U BQ	0.300	0.090	0.211	0.008	1.420	A	A
Matrix: SO		Bq/kg						
1	AM241	14.000	2.500	5.680	0.500	2.465	W	W
1	CO 60	2.400	1.000	1.060	0.120	2.264	N	N
1	CS137	756.000	10.000	825.500	14.100	0.916	A	A
1	K 40	255.000	40.000	334.250	7.140	0.763	W	A
1	PU238	1.470	0.200	0.530	0.111	2.776	N	N
1		0.000	0.000	0.530	0.111	0.000	N	N
1	PU239	124.000	16.900	134.930	17.100	0.919	A	W
1	SR 90	71.400	8.000	40.310	0.420	1.771	W	A
1	U 234	40.300	3.700	37.570	2.480	1.073	A	A
1	U 238	44.700	3.800	42.430	2.500	1.053	A	A
1	U BQ	85.000	8.500	81.270	4.830	1.046	A	A
Matrix: VE		Bq/kg						
1	AM241	1.580	0.200	1.183	0.113	1.335	A	A
1	CM244	0.400	0.100	0.900	0.050	0.444	N	A
1	CO 60	10.700	1.900	12.500	0.320	0.856	A	N
1	CS137	170.000	4.800	189.250	7.270	0.898	W	A
1	K 40	704.000	46.000	811.500	12.200	0.868	W	A
1	PU239	1.720	0.200	1.942	0.222	0.886	A	A
1	SR 90	790.000	28.000	361.000	43.300	2.188	N	A
Matrix: WA		Bq/L						
1	AM241	0.950	0.200	0.837	0.028	1.136	A	W
1	CO 60	104.000	1.300	90.850	1.150	1.145	W	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: CL Core Laboratories, Casper, WY

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	CS137	87.000	1.300	69.780	1.230	1.247	W	W
1	FE 55	248.000	9.100	235.000	20.000	1.055	A	A
1	H 3	111.000	6.700	250.300	4.200	0.443	N	W
1	MN 54	23.900	0.900	20.850	0.310	1.146	A	N
1	PU238	1.180	0.160	1.291	0.063	0.914	A	A
1	PU239	0.790	0.100	0.850	0.050	0.929	A	A
1	SR 90	25.300	0.600	23.200	1.350	1.091	A	W
1	U 234	0.560	0.120	0.540	0.020	1.037	A	A
1	U 238	0.560	0.110	0.550	0.025	1.019	A	A
1	U BQ	0.900	0.100	1.105	0.050	0.814	W	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: CN China Institute for Radiation Protection

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: AI Bq/filter							
1	CE144	13.000	2.000	15.700	1.000	0.828	A
1	CO 57	13.000	2.000	10.810	1.000	1.203	W
1	CO 60	6.000	0.000	5.010	0.300	1.198	W
1	CS134	13.000	2.000	10.880	1.000	1.195	W
1	CS137	11.000	2.000	8.700	0.800	1.264	W
1	MN 54	10.000	1.000	7.620	0.600	1.312	W
1	SB125	14.000	2.000	12.330	1.000	1.135	A
Matrix: SO Bq/kg							
1	AM241	8.000	0.000	5.680	0.500	1.408	A
1	CO 60	1.000	0.000	1.060	0.120	0.943	A
1	CS137	760.000	38.000	825.500	14.100	0.921	A
1	K 40	270.000	18.000	334.250	7.140	0.808	W
Matrix: VE Bq/kg							
1	AM241	3.000	0.000	1.183	0.113	2.535	W
1	CO 60	12.000	1.000	12.500	0.320	0.960	A
1	CS137	190.000	10.000	189.250	7.270	1.004	A
1	K 40	830.000	43.000	811.500	12.200	1.023	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: CO Bedford Institute of Oceanography, Dartmouth. Nova Scotia, Canada

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI Bq/filter								
1	CE144	33.100	0.500	15.700	1.000	2.108	N	
1	CO 57	15.400	0.200	10.810	1.000	1.425	N	
1	CO 60	6.500	0.200	5.010	0.300	1.297	N	
1	CS134	13.600	0.300	10.880	1.000	1.250	N	
1	CS137	10.700	0.200	8.700	0.800	1.230	W	
1	MN 54	10.400	0.200	7.620	0.600	1.365	N	
1	SB125	15.700	0.300	12.330	1.000	1.273	W	
Matrix: SO Bq/kg								
1	AM241	4.700	0.400	5.680	0.500	0.827	A	
1	CO 60	3.300	0.900	1.060	0.120	3.113	N	
1	CS137	875.000	8.000	825.500	14.100	1.060	A	
1	PU238	0.380	0.070	0.530	0.111	0.718	W	
1	PU239	112.000	3.000	134.930	17.100	0.830	W	
Matrix: VE Bq/kg								
1	AM241	1.600	0.100	1.183	0.113	1.352	A	
1	CO 60	13.000	1.000	12.500	0.320	1.040	A	
1	CS137	204.000	3.000	189.250	7.270	1.078	A	
1	PU238	0.140	0.020	0.182	0.011	0.768	W	
1	PU239	2.090	0.090	1.942	0.222	1.076	A	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: CR Laboratorio de Fisica Nuclear Aplicada, Costa Rica

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: AI Bq/filter							
1	CE144	66.000	5.000	15.700	1.000	4.204	N
1	CO 57	50.000	2.000	10.810	1.000	4.625	N
1	CO 60	29.000	2.000	5.010	0.300	5.788	N
1	CS134	58.000	4.000	10.880	1.000	5.331	N
1	CS137	51.000	3.000	8.700	0.800	5.862	N
1	MN 54	42.000	3.000	7.620	0.600	5.512	N
1	SB125	64.000	6.000	12.330	1.000	5.191	N
Matrix: SO Bq/kg							
1	CO 60	4.000	2.000	1.060	0.120	3.774	N
1	CS137	1069.000	42.000	825.500	14.100	1.295	W
1	K 40	319.000	40.000	334.250	7.140	0.954	A
Matrix: VE Bq/kg							
1	CO 60	13.000	2.000	12.500	0.320	1.040	A
1	CS137	221.000	9.000	189.250	7.270	1.168	A
1	K 40	848.000	45.000	811.500	12.200	1.045	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.120	0.020	0.152	0.013	0.789	W	N
1	CE144	12.540	0.580	15.700	1.000	0.799	A	
1	CO 57	9.220	0.300	10.810	1.000	0.853	A	N
1	CO 60	4.710	0.160	5.010	0.300	0.940	A	N
1	CS134	10.480	0.260	10.880	1.000	0.963	A	N
1	CS137	7.580	0.340	8.700	0.800	0.871	A	N
1	GA 1	1.090	0.059	0.960	0.050	1.135	A	
1	GB 2	0.790	0.069	0.450	0.030	1.756	W	
1	MN 54	7.280	0.310	7.620	0.600	0.955	A	N
1	SB125	11.910	0.300	12.330	1.000	0.966	A	W
1	U BQ	18.960	2.840	0.211	0.008	*.***	N	
Matrix: SO		Bq/kg						
1	AM241	5.040	0.470	5.680	0.500	0.887	A	A
1	CO 60	1.140	0.090	1.060	0.120	1.075	A	A
1	CS137	834.400	36.130	825.500	14.100	1.011	A	A
1	K 40	346.500	15.970	334.250	7.140	1.037	A	A
1	U BQ	101.300	13.120	81.270	4.830	1.246	W	
Matrix: VE		Bq/kg						
1	CO 60	13.990	0.520	12.500	0.320	1.119	A	A
1	CS137	209.800	9.170	189.250	7.270	1.109	A	A
1	K 40	874.800	41.030	811.500	12.200	1.078	A	A
Matrix: WA		Bq/L						
1	AM241	0.800	0.080	0.837	0.028	0.956	A	A
1	CO 60	97.600	4.310	90.850	1.150	1.074	A	A
1	CS134	21.820	0.550	20.550	0.310	1.062	A	
1	CS137	78.160	3.410	69.780	1.230	1.120	A	A
1	MN 54	24.540	1.030	20.850	0.310	1.177	W	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.137	0.015	0.152	0.013	0.901	A	A
1	PU238	0.090	0.010	0.100	0.006	0.898	A	A
1	PU239	0.120	0.010	0.119	0.006	1.010	A	A
1	U 234	0.090	0.010	0.103	0.005	0.875	W	A
1	U 238	0.090	0.010	0.105	0.004	0.861	W	A
Matrix: SO		Bq/kg						
1	AM241	8.300	0.900	5.680	0.500	1.461	A	A
1	PU238	0.120	0.050	0.530	0.111	0.227	N	A
1	PU239	139.000	11.000	134.930	17.100	1.030	A	A
1	U 234	37.000	4.000	37.570	2.480	0.985	A	A
1	U 238	39.000	4.000	42.430	2.500	0.919	A	A
Matrix: VE		Bq/kg						
1	AM241	1.200	0.100	1.183	0.113	1.014	A	A
1	CM244	0.860	0.100	0.900	0.050	0.956	A	A
1	PU239	1.900	0.200	1.942	0.222	0.978	A	A
Matrix: WA		Bq/L						
1	AM241	0.990	0.090	0.837	0.028	1.183	A	A
1	CO 60	92.000	1.000	90.850	1.150	1.013	A	A
1	CS137	70.000	1.000	69.780	1.230	1.003	A	A
1	MN 54	21.200	0.040	20.850	0.310	1.017	A	A
1	PU238	1.080	0.120	1.291	0.063	0.837	W	A
1	PU239	0.700	0.080	0.850	0.050	0.823	W	A
1	U 234	0.520	0.050	0.540	0.020	0.963	A	A
1	U 238	0.510	0.050	0.550	0.025	0.928	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: CZ

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: SO		Bq/kg						
1	K 40	50.000	5.000	334.250	7.140	0.150	N	
1	U UG	2.100	0.100	3.426	0.200	0.613	A	
Matrix: WA		Bq/L						
1	H 3	9008.000	***.***	250.300	4.200	*.***	N	
1	U UG	47.400	0.000	0.044	0.001	*.***	N	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: DC Datachem Laboratories, Salt Lake City

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.155	0.041	0.152	0.013	1.020	A	W
1	CE144	19.800	7.510	15.700	1.000	1.261	N	
1	CO 57	14.400	2.920	10.810	1.000	1.332	N	A
1	CO 60	5.850	0.866	5.010	0.300	1.168	W	W
1	CS134	11.400	1.290	10.880	1.000	1.048	A	W
1	CS137	9.870	2.250	8.700	0.800	1.134	W	W
1	GA 1	0.881	0.175	0.960	0.050	0.918	A	N
1	GB 2	0.418	0.084	0.450	0.030	0.929	A	N
1	MN 54	8.970	2.260	7.620	0.600	1.177	W	A
1	PU238	0.100	0.033	0.100	0.006	0.998	A	A
1	PU239	0.133	0.038	0.119	0.006	1.120	A	
1	SB125	14.100	1.680	12.330	1.000	1.144	W	W
1	SR 90	1.310	0.194	1.450	0.149	0.903	A	
1	U 234	0.139	0.038	0.103	0.005	1.351	A	A
1	U 238	0.123	0.036	0.105	0.004	1.177	A	N
1	U UG	8.368	0.837	8.448	0.400	0.991	A	N
Matrix: SO		Bq/kg						
1	AM241	11.100	2.560	5.680	0.500	1.954	W	A
1	CO 60	1.520	0.552	1.060	0.120	1.434	W	A
1	CS137	1080.000	291.000	825.500	14.100	1.308	W	W
1	K 40	335.000	91.100	334.250	7.140	1.002	A	A
1	PU238	0.882	0.752	0.530	0.111	1.665	W	N
1	PU239	138.000	17.800	134.930	17.100	1.023	A	A
1	SR 90	37.500	5.950	40.310	0.420	0.930	A	A
1	U 234	45.000	6.930	37.570	2.480	1.198	W	A
1	U 238	40.400	6.350	42.430	2.500	0.952	A	A
1	U UG	2.980	0.447	3.426	0.200	0.870	A	A
Matrix: VE		Bq/kg						
1	AM241	1.170	0.258	1.183	0.113	0.989	A	A
1	CM244	0.958	0.225	0.900	0.050	1.064	A	W
1	CO 60	15.700	4.220	12.500	0.320	1.256	W	A
1	CS137	286.000	113.000	189.250	7.270	1.511	N	W
1	K 40	916.000	371.000	811.500	12.200	1.129	A	A
1	PU239	2.140	0.387	1.942	0.222	1.102	A	A
1	SR 90	381.000	30.800	361.000	43.300	1.055	A	A
Matrix: WA		Bq/L						
1	AM241	0.856	0.132	0.837	0.028	1.023	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: DC Datachem Laboratories, Salt Lake City

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	CO 60	95.300	14.600	90.850	1.150	1.049	A	A
1	CS137	73.800	15.200	69.780	1.230	1.058	A	W
1	GA 1	1231.000	242.000	1130.000	10.000	1.080	A	N
1	GB 2	605.000	119.000	744.000	10.000	0.810	A	N
1	H 3	436.000	70.000	250.300	4.200	1.742	W	A
1	MN 54	23.100	5.250	20.850	0.310	1.108	A	W
1	PU238	1.133	0.200	1.291	0.063	0.878	W	A
1	PU239	0.905	0.145	0.850	0.050	1.064	A	A
1	SR 90	22.000	3.240	23.200	1.350	0.948	A	A
1	U 234	0.646	0.109	0.540	0.020	1.196	A	A
1	U 238	0.554	0.097	0.550	0.025	1.008	A	W
1	U UG	0.040	0.004	0.044	0.001	0.905	A	N

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: DH Duke Engineering Services Hanford

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: SO		Bq/kg					
1	AM241	5.630	2.060	5.680	0.500	0.991	A
1	CS137	925.000	9.560	825.500	14.100	1.121	A
1	K 40	339.000	4.000	334.250	7.140	1.014	A
Matrix: WA		Bq/L					
1	CO 60	99.900	4.760	90.850	1.150	1.100	A
1	CS137	82.600	3.820	69.780	1.230	1.184	W
1	MN 54	24.100	2.840	20.850	0.310	1.156	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: DP Duke Power Company, Huntersville, NC

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: AI Bq/filter							
1	GA 1	1.100	0.030	0.960	0.050	1.146	A
1	GB 2	0.200	0.020	0.450	0.030	0.444	N
1		0.400	0.020	0.450	0.030	0.889	W
1		0.300	0.020	0.450	0.030	0.667	W
Matrix: WA Bq/L							
1	CO 60	107.500	0.700	90.850	1.150	1.183	N
1		102.500	2.300	90.850	1.150	1.128	A
1		101.600	1.000	90.850	1.150	1.118	A
1	CS134	21.810	0.290	20.550	0.310	1.061	A
1		22.390	1.050	20.550	0.310	1.090	A
1		23.620	0.500	20.550	0.310	1.149	A
1	CS137	75.920	0.750	69.780	1.230	1.088	A
1		77.200	0.510	69.780	1.230	1.106	A
1		75.350	1.700	69.780	1.230	1.080	A
1	GA 1	1045.500	17.990	1130.000	10.000	0.750	A
1		852.800	16.340	1130.000	10.000	0.750	W
1		1024.400	19.950	1130.000	10.000	0.750	A
1	GB 2	464.700	12.020	744.000	10.000	0.600	W
1		450.600	10.330	744.000	10.000	0.600	W
1		476.900	10.590	744.000	10.000	0.600	W
1	H 3	233.440	3.700	250.300	4.200	0.933	A
1		235.670	3.720	250.300	4.200	0.942	A
1		232.370	3.670	250.300	4.200	0.928	A
1	MN 54	24.080	0.560	20.850	0.310	1.155	A
1		24.470	1.420	20.850	0.310	1.174	W
1		24.060	0.400	20.850	0.310	1.154	A
1	SR 90	23.240	1.458	23.200	1.350	1.002	A
1		23.090	1.447	23.200	1.350	0.995	A
1		23.640	1.521	23.200	1.350	1.019	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: **EG** LMITCO/INEL, Scoville

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI Bq/filter								
1	AM241	0.135	0.016	0.152	0.013	0.888	A	
1	CE144	15.500	0.400	15.700	1.000	0.987	A	
1	CO 57	11.400	0.100	10.810	1.000	1.055	A	W
1	CO 60	5.400	0.100	5.010	0.300	1.078	A	W
1	CS134	11.700	0.200	10.880	1.000	1.075	A	W
1	CS137	9.000	0.200	8.700	0.800	1.034	A	A
1	GA 1	1.100	0.100	0.960	0.050	1.146	A	A
1	GB 2	0.700	0.100	0.450	0.030	1.556	W	A
1	MN 54	8.100	0.100	7.620	0.600	1.063	A	W
1	PU238	0.119	0.016	0.100	0.006	1.188	W	
1	PU239	0.145	0.020	0.119	0.006	1.221	W	
1	SB125	14.100	0.200	12.330	1.000	1.144	W	W
1	SR 90	1.600	0.050	1.450	0.149	1.103	A	
1	U UG	8.200	1.000	8.448	0.400	0.971	A	
Matrix: SO Bq/kg								
1	AM241	5.140	1.110	5.680	0.500	0.905	A	N
1	CS137	948.000	23.000	825.500	14.100	1.148	A	A
1	K 40	382.000	38.000	334.250	7.140	1.143	A	A
1	PU238	0.343	0.472	0.530	0.111	0.648	W	N
1	PU239	135.000	*** **	134.930	17.100	1.001	A	A
1	SR 90	0.071	0.008	40.310	0.420	0.002	N	A
1		71.000	8.000	40.310	0.420	1.761	W	A
1	U UG	0.064	0.013	3.426	0.200	0.019	N	
Matrix: VE Bq/kg								
1	AM241	1.430	0.260	1.183	0.113	1.208	A	A
1	CM244	0.800	0.170	0.900	0.050	0.889	A	A
1	CO 60	11.600	1.200	12.500	0.320	0.928	A	A
1	CS137	201.000	6.000	189.250	7.270	1.062	A	A
1	K 40	820.000	50.000	811.500	12.200	1.010	A	A
1	PU238	0.065	0.070	0.182	0.011	0.357	N	
1	PU239	1.880	0.390	1.942	0.222	0.968	A	A
1	SR 90	473.500	12.000	361.000	43.300	1.312	N	A
1		0.474	0.012	361.000	43.300	0.001	N	A
Matrix: WA Bq/L								
1	AM241	0.840	0.097	0.837	0.028	1.004	A	A
1	CO 60	96.000	2.000	90.850	1.150	1.057	A	A
1	CS134	23.000	1.000	20.550	0.310	1.119	A	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: **EG** LMITCO/INEL, Scoville

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	CS137	74.000	2.000	69.780	1.230	1.060	A	A
1	GA 1	1190.000	50.000	1130.000	10.000	1.050	A	
1	GB 2	750.000	20.000	744.000	10.000	1.000	A	
1	H 3	240.000	20.000	250.300	4.200	0.959	A	
1	MN 54	22.000	1.000	20.850	0.310	1.055	A	A
1	PU238	1.270	0.180	1.291	0.063	0.984	A	N
1	PU239	0.814	0.123	0.850	0.050	0.957	A	N
1	SR 90	22.700	0.600	23.200	1.350	0.978	A	A
1	U UG	0.044	0.009	0.044	0.001	0.991	A	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: EI Eichrom Industries, Inc., Argonne

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.180	0.010	0.152	0.013	1.184	A	A
1	GA 1	0.640	0.070	0.960	0.050	0.667	W	N
1	PU238	0.500	0.030	0.100	0.006	4.990	N	N
1	PU239	0.230	0.015	0.119	0.006	1.936	N	
1	SR 90	3.480	0.200	1.450	0.149	2.400	N	W
1	U 234	0.220	0.020	0.103	0.005	2.138	N	A
1	U 238	0.220	0.020	0.105	0.004	2.105	W	A
Matrix: SO		Bq/kg						
1	AM241	6.470	0.380	5.680	0.500	1.139	A	N
1	PU238	6.230	0.330	0.530	0.111	*.***	N	
1	PU239	106.300	4.940	134.930	17.100	0.788	W	
1	SR 90	35.490	2.550	40.310	0.420	0.880	A	W
1	U 234	35.730	1.940	37.570	2.480	0.951	A	
1	U 238	34.570	1.880	42.430	2.500	0.815	A	
Matrix: VE		Bq/kg						
1	AM241	2.330	0.210	1.183	0.113	1.969	W	A
1	CM244	1.100	0.140	0.900	0.050	1.222	A	A
1	PU239	0.910	0.057	1.942	0.222	0.469	N	A
1	SR 90	301.400	13.960	361.000	43.300	0.835	A	A
Matrix: WA		Bq/L						
1	AM241	0.950	0.060	0.837	0.028	1.136	A	A
1	GA 1	973.200	99.050	1130.000	10.000	0.860	A	A
1	H 3	423.100	22.350	250.300	4.200	1.690	W	
1	PU238	1.950	0.100	1.291	0.063	1.511	N	N
1	PU239	0.850	0.050	0.850	0.050	1.000	A	N
1	SR 90	25.460	1.240	23.200	1.350	1.097	A	A
1	U 234	0.840	0.050	0.540	0.020	1.556	N	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

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

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: SO		Bq/kg					
1	AM241	1.860	0.100	5.680	0.500	0.327	N
1	CO 60	1.110	0.100	1.060	0.120	1.047	A
1	CS137	893.600	11.800	825.500	14.100	1.082	A
1	K 40	621.200	110.300	334.250	7.140	1.858	N
Matrix: VE		Bq/kg					
1	AM241	1.500	0.100	1.183	0.113	1.268	A
1	CS137	299.200	9.300	189.250	7.270	1.581	N
Matrix: WA		Bq/L					
1	AM241	1.660	0.600	0.837	0.028	1.984	N
1	CO 60	92.400	2.400	90.850	1.150	1.017	A
1	CS134	18.700	0.700	20.550	0.310	0.910	A
1	CS137	72.700	1.400	69.780	1.230	1.042	A
1	H 3	438.300	56.400	250.300	4.200	1.751	W
1	MN 54	20.300	1.700	20.850	0.310	0.974	A
1	U BQ	1.170		1.105	0.050	1.059	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: EP US EPA, Las Vegas

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	CE144	21.010	3.960	15.700	1.000	1.338	N	
1	CO 57	14.810	1.780	10.810	1.000	1.370	N	N
1	CO 60	6.710	0.880	5.010	0.300	1.339	N	N
1	CS134	13.280	1.700	10.880	1.000	1.221	N	N
1	CS137	10.550	1.330	8.700	0.800	1.213	W	W
1	MN 54	10.310	1.340	7.620	0.600	1.353	N	N
1	PU238	0.110	0.014	0.100	0.006	1.098	A	A
1	PU239	0.125	0.015	0.119	0.006	1.052	A	A
1	SB125	17.210	2.280	12.330	1.000	1.396	N	W
Matrix: SO		Bq/kg						
1	PU239	128.000	11.600	134.930	17.100	0.949	A	A
Matrix: VE		Bq/kg						
1	PU239	2.020	0.249	1.942	0.222	1.040	A	A
Matrix: WA		Bq/L						
1	CO 60	109.330	13.910	90.850	1.150	1.203	N	N
1	CS137	83.310	10.730	69.780	1.230	1.194	W	N
1	H 3	258.270	8.830	250.300	4.200	1.032	A	A
1	MN 54	25.840	3.580	20.850	0.310	1.239	N	N
1	PU238	1.320	0.113	1.291	0.063	1.023	A	A
1	PU239	0.827	0.080	0.850	0.050	0.973	A	A
1	SR 90	22.230	0.901	23.200	1.350	0.958	A	A
1	U 234	0.629	0.072	0.540	0.020	1.165	A	A
1	U 238	0.615	0.075	0.550	0.025	1.119	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.150	0.030	0.152	0.013	0.987	A	A
1	CE144	14.540	1.460	15.700	1.000	0.926	A	
1	CO 57	10.570	1.170	10.810	1.000	0.978	A	A
1	CO 60	4.850	0.560	5.010	0.300	0.968	A	A
1	CS134	10.250	1.140	10.880	1.000	0.942	A	A
1	CS137	8.820	1.000	8.700	0.800	1.014	A	A
1	GA 1	1.060	0.200	0.960	0.050	1.104	A	A
1	GB 2	0.480	0.090	0.450	0.030	1.067	A	A
1	MN 54	7.780	0.800	7.620	0.600	1.021	A	A
1	PU238	0.110	0.020	0.100	0.006	1.098	A	W
1	PU239	0.130	0.030	0.119	0.006	1.094	A	
1	SB125	12.630	1.430	12.330	1.000	1.024	A	A
1	SR 90	1.310	0.410	1.450	0.149	0.903	A	W
1	U 234	0.120	0.020	0.103	0.005	1.166	A	
1	U 238	0.110	0.020	0.105	0.004	1.053	A	
1	U UG	9.100	0.910	8.448	0.400	1.077	A	A
Matrix: SO		Bq/kg						
1	AM241	4.010	0.940	5.680	0.500	0.706	W	A
1	CO 60	1.110	3.730	1.060	0.120	1.047	A	A
1	CS137	949.670	104.270	825.500	14.100	1.150	A	W
1	K 40	377.770	46.390	334.250	7.140	1.130	A	W
1	PU239	121.880	22.100	134.930	17.100	0.903	A	A
1	SR 90	29.480	19.230	40.310	0.420	0.731	A	A
1	U 234	33.690	6.240	37.570	2.480	0.897	A	
1	U 238	36.100	6.650	42.430	2.500	0.851	A	
1	U UG	3.350	0.340	3.426	0.200	0.978	A	A
Matrix: VE		Bq/kg						
1	AM241	1.060	0.330	1.183	0.113	0.896	A	A
1	CM244	0.480	0.220	0.900	0.050	0.533	W	A
1	CO 60	14.360	1.880	12.500	0.320	1.149	A	W
1	CS137	221.630	24.550	189.250	7.270	1.171	A	W
1	K 40	973.100	110.870	811.500	12.200	1.199	A	W
1	PU239	2.110	0.370	1.942	0.222	1.087	A	W
1	SR 90	354.090	78.260	361.000	43.300	0.981	A	W
Matrix: WA		Bq/L						
1	AM241	0.610	0.110	0.837	0.028	0.729	W	A
1	CO 60	94.350	10.430	90.850	1.150	1.039	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	CS137	78.810	8.760	69.780	1.230	1.129	A	A
1	GA 1	1123.780	177.300	1130.000	10.000	0.990	A	A
1	GB 2	547.110	81.940	744.000	10.000	0.730	A	A
1	H 3	160.560	31.050	250.300	4.200	0.641	W	N
1	MN 54	22.770	2.690	20.850	0.310	1.092	A	A
1	PU238	1.290	0.240	1.291	0.063	0.999	A	A
1	PU239	0.830	0.160	0.850	0.050	0.976	A	A
1	SR 90	22.860	6.280	23.200	1.350	0.985	A	N
1	U 234	0.600	0.110	0.540	0.020	1.111	A	
1	U 238	0.570	0.110	0.550	0.025	1.037	A	
1	U UG	0.048	0.005	0.044	0.001	1.081	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: FG FGL Environmental, Santa Paula, CA

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.150	0.040	0.152	0.013	0.987	A	
1	CE144	12.100	0.200	15.700	1.000	0.771	A	
1	CO 57	11.300	0.420	10.810	1.000	1.045	A	N
1	CO 60	5.040	0.400	5.010	0.300	1.006	A	W
1	CS134	12.300	0.880	10.880	1.000	1.131	W	W
1	CS137	10.700	0.100	8.700	0.800	1.230	W	W
1	GA 1	1.140	0.100	0.960	0.050	1.188	A	N
1	GB 2	0.100	0.080	0.450	0.030	0.222	N	A
1	MN 54	10.180	0.150	7.620	0.600	1.336	N	W
1	SB125	15.800	0.600	12.330	1.000	1.281	W	W
Matrix: SO		Bq/kg						
1	AM241	6.480	1.500	5.680	0.500	1.141	A	A
1	CO 60	0.970	0.400	1.060	0.120	0.915	A	A
1	CS137	1168.000	152.000	825.500	14.100	1.415	N	A
1	K 40	386.000	67.000	334.250	7.140	1.155	A	W
Matrix: WA		Bq/L						
1	AM241	0.470	0.010	0.837	0.028	0.562	N	A
1	CO 60	78.030	0.013	90.850	1.150	0.859	W	A
1	CS134	18.970	0.011	20.550	0.310	0.923	A	
1	CS137	57.700	0.011	69.780	1.230	0.827	W	A
1	GA 1	1050.000	114.000	1130.000	10.000	0.920	A	A
1	GB 2	419.000	32.000	744.000	10.000	0.560	W	A
1	H 3	314.000	14.000	250.300	4.200	1.254	W	A
1	MN 54	16.990	0.012	20.850	0.310	0.815	W	N
1	PU238	1.379	0.053	1.291	0.063	1.068	A	A
1	PU239	0.852	0.042	0.850	0.050	1.002	A	A
1	U BQ	1.290	0.026	1.105	0.050	1.167	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	1.000	0.050	0.152	0.013	6.579	N	A
1	CE144	18.200	0.200	15.700	1.000	1.159	W	
1	CO 57	12.660	0.060	10.810	1.000	1.171	W	N
1	CO 60	5.950	0.090	5.010	0.300	1.188	W	W
1	CS134	11.160	0.090	10.880	1.000	1.026	A	W
1	CS137	10.500	0.100	8.700	0.800	1.207	W	W
1	GA 1	0.960	0.020	0.960	0.050	1.000	A	N
1	GB 2	0.590	0.010	0.450	0.030	1.311	A	A
1	MN 54	9.800	0.100	7.620	0.600	1.286	W	N
1	PU238	0.065	0.004	0.100	0.006	0.649	W	A
1	PU239	0.083	0.004	0.119	0.006	0.699	W	
1	SB125	12.800	0.500	12.330	1.000	1.038	A	W
1	U 238	0.800	0.200	0.105	0.004	7.656	N	
Matrix: SO		Bq/kg						
1	AM241	5.000	0.500	5.680	0.500	0.880	A	A
1	CS137	841.000	2.000	825.500	14.100	1.019	A	A
1	K 40	341.000	6.000	334.250	7.140	1.020	A	A
1	PU238	0.238	0.240	0.530	0.111	0.449	W	W
1	PU239	147.374	4.190	134.930	17.100	1.092	A	A
1	U 238	34.700	3.700	42.430	2.500	0.818	A	
Matrix: VE		Bq/kg						
1	AM241	2.300	0.500	1.183	0.113	1.944	W	A
1	CO 60	14.500	0.600	12.500	0.320	1.160	A	A
1	CS137	219.000	1.000	189.250	7.270	1.157	A	W
1	K 40	953.000	13.000	811.500	12.200	1.174	A	A
Matrix: WA		Bq/L						
1	CO 60	97.600	0.800	90.850	1.150	1.074	A	W
1	CS134	22.500	0.400	20.550	0.310	1.095	A	
1	CS137	79.400	0.800	69.780	1.230	1.138	A	W
1	GA 1	1332.000	19.000	1130.000	10.000	1.170	A	W
1	GB 2	643.000	9.000	744.000	10.000	0.860	A	A
1	H 3	228.000	2.000	250.300	4.200	0.911	A	A
1	MN 54	24.300	0.300	20.850	0.310	1.165	W	W
1	PU238	1.310	0.021	1.291	0.063	1.015	A	W
1	PU239	0.815	0.014	0.850	0.050	0.959	A	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	CE144	14.530	0.330	15.700	1.000	0.925	A	
1	CO 57	10.630	0.160	10.810	1.000	0.983	A	A
1	CO 60	5.200	0.070	5.010	0.300	1.038	A	W
1	CS134	11.070	0.160	10.880	1.000	1.017	A	A
1	CS137	9.250	1.570	8.700	0.800	1.063	A	A
1	MN 54	8.580	0.130	7.620	0.600	1.126	W	W
1	SB125	12.800	0.200	12.330	1.000	1.038	A	A
Matrix: WA		Bq/L						
1	CO 60	97.570	1.000	90.850	1.150	1.074	A	W
1	CS134	23.170	0.480	20.550	0.310	1.127	A	
1	CS137	79.900	0.920	69.780	1.230	1.145	A	W
1	MN 54	23.030	0.460	20.850	0.310	1.105	A	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: FN Fermi Lab, Batavia, IL

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	CE144	16.800	1.200	15.700	1.000	1.070	A	
1	CO 57	10.500	0.800	10.810	1.000	0.971	A	W
1	CO 60	5.000	0.370	5.010	0.300	0.998	A	W
1	CS134	11.600	0.700	10.880	1.000	1.066	A	W
1	CS137	8.390	0.850	8.700	0.800	0.964	A	W
1	MN 54	6.860	0.690	7.620	0.600	0.900	A	W
1	SB125	13.600	0.700	12.330	1.000	1.103	A	W
Matrix: SO		Bq/kg						
1	AM241	7.660	1.110	5.680	0.500	1.349	A	A
1	CS137	879.000	88.000	825.500	14.100	1.065	A	A
1	K 40	348.000	36.000	334.250	7.140	1.041	A	A
1	U 238	29.500	1.800	42.430	2.500	0.695	A	A
Matrix: VE		Bq/kg						
1	CO 60	14.100	1.000	12.500	0.320	1.128	A	A
1	CS137	193.000	19.000	189.250	7.270	1.020	A	A
1	K 40	883.000	90.000	811.500	12.200	1.088	A	A
Matrix: WA		Bq/L						
1	CO 60	96.700	6.900	90.850	1.150	1.064	A	A
1	CS134	22.700	1.400	20.550	0.310	1.105	A	
1	CS137	76.000	7.600	69.780	1.230	1.089	A	A
1	H 3	269.000	12.000	250.300	4.200	1.075	A	A
1	MN 54	21.000	2.100	20.850	0.310	1.007	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: FR Service Mixte de Surveillance Radiologique et Biologique (SMSRB), France

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: AI Bq/filter							
1	AM241	0.200	0.042	0.152	0.013	1.316	A
1	CE144	16.900	2.500	15.700	1.000	1.076	A
1	CO 57	10.900	2.000	10.810	1.000	1.008	A
1	CO 60	5.350	0.540	5.010	0.300	1.068	A
1	CS134	10.700	2.100	10.880	1.000	0.983	A
1	CS137	9.500	1.000	8.700	0.800	1.092	A
1	MN 54	8.300	1.000	7.620	0.600	1.089	A
1	SB125	11.100	1.700	12.330	1.000	0.900	A
Matrix: SO Bq/kg							
1	AM241	5.400	1.400	5.680	0.500	0.951	A
1	CO 60	0.830	0.480	1.060	0.120	0.783	N
1	CS137	830.000	85.000	825.500	14.100	1.005	A
1	K 40	318.000	32.000	334.250	7.140	0.951	A
1	PU238	1.800	0.450	0.530	0.111	3.399	N
1	PU239	117.000	12.000	134.930	17.100	0.867	W
Matrix: VE Bq/kg							
1	AM241	1.050	0.310	1.183	0.113	0.887	A
1	CO 60	13.700	1.400	12.500	0.320	1.096	A
1	CS137	210.000	25.000	189.250	7.270	1.110	A
1	K 40	887.000	89.000	811.500	12.200	1.093	A
1	PU239	1.660	0.320	1.942	0.222	0.855	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: FS Florida State University, Tallahassee

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: SO		Bq/kg						
1	AM241	6.400	0.900	5.680	0.500	1.127	A	A
1	CS137	802.000	5.000	825.500	14.100	0.972	A	A
1	K 40	325.000	14.000	334.250	7.140	0.972	A	A
1	PU238	0.440	0.100	0.530	0.111	0.831	A	A
1	PU239	129.000	3.000	134.930	17.100	0.956	A	A
1	U 234	37.300	1.600	37.570	2.480	0.993	A	A
1	U 238	39.500	1.700	42.430	2.500	0.931	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

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

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI Bq/filter								
1	AM241	0.170	0.021	0.152	0.013	1.118	A	A
1	CE144	14.000	2.800	15.700	1.000	0.892	A	
1	CO 57	11.000	0.790	10.810	1.000	1.018	A	A
1	CO 60	5.300	0.450	5.010	0.300	1.058	A	A
1	CS134	11.000	1.600	10.880	1.000	1.011	A	A
1	CS137	8.800	0.590	8.700	0.800	1.011	A	A
1	MN 54	7.700	0.990	7.620	0.600	1.010	A	A
1	PU238	0.120	0.022	0.100	0.006	1.198	W	A
1	PU239	0.150	0.034	0.119	0.006	1.263	W	A
1	SB125	12.000	3.700	12.330	1.000	0.973	A	A
1	SR 90	1.900	0.110	1.450	0.149	1.310	A	
1	U 234	0.130	0.012	0.103	0.005	1.263	A	A
1	U 238	0.130	0.015	0.105	0.004	1.244	A	A
Matrix: SO Bq/kg								
1	AM241	5.000	0.760	5.680	0.500	0.880	A	A
1	CO 60	2.900	2.100	1.060	0.120	2.736	N	
1	CS137	914.000	40.000	825.500	14.100	1.107	A	A
1	K 40	312.000	70.000	334.250	7.140	0.933	A	W
1	PU239	151.000	13.000	134.930	17.100	1.119	A	A
1	U 234	48.000	4.000	37.570	2.480	1.278	W	W
1	U 238	46.000	5.100	42.430	2.500	1.084	A	A
1	U UG	3.600	0.000	3.426	0.200	1.051	A	A
Matrix: VE Bq/kg								
1	AM241	1.200	0.330	1.183	0.113	1.014	A	A
1	CM244	0.850	0.250	0.900	0.050	0.944	A	A
1	CO 60	17.000	4.500	12.500	0.320	1.360	W	
1	CS137	210.000	11.000	189.250	7.270	1.110	A	A
1	K 40	909.000	104.000	811.500	12.200	1.120	A	W
1	PU239	2.200	0.150	1.942	0.222	1.133	A	A
Matrix: WA Bq/L								
1	AM241	0.920	0.110	0.837	0.028	1.100	A	A
1	CO 60	98.000	3.600	90.850	1.150	1.079	A	A
1	CS137	77.000	13.000	69.780	1.230	1.103	A	A
1	MN 54	23.000	3.200	20.850	0.310	1.103	A	A
1	PU238	1.400	0.080	1.291	0.063	1.085	A	W
1	PU239	0.810	0.110	0.850	0.050	0.953	A	A
1	SR 90	21.000	0.900	23.200	1.350	0.905	A	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: GA Lockheed Martin, Pikton, OH

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	U 234	0.620	0.035	0.540	0.020	1.148	A	A
1	U 238	0.580	0.020	0.550	0.025	1.056	A	A
1	U UG	0.047	0.001	0.044	0.001	1.059	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

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

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.148	0.035	0.152	0.013	0.974	A	A
1	CE144	14.140	2.330	15.700	1.000	0.901	A	
1	CO 57	10.270	0.890	10.810	1.000	0.950	A	W
1	CO 60	4.690	0.490	5.010	0.300	0.936	A	W
1	CS134	10.790	1.520	10.880	1.000	0.992	A	A
1	CS137	8.570	1.320	8.700	0.800	0.985	A	A
1	GA 1	1.010	0.020	0.960	0.050	1.052	A	A
1	GB 2	0.459	0.012	0.450	0.030	1.020	A	A
1	MN 54	7.590	0.990	7.620	0.600	0.996	A	W
1	PU238	0.098	0.019	0.100	0.006	0.978	A	A
1	PU239	0.118	0.021	0.119	0.006	0.993	A	
1	SB125	13.220	1.430	12.330	1.000	1.072	A	A
1	SR 90	1.520	0.070	1.450	0.149	1.048	A	A
1	U 234	0.098	0.021	0.103	0.005	0.952	A	A
1	U 238	0.103	0.026	0.105	0.004	0.986	A	A
1	U UG	9.650	0.130	8.448	0.400	1.142	A	A
Matrix: SO		Bq/kg						
1	AM241	5.880	1.020	5.680	0.500	1.035	A	A
1	CO 60	0.868	0.706	1.060	0.120	0.819	W	A
1	CS137	885.400	79.290	825.500	14.100	1.073	A	A
1	K 40	368.890	40.550	334.250	7.140	1.104	A	W
1	PU239	135.050	15.280	134.930	17.100	1.001	A	N
1	SR 90	30.340	1.220	40.310	0.420	0.753	A	A
1	U 234	39.590	4.770	37.570	2.480	1.054	A	A
1	U 238	40.700	7.700	42.430	2.500	0.959	A	A
1	U UG	3.700	0.040	3.426	0.200	1.080	A	
Matrix: VE		Bq/kg						
1	AM241	1.210	0.380	1.183	0.113	1.023	A	A
1	CM244	0.977	0.339	0.900	0.050	1.086	A	A
1	CO 60	15.620	2.350	12.500	0.320	1.250	W	A
1	CS137	236.060	21.430	189.250	7.270	1.247	A	A
1	K 40	1098.530	116.880	811.500	12.200	1.354	W	W
1	PU239	2.110	0.300	1.942	0.222	1.087	A	A
1	SR 90	421.800	4.810	361.000	43.300	1.168	W	A
Matrix: WA		Bq/L						
1	AM241	0.807	0.068	0.837	0.028	0.965	A	N
1	CO 60	95.870	9.130	90.850	1.150	1.055	A	N

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

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

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	CS137	78.810	12.030	69.780	1.230	1.129	A	W
1	FE 55	225.480	25.290	235.000	20.000	0.957	A	W
1	GA 1	1298.520	24.990	1130.000	10.000	1.140	A	A
1	GB 2	611.770	14.190	744.000	10.000	0.820	A	A
1	H 3	275.650	21.460	250.300	4.200	1.101	A	W
1	MN 54	23.410	3.040	20.850	0.310	1.123	A	N
1	PU238	1.290	0.100	1.291	0.063	0.999	A	N
1	PU239	0.759	0.066	0.850	0.050	0.893	W	N
1	SR 90	22.320	0.280	23.200	1.350	0.962	A	W
1	U 234	0.603	0.070	0.540	0.020	1.117	A	N
1	U 238	0.603	0.110	0.550	0.025	1.097	A	N
1	U UG	0.051	0.002	0.044	0.001	1.144	A	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: GP GPU Nuclear, Inc., Harrisburg, PA

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: AI		Bq/filter					
1	AM241	0.160	0.020	0.152	0.013	1.053	A
1	CE144	15.000	3.000	15.700	1.000	0.955	A
1	CO 57	11.000	2.000	10.810	1.000	1.018	A
1	CO 60	5.500	1.400	5.010	0.300	1.098	A
1	CS134	11.000	2.000	10.880	1.000	1.011	A
1	CS137	8.200	1.600	8.700	0.800	0.943	A
1	GA 1	1.000	0.100	0.960	0.050	1.042	A
1	GB 2	0.610	0.070	0.450	0.030	1.356	A
1	MN 54	7.600	1.600	7.620	0.600	0.997	A
1	PU238	0.092	0.009	0.100	0.006	0.918	A
1	PU239	0.120	0.010	0.119	0.006	1.010	A
1	SB125	11.000	3.000	12.330	1.000	0.892	A
1	SR 90	1.300	0.300	1.450	0.149	0.897	A
1	U 234	0.110	0.010	0.103	0.005	1.069	A
1	U 238	0.100	0.010	0.105	0.004	0.957	A
1	U BQ	0.210		0.211	0.008	0.994	A
Matrix: SO		Bq/kg					
1	AM241	8.900	2.000	5.680	0.500	1.567	W
1	CM244	1.100	0.600	0.233	0.020	4.721	N
1	CS137	980.000	200.000	825.500	14.100	1.187	A
1	K 40	400.000	80.000	334.250	7.140	1.197	A
1	PU238	0.780	0.540	0.530	0.111	1.473	W
1	PU239	130.000	10.000	134.930	17.100	0.963	A
1	SR 90	31.000	6.000	40.310	0.420	0.769	A
1	U 234	40.000	6.000	37.570	2.480	1.065	A
1	U 238	41.000	6.000	42.430	2.500	0.966	A
1	U BQ	83.100		81.270	4.830	1.023	A
Matrix: VE		Bq/kg					
1	AM241	1.300	0.200	1.183	0.113	1.099	A
1	CM244	0.990	0.160	0.900	0.050	1.100	A
1	CO 60	16.000	5.000	12.500	0.320	1.280	W
1	CS137	210.000	30.000	189.250	7.270	1.110	A
1	K 40	920.000	160.000	811.500	12.200	1.134	A
1	PU238	0.160	0.040	0.182	0.011	0.878	A
1	PU239	1.900	0.200	1.942	0.222	0.978	A
1	SR 90	380.000	80.000	361.000	43.300	1.053	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: GP GPU Nuclear, Inc., Harrisburg, PA

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: WA		Bq/L					
1	AM241	0.890	0.140	0.837	0.028	1.064	A
1	CO 60	99.000	17.000	90.850	1.150	1.090	A
1	CS134	22.000	3.000	20.550	0.310	1.071	A
1	CS137	80.000	14.000	69.780	1.230	1.146	A
1	FE 55	220.000	40.000	235.000	20.000	0.936	A
1	GA 1	1200.000	200.000	1130.000	10.000	1.060	A
1	GB 2	610.000	100.000	744.000	10.000	0.810	A
1	H 3	270.000	30.000	250.300	4.200	1.079	A
1	MN 54	24.000	4.000	20.850	0.310	1.151	A
1	PU238	1.300	0.100	1.291	0.063	1.007	A
1	PU239	0.850	0.160	0.850	0.050	1.000	A
1	SR 90	20.000	3.000	23.200	1.350	0.862	W
1	U 234	0.610	0.140	0.540	0.020	1.130	A
1	U 238	0.620	0.140	0.550	0.025	1.128	A
1	U BQ	1.300		1.105	0.050	1.176	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: GS USGS/NWQL, Arvada, CO

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	GA 1	1232.000	84.700	1130.000	10.000	1.090	A	A
1	GB 2	508.600	51.400	744.000	10.000	0.680	W	A
1	U UG	0.045	0.001	0.044	0.001	1.014	A	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: GT Georgia Institute of Technology

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.200	0.080	0.152	0.013	1.316	A	
1	CE144	14.700	5.600	15.700	1.000	0.936	A	
1	CO 57	10.480	2.300	10.810	1.000	0.969	A	
1	CO 60	5.200	0.500	5.010	0.300	1.038	A	
1	CS134	8.600	1.000	10.880	1.000	0.790	W	
1	CS137	8.500	2.600	8.700	0.800	0.977	A	
1	GA 1	1.400	0.100	0.960	0.050	1.458	W	
1	GB 2	0.700	0.100	0.450	0.030	1.556	W	
1	MN 54	8.150	2.000	7.620	0.600	1.070	A	
1	PU238	0.100	0.020	0.100	0.006	0.998	A	
1	PU239	0.120	0.030	0.119	0.006	1.010	A	
1	SB125	11.600	1.000	12.330	1.000	0.941	A	
1	SR 90	1.500	0.100	1.450	0.149	1.034	A	
1	U 234	0.100	0.020	0.103	0.005	0.972	A	
1	U 238	0.110	0.020	0.105	0.004	1.053	A	
1	U UG	9.300	3.600	8.448	0.400	1.101	A	
Matrix: SO		Bq/kg						
1	AM241	9.300	2.300	5.680	0.500	1.637	W	
1	CO 60	1.500	0.700	1.060	0.120	1.415	W	
1	CS137	1040.000	11.000	825.500	14.100	1.260	W	
1	K 40	381.000	22.000	334.250	7.140	1.140	A	
1	PU238	0.800	0.400	0.530	0.111	1.511	W	
1	PU239	146.000	29.000	134.930	17.100	1.082	A	
1	SR 90	46.700	26.000	40.310	0.420	1.159	A	
1	U 234	38.600	8.900	37.570	2.480	1.027	A	
1	U 238	42.600	10.000	42.430	2.500	1.004	A	
1	U UG	3.500	0.800	3.426	0.200	1.022	A	
Matrix: VE		Bq/kg						
1	CO 60	13.900	5.600	12.500	0.320	1.112	A	
1	CS137	211.000	46.000	189.250	7.270	1.115	A	
1	K 40	930.000	197.000	811.500	12.200	1.146	A	
1	SR 90	356.000	26.000	361.000	43.300	0.986	A	
Matrix: WA		Bq/L						
1	CO 60	97.000	10.700	90.850	1.150	1.068	A	
1	CS134	20.600	2.500	20.550	0.310	1.002	A	
1	CS137	76.700	16.200	69.780	1.230	1.099	A	
1	GA 1	1164.000	74.000	1130.000	10.000	1.030	A	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: GT Georgia Institute of Technology

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	GB 2	718.000	74.000	744.000	10.000	0.960	A	
1	H 3	250.000	10.000	250.300	4.200	0.999	A	
1	MN 54	23.000	5.200	20.850	0.310	1.103	A	
1	PU238	1.500	0.300	1.291	0.063	1.162	W	
1	PU239	0.900	0.200	0.850	0.050	1.059	A	
1	SR 90	21.500	0.300	23.200	1.350	0.927	A	
1	U 234	0.600	0.140	0.540	0.020	1.111	A	
1	U 238	0.600	0.130	0.550	0.025	1.092	A	
1	U UG	0.050	0.010	0.044	0.001	1.126	A	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: HC Lawrence Livermore Laboratory, California

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	GA 1	0.894	0.063	0.960	0.050	0.931	A	W
1	GB 2	0.396	0.032	0.450	0.030	0.880	W	A
Matrix: WA		Bq/L						
1	GA 1	1132.000	90.000	1130.000	10.000	1.000	A	A
1	GB 2	564.000	45.000	744.000	10.000	0.750	A	A
1	H 3	247.000	20.000	250.300	4.200	0.987	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: IA Bhabha Atomic Research Centre, India

