

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

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**July 1, 1998**

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## **ACKNOWLEDGEMENT**

**This report represents the efforts of the following EML staff: Anna Berne, Karin Decker, Michele Degennaro, Isabel M. Fisenne, Richard Godwin, John Kada, Ada Kong, 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 analysis of the 48th set of environmental quality assessment samples (QAP XLVIII) that were received on or before June 1, 1998.**

## 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 4 days after the reporting deadline via the Internet at [www.eml.doe.gov](http://www.eml.doe.gov).

This is the 54th report of this program. Preceding reports in this series are:

HASL-317	(February 1, 1977)	EML-439	(March 1, 1985)
HASL-319	(May 2, 1977)	EML-448	(October 1, 1985)
HASL-323	(August 1, 1977)	EML-453	(March 1, 1986)
HASL-331	(November 1, 1977)	EML-454	(March 1, 1986)
EML-336	(January 1, 1978)	EML-477	(October 1, 1986)
EML-337	(February 1, 1978)	EML-478	(March 1, 1987)
EML-340	(May 1, 1978)	EML-498	(September 1, 1987)
EML-343	(August 1, 1978)	EML-518	(January 2, 1989)
EML-346	(November 1, 1978)	EML-525*	(August 1, 1989)
EML-350	(February 1, 1979)	EML-526	(January 2, 1990)
EML-351	(February 1, 1979)	EML-530	(July 2, 1990)
EML-354	(May 1, 1979)	EML-535	(January 1, 1991)
EML-358	(August 1, 1979)	EML-539	(July 1, 1991)
EML-364	(November 1, 1979)	EML-543	(January 2, 1992)
EML-368	(February 1, 1980)	EML-546	(July 1, 1992)
EML-377	(August 1, 1980)	EML-551	(January 4, 1993)
EML-387	(February 1, 1981)	EML-556	(July 1, 1993)
EML-388	(February 1, 1981)	EML-559	(January 5, 1994)
EML-393	(August 3, 1981)	EML-561	(July 1, 1994)
EML-402	(February 1, 1982)	EML-565	(January 5, 1995)
EML-414	(April 1, 1983)	EML-569	(July 3, 1995)
EML-417	(September 1, 1983)	EML-576	(February 1, 1996, Revised)
EML-426	(March 1, 1984)	EML-581	(July 1, 1996)
PNL-5079	(April 1, 1984)	EML-587	(January 1997)
EML-431	(September 1, 1984)	EML-591	(July 1997)
EML-432	(November 1, 1984)	EML-594	(January 1998)
EML-438	(March 1, 1985)		

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\*Please note this is a corrected report number.

## RESULTS

The results from the analysis of QAP-XLVIII samples received on or before June 1, 1998 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 <sup>-1</sup>
Soil	Bq kg <sup>-1</sup>
Tissue	Bq kg <sup>-1</sup>
Vegetation	Bq kg <sup>-1</sup>
Water	Bq L <sup>-1</sup>

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 2.

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-XLVIII were developed from percentiles of data distributions for the years 1993-1998.

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 15<sup>th</sup> and 85<sup>th</sup> 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 5<sup>th</sup> and 15<sup>th</sup> percentile and between the 85<sup>th</sup> and 95<sup>th</sup> percentile. In other words, the middle 90% of all reported values are acceptable, while the outer 5<sup>th</sup>-15<sup>th</sup> (10%) and 85<sup>th</sup>-95<sup>th</sup> percentiles (10%) are in the warning area. The not acceptable criteria, "N", is established at less than the 5<sup>th</sup> percentile and greater than the 95<sup>th</sup> 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 (p. 3).