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: SO Bq/kg							
1	CO 60	0.910	0.300	1.060	0.120	0.858	W
1		1.220	0.320	1.060	0.120	1.151	A
1		1.120	0.320	1.060	0.120	1.057	A
1	CS137	843.000	4.000	825.500	14.100	1.021	A
1		804.000	3.000	825.500	14.100	0.974	A
1		828.000	3.000	825.500	14.100	1.003	A
1	K 40	306.000	15.000	334.250	7.140	0.915	A
1		317.000	15.000	334.250	7.140	0.948	A
1		310.000	19.000	334.250	7.140	0.927	A
1	PU239	14.900	6.100	134.930	17.100	0.110	N
1		39.200	11.700	134.930	17.100	0.291	N
1		30.100	5.600	134.930	17.100	0.223	N
1	SR 90	27.800	1.100	40.310	0.420	0.690	W
1		30.300	5.100	40.310	0.420	0.752	A
1		16.700	0.760	40.310	0.420	0.414	N
1	U UG	3.000	0.500	3.426	0.200	0.876	A
1		2.700	0.500	3.426	0.200	0.788	A
1		3.300	0.600	3.426	0.200	0.963	A
Matrix: VE Bq/kg							
1	CO 60	14.400	0.600	12.500	0.320	1.152	A
1		14.000	0.600	12.500	0.320	1.120	A
1		13.700	0.600	12.500	0.320	1.096	A
1	CS137	221.000	2.000	189.250	7.270	1.168	A
1		227.000	2.000	189.250	7.270	1.199	A
1		213.000	1.000	189.250	7.270	1.125	A
1	K 40	929.000	49.000	811.500	12.200	1.145	A
1		924.000	48.000	811.500	12.200	1.139	A
1		923.000	48.000	811.500	12.200	1.137	A
1	PU239	0.047	0.017	1.942	0.222	0.024	N
1		0.029		1.942	0.222	0.015	N
1		0.049	0.017	1.942	0.222	0.025	N
1	SR 90	311.300	25.100	361.000	43.300	0.862	A
1		317.000	48.800	361.000	43.300	0.878	A
1		355.900	81.800	361.000	43.300	0.986	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	CE144	11.767	0.600	15.700	1.000	0.749	A	
1	CO 57	8.300	0.492	10.810	1.000	0.768	A	A
1	CO 60	5.267	0.796	5.010	0.300	1.051	A	W
1	CS134	12.800	0.883	10.880	1.000	1.176	W	W
1	CS137	9.167	0.594	8.700	0.800	1.054	A	W
1	GA 1	1.133	0.081	0.960	0.050	1.180	A	N
1	GB 2	0.467	0.063	0.450	0.030	1.038	A	A
1	MN 54	7.400	0.899	7.620	0.600	0.971	A	A
1	PU238	0.122	0.024	0.100	0.006	1.218	W	A
1	PU239	0.134	0.043	0.119	0.006	1.128	A	
1	SB125	15.467	1.364	12.330	1.000	1.254	W	A
1	U BQ	0.204	0.010	0.211	0.008	0.966	A	A
Matrix: SO		Bq/kg						
1	AM241	5.633	1.524	5.680	0.500	0.992	A	A
1	CS137	953.333	47.932	825.500	14.100	1.155	A	A
1	K 40	378.667	14.640	334.250	7.140	1.133	A	A
1	PU238	1.550	0.550	0.530	0.111	2.927	N	A
1	PU239	114.960	15.417	134.930	17.100	0.852	W	W
1	SR 90	66.067	6.718	40.310	0.420	1.639	A	A
1	U BQ	75.333	4.216	81.270	4.830	0.927	A	A
Matrix: VE		Bq/kg						
1	AM241	2.617	0.270	1.183	0.113	2.212	W	
1	CO 60	12.700	1.638	12.500	0.320	1.016	A	A
1	CS137	234.667	11.859	189.250	7.270	1.240	A	A
1	K 40	914.700	55.852	811.500	12.200	1.127	A	A
1	PU239	2.560	0.283	1.942	0.222	1.318	A	A
1	SR 90	391.200	20.896	361.000	43.300	1.084	A	A
Matrix: WA		Bq/L						
1	CO 60	99.100	4.986	90.850	1.150	1.091	A	A
1	CS137	84.133	4.646	69.780	1.230	1.206	W	A
1	H 3	262.733	15.998	250.300	4.200	1.050	A	A
1	MN 54	19.100	1.132	20.850	0.310	0.916	A	A
1	PU238	1.420	0.188	1.291	0.063	1.100	A	A
1	PU239	0.890	0.071	0.850	0.050	1.047	A	A
1	SR 90	27.800	1.836	23.200	1.350	1.198	A	A
1	U BQ	1.191	0.062	1.105	0.050	1.078	A	N

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: **IE** IEA, Inc., Morrisville, NC

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.130	0.013	0.152	0.013	0.855	A	A
1	CE144	13.130	4.390	15.700	1.000	0.836	A	A
1	CO 57	9.260	2.060	10.810	1.000	0.857	A	A
1	CO 60	4.480	0.550	5.010	0.300	0.894	A	A
1	CS134	9.250	0.660	10.880	1.000	0.850	A	A
1	CS137	7.660	0.386	8.700	0.800	0.880	A	A
1	MN 54	6.690	0.690	7.620	0.600	0.878	A	A
1	PU238	0.104	0.022	0.100	0.006	1.038	A	A
1	PU239	0.123	0.006	0.119	0.006	1.035	A	A
1	SB125	10.460	1.438	12.330	1.000	0.848	A	A
1	SR 90	1.200	0.410	1.450	0.149	0.828	W	A
1	U 234	0.100	0.004	0.103	0.005	0.972	A	A
1	U 238	0.098	0.003	0.105	0.004	0.938	A	A
1	U UG	7.930	0.220	8.448	0.400	0.939	A	A
Matrix: SO		Bq/kg						
1	AM241	5.740	2.200	5.680	0.500	1.011	A	A
1	CS137	901.830	22.370	825.500	14.100	1.092	A	A
1	K 40	321.010	16.710	334.250	7.140	0.960	A	A
1	PU238	0.520	0.230	0.530	0.111	0.982	A	A
1	PU239	141.040	40.000	134.930	17.100	1.045	A	A
1	SR 90	39.710	10.000	40.310	0.420	0.985	A	A
1	U 234	38.730	2.900	37.570	2.480	1.031	A	A
1	U 238	40.480	0.840	42.430	2.500	0.954	A	A
1	U UG	3.280	0.070	3.426	0.200	0.957	A	A
Matrix: VE		Bq/kg						
1	AM241	1.150	0.300	1.183	0.113	0.972	A	A
1	CM244	0.940	0.120	0.900	0.050	1.044	A	A
1	CO 60	17.750	0.540	12.500	0.320	1.420	N	A
1	CS137	266.930	22.620	189.250	7.270	1.410	W	A
1	K 40	1073.280	39.830	811.500	12.200	1.323	W	A
1	PU239	2.010	0.100	1.942	0.222	1.035	A	A
1	SR 90	389.360	2.800	361.000	43.300	1.079	A	A
Matrix: WA		Bq/L						
1	AM241	0.800	0.030	0.837	0.028	0.956	A	A
1	CO 60	95.300	6.970	90.850	1.150	1.049	A	A
1	CS134	21.100	0.600	20.550	0.310	1.027	A	A
1	CS137	74.600	3.700	69.780	1.230	1.069	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: IE IEA, Inc., Morrisville, NC

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	GA 1	1236.780	30.090	1130.000	10.000	1.090	A	A
1	GB 2	411.180	10.260	744.000	10.000	0.550	W	A
1	H 3	259.920	10.000	250.300	4.200	1.038	A	W
1	MN 54	22.430	2.420	20.850	0.310	1.076	A	A
1	PU238	1.290	0.060	1.291	0.063	0.999	A	A
1	PU239	0.900	0.150	0.850	0.050	1.059	A	A
1	SR 90	24.120	2.000	23.200	1.350	1.040	A	A
1	U 234	0.620	0.050	0.540	0.020	1.148	A	A
1	U 238	0.570	0.090	0.550	0.025	1.037	A	A
1	U UG	0.046	0.007	0.044	0.001	1.036	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	CE144	11.000	0.500	15.700	1.000	0.701	A	
1	CO 57	9.000	0.100	10.810	1.000	0.833	A	W
1	CO 60	4.900	0.700	5.010	0.300	0.978	A	A
1	CS134	10.300	0.100	10.880	1.000	0.947	A	W
1	CS137	6.800	0.100	8.700	0.800	0.782	W	A
1	GA 1	1.290	0.030	0.960	0.050	1.344	W	N
1	GB 2	0.550	0.020	0.450	0.030	1.222	A	A
1	MN 54	6.200	0.300	7.620	0.600	0.814	W	A
1	SB125	10.600	0.200	12.330	1.000	0.860	A	A
Matrix: SO		Bq/kg						
1	CO 60	0.500	0.200	1.060	0.120	0.472	N	W
1	CS137	619.600	13.500	825.500	14.100	0.751	N	A
1	K 40	473.600	13.500	334.250	7.140	1.417	W	N
Matrix: VE		Bq/kg						
1	CO 60	17.000	0.800	12.500	0.320	1.360	W	A
1	CS137	233.300	5.000	189.250	7.270	1.233	A	A
1	K 40	916.400	38.300	811.500	12.200	1.129	A	N
Matrix: WA		Bq/L						
1	CO 60	93.000	1.800	90.850	1.150	1.024	A	A
1	CS137	72.800	1.800	69.780	1.230	1.043	A	A
1	FE 55	21.500	0.600	235.000	20.000	0.091	N	
1	GA 1	1231.900	37.800	1130.000	10.000	1.090	A	
1	GB 2	551.700	23.400	744.000	10.000	0.740	A	
1	MN 54	6.200	1.400	20.850	0.310	0.297	N	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: IN Lockheed Martin Idaho Technical Corp., Analytical Laboratory

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	CE144	15.100	0.900	15.700	1.000	0.962	A	
1	CO 57	10.800	0.500	10.810	1.000	0.999	A	A
1	CO 60	4.800	0.600	5.010	0.300	0.958	A	A
1	CS134	11.300	0.200	10.880	1.000	1.039	A	A
1	CS137	7.900	0.200	8.700	0.800	0.908	A	A
1	MN 54	7.500	0.100	7.620	0.600	0.984	A	A
1	SB125	13.200	0.400	12.330	1.000	1.071	A	A
Matrix: SO		Bq/kg						
1	AM241	5.180	0.690	5.680	0.500	0.912	A	A
1	CS137	966.500	19.300	825.500	14.100	1.171	A	A
1	K 40	422.300	11.900	334.250	7.140	1.263	A	A
1	PU238	0.540	0.220	0.530	0.111	1.020	A	A
1	PU239	136.000	10.900	134.930	17.100	1.008	A	A
Matrix: VE		Bq/kg						
1	CO 60	13.400	0.700	12.500	0.320	1.072	A	W
1	CS137	204.300	1.900	189.250	7.270	1.080	A	A
1	K 40	914.000	34.000	811.500	12.200	1.126	A	W
Matrix: WA		Bq/L						
1	AM241	0.980	0.090	0.837	0.028	1.171	A	A
1	CO 60	105.800	1.600	90.850	1.150	1.165	W	W
1	CS137	78.900	2.500	69.780	1.230	1.131	A	A
1	MN 54	25.100	1.300	20.850	0.310	1.204	W	W
1	PU238	1.590	0.150	1.291	0.063	1.232	W	A
1	PU239	0.840	0.110	0.850	0.050	0.988	A	A
1	SR 90	21.700	1.800	23.200	1.350	0.935	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: IR Idaho National Engineering Laboratory

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	GA 1	165.000	28.000	1130.000	10.000	0.140	N	A
1	GB 2	341.000	33.000	744.000	10.000	0.450	N	A
1	U UG	0.042	0.004	0.044	0.001	0.946	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: IS Quanterra- St. Louis

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI Bq/filter								
1	AM241	0.630	0.210	0.152	0.013	4.145	N	A
1	CE144	18.400	1.450	15.700	1.000	1.172	W	
1	CO 57	9.660	0.690	10.810	1.000	0.894	A	A
1	CO 60	4.320	0.290	5.010	0.300	0.862	A	A
1	CS134	9.640	0.650	10.880	1.000	0.886	A	A
1	CS137	7.450	0.580	8.700	0.800	0.856	A	A
1	GA 1	1.090	0.110	0.960	0.050	1.135	A	
1	GB 2	0.505	0.050	0.450	0.030	1.122	A	
1	MN 54	7.160	0.610	7.620	0.600	0.940	A	A
1	PU238	0.116	0.040	0.100	0.006	1.158	W	N
1	PU239	0.098	0.037	0.119	0.006	0.825	W	
1	SB125	10.520	1.110	12.330	1.000	0.853	A	A
1	SR 90	1.030	0.210	1.450	0.149	0.710	W	W
1	U UG	8.560	1.670	8.448	0.400	1.013	A	N
Matrix: SO Bq/kg								
1	AM241	22.800	8.100	5.680	0.500	4.014	N	A
1	CO 60	4.140	2.480	1.060	0.120	3.906	N	W
1	CS137	998.000	130.000	825.500	14.100	1.209	A	A
1	K 40	439.000	63.000	334.250	7.140	1.313	W	A
1	PU238	4.450	2.790	0.530	0.111	8.403	N	N
1	PU239	124.000	28.000	134.930	17.100	0.919	A	W
1	SR 90	32.700	9.700	40.310	0.420	0.811	A	A
1	U UG	3.180	0.640	3.426	0.200	0.928	A	N
Matrix: VE Bq/kg								
1	AM241	1.460	0.790	1.183	0.113	1.234	A	
1	CO 60	19.100	4.000	12.500	0.320	1.528	N	A
1	CS137	239.000	27.000	189.250	7.270	1.263	W	A
1	K 40	996.000	126.000	811.500	12.200	1.227	A	A
1	PU239	1.310	1.040	1.942	0.222	0.675	W	W
1	SR 90	228.000	46.000	361.000	43.300	0.632	W	A
Matrix: WA Bq/L								
1	AM241	0.740	0.210	0.837	0.028	0.885	A	A
1	CO 60	98.200	3.500	90.850	1.150	1.081	A	W
1	CS137	78.500	5.700	69.780	1.230	1.125	A	W
1	GA 1	1350.000	140.000	1130.000	10.000	1.190	A	W
1	GB 2	396.000	40.000	744.000	10.000	0.530	N	W
1	H 3	227.000	12.000	250.300	4.200	0.907	A	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: IS Quanterra- St. Louis

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix:	WA	Bq/L						
1	MN 54	22.800	2.200	20.850	0.310	1.094	A	W
1	PU238	1.350	0.290	1.291	0.063	1.046	A	A
1	PU239	0.876	0.206	0.850	0.050	1.030	A	W
1	SR 90	13.500	2.600	23.200	1.350	0.582	N	A
1	U UG	0.053	0.010	0.044	0.001	1.194	W	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: IT Quanterra- Richland Laboratory

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.140	0.010	0.152	0.013	0.921	A	A
1	CE144	14.600	0.140	15.700	1.000	0.930	A	
1	CO 57	10.600	0.230	10.810	1.000	0.981	A	A
1	CO 60	5.010	0.310	5.010	0.300	1.000	A	A
1	CS134	10.100	0.110	10.880	1.000	0.928	A	A
1	CS137	8.280	0.150	8.700	0.800	0.952	A	A
1	GA 1	1.020	0.030	0.960	0.050	1.063	A	A
1	GB 2	0.510	0.040	0.450	0.030	1.133	A	N
1	MN 54	7.720	0.130	7.620	0.600	1.013	A	A
1	PU238	0.110	0.010	0.100	0.006	1.098	A	A
1	PU239	0.125	0.001	0.119	0.006	1.052	A	
1	SB125	13.030	0.500	12.330	1.000	1.057	A	A
1	SR 90	1.470	0.010	1.450	0.149	1.014	A	A
1	U 234	0.109	0.012	0.103	0.005	1.059	A	A
1	U 238	0.105	0.004	0.105	0.004	1.005	A	W
1	U UG	9.090	0.080	8.448	0.400	1.076	A	A
Matrix: SO		Bq/kg						
1	AM241	5.940	0.340	5.680	0.500	1.046	A	A
1	CM244	0.250	0.030	0.233	0.020	1.073	A	A
1	CO 60	1.710	0.830	1.060	0.120	1.613	W	W
1	CS137	993.000	9.000	825.500	14.100	1.203	A	W
1	K 40	375.000	3.300	334.250	7.140	1.122	A	A
1	PU238	0.310	0.070	0.530	0.111	0.585	W	A
1	PU239	91.900	18.200	134.930	17.100	0.681	W	A
1	SR 90	41.100	2.900	40.310	0.420	1.020	A	A
1	U 234	42.600	4.400	37.570	2.480	1.134	W	A
1	U 238	44.700	1.200	42.430	2.500	1.053	A	A
1	U UG	3.320	0.040	3.426	0.200	0.969	A	A
Matrix: VE		Bq/kg						
1	AM241	1.169	0.074	1.183	0.113	0.988	A	A
1	CM244	0.805	0.077	0.900	0.050	0.894	A	A
1	CO 60	15.040	0.570	12.500	0.320	1.203	W	W
1	CS137	227.900	2.700	189.250	7.270	1.204	A	W
1	K 40	949.000	26.000	811.500	12.200	1.169	A	A
1	PU239	2.030	0.160	1.942	0.222	1.045	A	W
1	SR 90	394.500	9.400	361.000	43.300	1.093	A	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: IT Quanterra- Richland Laboratory

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	AM241	0.750	0.050	0.837	0.028	0.896	A	A
1	CO 60	165.000	2.000	90.850	1.150	1.816	N	A
1	CS137	74.200	3.000	69.780	1.230	1.063	A	A
1	GA 1	988.000	107.000	1130.000	10.000	0.870	A	W
1	GB 2	565.000	12.000	744.000	10.000	0.750	A	A
1	H 3	235.000	8.000	250.300	4.200	0.939	A	W
1	MN 54	14.400	0.500	20.850	0.310	0.691	N	A
1	PU238	1.330	0.074	1.291	0.063	1.030	A	A
1	PU239	0.830	0.050	0.850	0.050	0.976	A	A
1	SR 90	24.300	1.300	23.200	1.350	1.047	A	A
1	U 234	0.641	0.028	0.540	0.020	1.187	A	
1	U 238	0.604	0.065	0.550	0.025	1.099	A	
1	U UG	0.049	0.011	0.044	0.001	1.110	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: JP Japan Chemical Analysis Center

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: AI Bq/filter							
1	AM241	0.150	0.005	0.152	0.013	0.987	A
1	CE144	16.000	0.200	15.700	1.000	1.019	A
1	CO 57	12.000	0.050	10.810	1.000	1.110	W
1	CO 60	4.800	0.070	5.010	0.300	0.958	A
1	CS134	11.000	0.100	10.880	1.000	1.011	A
1	CS137	9.300	0.090	8.700	0.800	1.069	A
1	GA 1	1.300	0.030	0.960	0.050	1.354	W
1	MN 54	8.200	0.100	7.620	0.600	1.076	A
1	PU238	0.100	0.004	0.100	0.006	0.998	A
1	PU239	0.130	0.005	0.119	0.006	1.094	A
1	SB125	14.000	0.200	12.330	1.000	1.135	A
1	SR 90	1.100	0.040	1.450	0.149	0.759	W
1	U 234	0.110	0.005	0.103	0.005	1.069	A
1	U 238	0.110	0.005	0.105	0.004	1.053	A
Matrix: SO Bq/kg							
1	AM241	5.200	0.200	5.680	0.500	0.915	A
1	CO 60	0.580	0.380	1.060	0.120	0.547	N
1	CS137	910.000	4.000	825.500	14.100	1.102	A
1	K 40	340.000	12.000	334.250	7.140	1.017	A
1	PU238	0.370	0.053	0.530	0.111	0.699	W
1	PU239	130.000	4.000	134.930	17.100	0.963	A
1	SR 90	41.000	1.400	40.310	0.420	1.017	A
1	U 234	39.000	1.900	37.570	2.480	1.038	A
1	U 238	42.000	2.000	42.430	2.500	0.990	A
Matrix: VE Bq/kg							
1	AM241	1.200	0.060	1.183	0.113	1.014	A
1	CM244	0.950	0.050	0.900	0.050	1.056	A
1	CO 60	13.000	0.600	12.500	0.320	1.040	A
1	CS137	210.000	2.000	189.250	7.270	1.110	A
1	K 40	870.000	17.000	811.500	12.200	1.072	A
1	PU239	1.800	0.130	1.942	0.222	0.927	A
1	SR 90	360.000	7.000	361.000	43.300	0.997	A
Matrix: WA Bq/L							
1	AM241	0.920	0.036	0.837	0.028	1.100	A
1	CO 60	97.000	1.800	90.850	1.150	1.068	A
1	CS137	80.000	1.500	69.780	1.230	1.146	A
1	GA 1	940.000	29.000	1130.000	10.000	0.830	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: JP Japan Chemical Analysis Center

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: WA		Bq/L					
1	GB 2	730.000	25.000	744.000	10.000	0.980	A
1	H 3	250.000	1.000	250.300	4.200	0.999	A
1	MN 54	26.000	1.700	20.850	0.310	1.247	N
1	PU238	1.400	0.070	1.291	0.063	1.085	A
1	PU239	0.930	0.051	0.850	0.050	1.094	A
1	SR 90	23.000	0.500	23.200	1.350	0.991	A
1	U 234	0.590	0.035	0.540	0.020	1.093	A
1	U 238	0.630	0.036	0.550	0.025	1.146	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: KA Knolls Atomic Power Lab, Schenectady

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	GA 1	1.040	0.060	0.960	0.050	1.083	A	A
1	GB 2	0.550	0.040	0.450	0.030	1.222	A	A
Matrix: SO		Bq/kg						
1	CO 60	1.300	0.200	1.060	0.120	1.226	A	A
1	CS137	999.000	80.000	825.500	14.100	1.210	A	W
1	K 40	376.000	58.000	334.250	7.140	1.125	A	A
1	PU239	149.600	3.000	134.930	17.100	1.109	A	A
1	SR 90	44.900	2.400	40.310	0.420	1.114	A	A
Matrix: WA		Bq/L						
1	CO 60	96.000	4.000	90.850	1.150	1.057	A	A
1	CS137	77.000	10.000	69.780	1.230	1.103	A	A
1	FE 55	239.000	12.000	235.000	20.000	1.017	A	A
1	GA 1	1290.000	200.000	1130.000	10.000	1.140	A	A
1	GB 2	572.000	80.000	744.000	10.000	0.760	A	A
1	H 3	350.000	34.000	250.300	4.200	1.398	W	A
1	MN 54	21.000	3.000	20.850	0.310	1.007	A	A
1	PU238	1.394	0.100	1.291	0.063	1.080	A	A
1	PU239	0.893	0.010	0.850	0.050	1.050	A	A
1	SR 90	22.800	1.400	23.200	1.350	0.983	A	A
1	U UG	0.048	0.001	0.044	0.001	1.078	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: KO Korea Institute of Nuclear Safety

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: AI Bq/filter							
1	AM241	0.199	0.005	0.152	0.013	1.309	A
1	CE144	17.400	0.252	15.700	1.000	1.108	W
1	CO 57	12.700	0.183	10.810	1.000	1.175	W
1	CO 60	5.760	0.081	5.010	0.300	1.150	W
1	CS134	11.100	0.338	10.880	1.000	1.020	A
1	CS137	9.900	0.135	8.700	0.800	1.138	W
1	GA 1	0.904	0.047	0.960	0.050	0.942	A
1	GB 2	0.357	0.028	0.450	0.030	0.793	W
1	MN 54	8.960	0.072	7.620	0.600	1.176	W
1	PU238	0.102	0.005	0.100	0.006	1.018	A
1	PU239	0.129	0.006	0.119	0.006	1.086	A
1	SB125	13.600	0.554	12.330	1.000	1.103	A
1	SR 90	1.409	0.031	1.450	0.149	0.972	A
1	U 234	0.119	0.005	0.103	0.005	1.156	A
1	U 238	0.114	0.005	0.105	0.004	1.091	A
1	U UG	9.250	0.411	8.448	0.400	1.095	A
Matrix: SO Bq/kg							
1	CS137	920.000	7.500	825.500	14.100	1.114	A
1	K 40	373.000	10.600	334.250	7.140	1.116	A
1	PU238	0.423	0.057	0.530	0.111	0.799	A
1	PU239	124.500	4.230	134.930	17.100	0.923	A
1	SR 90	40.180	2.050	40.310	0.420	0.997	A
1	U 234	41.200	1.300	37.570	2.480	1.097	A
1	U 238	43.100	1.350	42.430	2.500	1.016	A
1	U UG	3.490	0.109	3.426	0.200	1.019	A
Matrix: VE Bq/kg							
1	AM241	1.400	0.071	1.183	0.113	1.183	A
1	CM244	1.030	0.059	0.900	0.050	1.144	A
1	CO 60	13.900	0.648	12.500	0.320	1.112	A
1	CS137	222.000	2.310	189.250	7.270	1.173	A
1	K 40	934.000	17.500	811.500	12.200	1.151	A
1	PU239	1.900	0.087	1.942	0.222	0.978	A
1	SR 90	426.600	4.010	361.000	43.300	1.182	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: LA Los Alamos National Laboratory, NM

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.177	0.020	0.152	0.013	1.164	A	A
2		0.179	0.020	0.152	0.013	1.178	A	A
3		0.161	0.018	0.152	0.013	1.059	A	A
1	CE144	13.600	1.100	15.700	1.000	0.866	A	
2		15.700	1.300	15.700	1.000	1.000	A	
3		13.400	1.100	15.700	1.000	0.854	A	
1	CO 57	10.100	0.700	10.810	1.000	0.934	A	A
2		10.300	0.700	10.810	1.000	0.953	A	A
3		10.100	0.700	10.810	1.000	0.934	A	A
1	CO 60	5.400	0.400	5.010	0.300	1.078	A	A
2		5.600	0.400	5.010	0.300	1.118	W	A
3		5.400	0.400	5.010	0.300	1.078	A	A
1	CS134	12.300	0.900	10.880	1.000	1.131	W	A
2		13.800	0.900	10.880	1.000	1.268	N	A
3		12.200	0.900	10.880	1.000	1.121	W	A
1	CS137	9.300	0.600	8.700	0.800	1.069	A	A
2		9.500	0.700	8.700	0.800	1.092	A	A
3		9.200	0.600	8.700	0.800	1.057	A	A
1	GA 1	1.000	0.200	0.960	0.050	1.042	A	W
2		1.000	0.200	0.960	0.050	1.042	A	W
3		1.100	0.300	0.960	0.050	1.146	A	W
1	GB 2	0.590	0.070	0.450	0.030	1.311	A	A
2		0.560	0.070	0.450	0.030	1.244	A	A
3		0.560	0.070	0.450	0.030	1.244	A	A
1	MN 54	8.400	0.600	7.620	0.600	1.102	A	W
2		8.500	0.600	7.620	0.600	1.115	W	W
3		8.400	0.600	7.620	0.600	1.102	A	W
1	PU238	0.105	0.013	0.100	0.006	1.048	A	A
2		0.094	0.011	0.100	0.006	0.938	A	A
3		0.110	0.013	0.100	0.006	1.098	A	A
1	PU239	0.127	0.014	0.119	0.006	1.069	A	
2		0.142	0.017	0.119	0.006	1.195	W	
3		0.125	0.014	0.119	0.006	1.052	A	
1	SB125	14.100	1.000	12.330	1.000	1.144	W	A
2		14.100	1.100	12.330	1.000	1.144	W	A
3		14.400	1.100	12.330	1.000	1.168	W	A
1	SR 90	22.000	2.500	1.450	0.149	*.***	N	A
2		21.400	2.300	1.450	0.149	*.***	N	A
3		21.400	2.300	1.450	0.149	*.***	N	A
1	U UG	8.310	0.830	8.448	0.400	0.984	A	W
2		8.310	0.830	8.448	0.400	0.984	A	W
3		8.270	0.830	8.448	0.400	0.979	A	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: LA Los Alamos National Laboratory, NM

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: SO		Bq/kg						
1	AM241	5.780	0.280	5.680	0.500	1.018	A	A
2		5.570	0.250	5.680	0.500	0.981	A	A
3		6.030	0.340	5.680	0.500	1.062	A	A
1	CO 60	3.300	0.600	1.060	0.120	3.113	N	A
2		5.000	7.600	1.060	0.120	4.717	N	A
3		3.400	5.200	1.060	0.120	3.208	N	A
1	CS137	936.000	52.000	825.500	14.100	1.134	A	N
2		840.000	47.000	825.500	14.100	1.018	A	N
3		875.000	49.000	825.500	14.100	1.060	A	N
1	K 40	431.000	36.000	334.250	7.140	1.289	W	W
2		373.000	33.000	334.250	7.140	1.116	A	W
3		388.000	33.000	334.250	7.140	1.161	A	W
1	PU238	0.600	0.100	0.530	0.111	1.133	A	A
2		0.500	0.100	0.530	0.111	0.944	A	A
3		0.500	0.100	0.530	0.111	0.944	A	A
1	PU239	133.000	3.000	134.930	17.100	0.986	A	A
2		127.000	3.000	134.930	17.100	0.941	A	A
3		132.000	3.000	134.930	17.100	0.978	A	A
1	SR 90	258.000	17.400	40.310	0.420	6.400	N	N
2		260.000	17.500	40.310	0.420	6.450	N	N
3		215.000	15.400	40.310	0.420	5.334	N	N
1	U UG	3.030	0.300	3.426	0.200	0.884	A	A
2		3.050	0.310	3.426	0.200	0.890	A	A
3		3.120	0.310	3.426	0.200	0.911	A	A
Matrix: VE		Bq/kg						
1	AM241	1.025	0.059	1.183	0.113	0.866	A	A
2		1.110	0.056	1.183	0.113	0.938	A	A
3		0.940	0.056	1.183	0.113	0.794	W	A
1	CO 60	10.400	1.500	12.500	0.320	0.832	A	A
2		10.400	1.100	12.500	0.320	0.832	A	A
3		10.000	1.500	12.500	0.320	0.800	W	A
1	CS137	170.000	15.000	189.250	7.270	0.898	W	A
2		169.000	15.000	189.250	7.270	0.893	W	A
3		167.000	15.000	189.250	7.270	0.882	W	A
1	K 40	585.000	59.000	811.500	12.200	0.721	N	N
2		585.000	59.000	811.500	12.200	0.721	N	N
3		592.000	59.000	811.500	12.200	0.730	N	N
1	PU239	1.680	0.081	1.942	0.222	0.865	A	A
2		1.606	0.104	1.942	0.222	0.827	W	A
3		1.898	0.078	1.942	0.222	0.977	A	A
1	SR 90	372.800	21.100	361.000	43.300	1.033	A	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: LA Los Alamos National Laboratory, NM

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: VE		Bq/kg						
2	SR 90	346.300	20.000	361.000	43.300	0.959	A	
3		385.000	22.000	361.000	43.300	1.066	A	
Matrix: WA		Bq/L						
1	AM241	0.910	0.200	0.837	0.028	1.088	A	A
2		1.050	0.230	0.837	0.028	1.255	W	A
3		0.910	0.200	0.837	0.028	1.088	A	A
1	CO 60	97.900	8.900	90.850	1.150	1.078	A	A
2		97.800	9.100	90.850	1.150	1.076	A	A
3		99.200	9.000	90.850	1.150	1.092	A	A
1	CS137	79.000	7.400	69.780	1.230	1.132	A	A
2		76.500	7.100	69.780	1.230	1.096	A	A
3		79.300	7.400	69.780	1.230	1.136	A	A
1	GA 1	1221.000	259.000	1130.000	10.000	1.080	A	A
2		1184.000	259.000	1130.000	10.000	1.080	A	A
3		1184.000	222.000	1130.000	10.000	1.080	A	A
1	GB 2	666.000	74.000	744.000	10.000	0.890	A	A
2		592.000	74.000	744.000	10.000	0.890	A	A
3		629.000	74.000	744.000	10.000	0.890	A	A
1	H 3	256.000	15.100	250.300	4.200	1.023	A	A
2		245.800	12.700	250.300	4.200	0.982	A	A
3		271.000	15.100	250.300	4.200	1.083	A	A
1	MN 54	23.600	2.400	20.850	0.310	1.132	A	
2		23.100	2.400	20.850	0.310	1.108	A	
3		24.800	2.600	20.850	0.310	1.189	W	
1	PU238	1.310	0.280	1.291	0.063	1.015	A	A
2		1.260	0.270	1.291	0.063	0.976	A	A
3		1.250	0.280	1.291	0.063	0.968	A	A
1	PU239	0.860	0.190	0.850	0.050	1.012	A	A
2		0.920	0.190	0.850	0.050	1.082	A	A
3		0.720	0.160	0.850	0.050	0.847	W	A
1	SR 90	530.500	32.000	23.200	1.350	*.***	N	N
2		483.100	29.600	23.200	1.350	*.***	N	N
3		489.300	29.700	23.200	1.350	*.***	N	N
1	U UG	0.056	0.006	0.044	0.001	1.265	W	A
2		0.055	0.006	0.044	0.001	1.241	W	A
3		0.056	0.006	0.044	0.001	1.252	W	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: LB Lawrence Berkeley Lab UCB

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: AI Bq/filter							
1	CE144	17.560	2.680	15.700	1.000	1.118	W
1	CO 57	10.930	1.690	10.810	1.000	1.011	A
1	CO 60	7.050	3.460	5.010	0.300	1.407	N
1	CS134	14.150	5.490	10.880	1.000	1.301	N
1	CS137	13.200	4.900	8.700	0.800	1.517	N
1	MN 54	12.440	5.090	7.620	0.600	1.633	N
1	SB125	19.240	7.910	12.330	1.000	1.560	N
Matrix: SO Bq/kg							
1	AM241	7.260	1.020	5.680	0.500	1.278	A
1	CO 60	1.280	0.580	1.060	0.120	1.208	A
1	CS137	719.000	68.000	825.500	14.100	0.871	W
1	K 40	292.700	40.100	334.250	7.140	0.876	A
1	U 234	36.500	2.100	37.570	2.480	0.972	A
1	U 238	36.900	2.100	42.430	2.500	0.870	A
Matrix: VE Bq/kg							
1	AM241	0.805	0.025	1.183	0.113	0.680	W
1	CO 60	15.680	2.120	12.500	0.320	1.254	W
1	CS137	194.000	18.000	189.250	7.270	1.025	A
1	K 40	804.000	115.000	811.500	12.200	0.991	A
1	PU239	3.790	0.220	1.942	0.222	1.952	N
Matrix: WA Bq/L							
1	AM241	0.957	0.068	0.837	0.028	1.144	A
1	CO 60	104.800	2.900	90.850	1.150	1.154	W
1	CS137	82.360	2.400	69.780	1.230	1.180	W
1	MN 54	24.400	0.800	20.850	0.310	1.170	W
1	PU238	1.103	0.051	1.291	0.063	0.855	W
1	PU239	1.016	0.051	0.850	0.050	1.195	W
1	U 234	0.738	0.044	0.540	0.020	1.367	W
1	U 238	0.637	0.039	0.550	0.025	1.159	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: LH Lockheed Analytical Laboratory, Las Vegas

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.140	0.010	0.152	0.013	0.921	A	A
1	CE144	14.200	1.500	15.700	1.000	0.904	A	
1	CO 57	11.000	1.100	10.810	1.000	1.018	A	A
1	CO 60	4.810	0.410	5.010	0.300	0.960	A	A
1	CS134	9.660	0.740	10.880	1.000	0.888	A	A
1	CS137	8.960	0.960	8.700	0.800	1.030	A	A
1	GA 1	1.340	0.070	0.960	0.050	1.396	W	A
1	GB 2	0.370	0.020	0.450	0.030	0.822	W	A
1	MN 54	7.480	0.800	7.620	0.600	0.982	A	W
1	PU238	0.100	0.010	0.100	0.006	0.998	A	A
1	PU239	0.120	0.010	0.119	0.006	1.010	A	
1	SB125	12.400	1.000	12.330	1.000	1.006	A	A
1	SR 90	2.060	0.150	1.450	0.149	1.421	A	A
1	U 234	0.120	0.010	0.103	0.005	1.166	A	A
1	U 238	0.110	0.010	0.105	0.004	1.053	A	A
Matrix: SO		Bq/kg						
1	AM241	6.560	0.450	5.680	0.500	1.155	A	A
1	CS137	934.000	94.000	825.500	14.100	1.131	A	A
1	K 40	356.000	46.000	334.250	7.140	1.065	A	A
1	PU238	0.490	0.200	0.530	0.111	0.925	A	A
1	PU239	137.300	7.800	134.930	17.100	1.018	A	A
1	SR 90	34.500	2.800	40.310	0.420	0.856	A	A
1	U 234	38.400	4.000	37.570	2.480	1.022	A	A
1	U 238	40.800	4.200	42.430	2.500	0.962	A	A
Matrix: VE		Bq/kg						
1	AM241	1.100	0.110	1.183	0.113	0.930	A	N
1	CM244	0.650	0.080	0.900	0.050	0.722	W	N
1	CO 60	13.000	1.800	12.500	0.320	1.040	A	A
1	CS137	230.000	23.000	189.250	7.270	1.215	A	A
1	K 40	886.000	99.000	811.500	12.200	1.092	A	A
1	PU239	2.480	0.210	1.942	0.222	1.277	A	A
1	SR 90	201.000	11.000	361.000	43.300	0.557	W	W
Matrix: WA		Bq/L						
1	AM241	0.820	0.090	0.837	0.028	0.980	A	A
1	CO 60	91.000	7.100	90.850	1.150	1.002	A	A
1	CS137	79.800	8.500	69.780	1.230	1.144	A	A
1	FE 55	258.000	16.000	235.000	20.000	1.098	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: LH Lockheed Analytical Laboratory, Las Vegas

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	GA 1	1154.000	68.000	1130.000	10.000	1.020	A	A
1	GB 2	426.000	24.000	744.000	10.000	0.570	W	A
1	H 3	262.000	18.000	250.300	4.200	1.047	A	W
1	MN 54	22.800	2.800	20.850	0.310	1.094	A	A
1	PU238	1.360	0.120	1.291	0.063	1.054	A	A
1	PU239	0.820	0.080	0.850	0.050	0.964	A	A
1	SR 90	19.400	1.200	23.200	1.350	0.836	W	A
1	U 234	0.660	0.080	0.540	0.020	1.222	W	W
1	U 238	0.650	0.080	0.550	0.025	1.183	W	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: LL LLNL Chemistry and Material Science/Waste

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.161	0.005	0.152	0.013	1.059	A	A
1	CE144	15.100	1.060	15.700	1.000	0.962	A	
1	CO 57	11.200	0.325	10.810	1.000	1.036	A	W
1	CO 60	5.010	0.180	5.010	0.300	1.000	A	W
1	CS134	12.000	0.180	10.880	1.000	1.103	A	W
1	CS137	8.510	0.255	8.700	0.800	0.978	A	A
1	GA 1	1.040	0.007	0.960	0.050	1.083	A	A
1	GB 2	0.627	0.001	0.450	0.030	1.393	A	W
1	MN 54	7.830	0.321	7.620	0.600	1.028	A	W
1	PU238	0.113	0.005	0.100	0.006	1.128	A	A
1	PU239	0.132	0.006	0.119	0.006	1.111	A	
1	SB125	14.100	0.430	12.330	1.000	1.144	W	W
1	U 234	0.098		0.103	0.005	0.954	A	A
1	U 238	0.095		0.105	0.004	0.906	A	A
1	U UG	7.670		8.448	0.400	0.908	A	A
Matrix: SO		Bq/kg						
1	AM241	6.620	1.040	5.680	0.500	1.165	A	W
1	CO 60	1.680	0.354	1.060	0.120	1.585	W	A
1	CS137	832.000	9.150	825.500	14.100	1.008	A	A
1	K 40	316.000	19.600	334.250	7.140	0.945	A	A
1	PU238	0.561	0.112	0.530	0.111	1.059	A	A
1	PU239	157.000	6.650	134.930	17.100	1.164	A	A
1	U 234	34.000		37.570	2.480	0.905	A	A
1	U 238	33.800		42.430	2.500	0.797	A	A
1	U UG	2.740		3.426	0.200	0.800	A	A
Matrix: VE		Bq/kg						
1	AM241	1.540	0.114	1.183	0.113	1.301	A	
1	CM244	0.859	0.083	0.900	0.050	0.954	A	
1	CO 60	13.700	0.740	12.500	0.320	1.096	A	A
1	CS137	202.000	2.830	189.250	7.270	1.067	A	A
1	K 40	838.000	21.800	811.500	12.200	1.033	A	A
1	PU239	2.240	0.193	1.942	0.222	1.153	A	A
Matrix: WA		Bq/L						
1	AM241	0.941	0.044	0.837	0.028	1.125	A	A
1	CO 60	90.000	1.530	90.850	1.150	0.991	A	A
1	CS137	72.900	1.310	69.780	1.230	1.045	A	A
1	GA 1	1020.000	7.400	1130.000	10.000	0.900	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: LL LLNL Chemistry and Material Science/Waste

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	GB 2	633.000	5.050	744.000	10.000	0.850	A	A
1	H 3	255.000	2.810	250.300	4.200	1.019	A	A
1	MN 54	22.500	0.878	20.850	0.310	1.079	A	A
1	PU238	1.370	0.071	1.291	0.063	1.061	A	A
1	PU239	0.864	0.049	0.850	0.050	1.016	A	A
1	SR 90	2.910	0.105	23.200	1.350	0.125	N	
1	U 234	0.494		0.540	0.020	0.915	A	A
1	U 238	0.520		0.550	0.025	0.946	A	A
1	U UG	0.042		0.044	0.001	0.948	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	QAP 45 Evaluation
Matrix: AI Bq/filter							
1	CE144	16.800	1.800	15.700	1.000	1.070	A
1	CO 57	12.200	0.500	10.810	1.000	1.129	W
1	CO 60	6.800	0.500	5.010	0.300	1.357	N
1	CS134	13.100	0.600	10.880	1.000	1.204	W
1	CS137	11.200	0.600	8.700	0.800	1.287	W
1	GA 1	0.860	0.100	0.960	0.050	0.896	A
1	GB 2	0.470	0.100	0.450	0.030	1.044	A
1	MN 54	8.300	0.500	7.620	0.600	1.089	A
1	SB125	14.400	0.900	12.330	1.000	1.168	W
Matrix: SO Bq/kg							
1	CS137	1200.000	45.000	825.500	14.100	1.454	N
1	K 40	468.000	43.000	334.250	7.140	1.400	W
Matrix: WA Bq/L							
1	CO 60	72.000	8.000	90.850	1.150	0.793	N
1	CS137	53.000	6.000	69.780	1.230	0.760	N
1	H 3	260.000	26.000	250.300	4.200	1.039	A
1	MN 54	16.000	2.000	20.850	0.310	0.767	N

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: LV UNLV, Dept of Health Physics

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.188	0.023	0.152	0.013	1.237	A	A
1	CE144	22.100	0.300	15.700	1.000	1.408	N	
1	CO 57	10.500	0.100	10.810	1.000	0.971	A	A
1	CO 60	5.120	0.063	5.010	0.300	1.022	A	A
1	CS134	11.700	0.100	10.880	1.000	1.075	A	A
1	CS137	9.560	0.100	8.700	0.800	1.099	A	A
1	GA 1	3.200	0.120	0.960	0.050	3.333	N	N
1	GB 2	0.331	0.045	0.450	0.030	0.736	W	N
1	MN 54	7.740	0.090	7.620	0.600	1.016	A	A
1	SB125	12.000	0.200	12.330	1.000	0.973	A	A
Matrix: SO		Bq/kg						
1	AM241	8.160	0.430	5.680	0.500	1.437	A	A
1	CO 60	1.250	0.320	1.060	0.120	1.179	A	W
1	CS137	1010.000	2.000	825.500	14.100	1.224	A	W
1	K 40	411.000	6.000	334.250	7.140	1.230	A	W
1	U 238	69.400	2.900	42.430	2.500	1.636	N	
Matrix: VE		Bq/kg						
1	AM241	1.130	0.250	1.183	0.113	0.955	A	W
1	CO 60	13.000	0.500	12.500	0.320	1.040	A	W
1	CS137	208.000	2.000	189.250	7.270	1.099	A	W
1	K 40	905.000	12.000	811.500	12.200	1.115	A	W
Matrix: WA		Bq/L						
1	AM241	0.546	0.213	0.837	0.028	0.653	N	A
1	CO 60	83.800	0.900	90.850	1.150	0.922	A	A
1	CS137	66.700	0.700	69.780	1.230	0.956	A	A
1	GA 1	1300.000	60.000	1130.000	10.000	1.150	A	A
1	GB 2	563.000	70.000	744.000	10.000	0.750	A	
1	H 3	288.000	6.000	250.300	4.200	1.151	A	W
1	MN 54	16.200	0.400	20.850	0.310	0.777	N	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: LW LLNL, Environmental Science Lab

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: SO		Bq/kg						
1	CS137	904.000	9.900	825.500	14.100	1.095	A	A
1	K 40	342.000	24.000	334.250	7.140	1.023	A	A
Matrix: VE		Bq/kg						
1	CO 60	12.400	0.680	12.500	0.320	0.992	A	A
1	CS137	208.000	2.700	189.250	7.270	1.099	A	A
1	K 40	793.000	20.000	811.500	12.200	0.977	A	A
Matrix: WA		Bq/L						
1	CO 60	91.900	1.500	90.850	1.150	1.012	A	A
1	CS137	77.900	1.600	69.780	1.230	1.116	A	A
1	GA 1	1128.000	37.000	1130.000	10.000	0.990	A	A
1	GB 2	556.000	20.000	744.000	10.000	0.740	A	A
1	H 3	250.000	5.800	250.300	4.200	0.999	A	A
1	MN 54	21.700	1.000	20.850	0.310	1.041	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: MA ORNL Health Sciences Research Div.

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: SO		Bq/kg					
1	AM241	8.100	3.700	5.680	0.500	1.426	A
1	CO 60	22.000	22.000	1.060	0.120	*.***	N
1	CS137	962.000	67.000	825.500	14.100	1.165	A
1	K 40	337.000	59.000	334.250	7.140	1.008	A
1	U 238	44.000	32.000	42.430	2.500	1.037	A
Matrix: VE		Bq/kg					
1	CO 60	14.000	3.000	12.500	0.320	1.120	A
1	CS137	226.000	19.000	189.250	7.270	1.194	A
1	K 40	814.000	100.000	811.500	12.200	1.003	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	CE144	15.160	2.990	15.700	1.000	0.966	A	
1	CO 57	10.880	0.310	10.810	1.000	1.006	A	N
1	CO 60	5.980	0.140	5.010	0.300	1.194	W	N
1	CS134	10.380	0.190	10.880	1.000	0.954	A	N
1	CS137	10.430	0.320	8.700	0.800	1.199	W	N
1	GA 1	1.320	0.040	0.960	0.050	1.375	W	A
1	GB 2	0.640	0.030	0.450	0.030	1.422	A	A
1	MN 54	9.900	0.300	7.620	0.600	1.299	W	N
1	SB125	16.130	0.310	12.330	1.000	1.308	W	N
Matrix: SO		Bq/kg						
1	AM241	6.090	2.200	5.680	0.500	1.072	A	A
1	CO 60	1.080	0.200	1.060	0.120	1.019	A	A
1	CS137	828.900	33.300	825.500	14.100	1.004	A	A
1	K 40	308.100	15.100	334.250	7.140	0.922	A	A
Matrix: VE		Bq/kg						
1	CO 60	16.700	0.800	12.500	0.320	1.336	W	A
1	CS137	259.900	11.700	189.250	7.270	1.373	W	W
1	K 40	1182.000	55.400	811.500	12.200	1.457	W	W
Matrix: WA		Bq/L						
1	CO 60	100.400	2.500	90.850	1.150	1.105	A	
1	CS137	81.450	3.190	69.780	1.230	1.167	A	
1	MN 54	24.660	0.967	20.850	0.310	1.183	W	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: MI Massachusetts Institute of Technology

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	CO 57	10.010	0.243	10.810	1.000	0.926	A	A
1	CO 60	4.419	0.113	5.010	0.300	0.882	A	A
1	CS134	9.698	0.153	10.880	1.000	0.891	A	A
1	CS137	7.958	0.219	8.700	0.800	0.915	A	A
1	MN 54	2.384	0.695	7.620	0.600	0.313	N	A
Matrix: WA		Bq/L						
1	AM241	1.662	0.191	0.837	0.028	1.987	N	
1		1.294	0.293	0.837	0.028	1.547	W	
1	CO 60	96.280	2.202	90.850	1.150	1.060	A	A
1		102.720	2.330	90.850	1.150	1.131	W	A
1	CS137	85.824	2.197	69.780	1.230	1.230	W	A
1		81.925	2.106	69.780	1.230	1.174	A	A
1	H 3	267.000	15.000	250.300	4.200	1.067	A	A
1		269.000	15.000	250.300	4.200	1.075	A	A
1	MN 54	24.066	1.009	20.850	0.310	1.154	A	A
1		25.036	0.988	20.850	0.310	1.201	W	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	PU238	0.110	0.005	0.100	0.006	1.098	A	W
1	PU239	0.130	0.006	0.119	0.006	1.094	A	
1	U 234	0.100	0.001	0.103	0.005	0.972	A	A
1	U 238	0.110	0.005	0.105	0.004	1.053	A	A
Matrix: SO		Bq/kg						
1	PU238	0.700	0.120	0.530	0.111	1.322	W	A
1	PU239	132.220	6.610	134.930	17.100	0.980	A	A
1	U 234	39.800	1.680	37.570	2.480	1.059	A	A
1	U 238	41.880	1.750	42.430	2.500	0.987	A	A
Matrix: VE		Bq/kg						
1	PU239	2.250	0.220	1.942	0.222	1.159	A	A
Matrix: WA		Bq/L						
1	AM241	1.040	0.150	0.837	0.028	1.243	W	A
1	H 3	241.480	72.720	250.300	4.200	0.965	A	W
1	PU238	1.410	0.190	1.291	0.063	1.092	A	A
1	PU239	0.930	0.120	0.850	0.050	1.094	A	A
1	U 234	0.630	0.080	0.540	0.020	1.167	A	A
1	U 238	0.600	0.080	0.550	0.025	1.092	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: **MO** CNESTEN, Morocco

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: SO		Bq/kg					
1	AM241	4.200	1.000	5.680	0.500	0.739	W
1	CO 60	1.260	0.210	1.060	0.120	1.189	A
1	CS137	1011.300	19.400	825.500	14.100	1.225	A
1	K 40	393.000	16.000	334.250	7.140	1.176	A
1	U BQ	4.600	0.700	81.270	4.830	0.057	N
Matrix: VE		Bq/kg					
1	CO 60	14.200	0.600	12.500	0.320	1.136	A
1	CS137	219.500	4.600	189.250	7.270	1.160	A
1	K 40	987.900	27.300	811.500	12.200	1.217	A
Matrix: WA		Bq/L					
1	CO 60	95.500	1.100	90.850	1.150	1.051	A
1	CS134	22.100	0.500	20.550	0.310	1.075	A
1	CS137	75.800	1.900	69.780	1.230	1.086	A
1	MN 54	22.400	0.700	20.850	0.310	1.074	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: MS Manufacturing Sciences Corporation, Oak Ridge

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	CE144	14.200	1.400	15.700	1.000	0.904	A	
1	CO 57	10.100	1.010	10.810	1.000	0.934	A	N
1	CO 60	4.970	0.500	5.010	0.300	0.992	A	W
1	CS134	10.400	1.000	10.880	1.000	0.956	A	A
1	CS137	7.880	0.790	8.700	0.800	0.906	A	W
1	MN 54	7.110	0.710	7.620	0.600	0.933	A	W
1	SB125	10.900	1.100	12.330	1.000	0.884	A	A
Matrix: SO		Bq/kg						
1	CO 60	2.500	0.250	1.060	0.120	2.358	N	N
1	CS137	786.000	79.000	825.500	14.100	0.952	A	A
1	K 40	303.000	30.000	334.250	7.140	0.907	A	A
Matrix: WA		Bq/L						
1	CO 60	94.200	9.400	90.850	1.150	1.037	A	A
1	CS134	21.800	2.200	20.550	0.310	1.061	A	
1	CS137	79.900	8.000	69.780	1.230	1.145	A	A
1	MN 54	24.000	2.400	20.850	0.310	1.151	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: MX Centro Nacional de Metrologia (CENAM), Mexico

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: AI		Bq/filter					
1	CE144	18.400	1.550	15.700	1.000	1.172	W
1	CO 57	14.500	1.350	10.810	1.000	1.341	N
1	CO 60	4.700	0.470	5.010	0.300	0.938	A
1	CS134	13.200	1.250	10.880	1.000	1.213	W
1	CS137	8.800	0.440	8.700	0.800	1.011	A
1	MN 54	8.900	0.760	7.620	0.600	1.168	W
1	SB125	16.200	2.930	12.330	1.000	1.314	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

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

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	CE144	18.230	0.590	15.700	1.000	1.161	W	
1	CO 57	13.070	0.380	10.810	1.000	1.209	W	
1	CO 60	5.910	0.180	5.010	0.300	1.180	W	
1	CS134	11.710	0.420	10.880	1.000	1.076	A	
1	CS137	10.630	0.320	8.700	0.800	1.222	W	
1	MN 54	9.700	0.290	7.620	0.600	1.273	W	
1	PU238	0.107	0.012	0.100	0.006	1.068	A	
1	PU239	0.120	0.013	0.119	0.006	1.010	A	
1	SB125	15.700	0.480	12.330	1.000	1.273	W	
1	SR 90	1.360	0.140	1.450	0.149	0.938	A	W
1	U 234	0.147	0.017	0.103	0.005	1.429	W	
1	U 238	0.124	0.016	0.105	0.004	1.187	A	
Matrix: SO		Bq/kg						
1	AM241	5.770	1.660	5.680	0.500	1.016	A	A
1	CO 60	1.300	0.230	1.060	0.120	1.226	A	A
1	CS137	814.000	3.000	825.500	14.100	0.986	A	A
1	K 40	331.000	8.000	334.250	7.140	0.990	A	A
1	PU238	0.750	0.460	0.530	0.111	1.416	W	W
1	PU239	114.000	6.000	134.930	17.100	0.845	W	A
1	U 234	45.700	7.100	37.570	2.480	1.216	W	W
1	U 238	40.200	6.600	42.430	2.500	0.947	A	A
Matrix: VE		Bq/kg						
1	AM241	1.210	0.360	1.183	0.113	1.023	A	N
1	CO 60	14.600	0.500	12.500	0.320	1.168	A	A
1	CS137	228.000	1.800	189.250	7.270	1.205	A	A
1	K 40	990.400	15.500	811.500	12.200	1.220	A	A
1	PU239	1.850	0.250	1.942	0.222	0.953	A	N
1	SR 90	380.000	11.000	361.000	43.300	1.053	A	A
Matrix: WA		Bq/L						
1	CO 60	95.100	0.700	90.850	1.150	1.047	A	A
1	CS137	76.500	0.700	69.780	1.230	1.096	A	A
1	H 3	242.000	5.000	250.300	4.200	0.967	A	W
1	MN 54	22.200	0.500	20.850	0.310	1.065	A	A
1	PU238	1.420	0.160	1.291	0.063	1.100	A	A
1	PU239	0.800	0.120	0.850	0.050	0.941	A	A
1	SR 90	2.200	0.100	23.200	1.350	0.095	N	W
1	U 234	0.590	0.070	0.540	0.020	1.093	A	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: NA US EPA NAREL, Montgomery, AL

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: WA		Bq/L					
1	U 238	0.660	0.070	0.550	0.025	1.201	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: ND Dept of Environmental Health & Safety, NC State University

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	CE144	15.380	2.100	15.700	1.000	0.980	A	
*	CO 57	11.320	0.490	10.810	1.000	1.047	A	
1	CO 60	5.220	0.560	5.010	0.300	1.042	A	
1	CS134	12.760	0.730	10.880	1.000	1.173	W	
1	CS137	8.820	0.600	8.700	0.800	1.014	A	
1	MN 54	8.540	0.560	7.620	0.600	1.121	W	
1	SB125	13.040	1.120	12.330	1.000	1.058	A	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: NL Fluor Daniel Fernald, Inc., Ohio

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	CE144	12.400	1.000	15.700	1.000	0.790	A	
1	CO 57	10.400	1.100	10.810	1.000	0.962	A	W
1	CO 60	4.690	0.350	5.010	0.300	0.936	A	W
1	CS134	10.100	0.700	10.880	1.000	0.928	A	W
1	CS137	8.400	0.900	8.700	0.800	0.966	A	W
1	MN 54	7.140	0.750	7.620	0.600	0.937	A	N
1	PU238	0.110	0.030	0.100	0.006	1.098	A	A
1	PU239	0.120	0.030	0.119	0.006	1.010	A	
1	SB125	11.800	1.600	12.330	1.000	0.957	A	W
1	U 234	0.110	0.030	0.103	0.005	1.069	A	
1	U 238	0.100	0.020	0.105	0.004	0.957	A	
1	U UG	7.800	0.900	8.448	0.400	0.923	A	A
Matrix: SO		Bq/kg						
1	CO 60	2.070	0.700	1.060	0.120	1.953	W	W
1	CS137	924.000	92.000	825.500	14.100	1.119	A	A
1	K 40	341.000	39.000	334.250	7.140	1.020	A	W
1	PU239	127.000	28.000	134.930	17.100	0.941	A	A
1	U 234	45.000	12.000	37.570	2.480	1.198	W	N
1	U 238	47.000	12.000	42.430	2.500	1.108	W	W
1		38.900	1.900	42.430	2.500	0.917	A	W
Matrix: WA		Bq/L						
1	CO 60	93.300	6.800	90.850	1.150	1.027	A	A
1	CS137	72.000	7.100	69.780	1.230	1.032	A	A
1	MN 54	23.400	2.400	20.850	0.310	1.122	A	A
1	PU238	1.300	0.300	1.291	0.063	1.007	A	A
1	PU239	0.800	0.180	0.850	0.050	0.941	A	A
1	U 234	0.560	0.130	0.540	0.020	1.037	A	
1	U 238	0.054	0.003	0.550	0.025	0.098	N	
1		0.540	0.130	0.550	0.025	0.983	A	
1	U UG	0.048	0.006	0.044	0.001	1.081	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: NM Environmental Evaluation Group, Carlsbad, NM

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.080	0.008	0.152	0.013	0.526	N	A
1	CS137	10.100	0.500	8.700	0.800	1.161	W	W
1	GA 1	0.920	0.040	0.960	0.050	0.958	A	N
1	GB 2	0.570	0.070	0.450	0.030	1.267	A	A
Matrix: SO		Bq/kg						
1	AM241	4.310	0.850	5.680	0.500	0.759	A	A
1	CS137	809.000	28.000	825.500	14.100	0.980	A	A
1	PU238	2.360	0.180	0.530	0.111	4.456	N	A
1	PU239	87.400	4.900	134.930	17.100	0.648	N	A
Matrix: WA		Bq/L						
1	AM241	0.880	0.040	0.837	0.028	1.052	A	A
1	CS137	35.500	1.700	69.780	1.230	0.509	N	A
1	GA 1	1199.000	47.000	1130.000	10.000	1.060	A	W
1	GB 2	713.000	84.000	744.000	10.000	0.950	A	N
1	PU238	1.270	0.030	1.291	0.063	0.984	A	A
1	PU239	0.820	0.020	0.850	0.050	0.964	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: NP JAF Environmental Laboratory, New York Power Authority

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI Bq/filter								
1	CE144	13.670	0.350	15.700	1.000	0.871	A	
1	CO 57	10.010	0.090	10.810	1.000	0.926	A	A
1	CO 60	4.590	0.110	5.010	0.300	0.916	A	A
1	CS134	9.300	0.190	10.880	1.000	0.855	A	A
1	CS137	8.120	0.160	8.700	0.800	0.933	A	A
1	GB 2	0.420	0.020	0.450	0.030	0.933	A	A
1	MN 54	7.850	0.170	7.620	0.600	1.030	A	A
1	SB125	12.730	0.350	12.330	1.000	1.032	A	A
Matrix: SO Bq/kg								
1	CO 60	1.520	0.240	1.060	0.120	1.434	W	W
1	CS137	1103.000	3.000	825.500	14.100	1.336	W	W
Matrix: VE Bq/kg								
1	CO 60	23.000	1.500	12.500	0.320	1.840	N	W
1	CS137	342.000	5.000	189.250	7.270	1.807	N	W
Matrix: WA Bq/L								
1	CO 60	98.300	2.800	90.850	1.150	1.082	A	A
1	CS134	22.900	1.400	20.550	0.310	1.114	A	
1	CS137	76.100	2.900	69.780	1.230	1.091	A	A
1	GB 2	107.000	0.900	744.000	10.000	0.140	N	A
1	H 3	401.000	3.000	250.300	4.200	1.602	W	A
1	MN 54	22.000	2.000	20.850	0.310	1.055	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: NR Naval Reactors Facility Chemistry, Scoville, ID

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: SO		Bq/kg						
1	CS137	900.000	180.000	825.500	14.100	1.090	A	A
1	K 40	364.000	73.000	334.250	7.140	1.089	A	W
Matrix: VE		Bq/kg						
1	CO 60	15.200	3.000	12.500	0.320	1.216	W	A
1	CS137	224.000	45.000	189.250	7.270	1.184	A	A
1	K 40	891.000	178.000	811.500	12.200	1.098	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: NS NC State Lab of Public Health, Env. Services Sec. Env. Radiochemistry Branch

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	CO 60	249.963	2.074	90.850	1.150	2.751	N	W
1		249.889	2.074	90.850	1.150	2.751	N	W
1		249.778	2.074	90.850	1.150	2.749	N	W
1	CS134	64.333	1.667	20.550	0.310	3.131	N	
1		64.296	1.630	20.550	0.310	3.129	N	
1		61.444	1.222	20.550	0.310	2.990	N	
1	CS137	216.481	2.037	69.780	1.230	3.102	N	A
1		215.481	1.963	69.780	1.230	3.088	N	A
1	MN 54	64.370	1.704	20.850	0.310	3.087	N	W
1		66.852	1.704	20.850	0.310	3.206	N	W
1		66.741	1.704	20.850	0.310	3.201	N	W
1	U BQ	1.510	0.348	1.105	0.050	1.366	W	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: NZ National Radiation Laboratory, New Zealand

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI Bq/filter								
1	CE144	17.700	1.000	15.700	1.000	1.127	W	
1		17.500	0.900	15.700	1.000	1.115	W	
1	CO 57	12.800	0.700	10.810	1.000	1.184	W	
1		13.000	0.700	10.810	1.000	1.203	W	
1	CO 60	5.600	0.300	5.010	0.300	1.118	W	
1		5.700	0.300	5.010	0.300	1.138	W	
1	CS134	11.700	0.600	10.880	1.000	1.075	A	
1		11.600	0.600	10.880	1.000	1.066	A	
1	CS137	10.100	0.500	8.700	0.800	1.161	W	
1		10.000	0.500	8.700	0.800	1.149	W	
1	GA 1	0.990	0.040	0.960	0.050	1.031	A	
1		0.960	0.040	0.960	0.050	1.000	A	
1	GB 2	0.640	0.030	0.450	0.030	1.422	A	
1		0.600	0.030	0.450	0.030	1.333	A	
1	MN 54	8.900	0.500	7.620	0.600	1.168	W	
1		9.000	0.500	7.620	0.600	1.181	W	
1	PU238	0.100	0.010	0.100	0.006	0.998	A	
1		0.110	0.010	0.100	0.006	1.098	A	
1	PU239	0.130	0.010	0.119	0.006	1.094	A	
1	SB125	15.600	0.800	12.330	1.000	1.265	W	
1		16.200	0.900	12.330	1.000	1.314	W	
1	SR 90	1.370	0.030	1.450	0.149	0.945	A	
1		1.440	0.040	1.450	0.149	0.993	A	
1	U 234	0.100	0.010	0.103	0.005	0.972	A	
1		0.110	0.010	0.103	0.005	1.069	A	
1	U 238	0.120	0.010	0.105	0.004	1.148	A	
1		0.110	0.010	0.105	0.004	1.053	A	
Matrix: SO Bq/kg								
1	AM241	7.300	1.800	5.680	0.500	1.285	A	
1		8.400	1.900	5.680	0.500	1.479	A	
1	CO 60	2.000	0.100	1.060	0.120	1.887	W	
1		1.800	0.200	1.060	0.120	1.698	W	
1	CS137	999.000	51.000	825.500	14.100	1.210	A	
1		985.000	50.000	825.500	14.100	1.193	A	
1	K 40	383.000	28.000	334.250	7.140	1.146	A	
1		390.000	21.000	334.250	7.140	1.167	A	
1	PU238	0.610	0.180	0.530	0.111	1.152	A	
1		0.600	0.300	0.530	0.111	1.133	A	
1	PU239	127.000	3.000	134.930	17.100	0.941	A	
1		133.000	4.000	134.930	17.100	0.986	A	
1	SR 90	67.000	3.000	40.310	0.420	1.662	W	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: NZ National Radiation Laboratory, New Zealand

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: SO		Bq/kg					
1	U 234	36.200	2.300	37.570	2.480	0.964	A
1		32.900	3.600	37.570	2.480	0.876	A
1	U 238	39.800	3.900	42.430	2.500	0.938	A
1		40.000	2.300	42.430	2.500	0.943	A
Matrix: VE		Bq/kg					
1	CO 60	12.500	0.700	12.500	0.320	1.000	A
1		14.200	1.200	12.500	0.320	1.136	A
1	CS137	228.000	12.000	189.250	7.270	1.205	A
1		215.000	11.000	189.250	7.270	1.136	A
1	K 40	955.000	57.000	811.500	12.200	1.177	A
1		958.000	50.000	811.500	12.200	1.181	A
1	PU239	1.860	0.100	1.942	0.222	0.958	A
1		1.840	0.160	1.942	0.222	0.947	A
1	SR 90	130.000	5.000	361.000	43.300	0.360	N
1		100.000	5.000	361.000	43.300	0.277	N
Matrix: WA		Bq/L					
1	CO 60	100.000	6.000	90.850	1.150	1.101	A
1		108.000	6.000	90.850	1.150	1.189	N
1	CS137	82.000	5.000	69.780	1.230	1.175	A
1		87.000	5.000	69.780	1.230	1.247	W
1	GA 1	874.000	44.000	1130.000	10.000	0.810	W
1		922.000	45.000	1130.000	10.000	0.810	W
1	GB 2	553.000	29.000	744.000	10.000	0.730	A
1		549.000	29.000	744.000	10.000	0.730	A
1	MN 54	25.000	1.500	20.850	0.310	1.199	W
1		24.700	1.400	20.850	0.310	1.185	W
1	PU238	1.260	0.050	1.291	0.063	0.976	A
1		1.350	0.090	1.291	0.063	1.046	A
1	PU239	0.850	0.070	0.850	0.050	1.000	A
1		0.800	0.040	0.850	0.050	0.941	A
1	SR 90	21.000	0.300	23.200	1.350	0.905	A
1		25.000	0.400	23.200	1.350	1.078	A
1	U 234	0.550	0.070	0.540	0.020	1.019	A
1		0.600	0.060	0.540	0.020	1.111	A
1	U 238	0.640	0.070	0.550	0.025	1.165	W
1		0.590	0.060	0.550	0.025	1.074	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: OB OBG Laboratories, East Syracuse, NY

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	GA 1	0.870	0.060	0.960	0.050	0.906	A	N
1	GB 2	0.390	0.040	0.450	0.030	0.867	W	A
Matrix: WA		Bq/L						
1	GA 1	1590.000	56.700	1130.000	10.000	1.400	W	N
1	GB 2	461.000	25.900	744.000	10.000	0.610	W	N

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: OD ORNL, Radiobioassay Lab

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	CE144	15.330	0.670	15.700	1.000	0.976	A	
1	CO 57	12.820	0.420	10.810	1.000	1.186	W	W
1	CO 60	5.500	0.080	5.010	0.300	1.098	A	W
1	CS134	11.880	0.260	10.880	1.000	1.092	A	W
1	CS137	9.900	0.370	8.700	0.800	1.138	W	A
1	GA 1	0.900	0.030	0.960	0.050	0.938	A	N
1	GB 2	0.590	0.030	0.450	0.030	1.311	A	A
1	MN 54	8.750	0.480	7.620	0.600	1.148	W	W
1	SB125	14.290	0.360	12.330	1.000	1.159	W	A
Matrix: WA		Bq/L						
1	AM241	0.870	0.089	0.837	0.028	1.040	A	A
1	CO 60	93.140	3.000	90.850	1.150	1.025	A	A
1	CS137	80.540	4.720	69.780	1.230	1.154	A	A
1	H 3	281.940	61.670	250.300	4.200	1.126	A	A
1	MN 54	22.410	2.940	20.850	0.310	1.075	A	W
1	PU238	1.296	0.133	1.291	0.063	1.004	A	A
1	PU239	0.831	0.086	0.850	0.050	0.977	A	A
1	SR 90	21.680	2.430	23.200	1.350	0.934	A	A
1	U 234	0.536	0.054	0.540	0.020	0.993	A	A
1	U 238	0.524	0.052	0.550	0.025	0.954	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: OK Southwest Laboratory of Oklahoma

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	U 234	0.107	0.013	0.103	0.005	1.040	A	W
1	U 238	0.111	0.012	0.105	0.004	1.062	A	A
Matrix: SO		Bq/kg						
1	CS137	965.700	67.710	825.500	14.100	1.170	A	N
1	K 40	525.400	35.890	334.250	7.140	1.572	W	W
1	U 234	26.733	1.442	37.570	2.480	0.712	A	
1	U 238	28.701	1.477	42.430	2.500	0.676	A	
Matrix: WA		Bq/L						
1	CO 60	109.520	4.700	90.850	1.150	1.206	N	N
1	CS137	76.960	6.070	69.780	1.230	1.103	A	W
1	GA 1	780.700	32.410	1130.000	10.000	0.690	W	A
1	GB 2	503.200	20.720	744.000	10.000	0.670	W	A
1	H 3	283.720	17.500	250.300	4.200	1.134	A	A
1	MN 54	23.050	2.000	20.850	0.310	1.106	A	W
1	U 234	0.581	0.047	0.540	0.020	1.076	A	W
1	U 238	0.588	0.046	0.550	0.025	1.070	A	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: OL ORNL Environmental Sciences Div.

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: AI Bq/filter							
1	CE144	17.680	0.680	15.700	1.000	1.126	W
1	CO 57	11.950	0.310	10.810	1.000	1.105	W
1	CO 60	5.370	0.090	5.010	0.300	1.072	A
1	CS134	10.810	0.450	10.880	1.000	0.994	A
1	CS137	9.790	0.260	8.700	0.800	1.125	W
1	MN 54	8.950	0.200	7.620	0.600	1.175	W
1	SB125	13.230	0.910	12.330	1.000	1.073	A
Matrix: SO Bq/kg							
1	CS137	947.000	22.800	825.500	14.100	1.147	A
1	K 40	388.200	25.200	334.250	7.140	1.161	A
Matrix: VE Bq/kg							
1	CO 60	13.530	0.170	12.500	0.320	1.082	A
1	CS137	210.700	6.900	189.250	7.270	1.113	A
1	K 40	939.400	31.700	811.500	12.200	1.158	A
Matrix: WA Bq/L							
1	CO 60	98.600	2.400	90.850	1.150	1.085	A
1	CS134	21.900	1.400	20.550	0.310	1.066	A
1	CS137	79.800	2.800	69.780	1.230	1.144	A
1	MN 54	23.700	1.040	20.850	0.310	1.137	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	CE144	20.100	0.400	15.700	1.000	1.280	N	
1	CO 57	14.400	0.110	10.810	1.000	1.332	N	W
1	CO 60	58.600	0.110	5.010	0.300	*.***	N	N
1	CS134	11.500	0.070	10.880	1.000	1.057	A	W
1	CS137	9.900	0.180	8.700	0.800	1.138	W	W
1	MN 54	9.600	0.185	7.620	0.600	1.260	W	N
1	SB125	14.100	0.300	12.330	1.000	1.144	W	W
Matrix: SO		Bq/kg						
1	CS137	721.000	4.000	825.500	14.100	0.873	W	A
1	K 40	231.000	0.150	334.250	7.140	0.691	N	N
Matrix: VE		Bq/kg						
1	CO 60	10.800	1.300	12.500	0.320	0.864	A	N
1	CS137	193.000	5.000	189.250	7.270	1.020	A	W
1	K 40	642.000	21.000	811.500	12.200	0.791	W	N

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: OT ORNL Radioactive Material Analysis Lab

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.160	0.020	0.152	0.013	1.053	A	
1	CE144	16.000	1.000	15.700	1.000	1.019	A	
1	CO 57	12.000	1.000	10.810	1.000	1.110	W	W
1	CO 60	5.400	0.200	5.010	0.300	1.078	A	W
1	CS134	9.700	1.000	10.880	1.000	0.892	A	W
1	CS137	9.100	0.200	8.700	0.800	1.046	A	A
1	GA 1	0.880	0.100	0.960	0.050	0.917	A	
1	GB 2	0.540	0.060	0.450	0.030	1.200	A	
1	MN 54	8.400	0.200	7.620	0.600	1.102	A	W
1	PU238	0.110	0.010	0.100	0.006	1.098	A	
1	PU239	0.140	0.020	0.119	0.006	1.178	W	
1	SB125	14.000	1.000	12.330	1.000	1.135	A	A
1	SR 90	1.200	0.200	1.450	0.149	0.828	W	
1	U BQ	0.260	0.060	0.211	0.008	1.231	A	
Matrix: SO		Bq/kg						
1	CO 60	1.500	1.900	1.060	0.120	1.415	W	W
1	CS137	880.000	10.000	825.500	14.100	1.066	A	A
1	K 40	370.000	30.000	334.250	7.140	1.107	A	A
Matrix: VE		Bq/kg						
1	CO 60	12.000	2.000	12.500	0.320	0.960	A	A
1	CS137	210.000	10.000	189.250	7.270	1.110	A	A
1	K 40	840.000	30.000	811.500	12.200	1.035	A	A
Matrix: WA		Bq/L						
1	AM241	0.920	0.080	0.837	0.028	1.100	A	A
1	CO 60	96.000	1.000	90.850	1.150	1.057	A	A
1	CS137	78.000	1.000	69.780	1.230	1.118	A	A
1	GA 1	1200.000	100.000	1130.000	10.000	1.060	A	A
1	GB 2	640.000	50.000	744.000	10.000	0.860	A	A
1	H 3	240.000	20.000	250.300	4.200	0.959	A	A
1	MN 54	23.000	1.000	20.850	0.310	1.103	A	A
1	PU238	1.400	0.100	1.291	0.063	1.085	A	A
1	PU239	0.870	0.060	0.850	0.050	1.023	A	W
1	SR 90	22.000	1.000	23.200	1.350	0.948	A	A
1	U BQ	1.500	0.200	1.105	0.050	1.357	W	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: OU Outreach Laboratory, Broken Arrow, OK

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	CS134	20.600	4.830	20.550	0.310	1.002	A	
1	CS137	81.800	7.040	69.780	1.230	1.172	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	GA 1	0.890	0.110	0.960	0.050	0.927	A	N
1	GB 2	0.540	0.080	0.450	0.030	1.200	A	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: PG Comision Nacional de Energia Atomica, Asuncion, Paraguay

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: SO		Bq/kg					
1	CS137	1131.000	12.000	825.500	14.100	1.370	N
Matrix: VE		Bq/kg					
1	CS137	439.000	10.000	189.250	7.270	2.320	N

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	PU238	0.106	0.012	0.100	0.006	1.058	A	A
1	PU239	0.127	0.013	0.119	0.006	1.069	A	
Matrix: SO		Bq/kg						
1	PU238	0.560	0.420	0.530	0.111	1.057	A	W
1	PU239	200.000	20.000	134.930	17.100	1.482	W	A
Matrix: WA		Bq/L						
1	H 3	255.000	11.000	250.300	4.200	1.019	A	A
1	PU238	1.330	0.090	1.291	0.063	1.030	A	A
1	PU239	0.850	0.070	0.850	0.050	1.000	A	A
1	U BQ	1.230	0.090	1.105	0.050	1.113	A	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: **PO** Institute of Oceanology PAN, Poland

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: AI Bq/filter							
1	CO 60	5.300	0.200	5.010	0.300	1.058	A
1		5.200	0.200	5.010	0.300	1.038	A
1	CS134	12.000	2.000	10.880	1.000	1.103	A
1	CS137	9.000	0.500	8.700	0.800	1.034	A
Matrix: SO Bq/kg							
1	AM241	11.700	1.000	5.680	0.500	2.060	W
1	CO 60	1.850	0.340	1.060	0.120	1.745	W
1	CS137	906.000	22.000	825.500	14.100	1.098	A
1	K 40	348.000	16.000	334.250	7.140	1.041	A
1	PU239	100.000	20.000	134.930	17.100	0.741	W
1	SR 90	43.000	3.000	40.310	0.420	1.067	A
Matrix: VE Bq/kg							
1	AM241	1.400	0.500	1.183	0.113	1.183	A
1	CO 60	14.200	0.670	12.500	0.320	1.136	A
1	CS137	206.000	13.000	189.250	7.270	1.089	A
1	K 40	869.000	26.000	811.500	12.200	1.071	A
1	PU238	0.130	0.020	0.182	0.011	0.713	W
1	PU239	1.800	0.200	1.942	0.222	0.927	A
1	SR 90	360.000	20.000	361.000	43.300	0.997	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: PR Princeton Plasma Physics Lab

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: WA		Bq/L					
1	H 3	275.400	3.540	250.300	4.200	1.100	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	CE144	13.700	2.000	15.700	1.000	0.873	A	
1		14.300	0.600	15.700	1.000	0.911	A	
1	CO 57	10.600	0.660	10.810	1.000	0.981	A	N
1		10.700	0.500	10.810	1.000	0.990	A	N
1	CO 60	4.880	0.140	5.010	0.300	0.974	A	W
1		5.510	0.390	5.010	0.300	1.100	A	W
1	CS134	11.900	0.600	10.880	1.000	1.094	A	N
1		11.600	0.600	10.880	1.000	1.066	A	N
1	CS137	7.740	0.530	8.700	0.800	0.890	A	W
1		9.440	0.360	8.700	0.800	1.085	A	W
1	MN 54	7.730	0.550	7.620	0.600	1.014	A	W
1		8.250	0.320	7.620	0.600	1.083	A	W
1	PU238	0.110	0.020	0.100	0.006	1.098	A	A
1	PU239	0.130	0.030	0.119	0.006	1.094	A	
1	SB125	13.900	0.800	12.330	1.000	1.127	A	W
1		13.900	1.800	12.330	1.000	1.127	A	W
1	SR 90	1.800	0.300	1.450	0.149	1.241	A	A
1	U UG	8.900	0.900	8.448	0.400	1.054	A	
Matrix: SO		Bq/kg						
1	AM241	2.400	1.220	5.680	0.500	0.423	N	A
1		8.000	0.700	5.680	0.500	1.408	A	A
1	CO 60	1.700	1.700	1.060	0.120	1.604	W	W
1		1.500	0.500	1.060	0.120	1.415	W	W
1	CS137	784.000	50.000	825.500	14.100	0.950	A	A
1		760.000	50.000	825.500	14.100	0.921	A	A
1		871.000	36.000	825.500	14.100	1.055	A	A
1	K 40	327.000	56.000	334.250	7.140	0.978	A	A
1		280.000	126.000	334.250	7.140	0.838	W	A
1		230.000	49.000	334.250	7.140	0.688	N	A
1	PU238	0.530	0.210	0.530	0.111	1.001	A	A
1	PU239	160.000	30.000	134.930	17.100	1.186	A	A
1	SR 90	50.000	8.000	40.310	0.420	1.240	A	A
1	U 234	40.000	6.000	37.570	2.480	1.065	A	
1	U 238	39.000	6.000	42.430	2.500	0.919	A	
1		70.000	8.000	42.430	2.500	1.650	N	
1	U UG	3.160	0.300	3.426	0.200	0.922	A	
Matrix: VE		Bq/kg						
1	AM241	3.500	0.300	1.183	0.113	2.958	N	
1		1.800	1.300	1.183	0.113	1.521	A	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: VE		Bq/kg						
1	CO 60	7.500	1.400	12.500	0.320	0.600	N	A
1		12.500	1.100	12.500	0.320	1.000	A	A
1		10.800	0.900	12.500	0.320	0.864	A	A
1	CS137	173.000	15.000	189.250	7.270	0.914	A	A
1		182.000	13.000	189.250	7.270	0.962	A	A
1		206.000	9.000	189.250	7.270	1.089	A	A
1	K 40	886.000	89.000	811.500	12.200	1.092	A	W
1		670.000	154.000	811.500	12.200	0.826	W	W
1		727.000	78.000	811.500	12.200	0.896	W	W
1	PU238	0.140	0.060	0.182	0.011	0.768	W	
1	PU239	2.130	0.430	1.942	0.222	1.097	A	A
1	SR 90	500.000	80.000	361.000	43.300	1.385	N	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: RC US NRC Region I Laboratory, PA

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: WA		Bq/L					
1	CO 60	95.500	5.900	90.850	1.150	1.051	A
1	CS134	22.400	1.600	20.550	0.310	1.090	A
1	CS137	75.300	4.200	69.780	1.230	1.079	A
1	H 3	252.000	15.000	250.300	4.200	1.007	A
1	MN 54	23.200	1.700	20.850	0.310	1.113	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: RD Radiation Detection Company, CA

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	GA 1	0.900	0.040	0.960	0.050	0.938	A	N
1	GB 2	0.780	0.060	0.450	0.030	1.733	W	N

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: RE Bechtel Nevada, Mercury, NV

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.158	0.014	0.152	0.013	1.039	A	A
1	CE144	15.400	1.900	15.700	1.000	0.981	A	
1	CO 57	11.200	1.000	10.810	1.000	1.036	A	W
1	CO 60	5.280	0.720	5.010	0.300	1.054	A	W
1	CS134	10.700	1.100	10.880	1.000	0.983	A	A
1	CS137	8.900	0.990	8.700	0.800	1.023	A	A
1	GA 1	0.960	0.074	0.960	0.050	1.000	A	N
1	GB 2	0.516	0.041	0.450	0.030	1.147	A	A
1	MN 54	8.190	0.940	7.620	0.600	1.075	A	W
1	PU238	0.091	0.009	0.100	0.006	0.908	A	A
1	PU239	0.105	0.010	0.119	0.006	0.884	A	
1	SB125	13.200	1.700	12.330	1.000	1.071	A	A
1	SR 90	1.370	0.040	1.450	0.149	0.945	A	A
1	U 234	0.103	0.010	0.103	0.005	1.001	A	A
1	U 238	0.104	0.010	0.105	0.004	0.995	A	A
Matrix: SO		Bq/kg						
1	AM241	6.720	2.460	5.680	0.500	1.183	A	
1	CO 60	1.180	0.720	1.060	0.120	1.113	A	A
1	CS137	687.000	52.000	825.500	14.100	0.832	W	W
1	K 40	260.000	30.000	334.250	7.140	0.778	W	W
1	PU238	0.481	0.126	0.530	0.111	0.908	A	A
1	PU239	104.000	13.000	134.930	17.100	0.771	W	A
1	SR 90	44.300	2.500	40.310	0.420	1.099	A	A
1	U 234	36.400	3.600	37.570	2.480	0.969	A	A
1	U 238	39.700	3.900	42.430	2.500	0.936	A	A
Matrix: VE		Bq/kg						
1	AM241	1.160	0.160	1.183	0.113	0.980	A	A
1	CO 60	13.700	3.300	12.500	0.320	1.096	A	A
1	CS137	162.000	16.000	189.250	7.270	0.856	W	A
1	K 40	787.000	99.000	811.500	12.200	0.970	A	N
1	PU239	1.390	0.180	1.942	0.222	0.716	W	A
1	SR 90	307.000	4.000	361.000	43.300	0.850	A	A
Matrix: WA		Bq/L						
1	AM241	0.903	0.088	0.837	0.028	1.079	A	A
1	CO 60	101.000	11.000	90.850	1.150	1.112	A	W
1	CS137	79.400	8.300	69.780	1.230	1.138	A	A
1	GA 1	1180.000	39.000	1130.000	10.000	1.040	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: RE Bechtel Nevada, Mercury, NV

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	GB 2	597.000	22.000	744.000	10.000	0.800	A	A
1	H 3	275.000	23.000	250.300	4.200	1.099	A	A
1	MN 54	24.100	3.600	20.850	0.310	1.156	A	W
1	PU238	0.958	0.102	1.291	0.063	0.742	W	A
1	PU239	0.777	0.085	0.850	0.050	0.914	A	A
1	SR 90	22.900	0.500	23.200	1.350	0.987	A	A
1	U 234	0.529	0.055	0.540	0.020	0.980	A	A
1	U 238	0.568	0.059	0.550	0.025	1.034	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: SO		Bq/kg						
1	AM241	6.220	0.620	5.680	0.500	1.095	A	
1	PU238	0.664	0.156	0.530	0.111	1.254	W	
1	PU239	143.000	5.000	134.930	17.100	1.060	A	
1	U 234	39.200	1.600	37.570	2.480	1.043	A	
1	U 238	44.500	1.700	42.430	2.500	1.049	A	
1	U BQ	85.900	3.600	81.270	4.830	1.057	A	
Matrix: WA		Bq/L						
1	AM241	0.876	0.041	0.837	0.028	1.047	A	A
1	GA 1	1172.000	59.700	1130.000	10.000	1.030	A	A
1	GB 2	409.600	27.300	744.000	10.000	0.550	W	A
1	H 3	258.600	6.200	250.300	4.200	1.033	A	A
1	PU238	1.328	0.063	1.291	0.063	1.029	A	A
1	PU239	0.854	0.042	0.850	0.050	1.004	A	A
1	U 234	0.700	0.032	0.540	0.020	1.296	W	A
1	U 238	0.690	0.032	0.550	0.025	1.256	W	W
1	U BQ	1.420	0.069	1.105	0.050	1.285	W	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: RI Rust Federal Services of Hanford, Inc., 222S Lab

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.175	0.021	0.152	0.013	1.151	A	A
1	CE144	15.600	1.600	15.700	1.000	0.994	A	
1	CO 57	10.700	0.400	10.810	1.000	0.990	A	A
1	CO 60	4.750	0.360	5.010	0.300	0.948	A	A
1	CS134	11.700	0.380	10.880	1.000	1.075	A	A
1	CS137	7.940	0.640	8.700	0.800	0.913	A	A
1	MN 54	7.770	0.540	7.620	0.600	1.020	A	A
1	PU238	0.139	0.016	0.100	0.006	1.387	W	A
1	PU239	0.141	0.016	0.119	0.006	1.187	W	
1	SB125	13.600	0.940	12.330	1.000	1.103	A	W
1	SR 90	2.820	0.120	1.450	0.149	1.945	W	A
1	U UG	9.400	0.300	8.448	0.400	1.113	A	A
Matrix: SO		Bq/kg						
1	CS137	1030.000	15.000	825.500	14.100	1.248	W	A
1	K 40	355.000	97.000	334.250	7.140	1.062	A	A
1	SR 90	65.500	2.700	40.310	0.420	1.625	A	
Matrix: VE		Bq/kg						
1	CO 60	14.400	3.500	12.500	0.320	1.152	A	
1	CS137	248.000	8.300	189.250	7.270	1.310	W	W
1	K 40	995.000	96.000	811.500	12.200	1.226	A	A
1	SR 90	440.000	8.800	361.000	43.300	1.219	W	
Matrix: WA		Bq/L						
1	AM241	0.988	0.087	0.837	0.028	1.181	A	A
1	CO 60	96.900	4.100	90.850	1.150	1.067	A	A
1	CS134	26.000	2.300	20.550	0.310	1.265	N	
1	CS137	76.500	5.300	69.780	1.230	1.096	A	A
1	H 3	282.000	17.000	250.300	4.200	1.127	A	A
1	MN 54	23.300	3.400	20.850	0.310	1.118	A	A
1	PU238	1.530	0.110	1.291	0.063	1.185	W	A
1	PU239	0.940	0.083	0.850	0.050	1.106	A	A
1	SR 90	25.100	1.300	23.200	1.350	1.082	A	W
1	U UG	0.045	0.000	0.044	0.001	1.007	A	N

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: RK Rock Island Arsenal, Illinois

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: AI		Bq/filter					
1	GA 1	0.727	0.041	0.960	0.050	0.757	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: RL Thermo Hanford

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI Bq/filter								
1	CE144	34.200	2.600	15.700	1.000	2.178	N	
1	CO 57	22.500	1.200	10.810	1.000	2.081	N	A
1	CO 60	11.600	0.600	5.010	0.300	2.315	N	W
1	CS134	24.100	2.200	10.880	1.000	2.215	N	A
1	CS137	22.400	2.700	8.700	0.800	2.575	N	A
1	GA 1	0.890	0.040	0.960	0.050	0.927	A	
1	GB 2	0.650	0.060	0.450	0.030	1.444	A	
1	MN 54	19.200	1.400	7.620	0.600	2.520	N	W
1	SB125	36.000	5.400	12.330	1.000	2.920	N	A
Matrix: SO Bq/kg								
1	CS137	817.000	51.000	825.500	14.100	0.990	A	W
1	K 40	379.000	74.000	334.250	7.140	1.134	A	W
Matrix: VE Bq/kg								
1	CO 60	13.300	0.700	12.500	0.320	1.064	A	
1	CS137	187.000	17.900	189.250	7.270	0.988	A	W
1	K 40	924.000	54.700	811.500	12.200	1.139	A	W
1	SR 90	863.000	124.000	361.000	43.300	2.391	N	N
Matrix: WA Bq/L								
1	CO 60	92.500	23.600	90.850	1.150	1.018	A	N
1	CS137	76.000	4.000	69.780	1.230	1.089	A	N
1	GA 1	621.000	93.000	1130.000	10.000	0.540	W	N
1	GB 2	663.000	95.000	744.000	10.000	0.890	A	N
1	MN 54	23.700	2.300	20.850	0.310	1.137	A	N

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: RM Moscow State University, Russia

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: AI Bq/filter							
1	CE144	20.300	0.900	15.700	1.000	1.293	N
1	CO 57	16.000	0.200	10.810	1.000	1.480	N
1	CO 60	3.700	0.100	5.010	0.300	0.739	N
1	CS134	8.100	0.200	10.880	1.000	0.744	W
1	CS137	7.100	0.200	8.700	0.800	0.816	W
1	MN 54	5.900	0.200	7.620	0.600	0.774	W
1	SB125	12.400	0.900	12.330	1.000	1.006	A
Matrix: SO Bq/kg							
1	CO 60	12.300	3.600	1.060	0.120	*.***	N
1	CS137	756.000	11.000	825.500	14.100	0.916	A
1	K 40	279.000	45.000	334.250	7.140	0.835	W
Matrix: VE Bq/kg							
1	CO 60	19.000	3.200	12.500	0.320	1.520	N
1	CS137	160.000	5.500	189.250	7.270	0.845	W
1	K 40	648.000	47.000	811.500	12.200	0.799	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: RO Radiation Hygiene Laboratory, Romania

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: SO		Bq/kg					
1	CO 60	1.500	1.000	1.060	0.120	1.415	W
1	CS137	910.000	73.000	825.500	14.100	1.102	A
1	K 40	356.000	53.000	334.250	7.140	1.065	A
1	SR 90	24.700	6.000	40.310	0.420	0.613	W
Matrix: VE		Bq/kg					
1	CO 60	13.200	2.500	12.500	0.320	1.056	A
1	CS137	216.000	21.000	189.250	7.270	1.141	A
1	K 40	938.000	70.000	811.500	12.200	1.156	A
1	SR 90	156.000	31.000	361.000	43.300	0.432	N

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI Bq/filter								
1	CE144	16.000	1.600	15.700	1.000	1.019	A	
1	CO 57	11.300	1.100	10.810	1.000	1.045	A	N
1	CO 60	5.200	0.500	5.010	0.300	1.038	A	N
1	CS134	11.700	1.100	10.880	1.000	1.075	A	N
1	CS137	8.700	0.800	8.700	0.800	1.000	A	N
1	GA 1	0.890	0.180	0.960	0.050	0.927	A	N
1	GB 2	0.420	0.080	0.450	0.030	0.933	A	A
1	MN 54	8.200	0.800	7.620	0.600	1.076	A	N
1	SB125	14.100	1.400	12.330	1.000	1.144	W	N
Matrix: SO Bq/kg								
1	CS137	928.000	92.000	825.500	14.100	1.124	A	A
1	K 40	388.000	38.000	334.250	7.140	1.161	A	A
Matrix: WA Bq/L								
1	CO 60	100.000	6.000	90.850	1.150	1.101	A	A
1	CS137	80.000	5.000	69.780	1.230	1.146	A	A
1	GA 1	1073.000	215.000	1130.000	10.000	0.940	A	A
1	GB 2	771.000	154.000	744.000	10.000	1.030	A	W
1	MN 54	24.000	1.400	20.850	0.310	1.151	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: SB SC Dept. of Health and Environment Control Radiological Lab

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: AI		Bq/filter					
1	GA 1	1.360	0.110	0.960	0.050	1.417	W
1	GB 2	0.500	0.060	0.450	0.030	1.111	A
Matrix: SO		Bq/kg					
1	CS137	910.000	50.000	825.500	14.100	1.102	A
1	K 40	355.000	40.000	334.250	7.140	1.062	A
Matrix: VE		Bq/kg					
1	CO 60	9.300	0.900	12.500	0.320	0.744	W
1	CS137	133.000	6.000	189.250	7.270	0.703	N
1	K 40	614.000	30.000	811.500	12.200	0.757	N
Matrix: WA		Bq/L					
1	CO 60	9.900	0.400	90.850	1.150	0.109	N
1	CS134	2.300	0.200	20.550	0.310	0.112	N
1	CS137	8.600	0.300	69.780	1.230	0.123	N
1	GA 1	1052.000	60.000	1130.000	10.000	0.930	A
1	GB 2	376.000	20.000	744.000	10.000	0.500	N
1	H 3	568.000	100.000	250.300	4.200	2.269	N
1	MN 54	2.550	0.100	20.850	0.310	0.122	N

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: SK Savannah River Plant

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	CE144	14.700	0.200	15.700	1.000	0.936	A	
1	CO 57	11.000	0.400	10.810	1.000	1.018	A	W
1	CO 60	5.100	0.100	5.010	0.300	1.018	A	N
1	CS134	12.200	0.200	10.880	1.000	1.121	W	N
1	CS137	7.990	0.120	8.700	0.800	0.918	A	W
1	MN 54	7.070	0.100	7.620	0.600	0.928	A	W
1	SB125	12.500	0.200	12.330	1.000	1.014	A	W
Matrix: SO		Bq/kg						
1	CO 60	1.460	0.100	1.060	0.120	1.377	W	W
1	CS137	1045.000	24.000	825.500	14.100	1.266	W	A
1	K 40	390.000	12.000	334.250	7.140	1.167	A	A
Matrix: VE		Bq/kg						
1	CO 60	14.700	1.000	12.500	0.320	1.176	A	W
1	CS137	231.000	14.000	189.250	7.270	1.221	A	A
1	K 40	882.000	42.000	811.500	12.200	1.087	A	A
Matrix: WA		Bq/L						
1	CO 60	107.200	0.800	90.850	1.150	1.180	W	W
1	CS137	81.900	3.200	69.780	1.230	1.174	A	A
1	MN 54	23.400	0.600	20.850	0.310	1.122	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: SL Stanford Linear Accelerator Center

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	CO 60	101.900	3.800	90.850	1.150	1.122	A	W
1	CS134	27.500	1.300	20.550	0.310	1.338	N	
1	CS137	78.900	4.000	69.780	1.230	1.131	A	A
1	MN 54	22.800	1.300	20.850	0.310	1.094	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	PU238	0.110	0.011	0.100	0.006	1.098	A	A
1	PU239	0.130	0.014	0.119	0.006	1.094	A	
1	U BQ	0.220	0.027	0.211	0.008	1.042	A	
Matrix: SO		Bq/kg						
1	CO 60	1.160	0.640	1.060	0.120	1.094	A	A
1	CS137	872.730	87.200	825.500	14.100	1.057	A	A
1	K 40	371.440	36.240	334.250	7.140	1.111	A	W
1	PU238	1.380	1.780	0.530	0.111	2.606	N	W
1	PU239	148.760	19.180	134.930	17.100	1.102	A	A
1	U BQ	101.990	18.470	81.270	4.830	1.255	W	
Matrix: VE		Bq/kg						
1	CO 60	16.840	3.150	12.500	0.320	1.347	W	A
1	CS137	222.160	25.430	189.250	7.270	1.174	A	A
1	K 40	1016.650	109.950	811.500	12.200	1.253	W	W
1	PU239	2.940	0.640	1.942	0.222	1.514	W	W
Matrix: WA		Bq/L						
1	CO 60	96.450	8.500	90.850	1.150	1.062	A	A
1	CS137	72.810	6.440	69.780	1.230	1.043	A	A
1	GA 1	939.610	50.070	1130.000	10.000	0.830	A	A
1	GB 2	610.760	38.520	744.000	10.000	0.820	A	A
1	MN 54	23.010	2.550	20.850	0.310	1.104	A	A
1	PU238	1.320	0.150	1.291	0.063	1.023	A	A
1	PU239	0.820	0.098	0.850	0.050	0.964	A	A
1	U BQ	1.260	0.180	1.105	0.050	1.140	A	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: SR Savannah River Environmental Laboratory

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.164	0.017	0.152	0.013	1.079	A	W
1	CE144	15.500	2.100	15.700	1.000	0.987	A	
1	CO 57	10.900	0.700	10.810	1.000	1.008	A	A
1	CO 60	5.000	0.300	5.010	0.300	0.998	A	W
1	CS134	11.000	0.600	10.880	1.000	1.011	A	A
1	CS137	8.800	0.800	8.700	0.800	1.011	A	A
1	MN 54	7.800	0.800	7.620	0.600	1.024	A	W
1	PU238	0.109	0.015	0.100	0.006	1.088	A	A
1	PU239	0.132	0.018	0.119	0.006	1.111	A	
1	SB125	13.400	0.800	12.330	1.000	1.087	A	A
1	SR 90	1.280	0.160	1.450	0.149	0.883	A	N
1	U 234	0.112	0.016	0.103	0.005	1.088	A	N
1	U 238	0.110	0.015	0.105	0.004	1.053	A	W
Matrix: SO		Bq/kg						
1	AM241	7.370	2.500	5.680	0.500	1.298	A	
1	CS137	916.000	86.000	825.500	14.100	1.110	A	A
1	K 40	372.000	41.000	334.250	7.140	1.113	A	A
1	PU239	138.000	16.000	134.930	17.100	1.023	A	A
1	SR 90	49.000	25.000	40.310	0.420	1.216	A	A
1	U 234	31.400	5.000	37.570	2.480	0.836	A	
1	U 238	34.100	5.100	42.430	2.500	0.804	A	
Matrix: VE		Bq/kg						
1	AM241	1.370	0.230	1.183	0.113	1.158	A	W
1	CM244	0.970	0.190	0.900	0.050	1.078	A	
1	CO 60	14.400	1.400	12.500	0.320	1.152	A	A
1	CS137	217.000	21.000	189.250	7.270	1.147	A	A
1	K 40	962.000	98.000	811.500	12.200	1.185	A	A
1	PU239	2.130	0.330	1.942	0.222	1.097	A	A
1	SR 90	314.000	24.000	361.000	43.300	0.870	A	A
Matrix: WA		Bq/L						
1	AM241	0.960	0.110	0.837	0.028	1.148	A	A
1	CO 60	97.100	6.300	90.850	1.150	1.069	A	A
1	CS137	77.200	7.600	69.780	1.230	1.106	A	A
1	H 3	246.000	11.000	250.300	4.200	0.983	A	W
1	MN 54	23.300	2.400	20.850	0.310	1.118	A	A
1	PU238	1.330	0.210	1.291	0.063	1.030	A	W
1	PU239	0.850	0.150	0.850	0.050	1.000	A	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: SR Savannah River Environmental Laboratory

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	SR 90	25.900	2.700	23.200	1.350	1.116	A	A
1	U 234	0.620	0.060	0.540	0.020	1.148	A	A
1	U 238	0.630	0.060	0.550	0.025	1.146	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: SS Savannah River Tech Center