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

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<sup>239</sup> Pu	307
<sup>90</sup> Sr	310
<sup>234</sup> U	311
<sup>238</sup> U	313
µg U	315

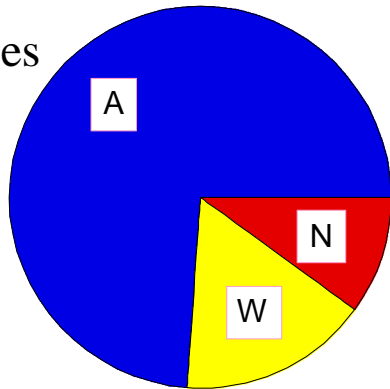
**List of Participating Laboratories for EML QAP48**

Laboratories Reporting Data	316
Laboratories Not Reporting Data	319

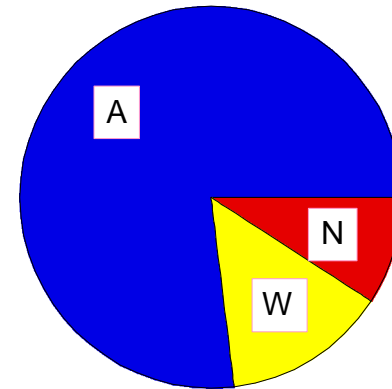
# QAP 48 Summary of Evaluations of 3127 Reported Analyses

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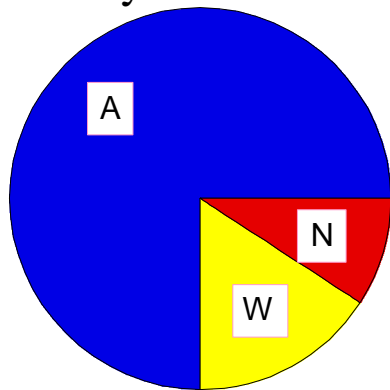
Air Filter:  
1195 Analyses