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	CE144	13.300	0.353	15.700	1.000	0.847	A	
1	CO 57	9.790	0.116	10.810	1.000	0.906	A	A
1	CO 60	5.010	0.090	5.010	0.300	1.000	A	W
1	CS134	9.670	0.173	10.880	1.000	0.889	A	A
1	CS137	8.700	0.159	8.700	0.800	1.000	A	A
1	MN 54	7.110	0.257	7.620	0.600	0.933	A	A
1	SB125	12.900	0.324	12.330	1.000	1.046	A	A
Matrix: SO		Bq/kg						
1	CO 60	1.250	0.118	1.060	0.120	1.179	A	A
1	CS137	955.000	14.100	825.500	14.100	1.157	A	A
1	K 40	373.000	10.400	334.250	7.140	1.116	A	A
Matrix: VE		Bq/kg						
1	CO 60	13.000	0.367	12.500	0.320	1.040	A	A
1	CS137	200.000	2.570	189.250	7.270	1.057	A	A
1	K 40	876.000	16.800	811.500	12.200	1.079	A	A
Matrix: WA		Bq/L						
1	CO 60	95.600	0.432	90.850	1.150	1.052	A	A
1	CS137	75.900	1.040	69.780	1.230	1.088	A	A
1	MN 54	22.800	0.871	20.850	0.310	1.094	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	GA 1	1315.370	67.010	1130.000	10.000	1.160	A	A
1	GB 2	478.460	26.030	744.000	10.000	0.640	W	A
1	H 3	242.220	10.680	250.300	4.200	0.968	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.150	0.010	0.152	0.013	0.987	A	
1	CE144	15.190	0.030	15.700	1.000	0.968	A	
1	CO 57	11.280	0.080	10.810	1.000	1.043	A	W
1	CO 60	5.290	0.070	5.010	0.300	1.056	A	A
1	CS134	11.380	0.080	10.880	1.000	1.046	A	A
1	CS137	8.960	0.110	8.700	0.800	1.030	A	A
1	GA 1	0.870	0.050	0.960	0.050	0.906	A	N
1	GB 2	0.510	0.050	0.450	0.030	1.133	A	W
1	MN 54	7.870	0.110	7.620	0.600	1.033	A	W
1	PU238	0.080	0.010	0.100	0.006	0.798	W	
1	PU239	0.080	0.010	0.119	0.006	0.673	W	
1	SB125	13.920	0.180	12.330	1.000	1.129	A	A
1	SR 90	1.610	0.100	1.450	0.149	1.110	A	A
1	U 238	11.900	0.000	0.105	0.004	*.***	N	
Matrix: SO		Bq/kg						
1	AM241	6.570	1.610	5.680	0.500	1.157	A	A
1	CO 60	2.450	0.280	1.060	0.120	2.311	N	A
1	CS137	1126.800	2.500	825.500	14.100	1.365	N	N
1	K 40	417.200	7.200	334.250	7.140	1.248	A	N
1	PU238	1.150	0.280	0.530	0.111	2.171	N	
1	PU239	65.740	4.080	134.930	17.100	0.487	N	
1	SR 90	26.350	0.450	40.310	0.420	0.654	W	
1	U 238	2.310	0.000	42.430	2.500	0.054	N	
Matrix: VE		Bq/kg						
1	AM241	4.250	0.910	1.183	0.113	3.592	N	
1	CM244	0.740	0.260	0.900	0.050	0.822	W	
1	CO 60	21.050	1.770	12.500	0.320	1.684	N	A
1	CS137	193.400	3.900	189.250	7.270	1.022	A	A
1	K 40	942.400	14.700	811.500	12.200	1.161	A	A
1	PU239	1.460	0.130	1.942	0.222	0.752	W	
1	SR 90	441.580	7.520	361.000	43.300	1.223	W	
Matrix: WA		Bq/L						
1	AM241	0.910	0.040	0.837	0.028	1.088	A	W
1	CO 60	97.200	0.230	90.850	1.150	1.070	A	A
1	CS137	76.350	0.250	69.780	1.230	1.094	A	A
1	GA 1	948.800	14.900	1130.000	10.000	0.830	A	A
1	GB 2	445.600	9.300	744.000	10.000	0.590	W	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	H 3	341.300	8.930	250.300	4.200	1.364	W	W
1	MN 54	23.260	0.200	20.850	0.310	1.116	A	A
1	PU238	0.890	0.040	1.291	0.063	0.689	N	
1	PU239	0.510	0.030	0.850	0.050	0.600	N	
1	SR 90	25.330	0.290	23.200	1.350	1.092	A	A
1	U 238	0.050	0.000	0.550	0.025	0.091	N	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	CO 57	9.528	0.230	10.810	1.000	0.881	A	A
1	CO 60	5.325	0.266	5.010	0.300	1.063	A	A
1	CS134	10.767	0.337	10.880	1.000	0.990	A	A
1	CS137	9.116	0.404	8.700	0.800	1.048	A	A
1	GA 1	1.199	0.045	0.960	0.050	1.249	A	N
1	GB 2	0.608	0.024	0.450	0.030	1.351	A	A
1	MN 54	8.494	0.429	7.620	0.600	1.115	W	W
1	PU238	0.022	0.016	0.100	0.006	0.224	N	
1	PU239	0.031	0.010	0.119	0.006	0.264	N	
1	SB125	14.118	1.099	12.330	1.000	1.145	W	W
1	SR 90	1.291	0.275	1.450	0.149	0.890	A	
1	U BQ	0.150	0.020	0.211	0.008	0.710	N	
Matrix: SO		Bq/kg						
1	AM241	6.740	3.730	5.680	0.500	1.187	A	A
1	CO 60	2.010	1.170	1.060	0.120	1.896	W	W
1	CS137	918.640	8.400	825.500	14.100	1.113	A	A
1	K 40	359.140	32.100	334.250	7.140	1.074	A	A
1	PU238	0.300	0.200	0.530	0.111	0.566	W	W
1	PU239	132.420	5.170	134.930	17.100	0.981	A	A
1	SR 90	38.830	5.770	40.310	0.420	0.963	A	A
1	U BQ	79.260	3.800	81.270	4.830	0.975	A	
Matrix: VE		Bq/kg						
1	AM241	1.673	0.688	1.183	0.113	1.414	A	A
1	CM244	0.688	0.468	0.900	0.050	0.764	W	W
1	CO 60	16.914	3.580	12.500	0.320	1.353	W	W
1	CS137	216.667	9.383	189.250	7.270	1.145	A	A
1	PU239	1.771	0.817	1.942	0.222	0.912	A	
1	SR 90	361.130	19.715	361.000	43.300	1.000	A	A
Matrix: WA		Bq/L						
1	AM241	0.840	0.220	0.837	0.028	1.004	A	A
1	CO 60	96.000	3.500	90.850	1.150	1.057	A	A
1	CS137	77.000	3.500	69.780	1.230	1.103	A	A
1	FE 55	175.500	25.400	235.000	20.000	0.747	W	
1	GA 1	1042.600	36.800	1130.000	10.000	0.920	A	A
1	GB 2	591.400	23.300	744.000	10.000	0.790	A	A
1	H 3	272.000	29.700	250.300	4.200	1.087	A	A
1	MN 54	23.700	3.400	20.850	0.310	1.137	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	PU238	1.400	0.200	1.291	0.063	1.085	A	N
1	PU239	0.900	0.100	0.850	0.050	1.059	A	W
1	SR 90	25.500	1.700	23.200	1.350	1.099	A	W
1	U BQ	1.500	0.200	1.105	0.050	1.357	W	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI Bq/filter								
1	AM241	0.150	0.030	0.152	0.013	0.987	A	A
1	CE144	14.500	1.450	15.700	1.000	0.924	A	
1	CO 57	12.500	1.250	10.810	1.000	1.156	W	W
1	CO 60	5.860	0.586	5.010	0.300	1.170	W	W
1	CS134	12.000	1.200	10.880	1.000	1.103	A	A
1	CS137	10.800	1.080	8.700	0.800	1.241	W	W
1	GA 1	1.200	0.100	0.960	0.050	1.250	A	N
1	GB 2	0.330	0.040	0.450	0.030	0.733	W	A
1	MN 54	9.630	0.963	7.620	0.600	1.264	W	W
1	PU238	0.110	0.030	0.100	0.006	1.098	A	W
1	PU239	0.170	0.040	0.119	0.006	1.431	W	
1	SB125	14.900	1.490	12.330	1.000	1.208	W	A
1	SR 90	1.400	0.200	1.450	0.149	0.966	A	A
1	U UG	7.900	1.200	8.448	0.400	0.935	A	W
Matrix: SO Bq/kg								
1	AM241	4.900	1.500	5.680	0.500	0.863	A	A
1	CS137	1010.000	100.000	825.500	14.100	1.224	A	A
1	K 40	384.000	38.000	334.250	7.140	1.149	A	A
1	PU238	0.530	0.280	0.530	0.111	1.001	A	A
1	PU239	140.000	10.000	134.930	17.100	1.038	A	A
1	SR 90	49.000	5.000	40.310	0.420	1.216	A	A
1	U UG	3.300	0.500	3.426	0.200	0.963	A	A
Matrix: VE Bq/kg								
1	AM241	1.200	0.300	1.183	0.113	1.014	A	A
1	CM244	0.940	0.300	0.900	0.050	1.044	A	A
1	CO 60	17.900	1.800	12.500	0.320	1.432	N	A
1	CS137	263.000	26.000	189.250	7.270	1.390	W	A
1	K 40	1060.000	110.000	811.500	12.200	1.306	W	W
1	PU239	2.100	0.600	1.942	0.222	1.081	A	A
1	SR 90	420.000	10.000	361.000	43.300	1.163	W	A
Matrix: WA Bq/L								
1	AM241	0.980	0.150	0.837	0.028	1.171	A	A
1	CO 60	94.400	9.400	90.850	1.150	1.039	A	W
1	CS134	20.400	2.000	20.550	0.310	0.993	A	
1	CS137	77.600	7.800	69.780	1.230	1.112	A	A
1	FE 55	200.000	20.000	235.000	20.000	0.851	A	W
1	GA 1	1100.000	100.000	1130.000	10.000	0.970	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	GB 2	360.000	40.000	744.000	10.000	0.480	N	W
1	H 3	240.000	10.000	250.300	4.200	0.959	A	A
1	MN 54	23.800	2.400	20.850	0.310	1.141	A	W
1	PU238	1.600	0.200	1.291	0.063	1.240	W	A
1	PU239	0.950	0.170	0.850	0.050	1.117	A	W
1	SR 90	26.000	1.000	23.200	1.350	1.121	A	A
1	U UG	0.045	0.007	0.044	0.001	1.014	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: TM TMA/Eberline-Albuquerque Lab, NM

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI Bq/filter								
1	AM241	0.133	0.006	0.152	0.013	0.875	A	A
1	CE144	18.100	0.982	15.700	1.000	1.153	W	
1	CO 57	12.600	0.414	10.810	1.000	1.166	W	W
1	CO 60	5.620	0.313	5.010	0.300	1.122	W	
1	CS134	12.300	0.450	10.880	1.000	1.131	W	W
1	CS137	9.860	0.428	8.700	0.800	1.133	W	W
1	GA 1	0.804	0.119	0.960	0.050	0.838	A	W
1	GB 2	0.394	0.076	0.450	0.030	0.876	W	A
1	MN 54	9.270	0.417	7.620	0.600	1.217	W	W
1	PU238	0.102	0.005	0.100	0.006	1.018	A	A
1	PU239	0.122	0.006	0.119	0.006	1.027	A	
1	SB125	15.400	0.792	12.330	1.000	1.249	W	N
1	SR 90	1.270	0.124	1.450	0.149	0.876	A	A
1	U 234	0.114	0.006	0.103	0.005	1.108	A	A
1	U 238	0.120	0.006	0.105	0.004	1.148	A	A
1	U UG	8.810	0.451	8.448	0.400	1.043	A	A
Matrix: SO Bq/kg								
1	AM241	5.870	0.532	5.680	0.500	1.033	A	A
1	CS137	827.000	24.900	825.500	14.100	1.002	A	W
1	K 40	323.000	31.200	334.250	7.140	0.966	A	A
1	PU238	0.648	0.157	0.530	0.111	1.224	W	A
1	PU239	130.000	4.360	134.930	17.100	0.963	A	A
1	SR 90	24.800	0.259	40.310	0.420	0.615	W	A
1	U 234	36.200	1.770	37.570	2.480	0.964	A	W
1	U 238	37.100	1.790	42.430	2.500	0.874	A	A
1	U UG	3.480	0.180	3.426	0.200	1.016	A	A
Matrix: VE Bq/kg								
1	AM241	1.630	0.166	1.183	0.113	1.378	A	A
1	CM244	1.170	0.178	0.900	0.050	1.300	A	W
1	CO 60	15.600	2.400	12.500	0.320	1.248	W	A
1	CS137	237.000	7.900	189.250	7.270	1.252	W	W
1	K 40	883.000	47.000	811.500	12.200	1.088	A	A
1	PU239	2.050	0.194	1.942	0.222	1.056	A	A
1	SR 90	399.000	28.100	361.000	43.300	1.105	W	W
Matrix: WA Bq/L								
1	AM241	0.889	0.041	0.837	0.028	1.063	A	A
1	CO 60	97.300	2.970	90.850	1.150	1.071	A	N

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: TM TMA/Eberline-Albuquerque Lab, NM

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	CS137	83.400	2.540	69.780	1.230	1.195	W	A
1	FE 55	176.000	4.640	235.000	20.000	0.749	W	A
1	GA 1	1520.000	172.000	1130.000	10.000	1.340	W	A
1	GB 2	408.000	34.400	744.000	10.000	0.540	N	A
1	H 3	228.000	10.800	250.300	4.200	0.911	A	A
1	MN 54	25.100	0.949	20.850	0.310	1.204	W	W
1	PU238	1.360	0.053	1.291	0.063	1.054	A	A
1	PU239	0.869	0.039	0.850	0.050	1.022	A	A
1	SR 90	26.900	1.610	23.200	1.350	1.159	A	A
1	U 234	0.587	0.036	0.540	0.020	1.087	A	A
1	U 238	0.594	0.036	0.550	0.025	1.081	A	A
1	U UG	0.050	0.003	0.044	0.001	1.124	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

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

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.153	0.013	0.152	0.013	1.007	A	A
1	CE144	27.100	2.200	15.700	1.000	1.726	N	
1	CO 57	17.500	0.900	10.810	1.000	1.619	N	A
1	CO 60	7.360	0.400	5.010	0.300	1.469	N	A
1	CS134	18.800	1.000	10.880	1.000	1.728	N	W
1	CS137	13.300	0.700	8.700	0.800	1.529	N	A
1	GA 1	1.380	0.140	0.960	0.050	1.438	W	
1	GB 2	0.253	0.070	0.450	0.030	0.562	N	
1	MN 54	12.110	0.700	7.620	0.600	1.589	N	A
1	PU238	0.099	0.010	0.100	0.006	0.988	A	A
1	PU239	0.129	0.011	0.119	0.006	1.086	A	
1	SB125	19.900	1.600	12.330	1.000	1.614	N	A
1	SR 90	1.540	0.300	1.450	0.149	1.062	A	A
1	U 234	0.114	0.009	0.103	0.005	1.108	A	
1	U 238	0.109	0.008	0.105	0.004	1.043	A	
1	U UG	8.970	1.400	8.448	0.400	1.062	A	A
Matrix: SO		Bq/kg						
1	AM241	6.900	1.000	5.680	0.500	1.215	A	A
1	CS137	930.000	50.000	825.500	14.100	1.127	A	A
1	K 40	330.000	50.000	334.250	7.140	0.987	A	A
1	PU238	0.350	0.500	0.530	0.111	0.661	W	A
1	PU239	134.000	8.000	134.930	17.100	0.993	A	A
1	SR 90	45.600	3.000	40.310	0.420	1.131	A	A
1	U 234	39.000	3.000	37.570	2.480	1.038	A	A
1	U 238	42.000	3.000	42.430	2.500	0.990	A	A
1	U UG	3.500	0.500	3.426	0.200	1.022	A	A
Matrix: VE		Bq/kg						
1	AM241	1.400	0.600	1.183	0.113	1.183	A	A
1	CM244	0.690	0.500	0.900	0.050	0.767	W	A
1	CO 60	15.000	2.000	12.500	0.320	1.200	W	A
1	CS137	219.000	10.000	189.250	7.270	1.157	A	A
1	K 40	844.000	40.000	811.500	12.200	1.040	A	A
1	PU239	2.000	0.800	1.942	0.222	1.030	A	A
1	SR 90	401.000	20.000	361.000	43.300	1.111	W	W
Matrix: WA		Bq/L						
1	AM241	0.910	0.060	0.837	0.028	1.088	A	A
1	CO 60	100.000	5.000	90.850	1.150	1.101	A	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: TN TMA/NORCAL, Richmond, CA

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	CS137	79.000	6.000	69.780	1.230	1.132	A	A
1	FE 55	238.000	7.000	235.000	20.000	1.000	A	A
1	GA 1	1203.000	33.000	1130.000	10.000	1.060	A	W
1	GB 2	421.000	16.000	744.000	10.000	0.560	W	A
1	H 3	257.000	9.000	250.300	4.200	1.027	A	A
1	MN 54	23.900	1.400	20.850	0.310	1.146	A	W
1	PU238	1.360	0.080	1.291	0.063	1.054	A	A
1	PU239	0.866	0.055	0.850	0.050	1.019	A	A
1	SR 90	24.900	2.000	23.200	1.350	1.073	A	A
1	U 234	0.570	0.030	0.540	0.020	1.056	A	A
1	U 238	0.590	0.030	0.550	0.025	1.074	A	A
1	U UG	0.049	0.008	0.044	0.001	1.104	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: TO Thermo NUtech Oak Ridge Laboratory

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.220	0.100	0.152	0.013	1.447	W	A
1	CE144	19.800	1.100	15.700	1.000	1.261	N	
1	CO 57	12.900	0.600	10.810	1.000	1.193	W	N
1	CO 60	6.000	0.500	5.010	0.300	1.198	W	N
1	CS134	12.100	0.700	10.880	1.000	1.112	W	N
1	CS137	9.700	0.900	8.700	0.800	1.115	W	W
1	GA 1	1.440	0.060	0.960	0.050	1.500	W	A
1	GB 2	0.750	0.030	0.450	0.030	1.667	W	W
1	MN 54	8.400	0.800	7.620	0.600	1.102	A	W
1	PU238	0.120	0.040	0.100	0.006	1.198	W	
1	PU239	0.130	0.040	0.119	0.006	1.094	A	
1	SB125	15.100	0.800	12.330	1.000	1.225	W	W
1	SR 90	1.850	0.220	1.450	0.149	1.276	A	A
1	U 234	0.095	0.006	0.103	0.005	0.923	A	A
1	U 238	0.095	0.006	0.105	0.004	0.909	A	A
1	U UG	7.640	0.048	8.448	0.400	0.904	A	A
Matrix: SO		Bq/kg						
1	AM241	6.200	2.900	5.680	0.500	1.092	A	A
1	CS137	794.000	24.300	825.500	14.100	0.962	A	N
1	K 40	300.000	44.300	334.250	7.140	0.898	A	A
1	PU238	1.420	1.390	0.530	0.111	2.681	N	A
1	PU239	142.000	36.800	134.930	17.100	1.052	A	A
1	SR 90	26.000	3.890	40.310	0.420	0.645	W	A
1	U 234	50.800	1.310	37.570	2.480	1.352	W	A
1	U 238	50.800	1.310	42.430	2.500	1.197	W	A
1	U BQ	4.100	0.110	81.270	4.830	0.050	N	
Matrix: VE		Bq/kg						
1	AM241	2.220	1.220	1.183	0.113	1.876	W	
1	CM244	1.530	1.010	0.900	0.050	1.700	N	
1	CO 60	20.100	6.300	12.500	0.320	1.608	N	A
1	CS137	302.000	44.800	189.250	7.270	1.596	N	N
1	K 40	1291.000	212.000	811.500	12.200	1.591	N	W
1	PU239	2.170	0.980	1.942	0.222	1.117	A	W
1	SR 90	409.000	13.200	361.000	43.300	1.133	W	A
Matrix: WA		Bq/L						
1	AM241	0.800	0.320	0.837	0.028	0.956	A	A
1	CO 60	94.700	1.210	90.850	1.150	1.042	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: TO Thermo NUtech Oak Ridge Laboratory

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	CS137	77.100	1.400	69.780	1.230	1.105	A	A
1	FE 55	47.800	12.800	235.000	20.000	0.203	N	
1	GA 1	1275.000	27.000	1130.000	10.000	1.120	A	A
1	GB 2	728.000	16.600	744.000	10.000	0.970	A	A
1	H 3	281.000	16.800	250.300	4.200	1.123	A	A
1	MN 54	23.100	1.040	20.850	0.310	1.108	A	W
1	PU238	1.390	0.300	1.291	0.063	1.077	A	A
1	PU239	0.870	0.210	0.850	0.050	1.023	A	W
1	SR 90	25.800	1.560	23.200	1.350	1.112	A	A
1	U 234	0.530	0.034	0.540	0.020	0.981	A	A
1	U 238	0.530	0.034	0.550	0.025	0.965	A	A
1	U UG	0.043	0.003	0.044	0.001	0.968	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: TP Taiwan Power Company, Taipei, Taiwan

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	CE144	15.395	1.696	15.700	1.000	0.981	A	
1	CO 57	10.738	0.024	10.810	1.000	0.993	A	A
1	CO 60	4.985	0.599	5.010	0.300	0.995	A	W
1	CS134	10.458	0.821	10.880	1.000	0.961	A	A
1	CS137	8.886	0.496	8.700	0.800	1.021	A	A
1	GA 1	0.930	0.045	0.960	0.050	0.969	A	
1	GB 2	0.440	0.029	0.450	0.030	0.978	A	A
1	MN 54	8.097	0.313	7.620	0.600	1.063	A	W
1	SB125	13.419	0.302	12.330	1.000	1.088	A	N
1	SR 90	1.190	0.057	1.450	0.149	0.821	W	A
Matrix: SO		Bq/kg						
1	CO 60	0.000	0.000	1.060	0.120	0.000	N	A
1	CS137	770.507	2.793	825.500	14.100	0.933	A	A
1	SR 90	43.700	2.000	40.310	0.420	1.084	A	A
Matrix: VE		Bq/kg						
1	CO 60	13.190	0.277	12.500	0.320	1.055	A	A
1	CS137	207.330	2.795	189.250	7.270	1.096	A	A
1	K 40	858.600	12.188	811.500	12.200	1.058	A	A
1	SR 90	399.000	4.000	361.000	43.300	1.105	W	A
Matrix: WA		Bq/L						
1	CO 60	93.670	3.803	90.850	1.150	1.031	A	A
1	CS137	73.707	1.057	69.780	1.230	1.056	A	A
1	GB 2	662.330	17.980	744.000	10.000	0.890	A	A
1	H 3	301.500	1.500	250.300	4.200	1.205	A	A
1	MN 54	22.342	0.720	20.850	0.310	1.072	A	A
1	SR 90	24.340	0.570	23.200	1.350	1.049	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: TR University of Istanbul, Turkey

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: AI Bq/filter							
1	CE144	18.858	0.720	15.700	1.000	1.201	W
1	CO 57	36.113	0.470	10.810	1.000	3.341	N
1	CO 60	6.795	0.300	5.010	0.300	1.356	N
1	CS134	14.895	0.930	10.880	1.000	1.369	N
1	CS137	12.060	0.330	8.700	0.800	1.386	N
1	MN 54	26.068	0.820	7.620	0.600	3.421	N
1	SB125	19.017	0.650	12.330	1.000	1.542	N
Matrix: SO Bq/kg							
1	AM241	2.729	1.390	5.680	0.500	0.480	N
1	CO 60	2.604	0.980	1.060	0.120	2.457	N
1	CS137	1207.883	7.250	825.500	14.100	1.463	N
1	K 40	667.888	17.890	334.250	7.140	1.998	N
1	PU239	32.597	2.020	134.930	17.100	0.242	N
1	U BQ	60.145	5.200	81.270	4.830	0.740	A
Matrix: VE Bq/kg							
1	AM241	0.787	0.543	1.183	0.113	0.665	N
1	CO 60	14.879	1.250	12.500	0.320	1.190	A
1	CS137	277.375	3.250	189.250	7.270	1.466	N
1	K 40	1836.090	32.890	811.500	12.200	2.263	N
1	PU239	1.717	0.390	1.942	0.222	0.884	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: TT Tracer Technologies International, Inc., Cleveland

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: SO		Bq/kg					
1	AM241	6.740	0.420	5.680	0.500	1.187	A
1	CO 60	1.030	0.170	1.060	0.120	0.972	A
1	CS137	785.000	35.000	825.500	14.100	0.951	A
1	K 40	312.000	9.000	334.250	7.140	0.933	A
Matrix: WA		Bq/L					
1	AM241	1.180	0.130	0.837	0.028	1.410	W
1	CO 60	102.900	1.600	90.850	1.150	1.133	W
1	CS137	83.000	3.400	69.780	1.230	1.189	W
1	GA 1	1060.000	32.000	1130.000	10.000	0.930	A
1	GB 2	288.000	8.000	744.000	10.000	0.380	N
1	H 3	249.000	7.000	250.300	4.200	0.995	A
1	MN 54	25.200	0.900	20.850	0.310	1.209	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: TW Taiwan Radiation Monitoring Center

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.204	0.006	0.152	0.013	1.342	W	A
1	CE144	15.000	2.000	15.700	1.000	0.955	A	
1	CO 57	11.200	0.600	10.810	1.000	1.036	A	A
1	CO 60	4.900	0.200	5.010	0.300	0.978	A	A
1	CS134	10.000	0.900	10.880	1.000	0.919	A	A
1	CS137	8.800	0.800	8.700	0.800	1.011	A	A
1	GA 1	0.950	0.020	0.960	0.050	0.990	A	N
1	GB 2	0.490	0.010	0.450	0.030	1.089	A	A
1	MN 54	8.000	0.700	7.620	0.600	1.050	A	A
1	PU238	0.123	0.005	0.100	0.006	1.228	W	A
1	PU239	0.129	0.005	0.119	0.006	1.086	A	
1	SB125	13.800	0.600	12.330	1.000	1.119	A	A
1	SR 90	1.360	0.070	1.450	0.149	0.938	A	A
1	U 234	0.127	0.006	0.103	0.005	1.234	A	W
1	U 238	0.120	0.006	0.105	0.004	1.148	A	W
Matrix: SO		Bq/kg						
1	AM241	1.870	0.050	5.680	0.500	0.329	N	A
1	CO 60	0.000	0.000	1.060	0.120	0.000	N	A
1	CS137	784.000	61.000	825.500	14.100	0.950	A	A
1	K 40	334.000	24.000	334.250	7.140	0.999	A	A
1	PU238	0.670	0.050	0.530	0.111	1.265	W	W
1	PU239	101.200	0.600	134.930	17.100	0.750	W	W
1	SR 90	41.000	2.000	40.310	0.420	1.017	A	A
1	U 234	28.700	0.700	37.570	2.480	0.764	A	W
1	U 238	32.200	0.800	42.430	2.500	0.759	A	W
Matrix: VE		Bq/kg						
1	AM241	1.100	0.100	1.183	0.113	0.930	A	W
1	CM244	0.846	0.009	0.900	0.050	0.940	A	W
1	CO 60	13.000	0.500	12.500	0.320	1.040	A	A
1	CS137	195.000	6.000	189.250	7.270	1.030	A	A
1	K 40	911.000	27.000	811.500	12.200	1.123	A	A
1	PU239	2.300	0.100	1.942	0.222	1.184	A	W
1	SR 90	427.000	10.000	361.000	43.300	1.183	W	A
Matrix: WA		Bq/L						
1	AM241	0.920	0.030	0.837	0.028	1.100	A	A
1	CO 60	98.000	5.000	90.850	1.150	1.079	A	N
1	CS134	19.000	2.000	20.550	0.310	0.925	A	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: TW Taiwan Radiation Monitoring Center

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	CS137	73.000	6.000	69.780	1.230	1.046	A	W
1	GA 1	1221.000	42.000	1130.000	10.000	1.080	A	W
1	GB 2	758.000	40.000	744.000	10.000	1.010	A	A
1	H 3	297.000	3.000	250.300	4.200	1.187	A	A
1	MN 54	22.000	2.000	20.850	0.310	1.055	A	W
1	PU238	1.280	0.040	1.291	0.063	0.992	A	A
1	PU239	0.800	0.040	0.850	0.050	0.941	A	A
1	SR 90	21.200	0.300	23.200	1.350	0.914	A	W
1	U 234	0.680	0.030	0.540	0.020	1.259	W	W
1	U 238	0.690	0.030	0.550	0.025	1.256	W	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.195	0.012	0.152	0.013	1.283	A	A
1	CE144	14.800	0.200	15.700	1.000	0.943	A	
1	CO 57	10.300	0.040	10.810	1.000	0.953	A	A
1	CO 60	5.000	0.100	5.010	0.300	0.998	A	A
1	CS134	10.600	0.100	10.880	1.000	0.974	A	A
1	CS137	8.450	0.080	8.700	0.800	0.971	A	A
1	GA 1	1.132	0.044	0.960	0.050	1.179	A	N
1	GB 2	0.349	0.033	0.450	0.030	0.776	W	A
1	MN 54	8.570	0.090	7.620	0.600	1.125	W	W
1	PU238	0.113	0.009	0.100	0.006	1.128	A	A
1	PU239	0.146	0.010	0.119	0.006	1.229	W	
1	SB125	12.180	0.130	12.330	1.000	0.988	A	A
1	U 234	0.122	0.007	0.103	0.005	1.186	A	A
1	U 238	0.126	0.007	0.105	0.004	1.206	A	A
Matrix: SO		Bq/kg						
1	AM241	8.325	0.740	5.680	0.500	1.466	A	A
1	CO 60	1.460	0.300	1.060	0.120	1.377	W	A
1	CS137	942.000	2.000	825.500	14.100	1.141	A	A
1	K 40	374.000	7.000	334.250	7.140	1.119	A	A
1	PU238	0.610	0.110	0.530	0.111	1.152	A	A
1	PU239	164.100	1.700	134.930	17.100	1.216	A	A
1	SR 90	46.600	12.000	40.310	0.420	1.156	A	A
1	U 234	46.300	1.900	37.570	2.480	1.232	W	W
1	U 238	50.000	1.900	42.430	2.500	1.178	W	A
Matrix: VE		Bq/kg						
1	AM241	1.480	0.370	1.183	0.113	1.251	A	A
1	CO 60	14.600	0.600	12.500	0.320	1.168	A	A
1	CS137	200.000	2.000	189.250	7.270	1.057	A	A
1	K 40	966.000	15.000	811.500	12.200	1.190	A	A
1	PU239	2.200	0.400	1.942	0.222	1.133	A	A
1	SR 90	387.000	30.000	361.000	43.300	1.072	A	W
Matrix: WA		Bq/L						
1	AM241	1.080	0.090	0.837	0.028	1.291	W	A
1	CO 60	95.800	0.500	90.850	1.150	1.054	A	A
1	CS137	76.100	0.600	69.780	1.230	1.091	A	A
1	GA 1	1172.000	38.000	1130.000	10.000	1.030	A	A
1	GB 2	427.000	30.000	744.000	10.000	0.570	W	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	H 3	256.000	12.000	250.300	4.200	1.023	A	A
1	MN 54	23.500	0.400	20.850	0.310	1.127	A	A
1	PU238	1.384	0.055	1.291	0.063	1.072	A	A
1	PU239	0.872	0.044	0.850	0.050	1.026	A	W
1	SR 90	24.770	0.860	23.200	1.350	1.068	A	A
1	U 234	0.705	0.035	0.540	0.020	1.306	W	A
1	U 238	0.703	0.072	0.550	0.025	1.279	W	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: UC Lockheed Martin, Paducah, KY

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	CO 60	5.080	0.510	5.010	0.300	1.014	A	A
1	CS137	11.030	1.100	8.700	0.800	1.268	W	W
1	GA 1	1.050	0.050	0.960	0.050	1.094	A	N
1	GB 2	0.460	0.020	0.450	0.030	1.022	A	
1	PU239	0.071	0.012	0.119	0.006	0.598	N	
Matrix: SO		Bq/kg						
1	CO 60	1.650	0.440	1.060	0.120	1.557	W	A
1	CS137	998.820	79.330	825.500	14.100	1.210	A	A
1	K 40	384.220	23.170	334.250	7.140	1.149	A	A
Matrix: VE		Bq/kg						
1	CO 60	11.930	0.640	12.500	0.320	0.954	A	A
1	CS137	180.320	16.420	189.250	7.270	0.953	A	W
1	K 40	823.900	33.090	811.500	12.200	1.015	A	A
Matrix: WA		Bq/L						
1	CO 60	98.930	1.720	90.850	1.150	1.089	A	A
1	CS137	79.630	5.260	69.780	1.230	1.141	A	A
1	GA 1	1122.400	53.100	1130.000	10.000	0.990	A	A
1	GB 2	397.000	17.000	744.000	10.000	0.530	N	W
1	PU239	0.728	0.108	0.850	0.050	0.856	W	A
1	U UG	0.066		0.044	0.001	1.486	N	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.150	0.032	0.152	0.013	0.987	A	A
1	CE144	15.640	0.500	15.700	1.000	0.996	A	
1	CO 57	10.380	0.100	10.810	1.000	0.960	A	A
1	CO 60	5.030	0.200	5.010	0.300	1.004	A	A
1	CS134	10.730	0.200	10.880	1.000	0.986	A	W
1	CS137	8.610	0.200	8.700	0.800	0.990	A	A
1	GA 1	0.984	0.029	0.960	0.050	1.025	A	N
1	GB 2	0.509	0.019	0.450	0.030	1.131	A	A
1	MN 54	7.790	0.300	7.620	0.600	1.022	A	W
1	PU238	0.136	0.038	0.100	0.006	1.357	W	A
1	PU239	0.129	0.037	0.119	0.006	1.086	A	
1	SB125	11.920	0.400	12.330	1.000	0.967	A	
1	U BQ	0.231	0.044	0.211	0.008	1.094	A	A
Matrix: SO		Bq/kg						
1	AM241	2.830	1.900	5.680	0.500	0.498	N	W
1	CO 60	1.090	0.900	1.060	0.120	1.028	A	A
1	CS137	791.000	5.200	825.500	14.100	0.958	A	A
1	K 40	299.000	22.000	334.250	7.140	0.895	A	A
1	PU238	4.450	3.700	0.530	0.111	8.403	N	N
1	PU239	139.000	21.000	134.930	17.100	1.030	A	A
Matrix: WA		Bq/L						
1	AM241	1.000	0.180	0.837	0.028	1.195	A	A
1	CO 60	98.100	17.000	90.850	1.150	1.080	A	A
1	CS137	79.900	1.800	69.780	1.230	1.145	A	A
1	GA 1	1170.000	41.000	1130.000	10.000	1.030	A	A
1	GB 2	562.000	20.000	744.000	10.000	0.750	A	A
1	MN 54	23.400	1.400	20.850	0.310	1.122	A	A
1	PU238	1.380	0.280	1.291	0.063	1.069	A	A
1	PU239	0.820	0.220	0.850	0.050	0.964	A	A
1	U BQ	1.260	0.220	1.105	0.050	1.140	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: **UN** Ministry of Agriculture, Fisheries and Food (MAFF), UK

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 45 Evaluation
Matrix: AI		Bq/filter					
1	AM241	0.155	0.004	0.152	0.013	1.020	A
1	CE144	15.700	0.800	15.700	1.000	1.000	A
1	CO 57	11.300	0.400	10.810	1.000	1.045	A
1	CO 60	5.230	0.220	5.010	0.300	1.044	A
1	CS134	13.300	0.400	10.880	1.000	1.222	N
1	CS137	8.720	0.320	8.700	0.800	1.002	A
1	MN 54	8.220	0.320	7.620	0.600	1.079	A
1	PU238	0.111	0.004	0.100	0.006	1.108	A
1	PU239	0.133	0.005	0.119	0.006	1.120	A
1	SB125	13.200	0.600	12.330	1.000	1.071	A
1	SR 90	1.240	0.060	1.450	0.149	0.855	A
1	U 234	0.100	0.024	0.103	0.005	0.971	A
1	U 238	0.098	0.024	0.105	0.004	0.939	A
Matrix: SO		Bq/kg					
1	AM241	5.610	0.250	5.680	0.500	0.988	A
1	CM244	0.299	0.043	0.233	0.020	1.283	A
1	CO 60	1.340	0.440	1.060	0.120	1.264	A
1	CS137	867.000	30.000	825.500	14.100	1.050	A
1	K 40	385.000	16.000	334.250	7.140	1.152	A
1	PU238	0.478	0.071	0.530	0.111	0.903	A
1	PU239	135.000	4.000	134.930	17.100	1.001	A
1	SR 90	38.400	2.700	40.310	0.420	0.953	A
1	U 234	39.240	6.460	37.570	2.480	1.044	A
1	U 238	42.240	6.980	42.430	2.500	0.996	A
Matrix: VE		Bq/kg					
1	AM241	1.170	0.080	1.183	0.113	0.989	A
1	CM244	0.848	0.062	0.900	0.050	0.942	A
1	CO 60	14.300	0.800	12.500	0.320	1.144	A
1	CS137	206.000	8.000	189.250	7.270	1.089	A
1	K 40	947.000	34.000	811.500	12.200	1.167	A
1	PU238	0.135	0.034	0.182	0.011	0.741	W
1	PU239	1.810	0.150	1.942	0.222	0.932	A
1	SR 90	354.000	13.000	361.000	43.300	0.981	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	GA 1	0.990	0.033	0.960	0.050	1.031	A	N
1	GB 2	0.530	0.004	0.450	0.030	1.178	A	A
1	U 234	0.123	0.021	0.103	0.005	1.194	A	
1	U 238	0.122	0.020	0.105	0.004	1.165	A	N
1	U BQ	0.251	0.029	0.211	0.008	1.188	A	
Matrix: SO		Bq/kg						
1	U UG	3.480		3.426	0.200	1.016	A	A
Matrix: WA		Bq/L						
1	U UG	0.047	0.050	0.044	0.001	1.059	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.120	0.030	0.152	0.013	0.789	W	A
1	CE144	14.500	0.700	15.700	1.000	0.924	A	
1	CO 57	10.700	1.000	10.810	1.000	0.990	A	W
1	CO 60	5.300	0.500	5.010	0.300	1.058	A	W
1	CS134	11.600	0.500	10.880	1.000	1.066	A	W
1	CS137	9.000	0.700	8.700	0.800	1.034	A	A
1	GA 1	1.000	0.200	0.960	0.050	1.042	A	N
1	GB 2	0.560	0.050	0.450	0.030	1.244	A	A
1	MN 54	8.500	0.800	7.620	0.600	1.115	W	W
1	PU238	0.100	0.020	0.100	0.006	0.998	A	A
1	PU239	0.100	0.020	0.119	0.006	0.842	W	
1	SB125	13.300	0.700	12.330	1.000	1.079	A	W
1	SR 90	1.070	0.100	1.450	0.149	0.738	W	
1	U BQ	0.230	0.030	0.211	0.008	1.089	A	
1	U UG	8.200		8.448	0.400	0.971	A	W
Matrix: SO		Bq/kg						
1	AM241	2.800	0.400	5.680	0.500	0.493	N	A
1	CO 60	2.200	1.000	1.060	0.120	2.075	N	N
1	CS137	830.000	100.000	825.500	14.100	1.005	A	A
1	K 40	330.000	50.000	334.250	7.140	0.987	A	A
1	PU238	1.300	0.200	0.530	0.111	2.455	N	A
1	PU239	130.000	20.000	134.930	17.100	0.963	A	A
1	SR 90	33.000	3.000	40.310	0.420	0.819	A	A
1	U BQ	90.000	10.000	81.270	4.830	1.107	W	
1	U UG	3.550		3.426	0.200	1.036	A	A
Matrix: VE		Bq/kg						
1	AM241	1.000	0.200	1.183	0.113	0.845	W	
1	CM244	0.760	0.300	0.900	0.050	0.844	A	
1	CO 60	10.700	2.000	12.500	0.320	0.856	A	
1	CS137	180.000	30.000	189.250	7.270	0.951	A	
1	K 40	740.000	90.000	811.500	12.200	0.912	A	
1	PU239	1.440	0.200	1.942	0.222	0.742	W	
1	SR 90	295.000	10.000	361.000	43.300	0.817	A	
Matrix: WA		Bq/L						
1	AM241	0.710	0.150	0.837	0.028	0.849	W	A
1	CO 60	100.000	5.000	90.850	1.150	1.101	A	A
1	CS137	78.000	4.000	69.780	1.230	1.118	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	GA 1	1130.000	100.000	1130.000	10.000	1.000	A	A
1	GB 2	550.000	30.000	744.000	10.000	0.730	A	A
1	H 3	240.000	30.000	250.300	4.200	0.959	A	A
1	MN 54	24.000	2.000	20.850	0.310	1.151	A	A
1	PU238	1.120	0.150	1.291	0.063	0.868	W	W
1	PU239	0.620	0.170	0.850	0.050	0.729	N	A
1	SR 90	21.000	1.000	23.200	1.350	0.905	A	A
1	U BQ	1.400	0.200	1.105	0.050	1.267	W	W
1	U UG	0.045		0.044	0.001	1.014	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: VE Universidad Simon Bolivar, Venezuela

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: SO		Bq/kg						
1	CO 60	2.280	0.972	1.060	0.120	2.151	N	
1	CS137	916.000	57.500	825.500	14.100	1.110	A	
1	K 40	358.000	66.400	334.250	7.140	1.071	A	
Matrix: VE		Bq/kg						
1	CO 60	16.600	2.020	12.500	0.320	1.328	W	
1	CS137	223.000	14.200	189.250	7.270	1.178	A	
1	K 40	883.000	153.000	811.500	12.200	1.088	A	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.174	0.022	0.152	0.013	1.145	A	A
1	CE144	16.100	0.600	15.700	1.000	1.025	A	
1	CO 57	11.400	0.200	10.810	1.000	1.055	A	W
1	CO 60	5.370	0.190	5.010	0.300	1.072	A	W
1	CS134	10.300	0.300	10.880	1.000	0.947	A	A
1	CS137	9.370	0.260	8.700	0.800	1.077	A	W
1	GA 1	1.250	0.060	0.960	0.050	1.302	A	A
1	GB 2	0.580	0.030	0.450	0.030	1.289	A	A
1	MN 54	8.740	0.330	7.620	0.600	1.147	W	N
1	PU238	0.105	0.022	0.100	0.006	1.048	A	A
1	PU239	0.131	0.023	0.119	0.006	1.103	A	
1	SB125	14.700	0.500	12.330	1.000	1.192	W	W
1	SR 90	1.500	0.160	1.450	0.149	1.034	A	A
1	U 234	0.100	0.030	0.103	0.005	0.972	A	A
1	U 238	0.100	0.020	0.105	0.004	0.957	A	A
1	U BQ	0.240	0.040	0.211	0.008	1.136	A	A
Matrix: SO		Bq/kg						
1	AM241	5.180	0.510	5.680	0.500	0.912	A	A
1	CO 60	1.360	0.530	1.060	0.120	1.283	A	A
1	CS137	958.000	104.000	825.500	14.100	1.161	A	A
1	K 40	400.000	30.000	334.250	7.140	1.197	A	W
1	PU238	0.248	0.207	0.530	0.111	0.468	W	A
1	PU239	77.900	1.900	134.930	17.100	0.577	N	A
1	SR 90	45.500	1.900	40.310	0.420	1.129	A	A
1	U 234	43.300	3.700	37.570	2.480	1.153	W	A
1	U 238	45.100	3.700	42.430	2.500	1.063	A	A
1	U BQ	91.000	5.500	81.270	4.830	1.120	W	A
Matrix: VE		Bq/kg						
1	AM241	1.240	0.150	1.183	0.113	1.048	A	A
1	CO 60	13.500	1.200	12.500	0.320	1.080	A	A
1	CS137	201.000	9.000	189.250	7.270	1.062	A	A
1	K 40	929.000	41.000	811.500	12.200	1.145	A	A
1	PU239	1.780	0.280	1.942	0.222	0.917	A	A
1	SR 90	331.000	40.000	361.000	43.300	0.917	A	W
Matrix: WA		Bq/L						
1	AM241	0.886	0.088	0.837	0.028	1.059	A	A
1	CO 60	97.400	2.400	90.850	1.150	1.072	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	CS134	22.200	1.400	20.550	0.310	1.080	A	
1	CS137	77.800	4.000	69.780	1.230	1.115	A	A
1	GA 1	1070.000	60.000	1130.000	10.000	0.940	A	A
1	GB 2	601.000	33.000	744.000	10.000	0.800	A	A
1	H 3	258.000	8.000	250.300	4.200	1.031	A	A
1	MN 54	24.000	2.500	20.850	0.310	1.151	A	A
1	PU238	1.190	0.100	1.291	0.063	0.922	A	A
1	PU239	0.833	0.081	0.850	0.050	0.980	A	A
1	SR 90	24.000	1.200	23.200	1.350	1.034	A	A
1	U 234	0.570	0.060	0.540	0.020	1.056	A	A
1	U 238	0.580	0.060	0.550	0.025	1.056	A	A
1	U BQ	1.180	0.090	1.105	0.050	1.068	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: **WC** Westinghouse Hanford Co.

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.178	0.020	0.152	0.013	1.171	A	W
1	CO 57	15.500	1.280	10.810	1.000	1.434	N	A
1	CO 60	6.760	0.536	5.010	0.300	1.349	N	W
1	CS134	10.200	0.688	10.880	1.000	0.938	A	W
1	CS137	12.000	1.670	8.700	0.800	1.379	N	W
1	GA 1	0.947	0.019	0.960	0.050	0.986	A	W
1	GB 2	0.396	0.008	0.450	0.030	0.880	W	W
1	MN 54	11.300	1.860	7.620	0.600	1.483	N	W
1	PU238	0.113	0.023	0.100	0.006	1.128	A	W
1	PU239	0.134	0.027	0.119	0.006	1.128	A	
1	SB125	18.800	1.120	12.330	1.000	1.525	N	N
1	SR 90	1.100	0.186	1.450	0.149	0.759	W	N
1	U 234	0.121	0.016	0.103	0.005	1.176	A	
1	U 238	0.116	0.015	0.105	0.004	1.110	A	
Matrix: SO		Bq/kg						
1	AM241	5.880	0.765	5.680	0.500	1.035	A	
1	CS137	933.000	138.000	825.500	14.100	1.130	A	A
1	K 40	401.000	50.100	334.250	7.140	1.200	A	A
1	PU239	139.000	25.000	134.930	17.100	1.030	A	
1	SR 90	88.800	17.800	40.310	0.420	2.203	W	A
1	U 234	25.100	4.270	37.570	2.480	0.668	A	
1	U 238	26.300	4.470	42.430	2.500	0.620	A	
Matrix: VE		Bq/kg						
1	AM241	2.070	0.724	1.183	0.113	1.749	W	
1	CO 60	13.200	1.360	12.500	0.320	1.056	A	A
1	CS137	209.000	31.000	189.250	7.270	1.104	A	A
1	K 40	1040.000	121.000	811.500	12.200	1.282	W	A
1	PU239	2.620	0.733	1.942	0.222	1.349	W	
1	SR 90	408.000	57.100	361.000	43.300	1.130	W	A
Matrix: WA		Bq/L						
1	AM241	0.965	0.189	0.837	0.028	1.153	A	A
1	CO 60	100.000	7.770	90.850	1.150	1.101	A	A
1	CS137	81.500	10.900	69.780	1.230	1.168	A	A
1	GA 1	1280.000	128.000	1130.000	10.000	1.130	A	A
1	GB 2	519.000	51.900	744.000	10.000	0.690	W	A
1	H 3	233.000	46.700	250.300	4.200	0.931	A	A
1	MN 54	24.500	3.400	20.850	0.310	1.175	W	W

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: WC Westinghouse Hanford Co.

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	PU238	1.350	0.217	1.291	0.063	1.046	A	A
1	PU239	0.874	0.149	0.850	0.050	1.028	A	W
1	SR 90	26.700	4.010	23.200	1.350	1.151	A	A
1	U 234	0.634	0.108	0.540	0.020	1.174	A	
1	U 238	0.625	0.106	0.550	0.025	1.137	A	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: WE Westinghouse Electric Corp., Madison, PA

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.303	0.120	0.152	0.013	1.992	N	
1	CE144	17.040	0.187	15.700	1.000	1.085	A	
1	CO 57	12.360	0.046	10.810	1.000	1.143	W	A
1	CO 60	25.160	0.149	5.010	0.300	5.022	N	A
1	CS134	11.190	0.101	10.880	1.000	1.028	A	A
1	CS137	9.420	0.079	8.700	0.800	1.083	A	A
1	MN 54	11.240	0.109	7.620	0.600	1.475	N	W
1	SB125	14.330	0.171	12.330	1.000	1.162	W	A
1	SR 90	1.110	0.034	1.450	0.149	0.766	W	
Matrix: SO		Bq/kg						
1	AM241	10.730	2.993	5.680	0.500	1.889	W	A
1	CO 60	1.824	0.798	1.060	0.120	1.721	W	N
1	CS137	889.000	3.145	825.500	14.100	1.077	A	A
1	K 40	363.700	10.180	334.250	7.140	1.088	A	A
1	SR 90	34.100	3.483	40.310	0.420	0.846	A	
1	U 234	21.000	2.450	37.570	2.480	0.559	W	W
1	U 238	18.800	2.250	42.430	2.500	0.443	W	W
Matrix: VE		Bq/kg						
1	AM241	4.691	1.588	1.183	0.113	3.964	N	
1	CO 60	18.490	1.052	12.500	0.320	1.479	N	N
1	CS137	245.800	1.314	189.250	7.270	1.299	W	A
1	K 40	1022.000	12.340	811.500	12.200	1.259	W	A
1	SR 90	290.000	5.300	361.000	43.300	0.803	A	
Matrix: WA		Bq/L						
1	AM241	0.892	0.771	0.837	0.028	1.067	A	
1	CO 60	107.800	0.895	90.850	1.150	1.187	N	N
1	CS137	86.510	0.705	69.780	1.230	1.240	W	N
1	MN 54	26.320	0.559	20.850	0.310	1.262	N	W
1	SR 90	18.200	0.262	23.200	1.350	0.784	W	
1	U 234	0.610	0.027	0.540	0.020	1.130	A	W
1	U 238	0.594	0.027	0.550	0.025	1.081	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Laboratory

Lab: WI WIPP Site, Westinghouse Electric Corp.