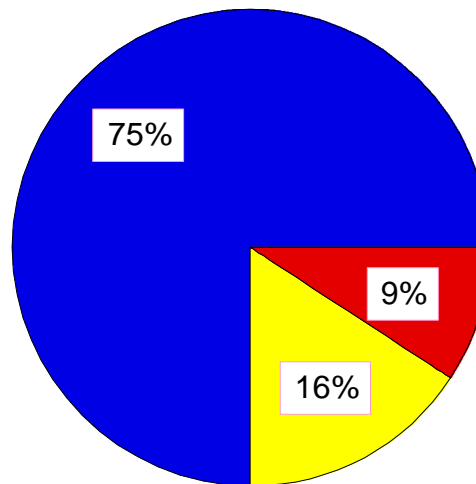
Soil: 511  
Analyses



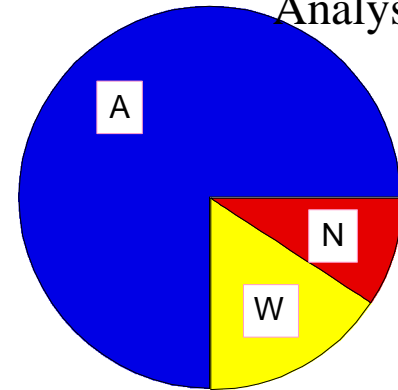
Vegetation:  
463 Analyses



Summary: All  
Analyses



Water: 958  
Analyses



 Acceptable

 Warning

 Not Acceptable

## QAP 48 Statistical Summary

Nuclide	EML Value	EML Error	Reported Values EML Value			No. of Reported Values
			Mean	Median	Std. Dev.	
<b>Matrix: VE</b>						
CO60	10.575	0.206	1.065	1.078	0.151	82
CS137	181.500	7.141	1.056	1.052	0.110	85
SR90	359.005	6.021	0.879	0.927	0.150	44
PU238	0.116	0.035	1.278	1.469	0.315	5
PU239	1.770	0.154	0.991	1.011	0.158	49
AM241	1.105	0.051	1.205	1.082	0.385	48
CM244	2.174	0.066	0.970	0.963	0.148	29
K40	707.500	24.987	1.057	1.060	0.114	80
<b>Matrix: SO</b>						
CS137	329.500	9.260	1.076	1.079	0.099	98
SR90	13.091	0.279	1.129	1.069	0.274	39
PU239	5.305	0.253	1.038	1.028	0.101	54
AM241	2.678	0.212	1.132	1.106	0.242	55
U234	31.133	0.802	0.950	0.972	0.133	39
U238	31.900	2.552	0.913	0.903	0.171	46
Bq U	64.600	2.858	0.939	0.982	0.179	16
ug U	2.583	0.200	0.833	0.879	0.133	23
K40	313.500	10.150	1.102	1.085	0.124	97
<b>Matrix: WA</b>						
MN54	57.000	1.900	1.097	1.094	0.068	96
CO60	13.600	1.200	1.092	1.103	0.050	90
CS137	46.000	1.700	1.107	1.109	0.059	100
SR90	4.357	0.192	1.030	1.026	0.145	60
PU238	2.526	0.060	0.957	0.962	0.070	59
PU239	1.650	0.061	1.000	1.000	0.074	59
AM241	1.226	0.050	1.068	1.036	0.156	63
U234	0.396	0.026	1.076	1.085	0.104	45
U238	0.396	0.037	1.076	1.087	0.090	48
Bq U	0.801	0.067	1.119	1.118	0.112	20
ug U	0.032	0.003	1.100	1.089	0.090	26
GROSS ALPHA	1421.000	100.000	1.010	1.049	0.159	61
GROSS BETA	2200.000	100.000	0.959	0.979	0.153	64
H3	218.300	6.505	1.095	1.076	0.161	74
FE55	202.800	2.921	1.194	1.303	0.233	14

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

### QAP 48 Statistical Summary

Nuclide	EML Value	EML Error	Reported Values			No. of Reported Values
			Mean	Median	Std. Dev.	
<b>Matrix: AI</b>						
MN54	5.440	0.485	1.047	1.040	0.118	95
CO57	11.110	0.846	0.978	0.972	0.110	89
CO60	9.090	0.732	0.987	0.979	0.091	99
SB125	12.160	1.151	1.058	1.053	0.144	92
CS134	19.740	1.380	0.958	0.961	0.093	85
CS137	11.860	0.957	1.012	1.003	0.108	95
CE144	8.210	0.796	0.941	0.936	0.132	86
SR90	1.758	0.042	0.986	0.955	0.213	31
PU238	0.069	0.003	0.976	0.978	0.104	46
PU239	0.062	0.002	1.065	1.075	0.115	48
AM241	0.069	0.003	1.187	1.105	0.302	51
U234	0.031	0.003	1.209	1.143	0.223	36
U238	0.030	0.001	1.140	1.115	0.194	39
Bq U	0.063	0.004	1.226	1.109	0.381	15
ug U	2.472	0.101	1.144	1.153	0.126	23
GROSS ALPHA	1.400	0.100	0.968	0.961	0.203	74
GROSS BETA	1.960	0.300	1.087	1.078	0.155	71

Units for matrices: Air filter: AI=Bq/filter  
Soil: SO=Bq/kg  
Vegetation: VE=Bq/kg  
Water: WA=Bq/L.

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

Conversion from Bq/kg or L to pCi/g or mL:  
1 Bq/kg or L = 0.027 pCi/g or mL

Example: Convert 3 Bq/kg to pCi/g  
3 Bq/kg x 27 pCi/Bq/1000 g/kg = 0.081 pCi/g

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

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### QAP 48 Control Limits\* by Matrix