No. Test	Radio-nuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.156	0.014	0.152	0.013	1.026	A	
1	CE144	15.060	2.230	15.700	1.000	0.959	A	
1	CO 57	11.280	1.210	10.810	1.000	1.043	A	W
1	CO 60	5.092	0.501	5.010	0.300	1.016	A	W
1	CS134	10.640	0.820	10.880	1.000	0.978	A	A
1	CS137	8.610	1.108	8.700	0.800	0.990	A	W
1	MN 54	7.703	0.823	7.620	0.600	1.011	A	W
1	PU238	0.100	0.010	0.100	0.006	0.998	A	
1	PU239	0.122	0.012	0.119	0.006	1.027	A	
1	SB125	13.030	0.860	12.330	1.000	1.057	A	A
1	U 234	0.102	0.012	0.103	0.005	0.991	A	
1	U 238	0.102	0.012	0.105	0.004	0.976	A	
Matrix: WA		Bq/L						
1	AM241	0.955	0.097	0.837	0.028	1.141	A	
1	CO 60	98.900	9.100	90.850	1.150	1.089	A	W
1	CS134	23.000	1.600	20.550	0.310	1.119	A	
1	CS137	76.200	9.500	69.780	1.230	1.092	A	A
1	MN 54	23.500	2.510	20.850	0.310	1.127	A	W
1	PU238	1.410	0.124	1.291	0.063	1.092	A	
1	PU239	0.946	0.089	0.850	0.050	1.113	A	
1	U 234	0.550	0.057	0.540	0.020	1.018	A	
1	U 238	0.582	0.059	0.550	0.025	1.059	A	

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	CE144	16.400	1.640	15.700	1.000	1.045	A	
1	CO 57	12.200	1.220	10.810	1.000	1.129	W	A
1	CO 60	5.770	0.580	5.010	0.300	1.152	W	A
1	CS134	10.800	1.080	10.880	1.000	0.993	A	A
1	CS137	10.800	1.080	8.700	0.800	1.241	W	A
1	GB 2	0.370	0.037	0.450	0.030	0.822	W	A
1	MN 54	9.160	0.920	7.620	0.600	1.202	W	A
1	SB125	14.900	1.490	12.330	1.000	1.208	W	A
1	SR 90	1.500	0.200	1.450	0.149	1.034	A	W
Matrix: SO		Bq/kg						
1	CS137	1010.000	100.000	825.500	14.100	1.224	A	A
1	K 40	358.000	35.800	334.250	7.140	1.071	A	A
1	SR 90	44.000	5.000	40.310	0.420	1.092	A	A
Matrix: VE		Bq/kg						
1	CO 60	16.700	1.670	12.500	0.320	1.336	W	W
1	CS137	260.000	26.000	189.250	7.270	1.374	W	A
1	K 40	1070.000	110.000	811.500	12.200	1.319	W	A
1	SR 90	380.000	10.000	361.000	43.300	1.053	A	W
Matrix: WA		Bq/L						
1	CO 60	93.200	9.320	90.850	1.150	1.026	A	A
1	CS134	20.400	2.040	20.550	0.310	0.993	A	
1	CS137	74.900	7.490	69.780	1.230	1.073	A	A
1	GB 2	420.000	40.000	744.000	10.000	0.560	W	A
1	H 3	240.000	10.000	250.300	4.200	0.959	A	A
1	MN 54	21.700	2.170	20.850	0.310	1.041	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	QAP 45 Evaluation
Matrix: AI		Bq/filter					
1	GA 1	0.978	0.022	0.960	0.050	1.019	A
Matrix: SO		Bq/kg					
1	AM241	6.700	1.100	5.680	0.500	1.180	A
1	CS137	980.500	32.400	825.500	14.100	1.188	A
1	K 40	384.800	15.200	334.250	7.140	1.151	A
1	U 238	40.000	5.700	42.430	2.500	0.943	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	GA 1	0.841	0.018	0.960	0.050	0.876	A	A
1	GB 2	0.467	0.014	0.450	0.030	1.038	A	W
Matrix: WA		Bq/L						
1	CO 60	101.000	1.410	90.850	1.150	1.112	A	A
1	CS137	77.000	1.110	69.780	1.230	1.103	A	A
1	GA 1	1050.000	68.000	1130.000	10.000	0.920	A	A
1	GB 2	614.000	45.000	744.000	10.000	0.820	A	A
1	H 3	256.000	9.580	250.300	4.200	1.023	A	A
1	MN 54	24.800	0.890	20.850	0.310	1.189	W	A
1	SR 90	24.000	0.730	23.200	1.350	1.034	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	AM241	0.139	0.003	0.152	0.013	0.916	A	A
1	CS134	12.080	0.611	10.880	1.000	1.110	W	
1	CS137	8.325	0.426	8.700	0.800	0.957	A	A
1	GA 1	0.964	0.009	0.960	0.050	1.004	A	N
1	GB 2	0.346	0.005	0.450	0.030	0.768	W	A
1	PU238	0.100	0.003	0.100	0.006	0.997	A	A
1	PU239	0.120	0.003	0.119	0.006	1.006	A	
1	SR 90	1.314	0.074	1.450	0.149	0.906	A	
1	U 234	0.106	0.009	0.103	0.005	1.034	A	A
1	U 238	0.103	0.008	0.105	0.004	0.981	A	A
1	U UG	8.260	0.650	8.448	0.400	0.978	A	A
Matrix: SO		Bq/kg						
1	AM241	4.943	0.176	5.680	0.500	0.870	A	A
1	CO 60	1.356	0.274	1.060	0.120	1.279	A	
1	CS137	935.500	3.515	825.500	14.100	1.133	A	A
1	K 40	376.100	10.550	334.250	7.140	1.125	A	
1	PU238	0.588	0.091	0.530	0.111	1.111	A	A
1	PU239	133.700	2.322	134.930	17.100	0.991	A	A
1	SR 90	33.060	1.739	40.310	0.420	0.820	A	
1	U 234	40.480	1.547	37.570	2.480	1.077	A	A
1	U 238	41.900	1.591	42.430	2.500	0.988	A	A
1	U UG	3.393	0.082	3.426	0.200	0.990	A	A
Matrix: VE		Bq/kg						
1	AM241	1.255	0.058	1.183	0.113	1.061	A	
1	CM244	0.923	0.058	0.900	0.050	1.025	A	
1	CO 60	10.930	0.426	12.500	0.320	0.874	A	
1	CS137	176.700	1.462	189.250	7.270	0.934	A	
1	K 40	856.700	13.320	811.500	12.200	1.056	A	
1	PU239	2.106	0.083	1.942	0.222	1.084	A	
1	SR 90	351.500	17.020	361.000	43.300	0.974	A	
Matrix: WA		Bq/L						
1	AM241	0.808	0.017	0.837	0.028	0.966	A	A
1	CO 60	97.410	0.950	90.850	1.150	1.072	A	A
1	CS137	76.330	1.011	69.780	1.230	1.094	A	A
1	GA 1	800.600	14.680	1130.000	10.000	0.700	W	A
1	GB 2	431.800	11.720	744.000	10.000	0.580	W	A
1	MN 54	23.310	0.678	20.850	0.310	1.118	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: WA		Bq/L						
1	PU238	1.319	0.026	1.291	0.063	1.022	A	A
1	PU239	0.829	0.018	0.850	0.050	0.975	A	A
1	SR 90	22.310	1.209	23.200	1.350	0.962	A	A
1	U 234	0.603	0.029	0.540	0.020	1.117	A	A
1	U 238	0.596	0.029	0.550	0.025	1.084	A	A
1	U UG	0.049	0.002	0.044	0.001	1.106	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 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	Evaluation	QAP 45 Evaluation
Matrix: AI		Bq/filter						
1	U UG	7.530	0.377	8.448	0.400	0.891	A	W
Matrix: SO		Bq/kg						
1	U UG	3.450	0.311	3.426	0.200	1.007	A	A
Matrix: WA		Bq/L						
1	U UG	0.047	0.002	0.044	0.001	1.056	A	A

Values for elemental uranium are reported in µg/filter, g, or mL.

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

pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: AM241

EML Value: 0.152
EML Error: 0.013

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	0.152	0.013	1.00	A	A
AC	1	0.176	0.005	1.16		A
AI	1	0.140	0.008	0.92		A
AM	1	1.590	0.430	10.46		N
AN	1	0.153	0.015	1.01	A	A
AR	1	0.155	0.060	1.02	N	A
AU	1	0.140	0.010	0.92	W	A
BE	1	0.140	0.010	0.92	A	A
BL	1	0.170	0.020	1.12	A	A
BM	1	0.150	0.023	0.99	A	A
BN	1	0.400	0.199	2.63	W	N
BP	1	0.161	0.008	1.06	A	A
BS	1	0.290	0.040	1.91	W	W
BU	1	0.170	0.020	1.12	A	A
BX	1	0.226	0.028	1.49	A	W
CH	1	0.169	0.015	1.11		A
CL	1	0.290	0.100	1.91	A	W
CS	1	0.120	0.020	0.79	N	W
CW	1	0.137	0.015	0.90	A	A
DC	1	0.155	0.041	1.02	W	A
EG	1	0.135	0.016	0.89		A
EI	1	0.180	0.010	1.18	A	A
ES	1	0.150	0.030	0.99	A	A
FG	1	0.150	0.040	0.99		A
FL	1	1.000	0.050	6.58	A	N
FR	1	0.200	0.042	1.32		A
GA	1	0.170	0.021	1.12	A	A
GE	1	0.148	0.035	0.97	A	A
GP	1	0.160	0.020	1.05		A
GT	1	0.200	0.080	1.32		A
IE	1	0.130	0.013	0.86	A	A
IS	1	0.630	0.210	4.14	A	N
IT	1	0.140	0.010	0.92	A	A
JP	1	0.150	0.005	0.99		A
KO	1	0.199	0.005	1.31		A
LA	1	0.177	0.020	1.16	A	A
LA	2	0.179	0.020	1.18	A	A
LA	3	0.161	0.018	1.06	A	A
LH	1	0.140	0.010	0.92	A	A
LL	1	0.161	0.005	1.06	A	A
LV	1	0.188	0.023	1.24	A	A
NM	1	0.080	0.008	0.53	A	N
OT	1	0.160	0.020	1.05		A
RE	1	0.158	0.014	1.04	A	A
RI	1	0.175	0.021	1.15	A	A
SR	1	0.164	0.017	1.08	W	A
SW	1	0.150	0.010	0.99		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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: AM241

EML Value: 0.152
EML Error: 0.013

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
TI	1	0.150	0.030	0.99	A	A
TM	1	0.133	0.006	0.88	A	A
TN	1	0.153	0.013	1.01	A	A
TO	1	0.220	0.100	1.45	A	W
TW	1	0.204	0.006	1.34	A	W
TX	1	0.195	0.012	1.28	A	A
UK	1	0.150	0.032	0.99	A	A
UN	1	0.155	0.004	1.02		A
UY	1	0.120	0.030	0.79	A	W
WA	1	0.174	0.022	1.14	A	A
WC	1	0.178	0.020	1.17	W	A
WE	1	0.303	0.120	1.99		N
WI	1	0.156	0.014	1.03		A
YA	1	0.139	0.003	0.92	A	A

Total Number Reported: 61

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: CE144

EML Value: 15.700
EML Error: 1.000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	15.700	1.000	1.00		A
AC	1	14.300	1.000	0.91		A
AF	1	12.700	2.140	0.81		A
AG	1	14.800	3.200	0.94		A
AI	1	19.700	0.440	1.25		W
AL	1	9.139	0.560	0.58		W
AM	1	19.050	0.620	1.21		W
AN	1	16.880	3.100	1.08		A
AR	1	31.700	2.200	2.02		N
AU	1	16.100	2.500	1.03		A
AW	1	23.300	3.500	1.48		N
BC	1	14.800	0.733	0.94		A
BE	1	25.820	2.760	1.64		N
BL	1	16.600	0.900	1.06		A
BM	1	20.400	0.630	1.30		N
BN	1	20.400	1.096	1.30		N
BP	1	14.000	1.000	0.89		A
BQ	1	18.900	0.500	1.20		W
BS	1	15.630	0.210	1.00		A
BX	1	14.800	0.718	0.94		A
CA	1	14.700	0.700	0.94		A
CH	1	14.900	0.526	0.95		A
CL	1	10.600	0.800	0.68		A
CN	1	13.000	2.000	0.83		A
CO	1	33.100	0.500	2.11		N
CR	1	66.000	5.000	4.20		N
CS	1	12.540	0.580	0.80		A
DC	1	19.800	7.510	1.26		N
EG	1	15.500	0.400	0.99		A
EP	1	21.010	3.960	1.34		N
ES	1	14.540	1.460	0.93		A
FG	1	12.100	0.200	0.77		A
FL	1	18.200	0.200	1.16		W
FM	1	14.530	0.330	0.93		A
FN	1	16.800	1.200	1.07		A
FR	1	16.900	2.500	1.08		A
GA	1	14.000	2.800	0.89		A
GE	1	14.140	2.330	0.90		A
GP	1	15.000	3.000	0.96		A
GT	1	14.700	5.600	0.94		A
ID	1	11.767	0.600	0.75		A
IE	1	13.130	4.390	0.84		A
IL	1	11.000	0.500	0.70		A
IN	1	15.100	0.900	0.96		A
IS	1	18.400	1.450	1.17		W
IT	1	14.600	0.140	0.93		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 Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: CE144

EML Value: 15.700
EML Error: 1.000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
JP	1	16.000	0.200	1.02		A
KO	1	17.400	0.252	1.11		W
LA	1	13.600	1.100	0.87		A
LA	2	15.700	1.300	1.00		A
LA	3	13.400	1.100	0.85		A
LB	1	17.560	2.680	1.12		W
LH	1	14.200	1.500	0.90		A
LL	1	15.100	1.060	0.96		A
LM	1	16.800	1.800	1.07		A
LV	1	22.100	0.300	1.41		N
ME	1	15.160	2.990	0.97		A
MS	1	14.200	1.400	0.90		A
MX	1	18.400	1.550	1.17		W
NA	1	18.230	0.590	1.16		W
ND	1	15.380	2.100	0.98		A
NL	1	12.400	1.000	0.79		A
NP	1	13.670	0.350	0.87		A
NZ	1	17.500	0.900	1.11		W
NZ	1	17.700	1.000	1.13		W
OD	1	15.330	0.670	0.98		A
OL	1	17.680	0.680	1.13		W
OS	1	20.100	0.400	1.28		N
OT	1	16.000	1.000	1.02		A
RA	1	14.300	0.600	0.91		A
RA	1	13.700	2.000	0.87		A
RE	1	15.400	1.900	0.98		A
RI	1	15.600	1.600	0.99		A
RL	1	34.200	2.600	2.18		N
RM	1	20.300	0.900	1.29		N
SA	1	16.000	1.600	1.02		A
SK	1	14.700	0.200	0.94		A
SR	1	15.500	2.100	0.99		A
SS	1	13.300	0.353	0.85		A
SW	1	15.190	0.030	0.97		A
TI	1	14.500	1.450	0.92		A
TM	1	18.100	0.982	1.15		W
TN	1	27.100	2.200	1.73		N
TO	1	19.800	1.100	1.26		N
TP	1	15.395	1.696	0.98		A
TR	1	18.858	0.720	1.20		W
TW	1	15.000	2.000	0.96		A
TX	1	14.800	0.200	0.94		A
UK	1	15.640	0.500	1.00		A
UN	1	15.700	0.800	1.00		A
UY	1	14.500	0.700	0.92		A
WA	1	16.100	0.600	1.03		A
WE	1	17.040	0.187	1.09		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 Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: CE144

EML Value: 15.700
EML Error: 1.000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
WI	1	15.060	2.230	0.96		A
WP	1	16.400	1.640	1.04		A

Total Number Reported: 95

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: CO 57

EML Value: 10.810
EML Error: 1.000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	10.810	1.000	1.00	A	A
AC	1	10.600	0.700	0.98		A
AF	1	9.710	0.960	0.90	A	A
AG	1	11.500	1.300	1.06	N	A
AI	1	14.100	0.085	1.30		N
AL	1	11.030	0.140	1.02	W	A
AM	1	13.840	0.150	1.28		N
AN	1	12.090	1.010	1.12	A	W
AR	1	13.800	0.400	1.28	W	W
AU	1	11.300	0.600	1.05	N	A
AW	1	16.100	2.400	1.49		N
BC	1	10.800	0.518	1.00	W	A
BE	1	10.590	0.720	0.98	W	A
BL	1	11.800	0.500	1.09	W	A
BM	1	14.500	0.180	1.34	W	N
BN	1	14.700	0.553	1.36	N	N
BP	1	10.700	0.200	0.99	A	A
BQ	1	12.000	0.100	1.11	W	W
BS	1	11.410	0.050	1.06	A	A
BU	1	14.000	0.700	1.30	N	N
BX	1	10.900	0.522	1.01	A	A
CA	1	10.600	0.100	0.98	A	A
CH	1	10.700	0.396	0.99		A
CL	1	8.800	0.200	0.81	A	A
CN	1	13.000	2.000	1.20		W
CO	1	15.400	0.200	1.42		N
CR	1	50.000	2.000	4.63		N
CS	1	9.220	0.300	0.85	N	A
DC	1	14.400	2.920	1.33	A	N
EG	1	11.400	0.100	1.05	W	A
EP	1	14.810	1.780	1.37	N	N
ES	1	10.570	1.170	0.98	A	A
FG	1	11.300	0.420	1.05	N	A
FL	1	12.660	0.060	1.17	N	W
FM	1	10.630	0.160	0.98	A	A
FN	1	10.500	0.800	0.97	W	A
FR	1	10.900	2.000	1.01		A
GA	1	11.000	0.790	1.02	A	A
GE	1	10.270	0.890	0.95	W	A
GP	1	11.000	2.000	1.02		A
GT	1	10.480	2.300	0.97		A
ID	1	8.300	0.492	0.77	A	A
IE	1	9.260	2.060	0.86	A	A
IL	1	9.000	0.100	0.83	W	A
IN	1	10.800	0.500	1.00	A	A
IS	1	9.660	0.690	0.89	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: CO 57

EML Value: 10.810
EML Error: 1.000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
IT	1	10.600	0.230	0.98	A	A
JP	1	12.000	0.050	1.11		W
KO	1	12.700	0.183	1.17		W
LA	1	10.100	0.700	0.93	A	A
LA	2	10.300	0.700	0.95	A	A
LA	3	10.100	0.700	0.93	A	A
LB	1	10.930	1.690	1.01		A
LH	1	11.000	1.100	1.02	A	A
LL	1	11.200	0.325	1.04	W	A
LM	1	12.200	0.500	1.13		W
LV	1	10.500	0.100	0.97	A	A
ME	1	10.880	0.310	1.01	N	A
MI	1	10.010	0.243	0.93	A	A
MS	1	10.100	1.010	0.93	N	A
MX	1	14.500	1.350	1.34		N
NA	1	13.070	0.380	1.21		W
ND	*	11.320	0.490	1.05		A
NL	1	10.400	1.100	0.96	W	A
NP	1	10.010	0.090	0.93	A	A
NZ	1	13.000	0.700	1.20		W
NZ	1	12.800	0.700	1.18		W
OD	1	12.820	0.420	1.19	W	W
OL	1	11.950	0.310	1.11		W
OS	1	14.400	0.110	1.33	W	N
OT	1	12.000	1.000	1.11	W	W
RA	1	10.700	0.500	0.99	N	A
RA	1	10.600	0.660	0.98	N	A
RE	1	11.200	1.000	1.04	W	A
RI	1	10.700	0.400	0.99	A	A
RL	1	22.500	1.200	2.08	A	N
RM	1	16.000	0.200	1.48		N
SA	1	11.300	1.100	1.05	N	A
SK	1	11.000	0.400	1.02	W	A
SR	1	10.900	0.700	1.01	A	A
SS	1	9.790	0.116	0.91	A	A
SW	1	11.280	0.080	1.04	W	A
TE	1	9.528	0.230	0.88	A	A
TI	1	12.500	1.250	1.16	W	W
TM	1	12.600	0.414	1.17	W	W
TN	1	17.500	0.900	1.62	A	N
TO	1	12.900	0.600	1.19	N	W
TP	1	10.738	0.024	0.99	A	A
TR	1	36.113	0.470	3.34		N
TW	1	11.200	0.600	1.04	A	A
TX	1	10.300	0.040	0.95	A	A
UK	1	10.380	0.100	0.96	A	A
UN	1	11.300	0.400	1.05		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 Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: CO 57

EML Value: 10.810
EML Error: 1.000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
UY	1	10.700	1.000	0.99	W	A
WA	1	11.400	0.200	1.05	W	A
WC	1	15.500	1.280	1.43	A	N
WE	1	12.360	0.046	1.14	A	W
WI	1	11.280	1.210	1.04	W	A
WP	1	12.200	1.220	1.13	A	W

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 µg/filter, g
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: CO 60

EML Value: 5.010
EML Error: 0.300

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	5.010	0.300	1.00	A	A
AC	1	5.340	0.310	1.07		A
AF	1	5.290	0.660	1.06	A	A
AG	1	5.340	0.480	1.07	W	A
AI	1	6.430	0.080	1.28		N
AL	1	5.143	0.200	1.03	W	A
AM	1	7.610	0.340	1.52		N
AN	1	5.580	0.540	1.11	W	W
AR	1	6.510	0.390	1.30	A	N
AU	1	5.400	0.400	1.08	N	A
AW	1	6.500	1.000	1.30		N
BC	1	5.030	0.278	1.00	A	A
BE	1	4.990	0.390	1.00	N	A
BL	1	5.220	0.210	1.04	W	A
BM	1	5.840	0.200	1.17	W	W
BN	1	5.200	0.091	1.04	W	A
BP	1	5.300	0.200	1.06	A	A
BQ	1	5.000	0.200	1.00	A	A
BS	1	5.150	0.100	1.03	A	A
BU	1	5.700	0.300	1.14	N	W
BX	1	5.020	0.266	1.00	A	A
CA	1	4.950	0.500	0.99	A	A
CH	1	5.110	0.180	1.02		A
CL	1	5.000	0.200	1.00	A	A
CN	1	6.000	0.000	1.20		W
CO	1	6.500	0.200	1.30		N
CR	1	29.000	2.000	5.79		N
CS	1	4.710	0.160	0.94	N	A
DC	1	5.850	0.866	1.17	W	W
EG	1	5.400	0.100	1.08	W	A
EP	1	6.710	0.880	1.34	N	N
ES	1	4.850	0.560	0.97	A	A
FG	1	5.040	0.400	1.01	W	A
FL	1	5.950	0.090	1.19	W	W
FM	1	5.200	0.070	1.04	W	A
FN	1	5.000	0.370	1.00	W	A
FR	1	5.350	0.540	1.07		A
GA	1	5.300	0.450	1.06	A	A
GE	1	4.690	0.490	0.94	W	A
GP	1	5.500	1.400	1.10		A
GT	1	5.200	0.500	1.04		A
ID	1	5.267	0.796	1.05	W	A
IE	1	4.480	0.550	0.89	A	A
IL	1	4.900	0.700	0.98	A	A
IN	1	4.800	0.600	0.96	A	A
IS	1	4.320	0.290	0.86	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: CO 60

EML Value: 5.010
EML Error: 0.300

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
IT	1	5.010	0.310	1.00	A	A
JP	1	4.800	0.070	0.96		A
KO	1	5.760	0.081	1.15		W
LA	1	5.400	0.400	1.08	A	A
LA	2	5.600	0.400	1.12	A	W
LA	3	5.400	0.400	1.08	A	A
LB	1	7.050	3.460	1.41		N
LH	1	4.810	0.410	0.96	A	A
LL	1	5.010	0.180	1.00	W	A
LM	1	6.800	0.500	1.36		N
LV	1	5.120	0.063	1.02	A	A
ME	1	5.980	0.140	1.19	N	W
MI	1	4.419	0.113	0.88	A	A
MS	1	4.970	0.500	0.99	W	A
MX	1	4.700	0.470	0.94		A
NA	1	5.910	0.180	1.18		W
ND	1	5.220	0.560	1.04		A
NL	1	4.690	0.350	0.94	W	A
NP	1	4.590	0.110	0.92	A	A
NZ	1	5.700	0.300	1.14		W
NZ	1	5.600	0.300	1.12		W
OD	1	5.500	0.080	1.10	W	A
OL	1	5.370	0.090	1.07		A
OS	1	58.600	0.110	11.70	N	N
OT	1	5.400	0.200	1.08	W	A
PO	1	5.300	0.200	1.06		A
PO	1	5.200	0.200	1.04		A
RA	1	5.510	0.390	1.10	W	A
RA	1	4.880	0.140	0.97	W	A
RE	1	5.280	0.720	1.05	W	A
RI	1	4.750	0.360	0.95	A	A
RL	1	11.600	0.600	2.32	W	N
RM	1	3.700	0.100	0.74		N
SA	1	5.200	0.500	1.04	N	A
SK	1	5.100	0.100	1.02	N	A
SR	1	5.000	0.300	1.00	W	A
SS	1	5.010	0.090	1.00	W	A
SW	1	5.290	0.070	1.06	A	A
TE	1	5.325	0.266	1.06	A	A
TI	1	5.860	0.586	1.17	W	W
TM	1	5.620	0.313	1.12		W
TN	1	7.360	0.400	1.47	A	N
TO	1	6.000	0.500	1.20	N	W
TP	1	4.985	0.599	1.00	W	A
TR	1	6.795	0.300	1.36		N
TW	1	4.900	0.200	0.98	A	A
TX	1	5.000	0.100	1.00	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: CO 60

EML Value: 5.010
EML Error: 0.300

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
UC	1	5.080	0.510	1.01	A	A
UK	1	5.030	0.200	1.00	A	A
UN	1	5.230	0.220	1.04	A	A
UY	1	5.300	0.500	1.06	W	A
WA	1	5.370	0.190	1.07	W	A
WC	1	6.760	0.536	1.35	W	N
WE	1	25.160	0.149	5.02	A	N
WI	1	5.092	0.501	1.02	W	A
WP	1	5.770	0.580	1.15	A	W

Total Number Reported: 102

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: CS134

EML Value: 10.880
EML Error: 1.000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	10.880	1.000	1.00	A	A
AC	1	12.200	0.400	1.12		W
AF	1	11.140	1.280	1.02	A	A
AG	1	11.300	1.500	1.04	A	A
AI	1	13.300	0.090	1.22		N
AL	1	11.430	0.990	1.05	W	A
AM	1	11.660	0.280	1.07		A
AN	1	11.500	0.610	1.06	A	A
AR	1	12.800	0.500	1.18	A	W
AU	1	11.800	0.900	1.08	W	A
AW	1	14.200	2.100	1.31		N
BC	1	10.900	0.659	1.00	A	A
BE	1	10.510	0.740	0.97	W	A
BL	1	11.000	0.400	1.01	A	A
BM	1	13.700	0.220	1.26	W	N
BN	1	10.800	0.168	0.99	A	A
BP	1	12.200	0.200	1.12	W	W
BQ	1	11.200	0.200	1.03	W	A
BS	1	11.370	0.110	1.05	A	A
BU	1	12.000	0.600	1.10	W	A
BX	1	11.400	0.677	1.05	A	A
CA	1	12.100	0.400	1.11	W	W
CH	1	11.200	0.415	1.03		A
CL	1	10.300	0.300	0.95	A	A
CN	1	13.000	2.000	1.19		W
CO	1	13.600	0.300	1.25		N
CR	1	58.000	4.000	5.33		N
CS	1	10.480	0.260	0.96	N	A
DC	1	11.400	1.290	1.05	W	A
EG	1	11.700	0.200	1.08	W	A
EP	1	13.280	1.700	1.22	N	N
ES	1	10.250	1.140	0.94	A	A
FG	1	12.300	0.880	1.13	W	W
FL	1	11.160	0.090	1.03	W	A
FM	1	11.070	0.160	1.02	A	A
FN	1	11.600	0.700	1.07	W	A
FR	1	10.700	2.100	0.98		A
GA	1	11.000	1.600	1.01	A	A
GE	1	10.790	1.520	0.99	A	A
GP	1	11.000	2.000	1.01		A
GT	1	8.600	1.000	0.79		W
ID	1	12.800	0.883	1.18	W	W
IE	1	9.250	0.660	0.85	A	A
IL	1	10.300	0.100	0.95	W	A
IN	1	11.300	0.200	1.04	A	A
IS	1	9.640	0.650	0.89	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: CS134

EML Value: 10.880
EML Error: 1.000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
IT	1	10.100	0.110	0.93	A	A
JP	1	11.000	0.100	1.01		A
KO	1	11.100	0.338	1.02		A
LA	1	12.300	0.900	1.13	A	W
LA	2	13.800	0.900	1.27	A	N
LA	3	12.200	0.900	1.12	A	W
LB	1	14.150	5.490	1.30		N
LH	1	9.660	0.740	0.89	A	A
LL	1	12.000	0.180	1.10	W	A
LM	1	13.100	0.600	1.20		W
LV	1	11.700	0.100	1.08	A	A
ME	1	10.380	0.190	0.95	N	A
MI	1	9.698	0.153	0.89	A	A
MS	1	10.400	1.000	0.96	A	A
MX	1	13.200	1.250	1.21		W
NA	1	11.710	0.420	1.08		A
ND	1	12.760	0.730	1.17		W
NL	1	10.100	0.700	0.93	W	A
NP	1	9.300	0.190	0.85	A	A
NZ	1	11.700	0.600	1.08		A
NZ	1	11.600	0.600	1.07		A
OD	1	11.880	0.260	1.09	W	A
OL	1	10.810	0.450	0.99		A
OS	1	11.500	0.070	1.06	W	A
OT	1	9.700	1.000	0.89	W	A
PO	1	12.000	2.000	1.10		A
RA	1	11.900	0.600	1.09	N	A
RA	1	11.600	0.600	1.07	N	A
RE	1	10.700	1.100	0.98	A	A
RI	1	11.700	0.380	1.08	A	A
RL	1	24.100	2.200	2.22	A	N
RM	1	8.100	0.200	0.74		W
SA	1	11.700	1.100	1.08	N	A
SK	1	12.200	0.200	1.12	N	W
SR	1	11.000	0.600	1.01	A	A
SS	1	9.670	0.173	0.89	A	A
SW	1	11.380	0.080	1.05	A	A
TE	1	10.767	0.337	0.99	A	A
TI	1	12.000	1.200	1.10	A	A
TM	1	12.300	0.450	1.13	W	W
TN	1	18.800	1.000	1.73	W	N
TO	1	12.100	0.700	1.11	N	W
TP	1	10.458	0.821	0.96	A	A
TR	1	14.895	0.930	1.37		N
TW	1	10.000	0.900	0.92	A	A
TX	1	10.600	0.100	0.97	A	A
UK	1	10.730	0.200	0.99	W	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: CS134

EML Value: 10.880
EML Error: 1.000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
UN	1	13.300	0.400	1.22		N
UY	1	11.600	0.500	1.07	W	A
WA	1	10.300	0.300	0.95	A	A
WC	1	10.200	0.688	0.94	W	A
WE	1	11.190	0.101	1.03	A	A
WI	1	10.640	0.820	0.98	A	A
WP	1	10.800	1.080	0.99	A	A
YA	1	12.080	0.611	1.11		W

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 µg/filter, g
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: CS137

EML Value: 8.700
EML Error: 0.800

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	8.700	0.800	1.00	A	A
AC	1	8.340	0.310	0.96		A
AF	1	8.010	0.910	0.92	A	A
AG	1	9.340	0.650	1.07	W	A
AI	1	11.000	0.130	1.26		W
AL	1	8.954	0.180	1.03	A	A
AM	1	13.140	0.320	1.51		N
AN	1	9.520	0.870	1.09	A	A
AR	1	10.400	0.400	1.20	A	W
AU	1	9.300	0.600	1.07	W	A
AW	1	12.000	1.800	1.38		N
BC	1	8.700	0.577	1.00	A	A
BE	1	9.100	0.670	1.05	W	A
BL	1	9.190	0.360	1.06	N	A
BM	1	10.800	0.240	1.24	A	W
BN	1	11.900	0.402	1.37	W	N
BP	1	9.500	0.300	1.09	A	A
BQ	1	9.500	0.200	1.09	N	A
BS	1	8.930	0.090	1.03	A	A
BU	1	10.000	0.500	1.15	W	W
BX	1	8.800	0.581	1.01	A	A
CA	1	9.100	0.100	1.05	A	A
CH	1	8.370	0.241	0.96		A
CL	1	9.000	0.500	1.03	A	A
CN	1	11.000	2.000	1.26		W
CO	1	10.700	0.200	1.23		W
CR	1	51.000	3.000	5.86		N
CS	1	7.580	0.340	0.87	N	A
DC	1	9.870	2.250	1.13	W	W
EG	1	9.000	0.200	1.03	A	A
EP	1	10.550	1.330	1.21	W	W
ES	1	8.820	1.000	1.01	A	A
FG	1	10.700	0.100	1.23	W	W
FL	1	10.500	0.100	1.21	W	W
FM	1	9.250	1.570	1.06	A	A
FN	1	8.390	0.850	0.96	W	A
FR	1	9.500	1.000	1.09		A
GA	1	8.800	0.590	1.01	A	A
GE	1	8.570	1.320	0.99	A	A
GP	1	8.200	1.600	0.94		A
GT	1	8.500	2.600	0.98		A
ID	1	9.167	0.594	1.05	W	A
IE	1	7.660	0.386	0.88	A	A
IL	1	6.800	0.100	0.78	A	W
IN	1	7.900	0.200	0.91	A	A
IS	1	7.450	0.580	0.86	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: CS137

EML Value: 8.700
EML Error: 0.800

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
IT	1	8.280	0.150	0.95	A	A
JP	1	9.300	0.090	1.07		A
KO	1	9.900	0.135	1.14		W
LA	1	9.300	0.600	1.07	A	A
LA	2	9.500	0.700	1.09	A	A
LA	3	9.200	0.600	1.06	A	A
LB	1	13.200	4.900	1.52		N
LH	1	8.960	0.960	1.03	A	A
LL	1	8.510	0.255	0.98	A	A
LM	1	11.200	0.600	1.29		W
LV	1	9.560	0.100	1.10	A	A
ME	1	10.430	0.320	1.20	N	W
MI	1	7.958	0.219	0.91	A	A
MS	1	7.880	0.790	0.91	W	A
MX	1	8.800	0.440	1.01		A
NA	1	10.630	0.320	1.22		W
ND	1	8.820	0.600	1.01		A
NL	1	8.400	0.900	0.97	W	A
NM	1	10.100	0.500	1.16	W	W
NP	1	8.120	0.160	0.93	A	A
NZ	1	10.100	0.500	1.16		W
NZ	1	10.000	0.500	1.15		W
OD	1	9.900	0.370	1.14	A	W
OL	1	9.790	0.260	1.13		W
OS	1	9.900	0.180	1.14	W	W
OT	1	9.100	0.200	1.05	A	A
PO	1	9.000	0.500	1.03		A
RA	1	7.740	0.530	0.89	W	A
RA	1	9.440	0.360	1.09	W	A
RE	1	8.900	0.990	1.02	A	A
RI	1	7.940	0.640	0.91	A	A
RL	1	22.400	2.700	2.57	A	N
RM	1	7.100	0.200	0.82		W
SA	1	8.700	0.800	1.00	N	A
SK	1	7.990	0.120	0.92	W	A
SR	1	8.800	0.800	1.01	A	A
SS	1	8.700	0.159	1.00	A	A
SW	1	8.960	0.110	1.03	A	A
TE	1	9.116	0.404	1.05	A	A
TI	1	10.800	1.080	1.24	W	W
TM	1	9.860	0.428	1.13	W	W
TN	1	13.300	0.700	1.53	A	N
TO	1	9.700	0.900	1.11	W	W
TP	1	8.886	0.496	1.02	A	A
TR	1	12.060	0.330	1.39		N
TW	1	8.800	0.800	1.01	A	A
TX	1	8.450	0.080	0.97	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: CS137

EML Value: 8.700
EML Error: 0.800

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
UC	1	11.030	1.100	1.27	W	W
UK	1	8.610	0.200	0.99	A	A
UN	1	8.720	0.320	1.00	A	A
UY	1	9.000	0.700	1.03	A	A
WA	1	9.370	0.260	1.08	W	A
WC	1	12.000	1.670	1.38	W	N
WE	1	9.420	0.079	1.08	A	A
WI	1	8.610	1.108	0.99	W	A
WP	1	10.800	1.080	1.24	A	W
YA	1	8.325	0.426	0.96	A	A

Total Number Reported: 103

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: GA 1

EML Value: 0.960
EML Error: 0.050

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	0.960	0.050	1.00	A	A
AF	1	1.100	0.044	1.15	W	A
AG	1	0.935	0.097	0.97	N	A
AI	1	0.853	0.055	0.89		A
AM	1	1.040	0.010	1.08		A
AN	1	0.900	0.090	0.94	N	A
AR	1	1.780	0.080	1.85	N	N
AU	1	1.030	0.030	1.07	A	A
BC	1	0.962	0.112	1.00	W	A
BE	1	1.075	0.090	1.12	W	A
BL	1	0.730	0.063	0.76	W	W
BN	1	0.900	0.023	0.94	A	A
BP	1	1.020	0.050	1.06	W	A
BS	1	1.140	0.010	1.19	A	A
BX	1	1.210	0.125	1.26	N	A
CA	1	0.930	0.030	0.97	N	A
CH	1	1.030	0.016	1.07		A
CS	1	1.090	0.059	1.14		A
DC	1	0.881	0.175	0.92	N	A
DP	1	1.100	0.030	1.15		A
EG	1	1.100	0.100	1.15	A	A
EI	1	0.640	0.070	0.67	N	W
ES	1	1.060	0.200	1.10	A	A
FG	1	1.140	0.100	1.19	N	A
FL	1	0.960	0.020	1.00	N	A
GE	1	1.010	0.020	1.05	A	A
GP	1	1.000	0.100	1.04		A
GT	1	1.400	0.100	1.46		W
HC	1	0.894	0.063	0.93	W	A
ID	1	1.133	0.081	1.18	N	A
IL	1	1.290	0.030	1.34	N	W
IS	1	1.090	0.110	1.14		A
IT	1	1.020	0.030	1.06	A	A
JP	1	1.300	0.030	1.35		W
KA	1	1.040	0.060	1.08	A	A
KO	1	0.904	0.047	0.94		A
LA	1	1.000	0.200	1.04	W	A
LA	2	1.000	0.200	1.04	W	A
LA	3	1.100	0.300	1.15	W	A
LH	1	1.340	0.070	1.40	A	W
LL	1	1.040	0.007	1.08	A	A
LM	1	0.860	0.100	0.90		A
LV	1	3.200	0.120	3.33	N	N
ME	1	1.320	0.040	1.38	A	W
NM	1	0.920	0.040	0.96	N	A
NZ	1	0.990	0.040	1.03		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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: GA 1

EML Value: 0.960
EML Error: 0.050

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
NZ	1	0.960	0.040	1.00		A
OB	1	0.870	0.060	0.91	N	A
OD	1	0.900	0.030	0.94	N	A
OT	1	0.880	0.100	0.92		A
PA	1	0.890	0.110	0.93	N	A
RD	1	0.900	0.040	0.94	N	A
RE	1	0.960	0.074	1.00	N	A
RK	1	0.727	0.041	0.76		W
RL	1	0.890	0.040	0.93		A
SA	1	0.890	0.180	0.93	N	A
SB	1	1.360	0.110	1.42		W
SW	1	0.870	0.050	0.91	N	A
TE	1	1.199	0.045	1.25	N	A
TI	1	1.200	0.100	1.25	N	A
TM	1	0.804	0.119	0.84	W	A
TN	1	1.380	0.140	1.44		W
TO	1	1.440	0.060	1.50	A	W
TP	1	0.930	0.045	0.97		A
TW	1	0.950	0.020	0.99	N	A
TX	1	1.132	0.044	1.18	N	A
UC	1	1.050	0.050	1.09	N	A
UK	1	0.984	0.029	1.03	N	A
UP	1	0.990	0.033	1.03	N	A
UY	1	1.000	0.200	1.04	N	A
WA	1	1.250	0.060	1.30	A	A
WC	1	0.947	0.019	0.99	W	A
WS	1	0.978	0.022	1.02		A
WV	1	0.841	0.018	0.88	A	A
YA	1	0.964	0.009	1.00	N	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 µg/filter, g
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: GB 2

EML Value: 0.450
EML Error: 0.030

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	0.450	0.030	1.00	A	A
AF	1	0.296	0.444	0.66	W	N
AG	1	0.327	0.039	0.73	A	W
AI	1	0.522	0.005	1.16		A
AM	1	0.630	0.010	1.40		A
AN	1	0.490	0.050	1.09	A	A
AR	1	0.290	0.030	0.64	A	N
AU	1	0.560	0.020	1.24	A	A
BC	1	0.710	0.066	1.58	A	W
BE	1	0.452	0.043	1.00	A	A
BL	1	0.404	0.085	0.90		A
BN	1	0.440	0.038	0.98	W	A
BP	1	0.560	0.031	1.24	A	A
BS	1	0.510	0.010	1.13	A	A
BX	1	0.747	0.067	1.66	A	W
CA	1	0.610	0.090	1.36	A	A
CH	1	0.392	0.021	0.87		W
CS	1	0.790	0.069	1.76		W
DC	1	0.418	0.084	0.93	N	A
DP	1	0.300	0.020	0.67		W
DP	1	0.200	0.020	0.44		N
DP	1	0.400	0.020	0.89		W
EG	1	0.700	0.100	1.56	A	W
ES	1	0.480	0.090	1.07	A	A
FG	1	0.100	0.080	0.22	A	N
FL	1	0.590	0.010	1.31	A	A
GE	1	0.459	0.012	1.02	A	A
GP	1	0.610	0.070	1.36		A
GT	1	0.700	0.100	1.56		W
HC	1	0.396	0.032	0.88	A	W
ID	1	0.467	0.063	1.04	A	A
IL	1	0.550	0.020	1.22	A	A
IS	1	0.505	0.050	1.12		A
IT	1	0.510	0.040	1.13	N	A
KA	1	0.550	0.040	1.22	A	A
KO	1	0.357	0.028	0.79		W
LA	1	0.590	0.070	1.31	A	A
LA	2	0.560	0.070	1.24	A	A
LA	3	0.560	0.070	1.24	A	A
LH	1	0.370	0.020	0.82	A	W
LL	1	0.627	0.001	1.39	W	A
LM	1	0.470	0.100	1.04		A
LV	1	0.331	0.045	0.74	N	W
ME	1	0.640	0.030	1.42	A	A
NM	1	0.570	0.070	1.27	A	A
NP	1	0.420	0.020	0.93	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: GB 2

EML Value: 0.450
EML Error: 0.030

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
NZ	1	0.600	0.030	1.33		A
NZ	1	0.640	0.030	1.42		A
OB	1	0.390	0.040	0.87	A	W
OD	1	0.590	0.030	1.31	A	A
OT	1	0.540	0.060	1.20		A
PA	1	0.540	0.080	1.20	W	A
RD	1	0.780	0.060	1.73	N	W
RE	1	0.516	0.041	1.15	A	A
RL	1	0.650	0.060	1.44		A
SA	1	0.420	0.080	0.93	A	A
SB	1	0.500	0.060	1.11		A
SW	1	0.510	0.050	1.13	W	A
TE	1	0.608	0.024	1.35	A	A
TI	1	0.330	0.040	0.73	A	W
TM	1	0.394	0.076	0.88	A	W
TN	1	0.253	0.070	0.56		N
TO	1	0.750	0.030	1.67	W	W
TP	1	0.440	0.029	0.98	A	A
TW	1	0.490	0.010	1.09	A	A
TX	1	0.349	0.033	0.78	A	W
UC	1	0.460	0.020	1.02		A
UK	1	0.509	0.019	1.13	A	A
UP	1	0.530	0.004	1.18	A	A
UY	1	0.560	0.050	1.24	A	A
WA	1	0.580	0.030	1.29	A	A
WC	1	0.396	0.008	0.88	W	W
WP	1	0.370	0.037	0.82	A	W
WV	1	0.467	0.014	1.04	W	A
YA	1	0.346	0.005	0.77	A	W

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 µg/filter, g
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: MN 54

EML Value: 7.620
EML Error: 0.600

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	7.620	0.600	1.00	A	A
AC	1	7.860	0.300	1.03		A
AF	1	6.700	0.892	0.88	A	A
AG	1	8.470	0.600	1.11	W	W
AI	1	10.200	0.130	1.34		N
AL	1	8.954	0.210	1.18	W	W
AM	1	11.870	0.370	1.56		N
AN	1	8.480	0.530	1.11	A	W
AR	1	9.660	0.440	1.27	A	W
AU	1	9.200	0.800	1.21	N	W
AW	1	10.900	1.600	1.43		N
BC	1	7.650	0.440	1.00	W	A
BE	1	8.010	0.570	1.05	N	A
BL	1	8.420	0.330	1.10	W	A
BM	1	9.570	0.240	1.26	W	W
BN	1	10.400	0.376	1.36	N	N
BP	1	7.400	0.300	0.97	A	A
BQ	1	7.580	0.200	0.99	A	A
BS	1	8.520	0.110	1.12	W	W
BU	1	8.800	0.400	1.15	N	W
BX	1	7.720	0.437	1.01	A	A
CA	1	7.800	0.300	1.02	A	A
CH	1	7.670	0.173	1.01		A
CL	1	7.300	0.300	0.96	A	A
CN	1	10.000	1.000	1.31		W
CO	1	10.400	0.200	1.36		N
CR	1	42.000	3.000	5.51		N
CS	1	7.280	0.310	0.96	N	A
DC	1	8.970	2.260	1.18	A	W
EG	1	8.100	0.100	1.06	W	A
EP	1	10.310	1.340	1.35	N	N
ES	1	7.780	0.800	1.02	A	A
FG	1	10.180	0.150	1.34	W	N
FL	1	9.800	0.100	1.29	N	W
FM	1	8.580	0.130	1.13	W	W
FN	1	6.860	0.690	0.90	W	A
FR	1	8.300	1.000	1.09		A
GA	1	7.700	0.990	1.01	A	A
GE	1	7.590	0.990	1.00	W	A
GP	1	7.600	1.600	1.00		A
GT	1	8.150	2.000	1.07		A
ID	1	7.400	0.899	0.97	A	A
IE	1	6.690	0.690	0.88	A	A
IL	1	6.200	0.300	0.81	A	W
IN	1	7.500	0.100	0.98	A	A
IS	1	7.160	0.610	0.94	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: MN 54

EML Value: 7.620
EML Error: 0.600

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
IT	1	7.720	0.130	1.01	A	A
JP	1	8.200	0.100	1.08		A
KO	1	8.960	0.072	1.18		W
LA	1	8.400	0.600	1.10	W	A
LA	2	8.500	0.600	1.12	W	W
LA	3	8.400	0.600	1.10	W	A
LB	1	12.440	5.090	1.63		N
LH	1	7.480	0.800	0.98	W	A
LL	1	7.830	0.321	1.03	W	A
LM	1	8.300	0.500	1.09		A
LV	1	7.740	0.090	1.02	A	A
ME	1	9.900	0.300	1.30	N	W
MI	1	2.384	0.695	0.31	A	N
MS	1	7.110	0.710	0.93	W	A
MX	1	8.900	0.760	1.17		W
NA	1	9.700	0.290	1.27		W
ND	1	8.540	0.560	1.12		W
NL	1	7.140	0.750	0.94	N	A
NP	1	7.850	0.170	1.03	A	A
NZ	1	8.900	0.500	1.17		W
NZ	1	9.000	0.500	1.18		W
OD	1	8.750	0.480	1.15	W	W
OL	1	8.950	0.200	1.17		W
OS	1	9.600	0.185	1.26	N	W
OT	1	8.400	0.200	1.10	W	A
RA	1	7.730	0.550	1.01	W	A
RA	1	8.250	0.320	1.08	W	A
RE	1	8.190	0.940	1.07	W	A
RI	1	7.770	0.540	1.02	A	A
RL	1	19.200	1.400	2.52	W	N
RM	1	5.900	0.200	0.77		W
SA	1	8.200	0.800	1.08	N	A
SK	1	7.070	0.100	0.93	W	A
SR	1	7.800	0.800	1.02	W	A
SS	1	7.110	0.257	0.93	A	A
SW	1	7.870	0.110	1.03	W	A
TE	1	8.494	0.429	1.11	W	W
TI	1	9.630	0.963	1.26	W	W
TM	1	9.270	0.417	1.22	W	W
TN	1	12.110	0.700	1.59	A	N
TO	1	8.400	0.800	1.10	W	A
TP	1	8.097	0.313	1.06	W	A
TR	1	26.068	0.820	3.42		N
TW	1	8.000	0.700	1.05	A	A
TX	1	8.570	0.090	1.12	W	W
UK	1	7.790	0.300	1.02	W	A
UN	1	8.220	0.320	1.08		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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: MN 54

EML Value: 7.620
EML Error: 0.600

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
UY	1	8.500	0.800	1.12	W	W
WA	1	8.740	0.330	1.15	N	W
WC	1	11.300	1.860	1.48	W	N
WE	1	11.240	0.109	1.48	W	N
WI	1	7.703	0.823	1.01	W	A
WP	1	9.160	0.920	1.20	A	W

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 µg/filter, g
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: PU238

EML Value: 0.100
EML Error: 0.006

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	0.100	0.006	1.00	A	A
AC	1	0.096	0.004	0.96		A
AG	1	0.072	0.029	0.72	A	W
AI	1	0.100	0.005	1.00		A
AM	1	0.850	0.020	8.48		N
AN	1	0.097	0.006	0.97	A	A
AR	1	0.076	0.031	0.76	A	W
AU	1	0.110	0.010	1.10	A	A
BE	1	0.106	0.010	1.06	A	A
BL	1	0.110	0.010	1.10	A	A
BM	1	0.087	0.010	0.87	A	A
BP	1	0.102	0.004	1.02	A	A
BU	1	0.100	0.010	1.00	A	A
BX	1	0.105	0.008	1.05	W	A
CH	1	0.110	0.008	1.10		A
CL	1	0.120	0.090	1.20	W	W
CW	1	0.090	0.010	0.90	A	A
DC	1	0.100	0.033	1.00	A	A
EG	1	0.119	0.016	1.19		W
EI	1	0.500	0.030	4.99	N	N
EP	1	0.110	0.014	1.10	A	A
ES	1	0.110	0.020	1.10	W	A
FL	1	0.065	0.004	0.65	A	W
GA	1	0.120	0.022	1.20	A	W
GE	1	0.098	0.019	0.98	A	A
GP	1	0.092	0.009	0.92		A
GT	1	0.100	0.020	1.00		A
ID	1	0.122	0.024	1.22	A	W
IE	1	0.104	0.022	1.04	A	A
IS	1	0.116	0.040	1.16	N	W
IT	1	0.110	0.010	1.10	A	A
JP	1	0.100	0.004	1.00		A
KO	1	0.102	0.005	1.02		A
LA	1	0.105	0.013	1.05	A	A
LA	2	0.094	0.011	0.94	A	A
LA	3	0.110	0.013	1.10	A	A
LH	1	0.100	0.010	1.00	A	A
LL	1	0.113	0.005	1.13	A	A
ML	1	0.110	0.005	1.10	W	A
NA	1	0.107	0.012	1.07		A
NL	1	0.110	0.030	1.10	A	A
NZ	1	0.100	0.010	1.00		A
NZ	1	0.110	0.010	1.10		A
OT	1	0.110	0.010	1.10		A
PI	1	0.106	0.012	1.06	A	A
RA	1	0.110	0.020	1.10	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: PU238

EML Value: 0.100
EML Error: 0.006

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
RE	1	0.091	0.009	0.91	A	A
RI	1	0.139	0.016	1.39	A	W
SN	1	0.110	0.011	1.10	A	A
SR	1	0.109	0.015	1.09	A	A
SW	1	0.080	0.010	0.80		W
TE	1	0.022	0.016	0.22		N
TI	1	0.110	0.030	1.10	W	A
TM	1	0.102	0.005	1.02	A	A
TN	1	0.099	0.010	0.99	A	A
TO	1	0.120	0.040	1.20		W
TW	1	0.123	0.005	1.23	A	W
TX	1	0.113	0.009	1.13	A	A
UK	1	0.136	0.038	1.36	A	W
UN	1	0.111	0.004	1.11		A
UY	1	0.100	0.020	1.00	A	A
WA	1	0.105	0.022	1.05	A	A
WC	1	0.113	0.023	1.13	W	A
WI	1	0.100	0.010	1.00		A
YA	1	0.100	0.003	1.00	A	A

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 µg/filter, g
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: PU239

EML Value: 0.119
EML Error: 0.006

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	0.119	0.006	1.00		A
AC	1	0.114	0.004	0.96		A
AF	1	0.130	0.070	1.09		A
AG	1	0.124	0.012	1.04		A
AI	1	0.130	0.006	1.09		A
AM	1	0.640	0.020	5.39		N
AN	1	0.125	0.006	1.05		A
AR	1	0.093	0.037	0.78		W
AR	1	0.119	0.043	1.00		A
AU	1	0.130	0.010	1.09		A
BE	1	0.128	0.012	1.08		A
BL	1	0.150	0.010	1.26		W
BL	1	0.130	0.010	1.09		A
BM	1	0.122	0.013	1.03		A
BP	1	0.125	0.005	1.05		A
BU	1	0.120	0.010	1.01		A
BX	1	0.107	0.008	0.90		A
CH	1	0.129	0.010	1.09		A
CL	1	0.130	0.060	1.09		A
CW	1	0.120	0.010	1.01		A
DC	1	0.133	0.038	1.12		A
EG	1	0.145	0.020	1.22		W
EI	1	0.230	0.015	1.94		N
EP	1	0.125	0.015	1.05		A
ES	1	0.130	0.030	1.09		A
FL	1	0.083	0.004	0.70		W
GA	1	0.150	0.034	1.26		W
GE	1	0.118	0.021	0.99		A
GP	1	0.120	0.010	1.01		A
GT	1	0.120	0.030	1.01		A
ID	1	0.134	0.043	1.13		A
IE	1	0.123	0.006	1.04		A
IS	1	0.098	0.037	0.82		W
IT	1	0.125	0.001	1.05		A
JP	1	0.130	0.005	1.09		A
KO	1	0.129	0.006	1.09		A
LA	1	0.127	0.014	1.07		A
LA	2	0.142	0.017	1.20		W
LA	3	0.125	0.014	1.05		A
LH	1	0.120	0.010	1.01		A
LL	1	0.132	0.006	1.11		A
ML	1	0.130	0.006	1.09		A
NA	1	0.120	0.013	1.01		A
NL	1	0.120	0.030	1.01		A
NZ	1	0.130	0.010	1.09		A
OT	1	0.140	0.020	1.18		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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: PU239

EML Value: 0.119
EML Error: 0.006

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
PI	1	0.127	0.013	1.07		A
RA	1	0.130	0.030	1.09		A
RE	1	0.105	0.010	0.88		A
RI	1	0.141	0.016	1.19		W
SN	1	0.130	0.014	1.09		A
SR	1	0.132	0.018	1.11		A
SW	1	0.080	0.010	0.67		W
TE	1	0.031	0.010	0.26		N
TI	1	0.170	0.040	1.43		W
TM	1	0.122	0.006	1.03		A
TN	1	0.129	0.011	1.09		A
TO	1	0.130	0.040	1.09		A
TW	1	0.129	0.005	1.09		A
TX	1	0.146	0.010	1.23		W
UC	1	0.071	0.012	0.60		N
UK	1	0.129	0.037	1.09		A
UN	1	0.133	0.005	1.12		A
UY	1	0.100	0.020	0.84		W
WA	1	0.131	0.023	1.10		A
WC	1	0.134	0.027	1.13		A
WI	1	0.122	0.120	1.03		A
YA	1	0.120	0.003	1.01		A

Total Number Reported: 68

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: SB125

EML Value: 12.330
EML Error: 1.000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	12.330	1.000	1.00	A	A
AC	1	13.700	1.300	1.11		A
AF	1	10.770	1.680	0.87	A	A
AG	1	14.500	1.000	1.18	W	W
AI	1	17.000	0.200	1.38		N
AL	1	14.210	0.370	1.15	W	W
AM	1	14.430	0.580	1.17		W
AN	1	13.240	0.850	1.07	W	A
AR	1	16.300	1.000	1.32	A	W
AU	1	12.400	1.400	1.01	W	A
AW	1	18.500	2.800	1.50		N
BC	1	12.400	0.655	1.01	W	A
BE	1	12.170	1.040	0.99	A	A
BL	1	12.400	0.600	1.01	A	A
BM	1	15.500	0.520	1.26	A	W
BN	1	17.600	0.859	1.43	W	N
BP	1	13.300	0.400	1.08	N	A
BQ	1	22.500	0.700	1.82	W	N
BS	1	11.670	0.210	0.95	A	A
BU	1	14.000	0.700	1.14	A	A
BX	1	12.800	0.655	1.04	A	A
CA	1	12.700	1.000	1.03	A	A
CH	1	13.200	0.459	1.07		A
CL	1	12.700	0.700	1.03	A	A
CN	1	14.000	2.000	1.14		A
CO	1	15.700	0.300	1.27		W
CR	1	64.000	6.000	5.19		N
CS	1	11.910	0.300	0.97	W	A
DC	1	14.100	1.680	1.14	W	W
EG	1	14.100	0.200	1.14	W	W
EP	1	17.210	2.280	1.40	W	N
ES	1	12.630	1.430	1.02	A	A
FG	1	15.800	0.600	1.28	W	W
FL	1	12.800	0.500	1.04	W	A
FM	1	12.800	0.200	1.04	A	A
FN	1	13.600	0.700	1.10	W	A
FR	1	11.100	1.700	0.90		A
GA	1	12.000	3.700	0.97	A	A
GE	1	13.220	1.430	1.07	A	A
GP	1	11.000	3.000	0.89		A
GT	1	11.600	1.000	0.94		A
ID	1	15.467	1.364	1.25	A	W
IE	1	10.460	1.438	0.85	A	A
IL	1	10.600	0.200	0.86	A	A
IN	1	13.200	0.400	1.07	A	A
IS	1	10.520	1.110	0.85	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: SB125

EML Value: 12.330
EML Error: 1.000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
IT	1	13.030	0.500	1.06	A	A
JP	1	14.000	0.200	1.14		A
KO	1	13.600	0.554	1.10		A
LA	1	14.100	1.000	1.14	A	W
LA	2	14.100	1.100	1.14	A	W
LA	3	14.400	1.100	1.17	A	W
LB	1	19.240	7.910	1.56		N
LH	1	12.400	1.000	1.01	A	A
LL	1	14.100	0.430	1.14	W	W
LM	1	14.400	0.900	1.17		W
LV	1	12.000	0.200	0.97	A	A
ME	1	16.130	0.310	1.31	N	W
MS	1	10.900	1.100	0.88	A	A
MX	1	16.200	2.930	1.31		W
NA	1	15.700	0.480	1.27		W
ND	1	13.040	1.120	1.06		A
NL	1	11.800	1.600	0.96	W	A
NP	1	12.730	0.350	1.03	A	A
NZ	1	16.200	0.900	1.31		W
NZ	1	15.600	0.800	1.27		W
OD	1	14.290	0.360	1.16	A	W
OL	1	13.230	0.910	1.07		A
OS	1	14.100	0.300	1.14	W	W
OT	1	14.000	1.000	1.14	A	A
RA	1	13.900	1.800	1.13	W	A
RA	1	13.900	0.800	1.13	W	A
RE	1	13.200	1.700	1.07	A	A
RI	1	13.600	0.940	1.10	W	A
RL	1	36.000	5.400	2.92	A	N
RM	1	12.400	0.900	1.01		A
SA	1	14.100	1.400	1.14	N	W
SK	1	12.500	0.200	1.01	W	A
SR	1	13.400	0.800	1.09	A	A
SS	1	12.900	0.324	1.05	A	A
SW	1	13.920	0.180	1.13	A	A
TE	1	14.118	1.099	1.15	W	W
TI	1	14.900	1.490	1.21	A	W
TM	1	15.400	0.792	1.25	N	W
TN	1	19.900	1.600	1.61	A	N
TO	1	15.100	0.800	1.22	W	W
TP	1	13.419	0.302	1.09	N	A
TR	1	19.017	0.650	1.54		N
TW	1	13.800	0.600	1.12	A	A
TX	1	12.180	0.130	0.99	A	A
UK	1	11.920	0.400	0.97		A
UN	1	13.200	0.600	1.07		A
UY	1	13.300	0.700	1.08	W	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
 Radionuclide: SB125

EML Value: 12.330
 EML Error: 1.000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
WA	1	14.700	0.500	1.19	W	W
WC	1	18.800	1.120	1.52	N	N
WE	1	14.330	0.171	1.16	A	W
WI	1	13.030	0.860	1.06	A	A
WP	1	14.900	1.490	1.21	A	W

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 µg/filter, g
 Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: SR 90

EML Value: 1.450
EML Error: 0.149

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	1.450	0.149	1.00	A	A
AF	1	1.460	0.150	1.01		A
AG	1	2.820	0.530	1.94	A	W
AI	1	1.300	0.100	0.90		A
AN	1	1.514	0.040	1.04	A	A
AR	1	1.780	0.410	1.23	A	A
BC	1	1.460	0.302	1.01	A	A
BE	1	1.400	0.110	0.97	A	A
BL	1	1.500	0.180	1.03	N	A
BM	1	1.460	0.040	1.01	W	A
BP	1	1.350	0.060	0.93	A	A
BX	1	1.640	0.429	1.13	W	A
CH	1	1.490	0.100	1.03		A
CL	1	2.150	0.400	1.48	A	A
DC	1	1.310	0.194	0.90		A
EG	1	1.600	0.050	1.10		A
EI	1	3.480	0.200	2.40	W	N
ES	1	1.310	0.410	0.90	W	A
GA	1	1.900	0.110	1.31		A
GE	1	1.520	0.070	1.05	A	A
GP	1	1.300	0.300	0.90		A
GT	1	1.500	0.100	1.03		A
IE	1	1.200	0.410	0.83	A	W
IS	1	1.030	0.210	0.71	W	W
IT	1	1.470	0.010	1.01	A	A
JP	1	1.100	0.040	0.76		W
KO	1	1.409	0.031	0.97		A
LA	1	22.000	2.500	15.17	A	N
LA	2	21.400	2.300	14.76	A	N
LA	3	21.400	2.300	14.76	A	N
LH	1	2.060	0.150	1.42	A	A
NA	1	1.360	0.140	0.94	W	A
NZ	1	1.370	0.030	0.94		A
NZ	1	1.440	0.040	0.99		A
OT	1	1.200	0.200	0.83		W
RA	1	1.800	0.300	1.24	A	A
RE	1	1.370	0.040	0.94	A	A
RI	1	2.820	0.120	1.94	A	W
SR	1	1.280	0.160	0.88	N	A
SW	1	1.610	0.100	1.11	A	A
TE	1	1.291	0.275	0.89		A
TI	1	1.400	0.200	0.97	A	A
TM	1	1.270	0.124	0.88	A	A
TN	1	1.540	0.300	1.06	A	A
TO	1	1.850	0.220	1.28	A	A
TP	1	1.190	0.057	0.82	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: SR 90

EML Value: 1.450
EML Error: 0.149

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
TW	1	1.360	0.070	0.94	A	A
UN	1	1.240	0.060	0.86		A
UY	1	1.070	0.100	0.74		W
WA	1	1.500	0.160	1.03	A	A
WC	1	1.100	0.186	0.76	N	W
WE	1	1.110	0.034	0.77		W
WP	1	1.500	0.200	1.03	W	A
YA	1	1.314	0.074	0.91		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 µg/filter, g
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: U 234

EML Value: 0.103
EML Error: 0.005

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	0.103	0.005	1.00	A	A
AC	1	0.091	0.002	0.89		W
AG	1	0.119	0.044	1.16	A	A
AI	1	0.280	0.030	2.72		N
AN	1	0.109	0.006	1.06	A	A
AR	1	0.116	0.043	1.13	A	A
AR	1	0.118	0.046	1.15	A	A
AU	1	0.110	0.010	1.07	N	A
BC	1	0.141	0.012	1.37	A	A
BE	1	0.097	0.012	0.94	A	A
BL	1	0.110	0.010	1.07	A	A
BL	1	0.100	0.080	0.97	A	A
BM	1	0.092	0.018	0.89	A	A
BU	1	0.091	0.009	0.88		W
BX	1	0.124	0.010	1.21	A	A
CH	1	0.116	0.004	1.13		A
CL	1	0.160	0.090	1.55	A	W
CW	1	0.090	0.010	0.87	A	W
DC	1	0.139	0.038	1.35	A	A
EI	1	0.220	0.020	2.14	A	N
ES	1	0.120	0.020	1.17		A
GA	1	0.130	0.012	1.26	A	A
GE	1	0.098	0.021	0.95	A	A
GP	1	0.110	0.010	1.07		A
GT	1	0.100	0.020	0.97		A
IE	1	0.100	0.004	0.97	A	A
IT	1	0.109	0.012	1.06	A	A
JP	1	0.110	0.005	1.07		A
KO	1	0.119	0.005	1.16		A
LH	1	0.120	0.010	1.17	A	A
LL	1	0.098		0.95	A	A
ML	1	0.100	0.001	0.97	A	A
NA	1	0.147	0.017	1.43		W
NL	1	0.110	0.030	1.07		A
NZ	1	0.100	0.010	0.97		A
NZ	1	0.110	0.010	1.07		A
OK	1	0.107	0.013	1.04	W	A
RE	1	0.103	0.010	1.00	A	A
SR	1	0.112	0.016	1.09	N	A
TM	1	0.114	0.006	1.11	A	A
TN	1	0.114	0.009	1.11		A
TO	1	0.095	0.006	0.92	A	A
TW	1	0.127	0.006	1.23	W	A
TX	1	0.122	0.007	1.19	A	A
UN	1	0.100	0.024	0.97		A
UP	1	0.123	0.021	1.19		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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
 Radionuclide: U 234

EML Value: 0.103
 EML Error: 0.005

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
WA	1	0.100	0.030	0.97	A	A
WC	1	0.121	0.016	1.18		A
WI	1	0.102	0.012	0.99		A
YA	1	0.106	0.009	1.03	A	A

Total Number Reported: 50

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
 Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: U 238

EML Value: 0.105
EML Error: 0.004

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	0.105	0.004	1.00	A	A
AC	1	0.094	0.002	0.90		A
AG	1	0.115	0.039	1.10	A	A
AI	1	0.275	0.028	2.63		N
AN	1	0.110	0.006	1.05	A	A
AR	1	0.130	0.050	1.24	N	A
AR	1	0.116	0.043	1.11	N	A
AU	1	0.100	0.010	0.96	A	A
BC	1	0.115	0.014	1.10	A	A
BE	1	0.098	0.012	0.94	A	A
BL	1	0.100	0.080	0.96	A	A
BL	1	0.110	0.010	1.05	A	A
BM	1	0.098	0.018	0.94	A	A
BU	1	0.100	0.010	0.96		A
BX	1	0.123	0.013	1.18	A	A
CH	1	0.110	0.006	1.05		A
CL	1	0.120	0.070	1.15	N	A
CW	1	0.090	0.010	0.86	A	W
DC	1	0.123	0.036	1.18	N	A
EI	1	0.220	0.020	2.11	A	W
ES	1	0.110	0.020	1.05		A
FL	1	0.800	0.200	7.66		N
GA	1	0.130	0.015	1.24	A	A
GE	1	0.103	0.026	0.99	A	A
GP	1	0.100	0.010	0.96		A
GT	1	0.110	0.020	1.05		A
IE	1	0.098	0.003	0.94	A	A
IT	1	0.105	0.004	1.00	W	A
JP	1	0.110	0.005	1.05		A
KO	1	0.114	0.005	1.09		A
LH	1	0.110	0.010	1.05	A	A
LL	1	0.095		0.91	A	A
ML	1	0.110	0.005	1.05	A	A
NA	1	0.124	0.016	1.19		A
NL	1	0.100	0.020	0.96		A
NZ	1	0.120	0.010	1.15		A
NZ	1	0.110	0.010	1.05		A
OK	1	0.111	0.012	1.06	A	A
RE	1	0.104	0.010	1.00	A	A
SR	1	0.110	0.015	1.05	W	A
SW	1	11.900	0.000	** **		N
TM	1	0.120	0.006	1.15	A	A
TN	1	0.109	0.008	1.04		A
TO	1	0.095	0.006	0.91	A	A
TW	1	0.120	0.006	1.15	W	A
TX	1	0.126	0.007	1.21	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: U 238

EML Value: 0.105
EML Error: 0.004

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
UN	1	0.098	0.024	0.94		A
UP	1	0.122	0.020	1.16	N	A
WA	1	0.100	0.020	0.96	A	A
WC	1	0.116	0.015	1.11		A
WI	1	0.102	0.012	0.98		A
YA	1	0.103	0.008	0.98	A	A

Total Number Reported: 52

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: U BQ

EML Value: 0.211
EML Error: 0.008

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	0.211	0.008	1.00	A	A
AG	1	0.240	0.089	1.14	A	A
AI	1	0.560	0.060	2.65		W
AM	1	0.020	0.006	0.09		N
BL	1	0.250	0.000	1.18		A
BL	1	1.160	0.030	5.49		N
BU	1	0.190	0.020	0.90	A	W
CH	1	0.224	0.008	1.06		A
CL	1	0.300	0.090	1.42	A	A
CS	1	18.960	2.840	89.77		N
GP	1	0.210		0.99		A
ID	1	0.204	0.010	0.97	A	A
OT	1	0.260	0.060	1.23		A
SN	1	0.220	0.027	1.04		A
TE	1	0.150	0.020	0.71		N
UK	1	0.231	0.044	1.09	A	A
UP	1	0.251	0.029	1.19		A
UY	1	0.230	0.030	1.09		A
WA	1	0.240	0.040	1.14	A	A

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 µg/filter, g
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: AI
Radionuclide: U UG

EML Value: 8.448
EML Error: 0.400

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	8.448	0.400	1.00	A	A
AF	1	11.200	5.890	1.33		W
AG	1	11.200	1.500	1.33	A	W
AR	1	9.300	0.800	1.10	W	A
BE	1	8.670	0.000	1.03	A	A
BQ	1	8.800	0.300	1.04	N	A
BU	1	7.600	0.800	0.90		A
CH	1	8.490	0.125	1.01		A
DC	1	8.368	0.837	0.99	N	A
EG	1	8.200	1.000	0.97		A
ES	1	9.100	0.910	1.08	A	A
GE	1	9.650	0.130	1.14	A	A
GT	1	9.300	3.600	1.10		A
IE	1	7.930	0.220	0.94	A	A
IS	1	8.560	1.670	1.01	N	A
IT	1	9.090	0.080	1.08	A	A
KO	1	9.250	0.411	1.09		A
LA	1	8.310	0.830	0.98	W	A
LA	2	8.310	0.830	0.98	W	A
LA	3	8.270	0.830	0.98	W	A
LL	1	7.670		0.91	A	A
NL	1	7.800	0.900	0.92	A	A
RA	1	8.900	0.900	1.05		A
RI	1	9.400	0.300	1.11	A	A
TI	1	7.900	1.200	0.94	W	A
TM	1	8.810	0.451	1.04	A	A
TN	1	8.970	1.400	1.06	A	A
TO	1	7.640	0.048	0.90	A	A
UY	1	8.200		0.97	W	A
YA	1	8.260	0.650	0.98	A	A
YP	1	7.530	0.377	0.89	W	A

Total Number Reported: 31

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: SO
Radionuclide: AM241

EML Value: 5.680
EML Error: 0.500

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	5.680	0.500	1.00	A	A
AC	1	6.300	0.700	1.11		A
AF	1	7.400	1.480	1.30	N	A
AG	1	6.320	0.830	1.11	A	A
AI	1	6.020	0.780	1.06		A
AM	1	9.240	2.590	1.63		W
AN	1	5.590	0.740	0.98	A	A
AR	1	5.200	0.900	0.92	W	A
AU	1	5.840	0.910	1.03	A	A
BE	1	5.740	0.450	1.01	A	A
BL	1	3.780	1.130	0.67	W	W
BM	1	3.980	1.380	0.70	A	W
BN	1	9.100	2.738	1.60	W	W
BP	1	5.470	0.240	0.96	A	A
BR	1	4.900	2.500	0.86		A
BS	1	6.150	0.840	1.08	A	A
BX	1	195.000	10.900	34.33	A	N
CH	1	6.530	0.400	1.15		A
CL	1	14.000	2.500	2.46	W	W
CN	1	8.000	0.000	1.41		A
CO	1	4.700	0.400	0.83		A
CS	1	5.040	0.470	0.89	A	A
CW	1	8.300	0.900	1.46	A	A
DC	1	11.100	2.560	1.95	A	W
DH	1	5.630	2.060	0.99		A
EG	1	5.140	1.110	0.90	N	A
EI	1	6.470	0.380	1.14	N	A
EL	1	1.860	0.100	0.33		N
ES	1	4.010	0.940	0.71	A	W
FG	1	6.480	1.500	1.14	A	A
FL	1	5.000	0.500	0.88	A	A
FN	1	7.660	1.110	1.35	A	A
FR	1	5.400	1.400	0.95		A
FS	1	6.400	0.900	1.13	A	A
GA	1	5.000	0.760	0.88	A	A
GE	1	5.880	1.020	1.04	A	A
GP	1	8.900	2.000	1.57		W
GT	1	9.300	2.300	1.64		W
ID	1	5.633	1.524	0.99	A	A
IE	1	5.740	2.200	1.01	A	A
IN	1	5.180	0.690	0.91	A	A
IS	1	22.800	8.100	4.01	A	N
IT	1	5.940	0.340	1.05	A	A
JP	1	5.200	0.200	0.92		A
LA	1	5.780	0.280	1.02	A	A
LA	2	5.570	0.250	0.98	A	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 Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: SO
Radionuclide: AM241

EML Value: 5.680
EML Error: 0.500

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
LA	3	6.030	0.340	1.06	A	A
LB	1	7.260	1.020	1.28		A
LH	1	6.560	0.450	1.15	A	A
LL	1	6.620	1.040	1.17	W	A
LV	1	8.160	0.430	1.44	A	A
MA	1	8.100	3.700	1.43		A
ME	1	6.090	2.200	1.07	A	A
MO	1	4.200	1.000	0.74		W
NA	1	5.770	1.660	1.02	A	A
NM	1	4.310	0.850	0.76	A	A
NZ	1	7.300	1.800	1.29		A
NZ	1	8.400	1.900	1.48		A
PO	1	11.700	1.000	2.06		W
RA	1	2.400	1.220	0.42	A	N
RA	1	8.000	0.700	1.41	A	A
RE	1	6.720	2.460	1.18		A
RG	1	6.220	0.620	1.10		A
SR	1	7.370	2.500	1.30		A
SW	1	6.570	1.610	1.16	A	A
TE	1	6.740	3.730	1.19	A	A
TI	1	4.900	1.500	0.86	A	A
TM	1	5.870	0.532	1.03	A	A
TN	1	6.900	1.000	1.21	A	A
TO	1	6.200	2.900	1.09	A	A
TR	1	2.729	1.390	0.48		N
TT	1	6.740	0.420	1.19		A
TW	1	1.870	0.050	0.33	A	N
TX	1	8.325	0.740	1.47	A	A
UK	1	2.830	1.900	0.50	W	N
UN	1	5.610	0.250	0.99		A
UY	1	2.800	0.400	0.49	A	N
WA	1	5.180	0.510	0.91	A	A
WC	1	5.880	0.765	1.04		A
WE	1	10.730	2.993	1.89	A	W
WS	1	6.700	1.100	1.18		A
YA	1	4.943	0.176	0.87	A	A

Total Number Reported: 82

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: SO
Radionuclide: CM244

EML Value: 0.233
EML Error: 0.020

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	0.233	0.020	1.00	A	A
GP	1	1.100	0.600	4.72		N
IT	1	0.250	0.030	1.07	A	A
UN	1	0.299	0.043	1.28		A

Total Number Reported: 4

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: SO
Radionuclide: CO 60

EML Value: 1.060
EML Error: 0.120

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	1.060	0.120	1.00	A	A
AF	1	2.220	1.110	2.09	A	N
AG	1	1.370	0.500	1.29	A	A
AL	1	1.443	0.466	1.36	A	W
AR	1	3.330	1.080	3.14	N	N
BC	1	1.980	0.426	1.87	A	W
BL	1	1.200	0.300	1.13	A	A
BN	1	1.100	0.202	1.04	A	A
BP	1	2.100	0.300	1.98	W	W
BS	1	1.200	0.480	1.13	A	A
BX	1	1.850	0.582	1.75	A	W
CH	1	1.330	0.300	1.25		A
CL	1	2.400	1.000	2.26	N	N
CN	1	1.000	0.000	0.94		A
CO	1	3.300	0.900	3.11		N
CR	1	4.000	2.000	3.77		N
CS	1	1.140	0.090	1.08	A	A
DC	1	1.520	0.552	1.43	A	W
EL	1	1.110	0.100	1.05		A
ES	1	1.110	3.730	1.05	A	A
FG	1	0.970	0.400	0.92	A	A
FR	1	0.830	0.480	0.78		N
GA	1	2.900	2.100	2.74		N
GE	1	0.868	0.706	0.82	A	W
GT	1	1.500	0.700	1.42		W
IA	1	1.120	0.320	1.06		A
IA	1	0.910	0.300	0.86		W
IA	1	1.220	0.320	1.15		A
IL	1	0.500	0.200	0.47	W	N
IS	1	4.140	2.480	3.91	W	N
IT	1	1.710	0.830	1.61	W	W
JP	1	0.580	0.380	0.55		N
KA	1	1.300	0.200	1.23	A	A
LA	1	3.300	0.600	3.11	A	N
LA	2	5.000	7.600	4.72	A	N
LA	3	3.400	5.200	3.21	A	N
LB	1	1.280	0.580	1.21		A
LL	1	1.680	0.354	1.58	A	W
LV	1	1.250	0.320	1.18	W	A
MA	1	22.000	22.000	20.75		N
ME	1	1.080	0.200	1.02	A	A
MO	1	1.260	0.210	1.19		A
MS	1	2.500	0.250	2.36	N	N
NA	1	1.300	0.230	1.23	A	A
NL	1	2.070	0.700	1.95	W	W
NP	1	1.520	0.240	1.43	W	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: SO
Radionuclide: CO 60

EML Value: 1.060
EML Error: 0.120

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
NZ	1	2.000	0.100	1.89		W
NZ	1	1.800	0.200	1.70		W
OT	1	1.500	1.900	1.42	W	W
PO	1	1.850	0.340	1.75		W
RA	1	1.700	1.700	1.60	W	W
RA	1	1.500	0.500	1.42	W	W
RE	1	1.180	0.720	1.11	A	A
RM	1	12.300	3.600	11.60		N
RO	1	1.500	1.000	1.42		W
SK	1	1.460	0.100	1.38	W	W
SN	1	1.160	0.640	1.09	A	A
SS	1	1.250	0.118	1.18	A	A
SW	1	2.450	0.280	2.31	A	N
TE	1	2.010	1.170	1.90	W	W
TP	1	0.000	0.000	0.00	A	N
TR	1	2.604	0.980	2.46		N
TT	1	1.030	0.170	0.97		A
TW	1	0.000	0.000	0.00	A	N
TX	1	1.460	0.300	1.38	A	W
UC	1	1.650	0.440	1.56	A	W
UK	1	1.090	0.900	1.03	A	A
UN	1	1.340	0.440	1.26		A
UY	1	2.200	1.000	2.08	N	N
VE	1	2.280	0.972	2.15		N
WA	1	1.360	0.530	1.28	A	A
WE	1	1.824	0.798	1.72	N	W
YA	1	1.356	0.274	1.28		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 µg/filter, g
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: SO
Radionuclide: CS137

EML Value: 825.500
EML Error: 14.100

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	825.500	14.100	1.00	A	A
AC	1	889.000	3.000	1.08		A
AF	1	758.500	85.100	0.92	W	A
AG	1	959.000	62.000	1.16	A	A
AI	1	1220.000	12.000	1.48		N
AL	1	884.300	5.809	1.07	W	A
AM	1	990.400	7.030	1.20		A
AN	1	1024.000	62.000	1.24	W	W
AR	1	889.000	26.000	1.08	A	A
AU	1	972.300	48.400	1.18	A	A
BC	1	980.000	64.800	1.19	W	A
BE	1	834.000	119.100	1.01	A	A
BL	1	860.000	20.000	1.04	A	A
BM	1	868.000	5.200	1.05	W	A
BN	1	846.100	17.442	1.02	A	A
BP	1	1045.000	14.000	1.27	A	W
BQ	1	960.000	20.000	1.16	A	A
BR	1	98.000	12.500	0.12		N
BS	1	874.100	3.400	1.06	A	A
BU	1	770.000	40.000	0.93	A	A
BX	1	973.000	67.300	1.18	W	A
CH	1	887.000	23.000	1.07		A
CL	1	756.000	10.000	0.92	A	A
CN	1	760.000	38.000	0.92		A
CO	1	875.000	8.000	1.06		A
CR	1	1069.000	42.000	1.29		W
CS	1	834.400	36.130	1.01	A	A
DC	1	1080.000	291.000	1.31	W	W
DH	1	925.000	9.560	1.12		A
EG	1	948.000	23.000	1.15	A	A
EL	1	893.600	11.800	1.08		A
ES	1	949.670	104.270	1.15	W	A
FG	1	1168.000	152.000	1.41	A	N
FL	1	841.000	2.000	1.02	A	A
FN	1	879.000	88.000	1.06	A	A
FR	1	830.000	85.000	1.01		A
FS	1	802.000	5.000	0.97	A	A
GA	1	914.000	40.000	1.11	A	A
GE	1	885.400	79.290	1.07	A	A
GP	1	980.000	200.000	1.19		A
GT	1	1040.000	11.000	1.26		W
IA	1	828.000	3.000	1.00		A
IA	1	843.000	4.000	1.02		A
IA	1	804.000	3.000	0.97		A
ID	1	953.333	47.932	1.15	A	A
IE	1	901.830	22.370	1.09	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: SO
Radionuclide: CS137

EML Value: 825.500
EML Error: 14.100

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
IL	1	619.600	13.500	0.75	A	N
IN	1	966.500	19.300	1.17	A	A
IS	1	998.000	130.000	1.21	A	A
IT	1	993.000	9.000	1.20	W	A
JP	1	910.000	4.000	1.10		A
KA	1	999.000	80.000	1.21	W	A
KO	1	920.000	7.500	1.11		A
LA	1	936.000	52.000	1.13	N	A
LA	2	840.000	47.000	1.02	N	A
LA	3	875.000	49.000	1.06	N	A
LB	1	719.000	68.000	0.87		W
LH	1	934.000	94.000	1.13	A	A
LL	1	832.000	9.150	1.01	A	A
LM	1	1200.000	45.000	1.45		N
LV	1	1010.000	2.000	1.22	W	A
LW	1	904.000	9.900	1.10	A	A
MA	1	962.000	67.000	1.17		A
ME	1	828.900	33.300	1.00	A	A
MO	1	1011.300	19.400	1.23		A
MS	1	786.000	79.000	0.95	A	A
NA	1	814.000	3.000	0.99	A	A
NL	1	924.000	92.000	1.12	A	A
NM	1	809.000	28.000	0.98	A	A
NP	1	1103.000	3.000	1.34	W	W
NR	1	900.000	180.000	1.09	A	A
NZ	1	999.000	51.000	1.21		A
NZ	1	985.000	50.000	1.19		A
OK	1	965.700	67.710	1.17	N	A
OL	1	947.000	22.800	1.15		A
OS	1	721.000	4.000	0.87	A	W
OT	1	880.000	10.000	1.07	A	A
PG	1	1131.000	12.000	1.37		N
PO	1	906.000	22.000	1.10		A
RA	1	760.000	50.000	0.92	A	A
RA	1	784.000	50.000	0.95	A	A
RA	1	871.000	36.000	1.06	A	A
RE	1	687.000	52.000	0.83	W	W
RI	1	1030.000	15.000	1.25	A	W
RL	1	817.000	51.000	0.99	W	A
RM	1	756.000	11.000	0.92		A
RO	1	910.000	73.000	1.10		A
SA	1	928.000	92.000	1.12	A	A
SB	1	910.000	50.000	1.10		A
SK	1	1045.000	24.000	1.27	A	W
SN	1	872.730	87.200	1.06	A	A
SR	1	916.000	86.000	1.11	A	A
SS	1	955.000	14.100	1.16	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: SO
Radionuclide: CS137

EML Value: 825.500
EML Error: 14.100

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
SW	1	1126.800	2.500	1.36	N	N
TE	1	918.640	8.400	1.11	A	A
TI	1	1010.000	100.000	1.22	A	A
TM	1	827.000	24.900	1.00	W	A
TN	1	930.000	50.000	1.13	A	A
TO	1	794.000	24.300	0.96	N	A
TP	1	770.507	2.793	0.93	A	A
TR	1	1207.883	7.250	1.46		N
TT	1	785.000	35.000	0.95		A
TW	1	784.000	61.000	0.95	A	A
TX	1	942.000	2.000	1.14	A	A
UC	1	998.820	79.330	1.21	A	A
UK	1	791.000	5.200	0.96	A	A
UN	1	867.000	30.000	1.05		A
UY	1	830.000	100.000	1.01	A	A
VE	1	916.000	57.500	1.11		A
WA	1	958.000	104.000	1.16	A	A
WC	1	933.000	138.000	1.13	A	A
WE	1	889.000	3.145	1.08	A	A
WP	1	1010.000	100.000	1.22	A	A
WS	1	980.500	32.400	1.19		A
YA	1	935.500	3.515	1.13	A	A

Total Number Reported: 115

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: SO
Radionuclide: K 40

EML Value: 334.250
EML Error: 7.140

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	334.250	7.140	1.00	A	A
AC	1	312.000	12.000	0.93		A
AF	1	325.600	37.000	0.97	A	A
AG	1	383.000	58.000	1.15	A	A
AI	1	470.000	110.000	1.41		W
AL	1	395.900	15.500	1.18	A	A
AM	1	371.800	23.680	1.11		A
AN	1	393.000	42.000	1.18	W	A
AR	1	357.000	26.000	1.07	A	A
AU	1	394.800	35.600	1.18	A	A
BC	1	355.000	20.300	1.06	A	A
BE	1	392.000	82.800	1.17	W	A
BL	1	331.000	13.000	0.99	A	A
BM	1	350.000	29.400	1.05	W	A
BN	1	295.600	2.581	0.88	A	A
BP	1	430.000	26.000	1.29	A	W
BQ	1	313.900	0.400	0.94	A	A
BR	1	376.500	31.550	1.13		A
BS	1	341.100	11.100	1.02	A	A
BU	1	300.000	60.000	0.90	A	A
BX	1	353.000	19.900	1.06	A	A
CH	1	345.000	13.000	1.03		A
CL	1	255.000	40.000	0.76	A	W
CN	1	270.000	18.000	0.81		W
CR	1	319.000	40.000	0.95		A
CS	1	346.500	15.970	1.04	A	A
CZ	1	50.000	5.000	0.15		N
DC	1	335.000	91.100	1.00	A	A
DH	1	339.000	4.000	1.01		A
EG	1	382.000	38.000	1.14	A	A
EL	1	621.200	110.300	1.86		N
ES	1	377.770	46.390	1.13	W	A
FG	1	386.000	67.000	1.15	W	A
FL	1	341.000	6.000	1.02	A	A
FN	1	348.000	36.000	1.04	A	A
FR	1	318.000	32.000	0.95		A
FS	1	325.000	14.000	0.97	A	A
GA	1	312.000	70.000	0.93	W	A
GE	1	368.890	40.550	1.10	W	A
GP	1	400.000	80.000	1.20		A
GT	1	381.000	22.000	1.14		A
IA	1	310.000	19.000	0.93		A
IA	1	317.000	15.000	0.95		A
IA	1	306.000	15.000	0.92		A
ID	1	378.667	14.640	1.13	A	A
IE	1	321.010	16.710	0.96	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: SO
Radionuclide: K 40

EML Value: 334.250
EML Error: 7.140

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
IL	1	473.600	13.500	1.42	N	W
IN	1	422.300	11.900	1.26	A	A
IS	1	439.000	63.000	1.31	A	W
IT	1	375.000	3.300	1.12	A	A
JP	1	340.000	12.000	1.02		A
KA	1	376.000	58.000	1.12	A	A
KO	1	373.000	10.600	1.12		A
LA	1	431.000	36.000	1.29	W	W
LA	2	373.000	33.000	1.12	W	A
LA	3	388.000	33.000	1.16	W	A
LB	1	292.700	40.100	0.88		A
LH	1	356.000	46.000	1.07	A	A
LL	1	316.000	19.600	0.95	A	A
LM	1	468.000	43.000	1.40		W
LV	1	411.000	6.000	1.23	W	A
LW	1	342.000	24.000	1.02	A	A
MA	1	337.000	59.000	1.01		A
ME	1	308.100	15.100	0.92	A	A
MO	1	393.000	16.000	1.18		A
MS	1	303.000	30.000	0.91	A	A
NA	1	331.000	8.000	0.99	A	A
NL	1	341.000	39.000	1.02	W	A
NR	1	364.000	73.000	1.09	W	A
NZ	1	390.000	21.000	1.17		A
NZ	1	383.000	28.000	1.15		A
OK	1	525.400	35.890	1.57	W	W
OL	1	388.200	25.200	1.16		A
OS	1	231.000	0.150	0.69	N	N
OT	1	370.000	30.000	1.11	A	A
PO	1	348.000	16.000	1.04		A
RA	1	230.000	49.000	0.69	A	N
RA	1	327.000	56.000	0.98	A	A
RA	1	280.000	126.000	0.84	A	W
RE	1	260.000	30.000	0.78	W	W
RI	1	355.000	97.000	1.06	A	A
RL	1	379.000	74.000	1.13	W	A
RM	1	279.000	45.000	0.83		W
RO	1	356.000	53.000	1.07		A
SA	1	388.000	38.000	1.16	A	A
SB	1	355.000	40.000	1.06		A
SK	1	390.000	12.000	1.17	A	A
SN	1	371.440	36.240	1.11	W	A
SR	1	372.000	41.000	1.11	A	A
SS	1	373.000	10.400	1.12	A	A
SW	1	417.200	7.200	1.25	N	A
TE	1	359.140	32.100	1.07	A	A
TI	1	384.000	38.000	1.15	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: SO
Radionuclide: K 40

EML Value: 334.250
EML Error: 7.140

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
TM	1	323.000	31.200	0.97	A	A
TN	1	330.000	50.000	0.99	A	A
TO	1	300.000	44.300	0.90	A	A
TR	1	667.888	17.890	2.00		N
TT	1	312.000	9.000	0.93		A
TW	1	334.000	24.000	1.00	A	A
TX	1	374.000	7.000	1.12	A	A
UC	1	384.220	23.170	1.15	A	A
UK	1	299.000	22.000	0.89	A	A
UN	1	385.000	16.000	1.15		A
UY	1	330.000	50.000	0.99	A	A
VE	1	358.000	66.400	1.07		A
WA	1	400.000	30.000	1.20	W	A
WC	1	401.000	50.100	1.20	A	A
WE	1	363.700	10.180	1.09	A	A
WP	1	358.000	35.800	1.07	A	A
WS	1	384.800	15.200	1.15		A
YA	1	376.100	10.550	1.13		A

Total Number Reported: 111

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: SO
Radionuclide: MN 54

EML Value: 0.518
EML Error: 0.127

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	0.518	0.127	1.00		A

Total Number Reported: 1

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: SO
Radionuclide: PU238

EML Value: 0.530
EML Error: 0.111

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	0.530	0.111	1.00	A	A
AI	1	1.260	0.530	2.38		N
AM	1	0.160	0.110	0.30		N
AN	1	0.486	0.094	0.92	A	A
AR	1	0.160	0.360	0.30	W	N
AU	1	1.120	0.250	2.11		N
BE	1	0.480	0.120	0.91	A	A
BL	1	0.710	0.210	1.34	A	W
BM	1	1.000	0.360	1.89	A	W
BU	1	0.400	0.200	0.76		A
BX	1	1.640	0.330	3.10		N
CH	1	0.520	0.120	0.98		A
CL	1	1.470	0.200	2.78	N	N
CL	1	0.000	0.000	0.00	N	N
CO	1	0.380	0.070	0.72		W
CW	1	0.120	0.050	0.23	A	N
DC	1	0.882	0.752	1.67	N	W
EG	1	0.343	0.472	0.65	N	W
EI	1	6.230	0.330	11.76		N
FL	1	0.238	0.240	0.45	W	W
FR	1	1.800	0.450	3.40		N
FS	1	0.440	0.100	0.83	A	A
GP	1	0.780	0.540	1.47		W
GT	1	0.800	0.400	1.51		W
ID	1	1.550	0.550	2.93	A	N
IE	1	0.520	0.230	0.98		A
IN	1	0.540	0.220	1.02	A	A
IS	1	4.450	2.790	8.40	N	N
IT	1	0.310	0.070	0.59	A	W
JP	1	0.370	0.053	0.70		W
KO	1	0.423	0.057	0.80		A
LA	1	0.600	0.100	1.13	A	A
LA	2	0.500	0.100	0.94	A	A
LA	3	0.500	0.100	0.94	A	A
LH	1	0.490	0.200	0.93	A	A
LL	1	0.561	0.112	1.06	A	A
ML	1	0.700	0.120	1.32	A	W
NA	1	0.750	0.460	1.42	W	W
NM	1	2.360	0.180	4.46	A	N
NZ	1	0.600	0.300	1.13		A
NZ	1	0.610	0.180	1.15		A
PI	1	0.560	0.420	1.06	W	A
RA	1	0.530	0.210	1.00	A	A
RE	1	0.481	0.126	0.91	A	A
RG	1	0.664	0.156	1.25		W
SN	1	1.380	1.780	2.61	W	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 Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: SO
Radionuclide: PU238

EML Value: 0.530
EML Error: 0.111

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
SW	1	1.150	0.280	2.17		N
TE	1	0.300	0.200	0.57	W	W
TI	1	0.530	0.280	1.00	A	A
TM	1	0.648	0.157	1.22	A	W
TN	1	0.350	0.500	0.66	A	W
TO	1	1.420	1.390	2.68	A	N
TW	1	0.670	0.050	1.27	W	W
TX	1	0.610	0.110	1.15	A	A
UK	1	4.450	3.700	8.40	N	N
UN	1	0.478	0.071	0.90		A
UY	1	1.300	0.200	2.45	A	N
WA	1	0.248	0.207	0.47	A	W
YA	1	0.588	0.091	1.11	A	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 µg/filter, g
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: SO
Radionuclide: PU239

EML Value: 134.930
EML Error: 17.100

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	134.930	17.100	1.00	A	A
AC	1	114.000	5.000	0.84		W
AF	1	122.100	40.700	0.90	W	A
AG	1	140.000	47.000	1.04	A	A
AI	1	151.000	7.240	1.12		A
AM	1	5.290	1.360	0.04		N
AN	1	150.000	16.000	1.11	A	A
AR	1	127.000	30.000	0.94	A	A
AU	1	144.700	7.700	1.07	W	A
BE	1	148.500	7.900	1.10	A	A
BL	1	147.000	2.000	1.09	A	A
BL	1	225.000	4.000	1.67	A	W
BM	1	134.000	13.500	0.99	W	A
BP	1	83.500	6.800	0.62	A	N
BU	1	146.000	7.000	1.08		A
BX	1	201.000	6.070	1.49	A	W
CH	1	142.000	10.600	1.05		A
CL	1	124.000	16.900	0.92	W	A
CO	1	112.000	3.000	0.83		W
CW	1	139.000	11.000	1.03	A	A
DC	1	138.000	17.800	1.02	A	A
EG	1	135.000	*** **	1.00	A	A
EI	1	106.300	4.940	0.79		W
EP	1	128.000	11.600	0.95	A	A
ES	1	121.880	22.100	0.90	A	A
FL	1	147.374	4.190	1.09	A	A
FR	1	117.000	12.000	0.87		W
FS	1	129.000	3.000	0.96	A	A
GA	1	151.000	13.000	1.12	A	A
GE	1	135.050	15.280	1.00	N	A
GP	1	130.000	10.000	0.96		A
GT	1	146.000	29.000	1.08		A
IA	1	14.900	6.100	0.11		N
IA	1	39.200	11.700	0.29		N
IA	1	30.100	5.600	0.22		N
ID	1	114.960	15.417	0.85	W	W
IE	1	141.040	40.000	1.05	A	A
IN	1	136.000	10.900	1.01	A	A
IS	1	124.000	28.000	0.92	W	A
IT	1	91.900	18.200	0.68	A	W
JP	1	130.000	4.000	0.96		A
KA	1	149.600	3.000	1.11	A	A
KO	1	124.500	4.230	0.92		A
LA	1	133.000	3.000	0.99	A	A
LA	2	127.000	3.000	0.94	A	A
LA	3	132.000	3.000	0.98	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: SO
Radionuclide: PU239

EML Value: 134.930
EML Error: 17.100

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
LH	1	137.300	7.800	1.02	A	A
LL	1	157.000	6.650	1.16	A	A
ML	1	132.220	6.610	0.98	A	A
NA	1	114.000	6.000	0.84	A	W
NL	1	127.000	28.000	0.94	A	A
NM	1	87.400	4.900	0.65	A	N
NZ	1	127.000	3.000	0.94		A
NZ	1	133.000	4.000	0.99		A
PI	1	200.000	20.000	1.48	A	W
PO	1	100.000	20.000	0.74		W
RA	1	160.000	30.000	1.19	A	A
RE	1	104.000	13.000	0.77	A	W
RG	1	143.000	5.000	1.06		A
SN	1	148.760	19.180	1.10	A	A
SR	1	138.000	16.000	1.02	A	A
SW	1	65.740	4.080	0.49		N
TE	1	132.420	5.170	0.98	A	A
TI	1	140.000	10.000	1.04	A	A
TM	1	130.000	4.360	0.96	A	A
TN	1	134.000	8.000	0.99	A	A
TO	1	142.000	36.800	1.05	A	A
TR	1	32.597	2.020	0.24		N
TW	1	101.200	0.600	0.75	W	W
TX	1	164.100	1.700	1.22	A	A
UK	1	139.000	21.000	1.03	A	A
UN	1	135.000	4.000	1.00		A
UY	1	130.000	20.000	0.96	A	A
WA	1	77.900	1.900	0.58	A	N
WC	1	139.000	25.000	1.03		A
YA	1	133.700	2.322	0.99	A	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 µg/filter, g
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: SO
Radionuclide: SR 90

EML Value: 40.310
EML Error: 0.420

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	40.310	0.420	1.00	A	A
AG	1	44.200	8.400	1.10	A	A
AM	1	70.660	6.290	1.75		W
AN	1	45.020	1.920	1.12	A	A
AR	1	46.300	4.400	1.15	A	A
AU	1	42.600	3.800	1.06	A	A
BC	1	26.000	8.180	0.65	W	W
BE	1	44.000	4.300	1.09	A	A
BL	1	47.100	3.600	1.17	A	A
BM	1	41.800	3.310	1.04	A	A
BP	1	36.400	1.600	0.90	A	A
BX	1	10.100	3.740	0.25	A	N
CH	1	33.100	7.100	0.82		A
CL	1	71.400	8.000	1.77	A	W
DC	1	37.500	5.950	0.93	A	A
EG	1	71.000	8.000	1.76	A	W
EG	1	0.071	0.008	0.00	A	N
EI	1	35.490	2.550	0.88	W	A
ES	1	29.480	19.230	0.73	A	A
GE	1	30.340	1.220	0.75	A	A
GP	1	31.000	6.000	0.77		A
GT	1	46.700	26.000	1.16		A
IA	1	30.300	5.100	0.75		A
IA	1	27.800	1.100	0.69		W
IA	1	16.700	0.760	0.41		N
ID	1	66.067	6.718	1.64	A	A
IE	1	39.710	10.000	0.99	A	A
IS	1	32.700	9.700	0.81	A	A
IT	1	41.100	2.900	1.02	A	A
JP	1	41.000	1.400	1.02		A
KA	1	44.900	2.400	1.11	A	A
KO	1	40.180	2.050	1.00		A
LA	1	258.000	17.400	6.40	N	N
LA	2	260.000	17.500	6.45	N	N
LA	3	215.000	15.400	5.33	N	N
LH	1	34.500	2.800	0.86	A	A
NZ	1	67.000	3.000	1.66		W
PO	1	43.000	3.000	1.07		A
RA	1	50.000	8.000	1.24	A	A
RE	1	44.300	2.500	1.10	A	A
RI	1	65.500	2.700	1.62		A
RO	1	24.700	6.000	0.61		W
SR	1	49.000	25.000	1.22	A	A
SW	1	26.350	0.450	0.65		W
TE	1	38.830	5.770	0.96	A	A
TI	1	49.000	5.000	1.22	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: SO
Radionuclide: SR 90

EML Value: 40.310
EML Error: 0.420

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
TM	1	24.800	0.259	0.62	A	W
TN	1	45.600	3.000	1.13	A	A
TO	1	26.000	3.890	0.65	A	W
TP	1	43.700	2.000	1.08	A	A
TW	1	41.000	2.000	1.02	A	A
TX	1	46.600	12.000	1.16	A	A
UN	1	38.400	2.700	0.95	A	A
UY	1	33.000	3.000	0.82	A	A
WA	1	45.500	1.900	1.13	A	A
WC	1	88.800	17.800	2.20	A	W
WE	1	34.100	3.483	0.85	A	A
WP	1	44.000	5.000	1.09	A	A
YA	1	33.060	1.739	0.82	A	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 µg/filter, g
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: SO
Radionuclide: U 234

EML Value: 37.570
EML Error: 2.480

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	37.570	2.480	1.00	A	A
AG	1	37.500	4.400	1.00	W	A
AM	1	34.620	7.830	0.92		A
AN	1	39.400	1.000	1.05	N	A
AR	1	33.400	8.300	0.89	A	A
AR	1	33.200	7.500	0.88	A	A
AU	1	41.400	2.700	1.10	A	W
BC	1	46.600	3.270	1.24	W	W
BE	1	41.900	4.600	1.12	A	W
BL	1	42.800	0.900	1.14	A	W
BL	1	32.900	6.400	0.88	A	A
BM	1	32.370	5.080	0.86	A	A
BU	1	54.000	5.000	1.44		W
BX	1	46.300	3.010	1.23	W	W
CH	1	34.600	1.330	0.92		A
CL	1	40.300	3.700	1.07	A	A
CW	1	37.000	4.000	0.98	A	A
DC	1	45.000	6.930	1.20	A	W
EI	1	35.730	1.940	0.95		A
ES	1	33.690	6.240	0.90		A
FS	1	37.300	1.600	0.99	A	A
GA	1	48.000	4.000	1.28	W	W
GE	1	39.590	4.770	1.05	A	A
GP	1	40.000	6.000	1.06		A
GT	1	38.600	8.900	1.03		A
IE	1	38.730	2.900	1.03	A	A
IT	1	42.600	4.400	1.13	A	W
JP	1	39.000	1.900	1.04		A
KO	1	41.200	1.300	1.10		A
LB	1	36.500	2.100	0.97		A
LH	1	38.400	4.000	1.02	A	A
LL	1	34.000		0.90	A	A
ML	1	39.800	1.680	1.06	A	A
NA	1	45.700	7.100	1.22	W	W
NL	1	45.000	12.000	1.20	N	W
NZ	1	32.900	3.600	0.88		A
NZ	1	36.200	2.300	0.96		A
OK	1	26.733	1.442	0.71		A
RA	1	40.000	6.000	1.06		A
RE	1	36.400	3.600	0.97	A	A
RG	1	39.200	1.600	1.04		A
SR	1	31.400	5.000	0.84		A
TM	1	36.200	1.770	0.96	W	A
TN	1	39.000	3.000	1.04	A	A
TO	1	50.800	1.310	1.35	A	W
TW	1	28.700	0.700	0.76	W	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: SO
 Radionuclide: U 234

EML Value: 37.570
 EML Error: 2.480

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
TX	1	46.300	1.900	1.23	W	W
UN	1	39.240	6.460	1.04		A
WA	1	43.300	3.700	1.15	A	W
WC	1	25.100	4.270	0.67		A
WE	1	21.000	2.450	0.56	W	W
YA	1	40.480	1.547	1.08	A	A

Total Number Reported: 52

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
 Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: SO
Radionuclide: U 238

EML Value: 42.430
EML Error: 2.500

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	42.430	2.500	1.00	A	A
AG	1	39.300	4.600	0.93	A	A
AM	1	41.020	13.310	0.97		A
AN	1	42.800	1.000	1.01	W	A
AR	1	35.000	8.600	0.82	A	A
AR	1	35.000	7.500	0.82	A	A
AU	1	44.300	2.800	1.04	A	A
BC	1	50.700	4.370	1.19	A	W
BE	1	44.900	4.800	1.06	A	A
BL	1	36.600	6.400	0.86	A	A
BL	1	41.700	0.900	0.98	A	A
BM	1	35.700	5.570	0.84	A	A
BU	1	54.000	5.000	1.27		W
BX	1	49.200	3.960	1.16	W	W
CH	1	37.800	1.340	0.89		A
CL	1	44.700	3.800	1.05	A	A
CW	1	39.000	4.000	0.92	A	A
DC	1	40.400	6.350	0.95	A	A
EI	1	34.570	1.880	0.81		A
ES	1	36.100	6.650	0.85		A
FL	1	34.700	3.700	0.82		A
FN	1	29.500	1.800	0.70	A	A
FS	1	39.500	1.700	0.93	A	A
GA	1	46.000	5.100	1.08	A	A
GE	1	40.700	7.700	0.96	A	A
GP	1	41.000	6.000	0.97		A
GT	1	42.600	10.000	1.00		A
IE	1	40.480	0.840	0.95	A	A
IT	1	44.700	1.200	1.05	A	A
JP	1	42.000	2.000	0.99		A
KO	1	43.100	1.350	1.02		A
LB	1	36.900	2.100	0.87		A
LH	1	40.800	4.200	0.96	A	A
LL	1	33.800		0.80	A	A
LV	1	69.400	2.900	1.64		N
MA	1	44.000	32.000	1.04		A
ML	1	41.880	1.750	0.99	A	A
NA	1	40.200	6.600	0.95	A	A
NL	1	47.000	12.000	1.11	W	W
NL	1	38.900	1.900	0.92	W	A
NZ	1	39.800	3.900	0.94		A
NZ	1	40.000	2.300	0.94		A
OK	1	28.701	1.477	0.68		A
RA	1	70.000	8.000	1.65		N
RA	1	39.000	6.000	0.92		A
RE	1	39.700	3.900	0.94	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: SO
Radionuclide: U 238

EML Value: 42.430
EML Error: 2.500

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
RG	1	44.500	1.700	1.05		A
SR	1	34.100	5.100	0.80		A
SW	1	2.310	0.000	0.05		N
TM	1	37.100	1.790	0.87	A	A
TN	1	42.000	3.000	0.99	A	A
TO	1	50.800	1.310	1.20	A	W
TW	1	32.200	0.800	0.76	W	A
TX	1	50.000	1.900	1.18	A	W
UN	1	42.240	6.980	1.00		A
WA	1	45.100	3.700	1.06	A	A
WC	1	26.300	4.470	0.62		A
WE	1	18.800	2.250	0.44	W	W
WS	1	40.000	5.700	0.94		A
YA	1	41.900	1.591	0.99	A	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 µg/filter, g
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: SO
Radionuclide: U BQ

EML Value: 81.270
EML Error: 4.830

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	81.270	4.830	1.00	A	A
AG	1	79.600	4.400	0.98		A
AM	1	79.170	9.620	0.97		A
BL	1	86.500	1.900	1.06		A
BL	1	82.000	0.000	1.01		A
BU	1	108.000	11.000	1.33		W
CH	1	72.500	2.300	0.89		A
CL	1	85.000	8.500	1.05	A	A
CS	1	101.300	13.120	1.25		W
GP	1	83.100		1.02		A
ID	1	75.333	4.216	0.93	A	A
MO	1	4.600	0.700	0.06		N
RG	1	85.900	3.600	1.06		A
SN	1	101.990	18.470	1.25		W
TE	1	79.260	3.800	0.98		A
TO	1	4.100	0.110	0.05		N
TR	1	60.145	5.200	0.74		A
UY	1	90.000	10.000	1.11		W
WA	1	91.000	5.500	1.12	A	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 µg/filter, g
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: SO
Radionuclide: U UG

EML Value: 3.426
EML Error: 0.200

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	3.426	0.200	1.00	A	A
AF	1	2.270	0.907	0.66		A
AG	1	3.550	0.490	1.04	A	A
AR	1	2.470	0.210	0.72	A	A
BE	1	3.620	0.000	1.06	A	A
BL	1	3.270	0.000	0.95	A	A
BL	1	3.460	0.070	1.01	A	A
BQ	1	3.700	0.200	1.08	A	A
BU	1	4.200	0.400	1.23	W	W
CA	1	3.550	0.130	1.04	A	A
CH	1	2.940	0.099	0.86		A
CZ	1	2.100	0.100	0.61		A
DC	1	2.980	0.447	0.87	A	A
EG	1	0.064	0.013	0.02		N
ES	1	3.350	0.340	0.98	A	A
GA	1	3.600	0.000	1.05	A	A
GE	1	3.700	0.040	1.08		A
GT	1	3.500	0.800	1.02		A
IA	1	3.000	0.500	0.88		A
IA	1	3.300	0.600	0.96		A
IA	1	2.700	0.500	0.79		A
IE	1	3.280	0.070	0.96	A	A
IS	1	3.180	0.640	0.93	N	A
IT	1	3.320	0.040	0.97	A	A
KO	1	3.490	0.109	1.02		A
LA	1	3.030	0.300	0.88	A	A
LA	2	3.050	0.310	0.89	A	A
LA	3	3.120	0.310	0.91	A	A
LL	1	2.740		0.80	A	A
RA	1	3.160	0.300	0.92		A
TI	1	3.300	0.500	0.96	A	A
TM	1	3.480	0.180	1.02	A	A
TN	1	3.500	0.500	1.02	A	A
UP	1	3.480		1.02	A	A
UY	1	3.550		1.04	A	A
YA	1	3.393	0.082	0.99	A	A
YP	1	3.450	0.311	1.01	A	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 Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: VE
Radionuclide: AM241

EML Value: 1.183
EML Error: 0.113

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	1.183	0.113	1.00	A	A
AG	1	1.200	0.210	1.01		A
AI	1	1.190	0.140	1.01		A
AM	1	3.030	1.850	2.56		W
AN	1	1.206	0.053	1.02	A	A
AU	1	1.400	0.210	1.18	N	A
BE	1	3.290	0.440	2.78	A	N
BL	1	1.520	0.200	1.28		A
BM	1	1.760	0.260	1.49	W	A
BP	1	1.100	0.200	0.93	A	A
BS	1	2.170	0.550	1.83		W
BU	1	1.200	0.100	1.01		A
BX	1	4.880	0.688	4.12	W	N
CH	1	1.260	0.017	1.06		A
CL	1	1.580	0.200	1.34	A	A
CN	1	3.000	0.000	2.54		W
CO	1	1.600	0.100	1.35		A
CW	1	1.200	0.100	1.01	A	A
DC	1	1.170	0.258	0.99	A	A
EG	1	1.430	0.260	1.21	A	A
EI	1	2.330	0.210	1.97	A	W
EL	1	1.500	0.100	1.27		A
ES	1	1.060	0.330	0.90	A	A
FL	1	2.300	0.500	1.94	A	W
FR	1	1.050	0.310	0.89		A
GA	1	1.200	0.330	1.01	A	A
GE	1	1.210	0.380	1.02	A	A
GP	1	1.300	0.200	1.10		A
ID	1	2.617	0.270	2.21		W
IE	1	1.150	0.300	0.97	A	A
IS	1	1.460	0.790	1.23		A
IT	1	1.169	0.074	0.99	A	A
JP	1	1.200	0.060	1.01		A
KO	1	1.400	0.071	1.18		A
LA	1	1.025	0.059	0.87	A	A
LA	2	1.110	0.056	0.94	A	A
LA	3	0.940	0.056	0.79	A	W
LB	1	0.805	0.025	0.68		W
LH	1	1.100	0.110	0.93	N	A
LL	1	1.540	0.114	1.30		A
LV	1	1.130	0.250	0.95	W	A
NA	1	1.210	0.360	1.02	N	A
PO	1	1.400	0.500	1.18		A
RA	1	1.800	1.300	1.52		A
RA	1	3.500	0.300	2.96		N
RE	1	1.160	0.160	0.98	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: VE
Radionuclide: AM241

EML Value: 1.183
EML Error: 0.113

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
SR	1	1.370	0.230	1.16	W	A
SW	1	4.250	0.910	3.59		N
TE	1	1.673	0.688	1.41	A	A
TI	1	1.200	0.300	1.01	A	A
TM	1	1.630	0.166	1.38	A	A
TN	1	1.400	0.600	1.18	A	A
TO	1	2.220	1.220	1.88		W
TR	1	0.787	0.543	0.67		N
TW	1	1.100	0.100	0.93	W	A
TX	1	1.480	0.370	1.25	A	A
UN	1	1.170	0.080	0.99		A
UY	1	1.000	0.200	0.85		W
WA	1	1.240	0.150	1.05	A	A
WC	1	2.070	0.724	1.75		W
WE	1	4.691	1.588	3.96		N
YA	1	1.255	0.058	1.06		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 µg/filter, g
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: VE
Radionuclide: CM244

EML Value: 0.900
EML Error: 0.050

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	0.900	0.050	1.00	A	A
AG	1	0.750	0.180	0.83		A
AI	1	1.110	0.310	1.23		A
AN	1	0.940	0.045	1.04	A	A
BE	1	2.770	0.360	3.08	A	N
BL	1	0.880	0.200	0.98		A
BU	1	0.900	0.060	1.00		A
BX	1	0.847	0.283	0.94		A
CH	1	0.944	0.067	1.05		A
CL	1	0.400	0.100	0.44	A	N
CW	1	0.860	0.100	0.96	A	A
DC	1	0.958	0.225	1.06	W	A
EG	1	0.800	0.170	0.89	A	A
EI	1	1.100	0.140	1.22	A	A
ES	1	0.480	0.220	0.53	A	W
GA	1	0.850	0.250	0.94	A	A
GE	1	0.977	0.339	1.09	A	A
GP	1	0.990	0.160	1.10		A
IE	1	0.940	0.120	1.04		A
IT	1	0.805	0.077	0.89	A	A
JP	1	0.950	0.050	1.06		A
KO	1	1.030	0.059	1.14		A
LH	1	0.650	0.080	0.72	N	W
LL	1	0.859	0.083	0.95		A
SR	1	0.970	0.190	1.08		A
SW	1	0.740	0.260	0.82		W
TE	1	0.688	0.468	0.76	W	W
TI	1	0.940	0.300	1.04	A	A
TM	1	1.170	0.178	1.30	W	A
TN	1	0.690	0.500	0.77	A	W
TO	1	1.530	1.010	1.70		N
TW	1	0.846	0.009	0.94	W	A
UN	1	0.848	0.062	0.94		A
UY	1	0.760	0.300	0.84		A
YA	1	0.923	0.058	1.03		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 µg/filter, g
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: VE
Radionuclide: CO 60

EML Value: 12.500
EML Error: 0.320

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	12.500	0.320	1.00	A	A
AG	1	14.300	1.500	1.14	A	A
AI	1	18.000	2.400	1.44		N
AL	1	14.950	2.280	1.20	A	A
AM	1	13.320	1.480	1.07		A
AN	1	14.700	1.800	1.18	W	A
AR	1	12.900	2.000	1.03	W	A
AU	1	15.600	2.200	1.25	A	W
BC	1	14.500	1.090	1.16	A	A
BL	1	13.900	1.000	1.11	A	A
BM	1	12.000	1.700	0.96	A	A
BN	1	13.000	0.349	1.04	A	A
BP	1	15.600	0.300	1.25	W	W
BS	1	11.520	1.310	0.92	A	A
BU	1	16.000	2.000	1.28	A	W
BX	1	14.900	0.899	1.19	A	A
CH	1	16.800	1.540	1.34		W
CL	1	10.700	1.900	0.86	N	A
CN	1	12.000	1.000	0.96		A
CO	1	13.000	1.000	1.04		A
CR	1	13.000	2.000	1.04		A
CS	1	13.990	0.520	1.12	A	A
DC	1	15.700	4.220	1.26	A	W
EG	1	11.600	1.200	0.93	A	A
ES	1	14.360	1.880	1.15	W	A
FL	1	14.500	0.600	1.16	A	A
FN	1	14.100	1.000	1.13	A	A
FR	1	13.700	1.400	1.10		A
GA	1	17.000	4.500	1.36		W
GE	1	15.620	2.350	1.25	A	W
GP	1	16.000	5.000	1.28		W
GT	1	13.900	5.600	1.11		A
IA	1	14.400	0.600	1.15		A
IA	1	14.000	0.600	1.12		A
IA	1	13.700	0.600	1.10		A
ID	1	12.700	1.638	1.02	A	A
IE	1	17.750	0.540	1.42	A	N
IL	1	17.000	0.800	1.36	A	W
IN	1	13.400	0.700	1.07	W	A
IS	1	19.100	4.000	1.53	A	N
IT	1	15.040	0.570	1.20	W	W
JP	1	13.000	0.600	1.04		A
KO	1	13.900	0.648	1.11		A
LA	1	10.400	1.500	0.83	A	A
LA	2	10.400	1.100	0.83	A	A
LA	3	10.000	1.500	0.80	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: VE
Radionuclide: CO 60

EML Value: 12.500
EML Error: 0.320

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
LB	1	15.680	2.120	1.25		W
LH	1	13.000	1.800	1.04	A	A
LL	1	13.700	0.740	1.10	A	A
LV	1	13.000	0.500	1.04	W	A
LW	1	12.400	0.680	0.99	A	A
MA	1	14.000	3.000	1.12		A
ME	1	16.700	0.800	1.34	A	W
MO	1	14.200	0.600	1.14		A
NA	1	14.600	0.500	1.17	A	A
NP	1	23.000	1.500	1.84	W	N
NR	1	15.200	3.000	1.22	A	W
NZ	1	12.500	0.700	1.00		A
NZ	1	14.200	1.200	1.14		A
OL	1	13.530	0.170	1.08		A
OS	1	10.800	1.300	0.86	N	A
OT	1	12.000	2.000	0.96	A	A
PO	1	14.200	0.670	1.14		A
RA	1	12.500	1.100	1.00	A	A
RA	1	7.500	1.400	0.60	A	N
RA	1	10.800	0.900	0.86	A	A
RE	1	13.700	3.300	1.10	A	A
RI	1	14.400	3.500	1.15		A
RL	1	13.300	0.700	1.06		A
RM	1	19.000	3.200	1.52		N
RO	1	13.200	2.500	1.06		A
SB	1	9.300	0.900	0.74		W
SK	1	14.700	1.000	1.18	W	A
SN	1	16.840	3.150	1.35	A	W
SR	1	14.400	1.400	1.15	A	A
SS	1	13.000	0.367	1.04	A	A
SW	1	21.050	1.770	1.68	A	N
TE	1	16.914	3.580	1.35	W	W
TI	1	17.900	1.800	1.43	A	N
TM	1	15.600	2.400	1.25	A	W
TN	1	15.000	2.000	1.20	A	W
TO	1	20.100	6.300	1.61	A	N
TP	1	13.190	0.277	1.06	A	A
TR	1	14.879	1.250	1.19		A
TW	1	13.000	0.500	1.04	A	A
TX	1	14.600	0.600	1.17	A	A
UC	1	11.930	0.640	0.95	A	A
UN	1	14.300	0.800	1.14		A
UY	1	10.700	2.000	0.86		A
VE	1	16.600	2.020	1.33		W
WA	1	13.500	1.200	1.08	A	A
WC	1	13.200	1.360	1.06	A	A
WE	1	18.490	1.052	1.48	N	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 Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: VE
Radionuclide: CO 60

EML Value: 12.500
EML Error: 0.320

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
WP	1	16.700	1.670	1.34	W	W
YA	1	10.930	0.426	0.87		A

Total Number Reported: 95

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: VE
Radionuclide: CS137

EML Value: 189.250
EML Error: 7.270

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	189.250	7.270	1.00	A	A
AF	1	173.900	38.000	0.92	A	A
AG	1	232.000	15.000	1.23	A	A
AI	1	265.000	6.000	1.40		W
AL	1	227.900	4.260	1.20	A	A
AM	1	232.000	3.700	1.23		A
AN	1	213.000	21.000	1.13	W	A
AR	1	209.000	7.000	1.10	W	A
AU	1	220.400	11.400	1.16	A	A
BC	1	239.000	18.400	1.26	W	W
BE	1	88.600	13.700	0.47	A	N
BL	1	202.000	5.000	1.07	A	A
BM	1	188.500	4.060	1.00	W	A
BN	1	241.600	5.955	1.28	A	W
BP	1	227.000	3.000	1.20	W	A
BQ	1	226.000	6.000	1.19	A	A
BS	1	170.000	1.930	0.90	W	W
BU	1	250.000	10.000	1.32	A	W
BX	1	244.000	18.800	1.29	W	W
CH	1	213.000	3.080	1.13		A
CL	1	170.000	4.800	0.90	A	W
CN	1	190.000	10.000	1.00		A
CO	1	204.000	3.000	1.08		A
CR	1	221.000	9.000	1.17		A
CS	1	209.800	9.170	1.11	A	A
DC	1	286.000	113.000	1.51	W	N
EG	1	201.000	6.000	1.06	A	A
EL	1	299.200	9.300	1.58		N
ES	1	221.630	24.550	1.17	W	A
FL	1	219.000	1.000	1.16	W	A
FN	1	193.000	19.000	1.02	A	A
FR	1	210.000	25.000	1.11		A
GA	1	210.000	11.000	1.11	A	A
GE	1	236.060	21.430	1.25	A	A
GP	1	210.000	30.000	1.11		A
GT	1	211.000	46.000	1.11		A
IA	1	227.000	2.000	1.20		A
IA	1	213.000	1.000	1.13		A
IA	1	221.000	2.000	1.17		A
ID	1	234.667	11.859	1.24	A	A
IE	1	266.930	22.620	1.41	A	W
IL	1	233.300	5.000	1.23	A	A
IN	1	204.300	1.900	1.08	A	A
IS	1	239.000	27.000	1.26	A	W
IT	1	227.900	2.700	1.20	W	A
JP	1	210.000	2.000	1.11		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 Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: VE
Radionuclide: CS137

EML Value: 189.250
EML Error: 7.270

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
KO	1	222.000	2.310	1.17		A
LA	1	170.000	15.000	0.90	A	W
LA	2	169.000	15.000	0.89	A	W
LA	3	167.000	15.000	0.88	A	W
LB	1	194.000	18.000	1.03		A
LH	1	230.000	23.000	1.22	A	A
LL	1	202.000	2.830	1.07	A	A
LV	1	208.000	2.000	1.10	W	A
LW	1	208.000	2.700	1.10	A	A
MA	1	226.000	19.000	1.19		A
ME	1	259.900	11.700	1.37	W	W
MO	1	219.500	4.600	1.16		A
NA	1	228.000	1.800	1.20	A	A
NP	1	342.000	5.000	1.81	W	N
NR	1	224.000	45.000	1.18	A	A
NZ	1	215.000	11.000	1.14		A
NZ	1	228.000	12.000	1.20		A
OL	1	210.700	6.900	1.11		A
OS	1	193.000	5.000	1.02	W	A
OT	1	210.000	10.000	1.11	A	A
PG	1	439.000	10.000	2.32		N
PO	1	206.000	13.000	1.09		A
RA	1	173.000	15.000	0.91	A	A
RA	1	206.000	9.000	1.09	A	A
RA	1	182.000	13.000	0.96	A	A
RE	1	162.000	16.000	0.86	A	W
RI	1	248.000	8.300	1.31	W	W
RL	1	187.000	17.900	0.99	W	A
RM	1	160.000	5.500	0.85		W
RO	1	216.000	21.000	1.14		A
SB	1	133.000	6.000	0.70		N
SK	1	231.000	14.000	1.22	A	A
SN	1	222.160	25.430	1.17	A	A
SR	1	217.000	21.000	1.15	A	A
SS	1	200.000	2.570	1.06	A	A
SW	1	193.400	3.900	1.02	A	A
TE	1	216.667	9.383	1.14	A	A
TI	1	263.000	26.000	1.39	A	W
TM	1	237.000	7.900	1.25	W	W
TN	1	219.000	10.000	1.16	A	A
TO	1	302.000	44.800	1.60	N	N
TP	1	207.330	2.795	1.10	A	A
TR	1	277.375	3.250	1.47		N
TW	1	195.000	6.000	1.03	A	A
TX	1	200.000	2.000	1.06	A	A
UC	1	180.320	16.420	0.95	W	A
UN	1	206.000	8.000	1.09		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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: VE
Radionuclide: CS137

EML Value: 189.250
EML Error: 7.270

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
UY	1	180.000	30.000	0.95		A
VE	1	223.000	14.200	1.18		A
WA	1	201.000	9.000	1.06	A	A
WC	1	209.000	31.000	1.10	A	A
WE	1	245.800	1.314	1.30	A	W
WP	1	260.000	26.000	1.37	A	W
YA	1	176.700	1.462	0.93		A

Total Number Reported: 100

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: VE
Radionuclide: K 40

EML Value: 811.500
EML Error: 12.200

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	811.500	12.200	1.00	A	A
AF	1	514.000	438.000	0.63	W	N
AG	1	956.000	70.000	1.18	A	A
AI	1	1100.000	91.000	1.36		W
AL	1	965.700	34.700	1.19	A	A
AM	1	955.600	29.970	1.18		A
AN	1	951.000	86.000	1.17	W	A
AR	1	998.000	45.000	1.23	A	A
AU	1	974.700	53.600	1.20	A	A
BC	1	926.000	49.200	1.14	A	A
BE	1	1088.000	171.300	1.34	A	W
BL	1	953.000	31.000	1.17	A	A
BM	1	789.000	35.000	0.97	W	A
BN	1	888.100	2.807	1.09	W	A
BP	1	1023.000	12.000	1.26	W	W
BQ	1	724.000	14.000	0.89	A	W
BS	1	729.600	20.400	0.90	W	W
BU	1	600.000	130.000	0.74	A	N
BX	1	940.000	49.200	1.16	A	A
CH	1	980.000	80.300	1.21		A
CL	1	704.000	46.000	0.87	A	W
CN	1	830.000	43.000	1.02		A
CR	1	848.000	45.000	1.04		A
CS	1	874.800	41.030	1.08	A	A
DC	1	916.000	371.000	1.13	A	A
EG	1	820.000	50.000	1.01	A	A
ES	1	973.100	110.870	1.20	W	A
FL	1	953.000	13.000	1.17	A	A
FN	1	883.000	90.000	1.09	A	A
FR	1	887.000	89.000	1.09		A
GA	1	909.000	104.000	1.12	W	A
GE	1	1098.530	116.880	1.35	W	W
GP	1	920.000	160.000	1.13		A
GT	1	930.000	197.000	1.15		A
IA	1	924.000	48.000	1.14		A
IA	1	923.000	48.000	1.14		A
IA	1	929.000	49.000	1.14		A
ID	1	914.700	55.852	1.13	A	A
IE	1	1073.280	39.830	1.32	A	W
IL	1	916.400	38.300	1.13	N	A
IN	1	914.000	34.000	1.13	W	A
IS	1	996.000	126.000	1.23	A	A
IT	1	949.000	26.000	1.17	A	A
JP	1	870.000	17.000	1.07		A
KO	1	934.000	17.500	1.15		A
LA	1	585.000	59.000	0.72	N	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: VE
Radionuclide: K 40

EML Value: 811.500
EML Error: 12.200

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
LA	2	585.000	59.000	0.72	N	N
LA	3	592.000	59.000	0.73	N	N
LB	1	804.000	115.000	0.99		A
LH	1	886.000	99.000	1.09	A	A
LL	1	838.000	21.800	1.03	A	A
LV	1	905.000	12.000	1.12	W	A
LW	1	793.000	20.000	0.98	A	A
MA	1	814.000	100.000	1.00		A
ME	1	1182.000	55.400	1.46	W	W
MO	1	987.900	27.300	1.22		A
NA	1	990.400	15.500	1.22	A	A
NR	1	891.000	178.000	1.10	A	A
NZ	1	958.000	50.000	1.18		A
NZ	1	955.000	57.000	1.18		A
OL	1	939.400	31.700	1.16		A
OS	1	642.000	21.000	0.79	N	W
OT	1	840.000	30.000	1.04	A	A
PO	1	869.000	26.000	1.07		A
RA	1	886.000	89.000	1.09	W	A
RA	1	670.000	154.000	0.83	W	W
RA	1	727.000	78.000	0.90	W	W
RE	1	787.000	99.000	0.97	N	A
RI	1	995.000	96.000	1.23	A	A
RL	1	924.000	54.700	1.14	W	A
RM	1	648.000	47.000	0.80		W
RO	1	938.000	70.000	1.16		A
SB	1	614.000	30.000	0.76		N
SK	1	882.000	42.000	1.09	A	A
SN	1	1016.650	109.950	1.25	W	W
SR	1	962.000	98.000	1.19	A	A
SS	1	876.000	16.800	1.08	A	A
SW	1	942.400	14.700	1.16	A	A
TI	1	1060.000	110.000	1.31	W	W
TM	1	883.000	47.000	1.09	A	A
TN	1	844.000	40.000	1.04	A	A
TO	1	1291.000	212.000	1.59	W	N
TP	1	858.600	12.188	1.06	A	A
TR	1	1836.090	32.890	2.26		N
TW	1	911.000	27.000	1.12	A	A
TX	1	966.000	15.000	1.19	A	A
UC	1	823.900	33.090	1.02	A	A
UN	1	947.000	34.000	1.17		A
UY	1	740.000	90.000	0.91		A
VE	1	883.000	153.000	1.09		A
WA	1	929.000	41.000	1.14	A	A
WC	1	1040.000	121.000	1.28	A	W
WE	1	1022.000	12.340	1.26	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: VE
Radionuclide: K 40

EML Value: 811.500
EML Error: 12.200

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
WP	1	1070.000	110.000	1.32	A	W
YA	1	856.700	13.320	1.06		A

Total Number Reported: 95

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: VE
Radionuclide: PU238

EML Value: 0.182
EML Error: 0.011

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	0.182	0.011	1.00		A
CO	1	0.140	0.020	0.77		W
EG	1	0.065	0.070	0.36		N
GP	1	0.160	0.040	0.88		A
PO	1	0.130	0.020	0.71		W
RA	1	0.140	0.060	0.77		W
UN	1	0.135	0.034	0.74		W

Total Number Reported: 7

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: VE
Radionuclide: PU239

EML Value: 1.942
EML Error: 0.222

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	1.942	0.222	1.00	A	A
AG	1	2.080	0.350	1.07		A
AI	1	2.000	0.160	1.03		A
AM	1	2.890	1.110	1.49		W
AN	1	1.973	0.117	1.02	A	A
AR	1	2.370	0.630	1.22	A	A
AR	1	1.860	0.520	0.96	A	A
AU	1	2.300	0.300	1.18	A	A
BE	1	5.620	0.510	2.89	N	N
BL	1	1.660	0.160	0.85	A	A
BL	1	2.820	0.200	1.45	A	W
BM	1	2.180	0.260	1.12	A	A
BU	1	1.800	0.100	0.93		A
BX	1	1.830	0.400	0.94	A	A
CH	1	1.910	0.180	0.98		A
CL	1	1.720	0.200	0.89	A	A
CO	1	2.090	0.090	1.08		A
CW	1	1.900	0.200	0.98	A	A
DC	1	2.140	0.387	1.10	A	A
EG	1	1.880	0.390	0.97	A	A
EI	1	0.910	0.057	0.47	A	N
EP	1	2.020	0.249	1.04	A	A
ES	1	2.110	0.370	1.09	W	A
FR	1	1.660	0.320	0.85		A
GA	1	2.200	0.150	1.13	A	A
GE	1	2.110	0.300	1.09	A	A
GP	1	1.900	0.200	0.98		A
IA	1	0.029		0.01		N
IA	1	0.049	0.017	0.03		N
IA	1	0.047	0.017	0.02		N
ID	1	2.560	0.283	1.32	A	A
IE	1	2.010	0.100	1.04	A	A
IS	1	1.310	1.040	0.67	W	W
IT	1	2.030	0.160	1.05	W	A
JP	1	1.800	0.130	0.93		A
KO	1	1.900	0.087	0.98		A
LA	1	1.680	0.081	0.86	A	A
LA	2	1.606	0.104	0.83	A	W
LA	3	1.898	0.078	0.98	A	A
LB	1	3.790	0.220	1.95		N
LH	1	2.480	0.210	1.28	A	A
LL	1	2.240	0.193	1.15	A	A
ML	1	2.250	0.220	1.16	A	A
NA	1	1.850	0.250	0.95	N	A
NZ	1	1.840	0.160	0.95		A
NZ	1	1.860	0.100	0.96		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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: VE
Radionuclide: PU239

EML Value: 1.942
EML Error: 0.222

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
PO	1	1.800	0.200	0.93		A
RA	1	2.130	0.430	1.10	A	A
RE	1	1.390	0.180	0.72	A	W
SN	1	2.940	0.640	1.51	W	W
SR	1	2.130	0.330	1.10	A	A
SW	1	1.460	0.130	0.75		W
TE	1	1.771	0.817	0.91		A
TI	1	2.100	0.600	1.08	A	A
TM	1	2.050	0.194	1.06	A	A
TN	1	2.000	0.800	1.03	A	A
TO	1	2.170	0.980	1.12	W	A
TR	1	1.717	0.390	0.88		A
TW	1	2.300	0.100	1.18	W	A
TX	1	2.200	0.400	1.13	A	A
UN	1	1.810	0.150	0.93		A
UY	1	1.440	0.200	0.74		W
WA	1	1.780	0.280	0.92	A	A
WC	1	2.620	0.733	1.35		W
YA	1	2.106	0.083	1.08		A

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 µg/filter, g
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: VE
Radionuclide: SR 90

EML Value: 361.000
EML Error: 43.300

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	361.000	43.300	1.00	A	A
AF	1	407.000	33.300	1.13		W
AG	1	349.000	63.000	0.97	A	A
AI	1	423.000	26.000	1.17		W
AM	1	151.700	8.140	0.42		N
AN	1	403.000	1.000	1.12	W	W
AR	1	432.000	52.000	1.20	N	W
AU	1	387.400	9.800	1.07	A	A
BC	1	396.000	66.600	1.10	A	A
BE	1	1056.000	56.000	2.93	W	N
BL	1	371.000	7.000	1.03	A	A
BM	1	425.000	6.400	1.18	A	W
BP	1	369.000	34.000	1.02	W	A
BU	1	397.000	40.000	1.10		A
BX	1	392.000	47.400	1.09	A	A
CH	1	367.000	12.400	1.02		A
CL	1	790.000	28.000	2.19	A	N
DC	1	381.000	30.800	1.06	A	A
EG	1	0.474	0.012	0.00	A	N
EG	1	473.500	12.000	1.31	A	N
EI	1	301.400	13.960	0.83	A	A
ES	1	354.090	78.260	0.98	W	A
GE	1	421.800	4.810	1.17	A	W
GP	1	380.000	80.000	1.05		A
GT	1	356.000	26.000	0.99		A
IA	1	355.900	81.800	0.99		A
IA	1	311.300	25.100	0.86		A
IA	1	317.000	48.800	0.88		A
ID	1	391.200	20.896	1.08	A	A
IE	1	389.360	2.800	1.08	A	A
IS	1	228.000	46.000	0.63	A	W
IT	1	394.500	9.400	1.09	W	A
JP	1	360.000	7.000	1.00		A
KO	1	426.600	4.010	1.18		W
LA	1	372.800	21.100	1.03		A
LA	2	346.300	20.000	0.96		A
LA	3	385.000	22.000	1.07		A
LH	1	201.000	11.000	0.56	W	W
NA	1	380.000	11.000	1.05	A	A
NZ	1	130.000	5.000	0.36		N
NZ	1	100.000	5.000	0.28		N
PO	1	360.000	20.000	1.00		A
RA	1	500.000	80.000	1.39	A	N
RE	1	307.000	4.000	0.85	A	A
RI	1	440.000	8.800	1.22		W
RL	1	863.000	124.000	2.39	N	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: VE
Radionuclide: SR 90

EML Value: 361.000
EML Error: 43.300

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
RO	1	156.000	31.000	0.43		N
SR	1	314.000	24.000	0.87	A	A
SW	1	441.580	7.520	1.22		W
TE	1	361.130	19.715	1.00	A	A
TI	1	420.000	10.000	1.16	A	W
TM	1	399.000	28.100	1.11	W	W
TN	1	401.000	20.000	1.11	W	W
TO	1	409.000	13.200	1.13	A	W
TP	1	399.000	4.000	1.11	A	W
TW	1	427.000	10.000	1.18	A	W
TX	1	387.000	30.000	1.07	W	A
UN	1	354.000	13.000	0.98		A
UY	1	295.000	10.000	0.82		A
WA	1	331.000	40.000	0.92	W	A
WC	1	408.000	57.100	1.13	A	W
WE	1	290.000	5.300	0.80		A
WP	1	380.000	10.000	1.05	W	A
YA	1	351.500	17.020	0.97		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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: AM241

EML Value: 0.837
EML Error: 0.028

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	0.837	0.028	1.00	A	A
AC	1	0.963	0.032	1.15		A
AG	1	0.910	0.120	1.09	W	A
AI	1	0.890	0.042	1.06		A
AM	1	1.280	0.860	1.53		W
AN	1	0.936	0.042	1.12	A	A
AR	1	1.040	0.260	1.24	A	W
AU	1	0.900	0.070	1.08	N	A
BE	1	0.840	0.070	1.00	A	A
BL	1	1.170	0.080	1.40	W	W
BM	1	0.840	0.140	1.00	A	A
BP	1	0.912	0.026	1.09	A	A
BS	1	0.930	0.280	1.11	A	A
BX	1	1.180	0.046	1.41	W	W
CH	1	1.010	0.088	1.21		A
CL	1	0.950	0.200	1.14	W	A
CS	1	0.800	0.080	0.96	A	A
CW	1	0.990	0.090	1.18	A	A
DC	1	0.856	0.132	1.02	A	A
EG	1	0.840	0.097	1.00	A	A
EI	1	0.950	0.060	1.14	A	A
EL	1	1.660	0.600	1.98		N
ES	1	0.610	0.110	0.73	A	W
FG	1	0.470	0.010	0.56	A	N
GA	1	0.920	0.110	1.10	A	A
GE	1	0.807	0.068	0.96	N	A
GP	1	0.890	0.140	1.06		A
IE	1	0.800	0.030	0.96	A	A
IN	1	0.980	0.090	1.17	A	A
IS	1	0.740	0.210	0.88	A	A
IT	1	0.750	0.050	0.90	A	A
JP	1	0.920	0.036	1.10		A
LA	1	0.910	0.200	1.09	A	A
LA	2	1.050	0.230	1.26	A	W
LA	3	0.910	0.200	1.09	A	A
LB	1	0.957	0.068	1.14		A
LH	1	0.820	0.090	0.98	A	A
LL	1	0.941	0.044	1.12	A	A
LV	1	0.546	0.213	0.65	A	N
MI	1	1.294	0.293	1.55		W
MI	1	1.662	0.191	1.99		N
ML	1	1.040	0.150	1.24	A	W
NM	1	0.880	0.040	1.05	A	A
OD	1	0.870	0.089	1.04	A	A
OT	1	0.920	0.080	1.10	A	A
RE	1	0.903	0.088	1.08	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: AM241

EML Value: 0.837
EML Error: 0.028

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
RG	1	0.876	0.041	1.05	A	A
RI	1	0.988	0.087	1.18	A	A
SR	1	0.960	0.110	1.15	A	A
SW	1	0.910	0.040	1.09	W	A
TE	1	0.840	0.220	1.00	A	A
TI	1	0.980	0.150	1.17	A	A
TM	1	0.889	0.041	1.06	A	A
TN	1	0.910	0.060	1.09	A	A
TO	1	0.800	0.320	0.96	A	A
TT	1	1.180	0.130	1.41		W
TW	1	0.920	0.030	1.10	A	A
TX	1	1.080	0.090	1.29	A	W
UK	1	1.000	0.180	1.20	A	A
UY	1	0.710	0.150	0.85	A	W
WA	1	0.886	0.088	1.06	A	A
WC	1	0.965	0.189	1.15	A	A
WE	1	0.892	0.771	1.07		A
WI	1	0.955	0.097	1.14		A
YA	1	0.808	0.017	0.97	A	A

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 µg/filter, g
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: CO 60

EML Value: 90.850
EML Error: 1.150

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	90.850	1.150	1.00	A	A
AC	1	99.200	1.500	1.09		A
AF	1	104.000	11.100	1.14	A	W
AG	1	85.900	5.600	0.95	A	A
AI	1	92.100	1.400	1.01		A
AL	1	92.500	0.900	1.02	N	A
AM	1	93.010	1.170	1.02		A
AN	1	104.000	9.000	1.14	A	W
AR	1	120.000	5.000	1.32	W	N
AU	1	101.900	3.700	1.12	W	A
AW	1	122.300	18.300	1.35		N
BC	1	99.900	3.180	1.10	A	A
BE	1	104.400	7.360	1.15	A	W
BL	1	96.800	2.300	1.07	A	A
BM	1	92.800	3.250	1.02	A	A
BN	1	98.400	2.281	1.08	A	A
BP	1	102.000	1.000	1.12	A	A
BQ	1	98.000	2.000	1.08	N	A
BR	1	95.240	2.200	1.05		A
BS	1	93.330	0.940	1.03	A	A
BX	1	98.800	4.920	1.09	A	A
CA	1	97.040	0.318	1.07	A	A
CH	1	93.800	1.700	1.03		A
CL	1	104.000	1.300	1.14	W	W
CS	1	97.600	4.310	1.07	A	A
CW	1	92.000	1.000	1.01	A	A
DC	1	95.300	14.600	1.05	A	A
DH	1	99.900	4.760	1.10		A
DP	1	102.500	2.300	1.13		A
DP	1	107.500	0.700	1.18		N
DP	1	101.600	1.000	1.12		A
EG	1	96.000	2.000	1.06	A	A
EL	1	92.400	2.400	1.02		A
EP	1	109.330	13.910	1.20	N	N
ES	1	94.350	10.430	1.04	A	A
FG	1	78.030	0.013	0.86	A	W
FL	1	97.600	0.800	1.07	W	A
FM	1	97.570	1.000	1.07	W	A
FN	1	96.700	6.900	1.06	A	A
GA	1	98.000	3.600	1.08	A	A
GE	1	95.870	9.130	1.06	N	A
GP	1	99.000	17.000	1.09		A
GT	1	97.000	10.700	1.07		A
ID	1	99.100	4.986	1.09	A	A
IE	1	95.300	6.970	1.05	A	A
IL	1	93.000	1.800	1.02	A	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 Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: CO 60

EML Value: 90.850
EML Error: 1.150

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
IN	1	105.800	1.600	1.16	W	W
IS	1	98.200	3.500	1.08	W	A
IT	1	165.000	2.000	1.82	A	N
JP	1	97.000	1.800	1.07		A
KA	1	96.000	4.000	1.06	A	A
LA	1	97.900	8.900	1.08	A	A
LA	2	97.800	9.100	1.08	A	A
LA	3	99.200	9.000	1.09	A	A
LB	1	104.800	2.900	1.15		W
LH	1	91.000	7.100	1.00	A	A
LL	1	90.000	1.530	0.99	A	A
LM	1	72.000	8.000	0.79		N
LV	1	83.800	0.900	0.92	A	A
LW	1	91.900	1.500	1.01	A	A
ME	1	100.400	2.500	1.11		A
MI	1	96.280	2.202	1.06	A	A
MI	1	102.720	2.330	1.13	A	W
MO	1	95.500	1.100	1.05		A
MS	1	94.200	9.400	1.04	A	A
NA	1	95.100	0.700	1.05	A	A
NL	1	93.300	6.800	1.03	A	A
NP	1	98.300	2.800	1.08	A	A
NS	1	249.963	2.074	2.75	W	N
NS	1	249.778	2.074	2.75	W	N
NS	1	249.889	2.074	2.75	W	N
NZ	1	108.000	6.000	1.19		N
NZ	1	100.000	6.000	1.10		A
OD	1	93.140	3.000	1.03	A	A
OK	1	109.520	4.700	1.21	N	N
OL	1	98.600	2.400	1.09		A
OT	1	96.000	1.000	1.06	A	A
RC	1	95.500	5.900	1.05		A
RE	1	101.000	11.000	1.11	W	A
RI	1	96.900	4.100	1.07	A	A
RL	1	92.500	23.600	1.02	N	A
SA	1	100.000	6.000	1.10	A	A
SB	1	9.900	0.400	0.11		N
SK	1	107.200	0.800	1.18	W	W
SL	1	101.900	3.800	1.12	W	A
SN	1	96.450	8.500	1.06	A	A
SR	1	97.100	6.300	1.07	A	A
SS	1	95.600	0.432	1.05	A	A
SW	1	97.200	0.230	1.07	A	A
TE	1	96.000	3.500	1.06	A	A
TI	1	94.400	9.400	1.04	W	A
TM	1	97.300	2.970	1.07	N	A
TN	1	100.000	5.000	1.10	W	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: CO 60

EML Value: 90.850
EML Error: 1.150

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
TO	1	94.700	1.210	1.04	A	A
TP	1	93.670	3.803	1.03	A	A
TT	1	102.900	1.600	1.13		W
TW	1	98.000	5.000	1.08	N	A
TX	1	95.800	0.500	1.05	A	A
UC	1	98.930	1.720	1.09	A	A
UK	1	98.100	17.000	1.08	A	A
UY	1	100.000	5.000	1.10	A	A
WA	1	97.400	2.400	1.07	A	A
WC	1	100.000	7.770	1.10	A	A
WE	1	107.800	0.895	1.19	N	N
WI	1	98.900	9.100	1.09	W	A
WP	1	93.200	9.320	1.03	A	A
WV	1	101.000	1.410	1.11	A	A
YA	1	97.410	0.950	1.07	A	A

Total Number Reported: 108

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: CS134

EML Value: 20.550
EML Error: 0.310

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	20.550	0.310	1.00		A
AC	1	25.200	0.700	1.23		W
AR	1	28.200	2.300	1.37		N
AW	1	29.300	4.400	1.43		N
BS	1	21.440	0.640	1.04		A
CA	1	22.010	0.057	1.07		A
CS	1	21.820	0.550	1.06		A
DP	1	23.620	0.500	1.15		A
DP	1	21.810	0.290	1.06		A
DP	1	22.390	1.050	1.09		A
EG	1	23.000	1.000	1.12		A
EL	1	18.700	0.700	0.91		A
FG	1	18.970	0.011	0.92		A
FL	1	22.500	0.400	1.09		A
FM	1	23.170	0.480	1.13		A
FN	1	22.700	1.400	1.10		A
GP	1	22.000	3.000	1.07		A
GT	1	20.600	2.500	1.00		A
IE	1	21.100	0.600	1.03		A
MO	1	22.100	0.500	1.08		A
MS	1	21.800	2.200	1.06		A
NP	1	22.900	1.400	1.11		A
NS	1	64.296	1.630	3.13		N
NS	1	61.444	1.222	2.99		N
NS	1	64.333	1.667	3.13		N
OL	1	21.900	1.400	1.07		A
OU	1	20.600	4.830	1.00		A
RC	1	22.400	1.600	1.09		A
RI	1	26.000	2.300	1.27		N
SB	1	2.300	0.200	0.11		N
SL	1	27.500	1.300	1.34		N
TI	1	20.400	2.000	0.99		A
TW	1	19.000	2.000	0.92		A
WA	1	22.200	1.400	1.08		A
WI	1	23.000	1.600	1.12		A
WP	1	20.400	2.040	0.99		A

Total Number Reported: 36

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: CS137

EML Value: 69.780
EML Error: 1.230

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	69.780	1.230	1.00	A	A
AC	1	69.400	1.000	0.99		A
AF	1	77.700	7.400	1.11	A	A
AG	1	71.000	4.700	1.02	A	A
AI	1	78.100	1.600	1.12		A
AL	1	72.520	0.810	1.04	N	A
AM	1	76.490	1.260	1.10		A
AN	1	80.160	7.550	1.15	A	A
AR	1	92.100	4.000	1.32	W	N
AU	1	80.500	4.500	1.15	A	A
AW	1	99.500	14.900	1.43		N
BC	1	79.700	2.440	1.14	A	A
BE	1	85.450	6.120	1.22	A	W
BL	1	76.900	1.900	1.10	A	A
BM	1	75.100	3.040	1.08	A	A
BN	1	91.100	0.923	1.31	A	N
BP	1	82.000	1.000	1.18	A	A
BQ	1	71.000	1.000	1.02	A	A
BR	1	85.000	2.700	1.22		W
BS	1	74.070	0.760	1.06	A	A
BX	1	82.300	5.480	1.18	A	A
CA	1	78.120	0.600	1.12	A	A
CH	1	72.700	1.580	1.04		A
CL	1	87.000	1.300	1.25	W	W
CS	1	78.160	3.410	1.12	A	A
CW	1	70.000	1.000	1.00	A	A
DC	1	73.800	15.200	1.06	W	A
DH	1	82.600	3.820	1.18		W
DP	1	77.200	0.510	1.11		A
DP	1	75.350	1.700	1.08		A
DP	1	75.920	0.750	1.09		A
EG	1	74.000	2.000	1.06	A	A
EL	1	72.700	1.400	1.04		A
EP	1	83.310	10.730	1.19	N	W
ES	1	78.810	8.760	1.13	A	A
FG	1	57.700	0.011	0.83	A	W
FL	1	79.400	0.800	1.14	W	A
FM	1	79.900	0.920	1.15	W	A
FN	1	76.000	7.600	1.09	A	A
GA	1	77.000	13.000	1.10	A	A
GE	1	78.810	12.030	1.13	W	A
GP	1	80.000	14.000	1.15		A
GT	1	76.700	16.200	1.10		A
ID	1	84.133	4.646	1.21	A	W
IE	1	74.600	3.700	1.07	A	A
IL	1	72.800	1.800	1.04	A	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 Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: CS137

EML Value: 69.780
EML Error: 1.230

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
IN	1	78.900	2.500	1.13	A	A
IS	1	78.500	5.700	1.12	W	A
IT	1	74.200	3.000	1.06	A	A
JP	1	80.000	1.500	1.15		A
KA	1	77.000	10.000	1.10	A	A
LA	1	79.000	7.400	1.13	A	A
LA	2	76.500	7.100	1.10	A	A
LA	3	79.300	7.400	1.14	A	A
LB	1	82.360	2.400	1.18		W
LH	1	79.800	8.500	1.14	A	A
LL	1	72.900	1.310	1.04	A	A
LM	1	53.000	6.000	0.76		N
LV	1	66.700	0.700	0.96	A	A
LW	1	77.900	1.600	1.12	A	A
ME	1	81.450	3.190	1.17		A
MI	1	81.925	2.106	1.17	A	A
MI	1	85.824	2.197	1.23	A	W
MO	1	75.800	1.900	1.09		A
MS	1	79.900	8.000	1.15	A	A
NA	1	76.500	0.700	1.10	A	A
NL	1	72.000	7.100	1.03	A	A
NM	1	35.500	1.700	0.51	A	N
NP	1	76.100	2.900	1.09	A	A
NS	1	215.481	1.963	3.09	A	N
NS	1	216.481	2.037	3.10	A	N
NZ	1	82.000	5.000	1.18		A
NZ	1	87.000	5.000	1.25		W
OD	1	80.540	4.720	1.15	A	A
OK	1	76.960	6.070	1.10	W	A
OL	1	79.800	2.800	1.14		A
OT	1	78.000	1.000	1.12	A	A
OU	1	81.800	7.040	1.17	A	A
RC	1	75.300	4.200	1.08		A
RE	1	79.400	8.300	1.14	A	A
RI	1	76.500	5.300	1.10	A	A
RL	1	76.000	4.000	1.09	N	A
SA	1	80.000	5.000	1.15	A	A
SB	1	8.600	0.300	0.12		N
SK	1	81.900	3.200	1.17	A	A
SL	1	78.900	4.000	1.13	A	A
SN	1	72.810	6.440	1.04	A	A
SR	1	77.200	7.600	1.11	A	A
SS	1	75.900	1.040	1.09	A	A
SW	1	76.350	0.250	1.09	A	A
TE	1	77.000	3.500	1.10	A	A
TI	1	77.600	7.800	1.11	A	A
TM	1	83.400	2.540	1.20	A	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 Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: CS137

EML Value: 69.780
EML Error: 1.230

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
TN	1	79.000	6.000	1.13	A	A
TO	1	77.100	1.400	1.10	A	A
TP	1	73.707	1.057	1.06	A	A
TT	1	83.000	3.400	1.19		W
TW	1	73.000	6.000	1.05	W	A
TX	1	76.100	0.600	1.09	A	A
UC	1	79.630	5.260	1.14	A	A
UK	1	79.900	1.800	1.15	A	A
UY	1	78.000	4.000	1.12	A	A
WA	1	77.800	4.000	1.11	A	A
WC	1	81.500	10.900	1.17	A	A
WE	1	86.510	0.705	1.24	N	W
WI	1	76.200	9.500	1.09	A	A
WP	1	74.900	7.490	1.07	A	A
WV	1	77.000	1.110	1.10	A	A
YA	1	76.330	1.011	1.09	A	A

Total Number Reported: 109

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: FE 55

EML Value: 235.000
EML Error: 20.000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	235.000	10.000	1.00	A	A
BL	1	256.000	7.000	1.09	A	A
BP	1	284.000	31.000	1.21		A
BX	1	202.000	16.500	0.86	W	A
CH	1	223.000	0.220	0.95		A
CL	1	248.000	9.100	1.06	A	A
GE	1	225.480	25.290	0.96	W	A
GP	1	220.000	40.000	0.94		A
IL	1	21.500	0.600	0.09		N
KA	1	239.000	12.000	1.02	A	A
LH	1	258.000	16.000	1.10	A	A
TE	1	175.500	25.400	0.75		W
TI	1	200.000	20.000	0.85	W	A
TM	1	176.000	4.640	0.75		W
TN	1	238.000	7.000	1.00	A	A
TO	1	47.800	12.800	0.20		N

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 µg/filter, g
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: GA 1

EML Value: 1130.000
EML Error: 10.000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	1130.000	10.000	1.00	A	A
AF	1	1110.000	30.000	0.98	N	A
AG	1	1080.000	110.000	0.95	W	A
AI	1	1074.000	70.000	0.95		A
AM	1	614.100	7.290	0.54		W
AN	1	1102.000	10.000	0.97	A	A
AR	1	1010.000	193.000	0.89	A	A
AR	1	1100.000	110.000	0.89	A	A
AU	1	912.000	22.000	0.80	W	W
BC	1	951.000	107.000	0.84	A	A
BE	1	1316.000	103.000	1.16	A	A
BL	1	1293.000	27.000	1.14	A	A
BL	1	1162.000	21.000	0.98	A	A
BL	1	1112.000	21.000	0.98	A	A
BN	1	1153.300	14.327	1.02	A	A
BP	1	1181.000	126.000	1.04		A
BS	1	1090.000	6.550	0.96	A	A
BX	1	999.000	110.000	0.88	A	A
CA	1	225.000	20.000	0.19	N	N
CH	1	1130.000	26.000	1.00		A
DC	1	1231.000	242.000	1.08	N	A
DP	1	852.800	16.340	0.75		W
DP	1	1024.400	19.950	0.75		A
DP	1	1045.500	17.990	0.75		A
EG	1	1190.000	50.000	1.05		A
EI	1	973.200	99.050	0.86	A	A
ES	1	1123.780	177.300	0.99	A	A
FG	1	1050.000	114.000	0.92	A	A
FL	1	1332.000	19.000	1.17	W	A
GE	1	1298.520	24.990	1.14	A	A
GP	1	1200.000	200.000	1.06		A
GS	1	1232.000	84.700	1.09	A	A
GT	1	1164.000	74.000	1.03		A
HC	1	1132.000	90.000	1.00	A	A
IE	1	1236.780	30.090	1.09	A	A
IL	1	1231.900	37.800	1.09		A
IR	1	165.000	28.000	0.14	A	N
IS	1	1350.000	140.000	1.19	W	A
IT	1	988.000	107.000	0.87	W	A
JP	1	940.000	29.000	0.83		A
KA	1	1290.000	200.000	1.14	A	A
LA	1	1221.000	259.000	1.08	A	A
LA	2	1184.000	259.000	1.08	A	A
LA	3	1184.000	222.000	1.08	A	A
LH	1	1154.000	68.000	1.02	A	A
LL	1	1020.000	7.400	0.90	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: GA 1

EML Value: 1130.000
EML Error: 10.000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
LV	1	1300.000	60.000	1.15	A	A
LW	1	1128.000	37.000	0.99	A	A
NM	1	1199.000	47.000	1.06	W	A
NZ	1	874.000	44.000	0.81		W
NZ	1	922.000	45.000	0.81		W
OB	1	1590.000	56.700	1.40	N	W
OK	1	780.700	32.410	0.69	A	W
OT	1	1200.000	100.000	1.06	A	A
RE	1	1180.000	39.000	1.04	A	A
RG	1	1172.000	59.700	1.03	A	A
RL	1	621.000	93.000	0.54	N	W
SA	1	1073.000	215.000	0.94	A	A
SB	1	1052.000	60.000	0.93		A
SN	1	939.610	50.070	0.83	A	A
SV	1	1315.370	67.010	1.16	A	A
SW	1	948.800	14.900	0.83	A	A
TE	1	1042.600	36.800	0.92	A	A
TI	1	1100.000	100.000	0.97	A	A
TM	1	1520.000	172.000	1.34	A	W
TN	1	1203.000	33.000	1.06	W	A
TO	1	1275.000	27.000	1.12	A	A
TT	1	1060.000	32.000	0.93		A
TW	1	1221.000	42.000	1.08	W	A
TX	1	1172.000	38.000	1.03	A	A
UC	1	1122.400	53.100	0.99	A	A
UK	1	1170.000	41.000	1.03	A	A
UY	1	1130.000	100.000	1.00	A	A
WA	1	1070.000	60.000	0.94	A	A
WC	1	1280.000	128.000	1.13	A	A
WV	1	1050.000	68.000	0.92	A	A
YA	1	800.600	14.680	0.70	A	W

Total Number Reported: 77

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: GB 2

EML Value: 744.000
EML Error: 10.000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	744.000	10.000	1.00	A	A
AF	1	303.000	15.000	0.40	N	N
AG	1	388.000	45.000	0.52	N	N
AI	1	551.000	42.000	0.74		A
AM	1	598.300	5.500	0.80		A
AN	1	614.000	7.000	0.82	A	A
AR	1	416.000	92.000	0.55	A	W
AR	1	420.000	48.000	0.55	A	W
AU	1	588.000	14.000	0.79	A	A
BC	1	584.000	14.400	0.78	A	A
BE	1	500.000	46.000	0.67	A	W
BL	1	410.000	17.000	0.54	W	W
BL	1	411.000	19.000	0.54	W	W
BL	1	408.000	21.000	0.54	W	N
BN	1	639.900	25.181	0.86	A	A
BP	1	641.000	41.000	0.86		A
BS	1	579.100	3.890	0.77	A	A
BX	1	655.000	47.700	0.88	A	A
CA	1	323.000	127.000	0.43	A	N
CH	1	483.000	5.800	0.64		W
DC	1	605.000	119.000	0.81	N	A
DP	1	450.600	10.330	0.60		W
DP	1	464.700	12.020	0.60		W
DP	1	476.900	10.590	0.60		W
EG	1	750.000	20.000	1.00		A
ES	1	547.110	81.940	0.73	A	A
FG	1	419.000	32.000	0.56	A	W
FL	1	643.000	9.000	0.86	A	A
GE	1	611.770	14.190	0.82	A	A
GP	1	610.000	100.000	0.81		A
GS	1	508.600	51.400	0.68	A	W
GT	1	718.000	74.000	0.96		A
HC	1	564.000	45.000	0.75	A	A
IE	1	411.180	10.260	0.55	A	W
IL	1	551.700	23.400	0.74		A
IR	1	341.000	33.000	0.45	A	N
IS	1	396.000	40.000	0.53	W	N
IT	1	565.000	12.000	0.75	A	A
JP	1	730.000	25.000	0.98		A
KA	1	572.000	80.000	0.76	A	A
LA	1	666.000	74.000	0.89	A	A
LA	2	592.000	74.000	0.89	A	A
LA	3	629.000	74.000	0.89	A	A
LH	1	426.000	24.000	0.57	A	W
LL	1	633.000	5.050	0.85	A	A
LV	1	563.000	70.000	0.75		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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: GB 2

EML Value: 744.000
EML Error: 10.000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
LW	1	556.000	20.000	0.74	A	A
NM	1	713.000	84.000	0.95	N	A
NP	1	107.000	0.900	0.14	A	N
NZ	1	549.000	29.000	0.73		A
NZ	1	553.000	29.000	0.73		A
OB	1	461.000	25.900	0.61	N	W
OK	1	503.200	20.720	0.67	A	W
OT	1	640.000	50.000	0.86	A	A
RE	1	597.000	22.000	0.80	A	A
RG	1	409.600	27.300	0.55	A	W
RL	1	663.000	95.000	0.89	N	A
SA	1	771.000	154.000	1.03	W	A
SB	1	376.000	20.000	0.50		N
SN	1	610.760	38.520	0.82	A	A
SV	1	478.460	26.030	0.64	A	W
SW	1	445.600	9.300	0.59	A	W
TE	1	591.400	23.300	0.79	A	A
TI	1	360.000	40.000	0.48	W	N
TM	1	408.000	34.400	0.54	A	N
TN	1	421.000	16.000	0.56	A	W
TO	1	728.000	16.600	0.97	A	A
TP	1	662.330	17.980	0.89	A	A
TT	1	288.000	8.000	0.38		N
TW	1	758.000	40.000	1.01	A	A
TX	1	427.000	30.000	0.57	A	W
UC	1	397.000	17.000	0.53	W	N
UK	1	562.000	20.000	0.75	A	A
UY	1	550.000	30.000	0.73	A	A
WA	1	601.000	33.000	0.80	A	A
WC	1	519.000	51.900	0.69	A	W
WP	1	420.000	40.000	0.56	A	W
WV	1	614.000	45.000	0.82	A	A
YA	1	431.800	11.720	0.58	A	W

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 µg/filter, g
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: H 3

EML Value: 250.300
EML Error: 4.200

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	250.300	4.200	1.00	A	A
AG	1	261.000	39.000	1.04	N	A
AI	1	697.000	105.000	2.78		N
AN	1	250.000	3.000	1.00	A	A
AR	1	242.000	9.000	0.97	W	A
AR	1	255.000	11.000	1.02	W	A
BE	1	260.000	12.000	1.04	A	A
BL	1	318.000	11.000	1.27	A	W
BL	1	303.000	15.000	1.21	A	A
BN	1	255.700	13.933	1.02	N	A
BP	1	260.500	6.300	1.04	A	A
BX	1	250.000	26.400	1.00	W	A
CH	1	257.000	1.400	1.03		A
CL	1	111.000	6.700	0.44	W	N
CZ	1	9008.000	*** **	35.99		N
DC	1	436.000	70.000	1.74	A	W
DP	1	232.370	3.670	0.93		A
DP	1	235.670	3.720	0.94		A
DP	1	233.440	3.700	0.93		A
EG	1	240.000	20.000	0.96		A
EI	1	423.100	22.350	1.69		W
EL	1	438.300	56.400	1.75		W
EP	1	258.270	8.830	1.03	A	A
ES	1	160.560	31.050	0.64	N	W
FG	1	314.000	14.000	1.25	A	W
FL	1	228.000	2.000	0.91	A	A
FN	1	269.000	12.000	1.07	A	A
GE	1	275.650	21.460	1.10	W	A
GP	1	270.000	30.000	1.08		A
GT	1	250.000	10.000	1.00		A
HC	1	247.000	20.000	0.99	A	A
ID	1	262.733	15.998	1.05	A	A
IE	1	259.920	10.000	1.04	W	A
IS	1	227.000	12.000	0.91	W	A
IT	1	235.000	8.000	0.94	W	A
JP	1	250.000	1.000	1.00		A
KA	1	350.000	34.000	1.40	A	W
LA	1	256.000	15.100	1.02	A	A
LA	2	245.800	12.700	0.98	A	A
LA	3	271.000	15.100	1.08	A	A
LH	1	262.000	18.000	1.05	W	A
LL	1	255.000	2.810	1.02	A	A
LM	1	260.000	26.000	1.04		A
LV	1	288.000	6.000	1.15	W	A
LW	1	250.000	5.800	1.00	A	A
MI	1	269.000	15.000	1.07	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: H 3

EML Value: 250.300
EML Error: 4.200

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
MI	1	267.000	15.000	1.07	A	A
ML	1	241.480	72.720	0.96	W	A
NA	1	242.000	5.000	0.97	W	A
NP	1	401.000	3.000	1.60	A	W
OD	1	281.940	61.670	1.13	A	A
OK	1	283.720	17.500	1.13	A	A
OT	1	240.000	20.000	0.96	A	A
PI	1	255.000	11.000	1.02	A	A
PR	1	275.400	3.540	1.10		A
RC	1	252.000	15.000	1.01		A
RE	1	275.000	23.000	1.10	A	A
RG	1	258.600	6.200	1.03	A	A
RI	1	282.000	17.000	1.13	A	A
SB	1	568.000	100.000	2.27		N
SR	1	246.000	11.000	0.98	W	A
SV	1	242.220	10.680	0.97	A	A
SW	1	341.300	8.930	1.36	W	W
TE	1	272.000	29.700	1.09	A	A
TI	1	240.000	10.000	0.96	A	A
TM	1	228.000	10.800	0.91	A	A
TN	1	257.000	9.000	1.03	A	A
TO	1	281.000	16.800	1.12	A	A
TP	1	301.500	1.500	1.20	A	A
TT	1	249.000	7.000	0.99		A
TW	1	297.000	3.000	1.19	A	A
TX	1	256.000	12.000	1.02	A	A
UY	1	240.000	30.000	0.96	A	A
WA	1	258.000	8.000	1.03	A	A
WC	1	233.000	46.700	0.93	A	A
WP	1	240.000	10.000	0.96	A	A
WV	1	256.000	9.580	1.02	A	A

Total Number Reported: 77

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: MN 54

EML Value: 20.850
EML Error: 0.310

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	20.850	0.310	1.00	A	A
AC	1	25.400	0.800	1.22		W
AF	1	24.130	3.360	1.16	A	A
AG	1	20.900	1.600	1.00	A	A
AI	1	22.700	1.200	1.09		A
AL	1	21.830	0.540	1.05	N	A
AM	1	23.020	1.570	1.10		A
AN	1	24.360	3.570	1.17	A	W
AR	1	29.500	4.500	1.41	W	N
AU	1	25.000	2.500	1.20	W	W
AW	1	34.900	5.200	1.67		N
BC	1	24.100	0.742	1.16	W	A
BE	1	26.260	1.950	1.26	A	N
BL	1	22.700	0.800	1.09	A	A
BM	1	23.800	2.480	1.14	A	A
BN	1	26.500	0.198	1.27	A	N
BP	1	24.500	0.400	1.18	A	W
BQ	1	20.600	0.800	0.99	A	A
BR	1	25.200	2.000	1.21		W
BS	1	22.600	0.750	1.08	A	A
BX	1	24.300	1.400	1.17	A	W
CA	1	23.400	1.300	1.12	A	A
CH	1	21.600	0.320	1.04		A
CL	1	23.900	0.900	1.15	N	A
CS	1	24.540	1.030	1.18	A	W
CW	1	21.200	0.040	1.02	A	A
DC	1	23.100	5.250	1.11	W	A
DH	1	24.100	2.840	1.16		A
DP	1	24.470	1.420	1.17		W
DP	1	24.060	0.400	1.15		A
DP	1	24.080	0.560	1.15		A
EG	1	22.000	1.000	1.06	A	A
EL	1	20.300	1.700	0.97		A
EP	1	25.840	3.580	1.24	N	N
ES	1	22.770	2.690	1.09	A	A
FG	1	16.990	0.012	0.81	N	W
FL	1	24.300	0.300	1.17	W	W
FM	1	23.030	0.460	1.10	W	A
FN	1	21.000	2.100	1.01	A	A
GA	1	23.000	3.200	1.10	A	A
GE	1	23.410	3.040	1.12	N	A
GP	1	24.000	4.000	1.15		A
GT	1	23.000	5.200	1.10		A
ID	1	19.100	1.132	0.92	A	A
IE	1	22.430	2.420	1.08	A	A
IL	1	6.200	1.400	0.30	A	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 Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: MN 54

EML Value: 20.850
EML Error: 0.310

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
IN	1	25.100	1.300	1.20	W	W
IS	1	22.800	2.200	1.09	W	A
IT	1	14.400	0.500	0.69	A	N
JP	1	26.000	1.700	1.25		N
KA	1	21.000	3.000	1.01	A	A
LA	1	23.600	2.400	1.13		A
LA	2	23.100	2.400	1.11		A
LA	3	24.800	2.600	1.19		W
LB	1	24.400	0.800	1.17		W
LH	1	22.800	2.800	1.09	A	A
LL	1	22.500	0.878	1.08	A	A
LM	1	16.000	2.000	0.77		N
LV	1	16.200	0.400	0.78	A	N
LW	1	21.700	1.000	1.04	A	A
ME	1	24.660	0.967	1.18		W
MI	1	25.036	0.988	1.20	A	W
MI	1	24.066	1.009	1.15	A	A
MO	1	22.400	0.700	1.07		A
MS	1	24.000	2.400	1.15	A	A
NA	1	22.200	0.500	1.06	A	A
NL	1	23.400	2.400	1.12	A	A
NP	1	22.000	2.000	1.06	A	A
NS	1	64.370	1.704	3.09	W	N
NS	1	66.852	1.704	3.21	W	N
NS	1	66.741	1.704	3.20	W	N
NZ	1	24.700	1.400	1.18		W
NZ	1	25.000	1.500	1.20		W
OD	1	22.410	2.940	1.07	W	A
OK	1	23.050	2.000	1.11	W	A
OL	1	23.700	1.040	1.14		A
OT	1	23.000	1.000	1.10	A	A
RC	1	23.200	1.700	1.11		A
RE	1	24.100	3.600	1.16	W	A
RI	1	23.300	3.400	1.12	A	A
RL	1	23.700	2.300	1.14	N	A
SA	1	24.000	1.400	1.15	A	A
SB	1	2.550	0.100	0.12		N
SK	1	23.400	0.600	1.12	A	A
SL	1	22.800	1.300	1.09	A	A
SN	1	23.010	2.550	1.10	A	A
SR	1	23.300	2.400	1.12	A	A
SS	1	22.800	0.871	1.09	A	A
SW	1	23.260	0.200	1.12	A	A
TE	1	23.700	3.400	1.14	A	A
TI	1	23.800	2.400	1.14	W	A
TM	1	25.100	0.949	1.20	W	W
TN	1	23.900	1.400	1.15	W	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: MN 54

EML Value: 20.850
EML Error: 0.310

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
TO	1	23.100	1.040	1.11	W	A
TP	1	22.342	0.720	1.07	A	A
TT	1	25.200	0.900	1.21		W
TW	1	22.000	2.000	1.06	W	A
TX	1	23.500	0.400	1.13	A	A
UK	1	23.400	1.400	1.12	A	A
UY	1	24.000	2.000	1.15	A	A
WA	1	24.000	2.500	1.15	A	A
WC	1	24.500	3.400	1.18	W	W
WE	1	26.320	0.559	1.26	W	N
WI	1	23.500	2.510	1.13	W	A
WP	1	21.700	2.170	1.04	A	A
WV	1	24.800	0.890	1.19	A	W
YA	1	23.310	0.678	1.12	A	A

Total Number Reported: 107

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: PU238

EML Value: 1.291
EML Error: 0.063

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	1.291	0.063	1.00	A	A
AC	1	1.250	0.050	0.97		A
AG	1	1.210	0.200	0.94	A	A
AI	1	1.140	0.030	0.88		W
AM	1	0.430	0.020	0.33		N
AN	1	1.282	0.049	0.99	A	A
AR	1	1.100	0.250	0.85	A	W
AU	1	1.310	0.090	1.01	W	A
BE	1	1.320	0.110	1.02	A	A
BL	1	1.350	0.070	1.05	A	A
BM	1	1.180	0.130	0.91	W	A
BP	1	1.290	0.059	1.00	A	A
BX	1	1.240	0.046	0.96	A	A
CH	1	1.380	0.060	1.07		A
CL	1	1.180	0.160	0.91	A	A
CW	1	1.080	0.120	0.84	A	W
DC	1	1.133	0.200	0.88	A	W
EG	1	1.270	0.180	0.98	N	A
EI	1	1.950	0.100	1.51	N	N
EP	1	1.320	0.113	1.02	A	A
ES	1	1.290	0.240	1.00	A	A
FG	1	1.379	0.053	1.07	A	A
FL	1	1.310	0.021	1.01	W	A
GA	1	1.400	0.080	1.08	W	A
GE	1	1.290	0.100	1.00	N	A
GP	1	1.300	0.100	1.01		A
GT	1	1.500	0.300	1.16		W
ID	1	1.420	0.188	1.10	A	A
IE	1	1.290	0.060	1.00	A	A
IN	1	1.590	0.150	1.23	A	W
IS	1	1.350	0.290	1.05	A	A
IT	1	1.330	0.074	1.03	A	A
JP	1	1.400	0.070	1.08		A
KA	1	1.394	0.100	1.08	A	A
LA	1	1.310	0.280	1.01	A	A
LA	2	1.260	0.270	0.98	A	A
LA	3	1.250	0.280	0.97	A	A
LB	1	1.103	0.051	0.85		W
LH	1	1.360	0.120	1.05	A	A
LL	1	1.370	0.071	1.06	A	A
ML	1	1.410	0.190	1.09	A	A
NA	1	1.420	0.160	1.10	A	A
NL	1	1.300	0.300	1.01	A	A
NM	1	1.270	0.030	0.98	A	A
NZ	1	1.260	0.050	0.98		A
NZ	1	1.350	0.090	1.05		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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: PU238

EML Value: 1.291
EML Error: 0.063

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
OD	1	1.296	0.133	1.00	A	A
OT	1	1.400	0.100	1.08	A	A
PI	1	1.330	0.090	1.03	A	A
RE	1	0.958	0.102	0.74	A	W
RG	1	1.328	0.063	1.03	A	A
RI	1	1.530	0.110	1.19	A	W
SN	1	1.320	0.150	1.02	A	A
SR	1	1.330	0.210	1.03	W	A
SW	1	0.890	0.040	0.69		N
TE	1	1.400	0.200	1.08	N	A
TI	1	1.600	0.200	1.24	A	W
TM	1	1.360	0.053	1.05	A	A
TN	1	1.360	0.080	1.05	A	A
TO	1	1.390	0.300	1.08	A	A
TW	1	1.280	0.040	0.99	A	A
TX	1	1.384	0.055	1.07	A	A
UK	1	1.380	0.280	1.07	A	A
UY	1	1.120	0.150	0.87	W	W
WA	1	1.190	0.100	0.92	A	A
WC	1	1.350	0.217	1.05	A	A
WI	1	1.410	0.124	1.09		A
YA	1	1.319	0.026	1.02	A	A

Total Number Reported: 68

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: PU239

EML Value: 0.850
EML Error: 0.050

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	0.850	0.050	1.00	A	A
AC	1	0.783	0.034	0.92		A
AF	1	1.250	0.370	1.47	A	N
AG	1	0.764	0.094	0.90	A	W
AI	1	0.730	0.026	0.86		W
AM	1	0.550	0.040	0.65		N
AN	1	0.909	0.175	1.07	A	A
AR	1	0.812	0.180	0.96	A	A
AR	1	0.823	0.185	0.97	A	A
AU	1	0.860	0.060	1.01	W	A
BE	1	0.820	0.080	0.96	A	A
BL	1	0.850	0.070	1.00	A	A
BL	1	0.930	0.060	1.09	A	A
BM	1	0.760	0.088	0.89	W	W
BP	1	0.862	0.020	1.01	A	A
BX	1	0.851	0.036	1.00	A	A
CH	1	0.872	0.031	1.03		A
CL	1	0.790	0.100	0.93	A	A
CW	1	0.700	0.080	0.82	A	W
DC	1	0.905	0.145	1.06	A	A
EG	1	0.814	0.123	0.96	N	A
EI	1	0.850	0.050	1.00	N	A
EP	1	0.827	0.080	0.97	A	A
ES	1	0.830	0.160	0.98	A	A
FG	1	0.852	0.042	1.00	A	A
FL	1	0.815	0.014	0.96	W	A
GA	1	0.810	0.110	0.95	A	A
GE	1	0.759	0.066	0.89	N	W
GP	1	0.850	0.160	1.00		A
GT	1	0.900	0.200	1.06		A
ID	1	0.890	0.071	1.05	A	A
IE	1	0.900	0.150	1.06	A	A
IN	1	0.840	0.110	0.99	A	A
IS	1	0.876	0.206	1.03	W	A
IT	1	0.830	0.050	0.98	A	A
JP	1	0.930	0.051	1.09		A
KA	1	0.893	0.010	1.05	A	A
LA	1	0.860	0.190	1.01	A	A
LA	2	0.920	0.190	1.08	A	A
LA	3	0.720	0.160	0.85	A	W
LB	1	1.016	0.051	1.20		W
LH	1	0.820	0.080	0.96	A	A
LL	1	0.864	0.049	1.02	A	A
ML	1	0.930	0.120	1.09	A	A
NA	1	0.800	0.120	0.94	A	A
NL	1	0.800	0.180	0.94	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: PU239

EML Value: 0.850
EML Error: 0.050

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
NM	1	0.820	0.020	0.96	A	A
NZ	1	0.850	0.070	1.00		A
NZ	1	0.800	0.040	0.94		A
OD	1	0.831	0.086	0.98	A	A
OT	1	0.870	0.060	1.02	W	A
PI	1	0.850	0.070	1.00	A	A
RE	1	0.777	0.085	0.91	A	A
RG	1	0.854	0.042	1.00	A	A
RI	1	0.940	0.083	1.11	A	A
SN	1	0.820	0.098	0.96	A	A
SR	1	0.850	0.150	1.00	W	A
SW	1	0.510	0.030	0.60		N
TE	1	0.900	0.100	1.06	W	A
TI	1	0.950	0.170	1.12	W	A
TM	1	0.869	0.039	1.02	A	A
TN	1	0.866	0.055	1.02	A	A
TO	1	0.870	0.210	1.02	W	A
TW	1	0.800	0.040	0.94	A	A
TX	1	0.872	0.044	1.03	W	A
UC	1	0.728	0.108	0.86	A	W
UK	1	0.820	0.220	0.96	A	A
UY	1	0.620	0.170	0.73	A	N
WA	1	0.833	0.081	0.98	A	A
WC	1	0.874	0.149	1.03	W	A
WI	1	0.946	0.089	1.11		A
YA	1	0.829	0.018	0.97	A	A

Total Number Reported: 72

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: SR 90

EML Value: 23.200
EML Error: 1.350

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	23.200	1.350	1.00	A	A
AF	1	20.190	0.500	0.87	A	W
AG	1	23.600	4.400	1.02	A	A
AI	1	14.400	1.000	0.62		N
AN	1	25.580	0.110	1.10	A	A
AR	1	24.500	2.600	1.06	A	A
AU	1	23.910	0.890	1.03	A	A
BC	1	24.900	2.080	1.07	A	A
BE	1	22.900	1.500	0.99	A	A
BL	1	24.700	0.700	1.06	A	A
BM	1	25.700	0.580	1.11	N	A
BN	1	20.300	0.449	0.87	A	W
BP	1	22.800	0.930	0.98	A	A
BX	1	25.600	2.290	1.10	A	A
CH	1	19.900	0.260	0.86		W
CL	1	25.300	0.600	1.09	W	A
DC	1	22.000	3.240	0.95	A	A
DP	1	23.240	1.458	1.00		A
DP	1	23.640	1.521	1.02		A
DP	1	23.090	1.447	1.00		A
EG	1	22.700	0.600	0.98	A	A
EI	1	25.460	1.240	1.10	A	A
EP	1	22.230	0.901	0.96	A	A
ES	1	22.860	6.280	0.99	N	A
GA	1	21.000	0.900	0.91		A
GE	1	22.320	0.280	0.96	W	A
GP	1	20.000	3.000	0.86		W
GT	1	21.500	0.300	0.93		A
ID	1	27.800	1.836	1.20	A	A
IE	1	24.120	2.000	1.04	A	A
IN	1	21.700	1.800	0.94	A	A
IS	1	13.500	2.600	0.58	A	N
IT	1	24.300	1.300	1.05	A	A
JP	1	23.000	0.500	0.99		A
KA	1	22.800	1.400	0.98	A	A
LA	1	530.500	32.000	22.87	N	N
LA	2	483.100	29.600	20.82	N	N
LA	3	489.300	29.700	21.09	N	N
LH	1	19.400	1.200	0.84	A	W
LL	1	2.910	0.105	0.13		N
NA	1	2.200	0.100	0.09	W	N
NZ	1	25.000	0.400	1.08		A
NZ	1	21.000	0.300	0.91		A
OD	1	21.680	2.430	0.93	A	A
OT	1	22.000	1.000	0.95	A	A
RE	1	22.900	0.500	0.99	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: SR 90

EML Value: 23.200
EML Error: 1.350

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
RI	1	25.100	1.300	1.08	W	A
SR	1	25.900	2.700	1.12	A	A
SW	1	25.330	0.290	1.09	A	A
TE	1	25.500	1.700	1.10	W	A
TI	1	26.000	1.000	1.12	A	A
TM	1	26.900	1.610	1.16	A	A
TN	1	24.900	2.000	1.07	A	A
TO	1	25.800	1.560	1.11	A	A
TP	1	24.340	0.570	1.05	A	A
TW	1	21.200	0.300	0.91	W	A
TX	1	24.770	0.860	1.07	A	A
UY	1	21.000	1.000	0.91	A	A
WA	1	24.000	1.200	1.03	A	A
WC	1	26.700	4.010	1.15	A	A
WE	1	18.200	0.262	0.78		W
WV	1	24.000	0.730	1.03	A	A
YA	1	22.310	1.209	0.96		A

Total Number Reported: 63

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: U 234

EML Value: 0.540
EML Error: 0.020

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	0.540	0.020	1.00	A	A
AC	1	0.555	0.021	1.03		A
AG	1	0.513	0.014	0.95	A	A
AI	1	1.560	0.016	2.89		N
AM	1	0.300	0.010	0.56		N
AN	1	0.599	0.024	1.11	A	A
AR	1	0.600	0.083	1.11	W	A
AR	1	0.601	0.148	1.11	W	A
AU	1	0.590	0.060	1.09	A	A
BC	1	0.710	0.037	1.31	A	W
BE	1	0.550	0.070	1.02	A	A
BL	1	0.610	0.120	1.13	A	A
BL	1	0.550	0.010	1.02	A	A
BM	1	0.580	0.140	1.07	W	A
BX	1	0.759	0.050	1.41	A	W
CH	1	0.572	0.021	1.06		A
CL	1	0.560	0.120	1.04	A	A
CW	1	0.520	0.050	0.96	A	A
DC	1	0.646	0.109	1.20	A	A
EI	1	0.840	0.050	1.56	W	N
EP	1	0.629	0.072	1.16	A	A
ES	1	0.600	0.110	1.11		A
GA	1	0.620	0.035	1.15	A	A
GE	1	0.603	0.070	1.12	N	A
GP	1	0.610	0.140	1.13		A
GT	1	0.600	0.140	1.11		A
IE	1	0.620	0.050	1.15	A	A
IT	1	0.641	0.028	1.19		A
JP	1	0.590	0.035	1.09		A
LB	1	0.738	0.044	1.37		W
LH	1	0.660	0.080	1.22	W	W
LL	1	0.494		0.91	A	A
ML	1	0.630	0.080	1.17	A	A
NA	1	0.590	0.070	1.09		A
NL	1	0.560	0.130	1.04		A
NZ	1	0.600	0.060	1.11		A
NZ	1	0.550	0.070	1.02		A
OD	1	0.536	0.054	0.99	A	A
OK	1	0.581	0.047	1.08	W	A
RE	1	0.529	0.055	0.98	A	A
RG	1	0.700	0.032	1.30	A	W
SR	1	0.620	0.060	1.15	A	A
TM	1	0.587	0.036	1.09	A	A
TN	1	0.570	0.030	1.06	A	A
TO	1	0.530	0.034	0.98	A	A
TW	1	0.680	0.030	1.26	W	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: U 234

EML Value: 0.540
EML Error: 0.020

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
TX	1	0.705	0.035	1.31	A	W
WA	1	0.570	0.060	1.06	A	A
WC	1	0.634	0.108	1.17		A
WE	1	0.610	0.027	1.13	W	A
WI	1	0.550	0.057	1.02		A
YA	1	0.603	0.029	1.12	A	A

Total Number Reported: 52

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: U 238

EML Value: 0.550
EML Error: 0.025

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	0.550	0.025	1.00	A	A
AC	1	0.549	0.021	1.00		A
AG	1	0.563	0.051	1.02	A	A
AI	1	1.620	0.160	2.95		N
AM	1	0.320	0.020	0.58		N
AN	1	0.591	0.025	1.08	A	A
AR	1	0.638	0.154	1.16	A	W
AR	1	0.602	0.125	1.10	A	A
AU	1	0.550	0.060	1.00	A	A
BC	1	0.685	0.043	1.25	W	W
BE	1	0.560	0.070	1.02	A	A
BL	1	0.540	0.010	0.98	A	A
BL	1	0.620	0.120	1.13	A	A
BM	1	0.560	0.120	1.02	A	A
BX	1	0.696	0.057	1.27	W	W
CH	1	0.570	0.040	1.04		A
CL	1	0.560	0.110	1.02	A	A
CW	1	0.510	0.050	0.93	A	A
DC	1	0.554	0.097	1.01	W	A
EP	1	0.615	0.075	1.12	A	A
ES	1	0.570	0.110	1.04		A
GA	1	0.580	0.020	1.06	A	A
GE	1	0.603	0.110	1.10	N	A
GP	1	0.620	0.140	1.13		A
GT	1	0.600	0.130	1.09		A
IE	1	0.570	0.090	1.04	A	A
IT	1	0.604	0.065	1.10		A
JP	1	0.630	0.036	1.15		A
LB	1	0.637	0.039	1.16		A
LH	1	0.650	0.080	1.18	W	W
LL	1	0.520		0.95	A	A
ML	1	0.600	0.080	1.09	A	A
NA	1	0.660	0.070	1.20		W
NL	1	0.540	0.130	0.98		A
NL	1	0.054	0.003	0.10		N
NZ	1	0.590	0.060	1.07		A
NZ	1	0.640	0.070	1.16		W
OD	1	0.524	0.052	0.95	A	A
OK	1	0.588	0.046	1.07	W	A
RE	1	0.568	0.059	1.03	A	A
RG	1	0.690	0.032	1.26	W	W
SR	1	0.630	0.060	1.15	A	A
SW	1	0.050	0.000	0.09		N
TM	1	0.594	0.036	1.08	A	A
TN	1	0.590	0.030	1.07	A	A
TO	1	0.530	0.034	0.96	A	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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: U 238

EML Value: 0.550
EML Error: 0.025

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
TW	1	0.690	0.030	1.26	W	W
TX	1	0.703	0.072	1.28	W	W
WA	1	0.580	0.060	1.06	A	A
WC	1	0.625	0.106	1.14	A	A
WE	1	0.594	0.027	1.08	A	A
WI	1	0.582	0.059	1.06	A	A
YA	1	0.596	0.029	1.08	A	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 µg/filter, g
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: U BQ

EML Value: 1.105
EML Error: 0.050

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	1.105	0.050	1.00	A	A
AG	1	1.095	0.042	0.99	A	A
AI	1	3.200	0.300	2.90		N
AM	1	0.730	0.040	0.66		W
BL	1	1.120	0.020	1.01		A
BL	1	1.290	0.000	1.17		A
CH	1	1.140	0.057	1.03		A
CL	1	0.900	0.100	0.81	A	W
EL	1	1.170		1.06		A
FG	1	1.290	0.026	1.17	A	A
GP	1	1.300		1.18		A
ID	1	1.191	0.062	1.08	N	A
NS	1	1.510	0.348	1.37		W
OT	1	1.500	0.200	1.36	A	W
PI	1	1.230	0.090	1.11		A
RG	1	1.420	0.069	1.28	A	W
SN	1	1.260	0.180	1.14		A
TE	1	1.500	0.200	1.36		W
UK	1	1.260	0.220	1.14	A	A
UY	1	1.400	0.200	1.27	W	W
WA	1	1.180	0.090	1.07	A	A

Total Number Reported: 21

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

QAP 46 Results by Nuclide

Matrix: WA
Radionuclide: U UG

EML Value: 0.044
EML Error: 0.001

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 45 Evaluation	Evaluation
AA	1	0.044	0.001	1.00	A	A
AF	1	34.450	13.900	** **		N
AG	1	0.053	0.007	1.18	N	W
AR	1	48.200	2.400	** **	A	N
BE	1	0.048	0.000	1.07	A	A
BL	1	0.051	0.000	1.16	A	W
BL	1	0.045	0.001	1.00	A	A
BQ	1	0.053	0.001	1.19	A	W
CA	1	0.054	0.003	1.22	A	W
CH	1	0.047	0.001	1.05		A
CZ	1	47.400	0.000	** **	A	N
DC	1	0.040	0.004	0.91	N	A
EG	1	0.044	0.009	0.99		A
ES	1	0.048	0.005	1.08	A	A
GA	1	0.047	0.001	1.06	A	A
GE	1	0.051	0.002	1.14	W	A
GS	1	0.045	0.001	1.01	W	A
GT	1	0.050	0.010	1.13		A
IE	1	0.046	0.007	1.04	A	A
IR	1	0.042	0.004	0.95	A	A
IS	1	0.053	0.010	1.19	A	W
IT	1	0.049	0.011	1.11	A	A
KA	1	0.048	0.001	1.08	A	A
LA	1	0.056	0.006	1.27	A	W
LA	2	0.055	0.006	1.24	A	W
LA	3	0.056	0.006	1.25	A	W
LL	1	0.042		0.95	A	A
NL	1	0.048	0.006	1.08	A	A
RI	1	0.045	0.000	1.01	N	A
TI	1	0.045	0.007	1.01	A	A
TM	1	0.050	0.003	1.12	A	A
TN	1	0.049	0.008	1.10	A	A
TO	1	0.043	0.003	0.97	A	A
UC	1	0.066		1.49	A	N
UP	1	0.047	0.050	1.06	A	A
UY	1	0.045		1.01	A	A
YA	1	0.049	0.002	1.11	A	A
YP	1	0.047	0.002	1.06	A	A

Total Number Reported: 38

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
Evaluation: A=Acceptable, W=Acceptable with Warning, N=Not Acceptable. pCi/g or mL = Bq x 0.027

Participating Laboratories in EML QAP46

Laboratories Reporting Data

Code	Laboratory Name
AC	Analytical Chemistry Laboratory Chemical Technology Div., Argonne, IL
AF	AL/OEBA , Brooks AFB, TX
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
BC	Babcock & Wilcox MC #42 Naval Nuclear Fuel Division, Lynchburg, VA
BE	RUST Geotech , Grand Junction, CO
BL	Barringer Laboratories Inc. , Golden, CO
BM	Battelle Memorial Institute , Columbus, OH
BN	Brookhaven Nat'l Laboratory Bldg. #535 A, Upton, NY
BP	Battelle PNNL , 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 Fed-EX address, Leechburg, PA
BS	B&W Nuclear Envir. Services mail address only, Vandergraft, PA
BU	Autoridad Regulatoria , Buenos Aires, Argentina
BX	B&W Nuclear Environmental Services Nuclear Environmental Labs, Lynchburg, VA
CA	Atomic Energy Control Board , Ottawa, K1P 5S9, CANADA
CH	California State Dept. Health Serv. Sanitation & Radiation Laborat, Berkeley, CA
CL	Core Laboratories , Casper, WY
CN	China Institute for Radiation Protect PO Box 120, Shanxi, China
CO	Bedford Institute of Oceanography Marine Chemistry Department, P, Dartmouth. Nova Scotia, Cana
CR	Laboratorio de Fisica Nuclear Aplicada Escuela de Fisica, San Jose, Costa Ric
CS	Boeing North American Inc. 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
DH	Duke Engineering Services Hanford PO BOX 350, Richland, WA
DP	Duke Power Co, Env Center/MG03A2 Radiological & Environmental S, Huntersville, NC
EG	TRA-MTR604 LAB 124 ATTN: Anita Freeman 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	Fermi Lab Shipping and Receiving Departm, Batavia, IL
FR	CEA/DIRCEN Serv. Mixte de Surv. Rad. et B, F-91311 Montlhery, France
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
GP	GPU Nuclear Inc. Environmental Radioactivity La, Harrisburg, PA
GS	USGS/NWQL , Arvada, CO
GT	Georgia Institute of Technology Environmental Resources Center, Atlanta, GA
HC	Lawrence Livermore Laboratory Hazards Control, L383, Livermore, CA

Participating Laboratories in EML QAP46

Laboratories Reporting Data

Code	Laboratory Name
IA	Bhabha Atomic Research Centre Regional Collaborating Centre, Trombay, Bombay 400 085, INDIA
ID	Av. Salvador Allende S/N, Recreio CEP 222780-160, Rio De Janeiro, Brasil
IE	IEA, Inc. , Morrisville, NC
IL	ISU Environmental Assessment Laborato Physical Science 103, Pocatello, ID
IN	Lockheed Martin Idaho Technical Corp. Analytical Lab. Dept., 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
KO	Korea Institute of Nuclear Safety Department of Radiation Enviro, Taejon,305-338, Republic
LA	Analytical Services, CST-3 MS K484, Los Alamos, NM
LB	Lawrence Berkeley Lab UCB Bldg 75, Room 124, Berkeley, CA
LH	LAS Laboratories , 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 Life Sciences Division 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
MO	CNESTEN , Rabat, Morocco
MS	Manufacturing Sciences Corporation , Oak Ridge, TN
MX	Centro Nuclear de Mexico , Salazar Edo. de Mexico, Mexico
NA	USEPA NAREL , Montgomery, AL
ND	Department of Environmental Health & North Carolina State Universit, Raleigh, NC
NL	FERMCO Fernald Environmental Restorat 7400 Willey Road, Fernald, OH, Cincinnati, OH
NM	Environmental Evaluation Group 505 North Main Street, Carlsbad, NM
NP	JAF Environmental Laboratory New York Power Authority, Fulton, NY
NR	NRF Chemistry, S1W2 , Scoville, ID
NS	State Lab of Public Health, Environme Environmental Radiochemistry B, Raleigh, NC
NZ	National Radiation Laboratory , Christchurch, New Zeala
OB	OBG Laboratories , East Syracuse, NY
OD	ORNL, Radiobioassay Lab Bldg 4500-S Rm H-249 MS 6105, Oak Ridge, TN
OK	Southwest Laboratory of Oklahoma , Broken Arrow, OK
OL	Oak Ridge National Laboratory Environmental Sciences Div., 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
OU	Outreach Laboratory , Broken Arrow, OK
PA	Mason & Hanger-Silas Mason Co., Inc. , Amarillo, TX
PG	Comision de Energia Atomica , Asuncion, Paraguay
PI	Lockheed Martin Specialty Components , Largo, FL
PO	Institute of Oceanology PAN , PL-81-712 Sopot, Poland
PR	Princeton Plasma Physics Lab REML, Princeton, NJ
RA	V. G. Khlopin Radium Institute , St. Petersburg, Russia
RC	Region I Laboratory U.S. NRC, King of Prussia, PA
RD	Radiation Detection Company , Sunnyvale, CA
RE	Bechtel Nevada Building 650, room 19, Mercury, NV
RG	EG&G Rocky Flats Plant , Golden, CO
RI	Rust Federal Services of Hanford, Inc 222S Analytical Labs,PO Box 70, Richland, WA

Participating Laboratories in EML QAP46

Laboratories Reporting Data

Code	Laboratory Name
RK	Materials Laboratory Division Radiati SIORI-SEL, Building 210, room, Rock Island, ILATTN: (m
RL	Thermo Hanford 3350 George Washington Way, Richland, WA
RM	Moscow State University Radiochemical Faculty, 119899 Moscow, Russia
RO	Radiation Hygiene Laboratory Institute of Hygiene and Publi, 76256 Bucharest 35, Romania
SA	Sandia Labs - Organization 7715 Radioactive Sample Diag. Prog., Albuquerque, NM
SB	SC Dept. of Health & Env. Control Rad , Columbia, SC
SK	Savannah River Plant Bldg 735-7A Rm 110, Aiken, SC
SL	Stanford Linear Accelerator Center Off. of Hlth Physics, MS 84, Menlow Park, CA
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	Thermo NUtech , Albuquerque, NM
TN	TMA/NORCAL , Richmond, CA
TO	Thermo NUtech Oak Ridge Laboratory, Oak Ridge, TN
TP	Taiwan Power Company , TAIPEI, TAIWAN, ROC
TR	University of Istanbul Nuclear Physics, Istanbul, Turkey
TT	Tracer Technologies International, In , Cleveland, OH
TW	Taiwan Radiation Monitoring Center Atomic Energy Council, Executi, Kaohsiung, Taiwan, ROC
TX	TDH/Laboratories , Austin, TX
UC	Lockheed Martin RM 60 BLDG C-710, Paducah, KY
UK	K-25 Plant Lockheed Martin Energy Systems, Oak Ridge, TN
UN	Directorate of Fisheries Research Ministry of Agriculture, Fishe, Lowestoft, Suffolk NR33, UK
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
VE	Departamento de Fisica Universidad Simon Bolivar, Caracas, Venezuela
WA	Environmental Radiation Lab Off. of Public Health Labs., Seattle, WA
WC	Fluor Daniel Hanford 6266/600 Area, MSIN S3-28, Richland, WA
WE	Westinghouse Electric Corp. Chemical & Materials Tech., Madison, PA
WI	Westinghouse Electric Corp. WIPP Site, Carlsbad, NM
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: 140

Participating Laboratories in EML QAP46

Laboratories NOT Reporting Data

Code	Laboratory Name
BA	Westinghouse Electric Corp. Bettis Atomic Power Lab, West Mifflin, PA
BV	Department Radiofisica PO Box 3268, Buenos Aires, Argentina
CB	Environmental Radiation Hazards Divis Bureau of Radiation and Medica, Ottawa, Ontario, Canada
CE	Comision Chilena de Energia Nuclear (Casilla 188D, Santiago de Chile, Chile
CP	Controls for Envir. Pollution , Santa Fe, NM
EM	3M Center Building 2-3E-09, St. Paul, MN
FC	Marine Nat. Lab del Surv. de l'Enviro Sec. de Surv. Rad. du Port de, F-50115 Cherbourg, France
GC	Georgia Power Company Environmental L , Smyrna, GA
HS	RESL - USDOE , Idaho Falls, ID
HU	Water Resources Research Centre (VITU Danube River Basin Project, 1095 Budapest, Hungary
JL	Jefferson Lab Trailer 52B, Newport News, VA
MH	Maine Health & Environmental Testing 221 State Street, Augusta, ME
MR	Centre National de Radioprotection Ministry of Public Health, Sale, Morocco
NC	Head, Nuclear Services North Carolina State Universit, Raleigh, NC
PE	Commision Permanente del Pacifico Sur Juan del la Fuente 743, Lima 18, Peru
RB	Region III Laboratory U.S. NRC, Lisle, IL
RF	EG&G Rocky Flats Plant Bldg 123, Golden, CO
RN	Hydochemical Institute , 344104 Rostov-on Don, Russia
SC	Ceimic Corp. , San Diego, CA
SE	Shealy Environmental Services Inc. Overlook Business Center, Cayce, SC
TU	Department of Nuclear Engineering Texas A&M University, College Station, TX
TY	Scientific Production Association 82, Lenin Street, Kaluga Region, RUSSIA

Total Non-Reporting Labs: 22