Nuclide	Lower Limit	Lower Middle Limit	Upper Middle Limit	Upper Limit
<b>Matrix: AI</b>				
SB125	0.61	0.83	1.18	1.41
CE144	0.60	0.66	1.10	1.30
MN54	0.76	0.84	1.15	1.37
CO60	0.75	0.82	1.10	1.30
CS134	0.74	0.82	1.12	1.23
CS137	0.73	0.82	1.13	1.33
SR90	0.65	0.84	1.35	1.95
PU238	0.72	0.88	1.14	1.39
AM241	0.71	0.87	1.39	2.12
U234	0.80	0.90	1.39	2.02
U238	0.80	0.90	1.32	2.55
Bq U	0.80	0.90	1.67	3.35
ug U	0.54	0.87	1.25	1.87
GROSS BETA	0.71	0.88	1.41	1.71
GROSS ALPHA	0.49	0.84	1.35	1.56
PU239	0.72	0.90	1.18	1.42
CO57	0.65	0.71	1.10	1.34
<b>Matrix: SO</b>				
ug U	0.44	0.66	1.10	1.22
CS137	0.80	0.90	1.21	1.32
PU239	0.69	0.88	1.22	1.67
AM241	0.57	0.77	1.46	2.26
U234	0.46	0.70	1.11	1.30
U238	0.43	0.68	1.10	1.39
K40	0.76	0.90	1.25	1.54
SR90	0.56	0.75	1.50	2.87
Bq U	0.29	0.46	1.10	1.37
<b>Matrix: VE</b>				
CS137	0.80	0.90	1.25	1.39
CO60	0.65	0.84	1.23	1.46
K40	0.76	0.90	1.24	1.31
CM244	0.46	0.81	1.36	1.65
AM241	0.71	0.89	1.60	2.70
PU239	0.59	0.85	1.24	1.72
SR90	0.43	0.72	1.13	1.31

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

**QAP 48 Control Limits\* by Matrix**

<b>Nuclide</b>	<b>Lower Limit</b>	<b>Lower Middle Limit</b>	<b>Upper Middle Limit</b>	<b>Upper Limit</b>
PU238	0.34	0.76	2.59	6.95
<b>Matrix: WA</b>				
U234	0.80	0.90	1.22	1.42
MN54	0.80	0.90	1.17	1.24
CO60	0.80	0.90	1.13	1.20
CS137	0.80	0.90	1.18	1.25
SR90	0.75	0.89	1.26	1.56
PU238	0.76	0.90	1.11	1.25
AM241	0.72	0.90	1.23	1.52
U238	0.80	0.90	1.17	1.29
Bq U	0.47	0.85	1.27	1.48
ug U	0.74	0.90	1.16	1.33
GROSS ALPHA	0.52	0.82	1.16	1.31
GROSS BETA	0.53	0.67	1.35	1.60
FE55	0.22	0.56	1.28	1.51
H3	0.69	0.81	1.20	1.80
PU239	0.80	0.90	1.15	1.36

Control limits are established from historical QAP data.

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

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

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

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

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

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

## QAP 48 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
<b>Lab: AC</b> Analytical Chemistry Laboratory, Argonne National Lab							
WA	5	2	1	8	63	25	13
AI	10	2	0	12	83	17	0
SO	3	0	1	4	75	0	25
<b>Totals:</b>	<b>18</b>	<b>4</b>	<b>2</b>	<b>24</b>	<b>75%</b>	<b>17%</b>	<b>8%</b>
<b>Lab: AF</b> Air Force Analytical Lab, Brooks AFB							
VE	1	3	2	6	17	50	33
SO	3	2	2	7	43	29	29
WA	9	1	2	12	75	8	17
AI	10	4	0	14	71	29	0
<b>Totals:</b>	<b>23</b>	<b>10</b>	<b>6</b>	<b>39</b>	<b>59%</b>	<b>26%</b>	<b>15%</b>
<b>Lab: AG</b> Paragon Analytics, Inc, Fort Collins, CO							
SO	9	0	0	9	100	0	0
WA	11	1	0	12	92	8	0
VE	7	0	0	7	100	0	0
AI	12	3	0	15	80	20	0
<b>Totals:</b>	<b>39</b>	<b>4</b>	<b>0</b>	<b>43</b>	<b>91%</b>	<b>9%</b>	<b>0%</b>
<b>Lab: AI</b> Nuclear Technology Services, Inc., Roswell, GA							
AI	4	8	1	13	31	62	8
VE	10	1	1	12	83	8	8
SO	7	2	2	11	64	18	18
WA	6	0	3	9	67	0	33
<b>Totals:</b>	<b>27</b>	<b>11</b>	<b>7</b>	<b>45</b>	<b>60%</b>	<b>24%</b>	<b>16%</b>
<b>Lab: AL</b> Ames Laboratory, Ames, IA							
WA	1	2	0	3	33	67	0
AI	2	3	4	9	22	33	44
VE	0	0	3	3	0	0	100
SO	0	0	2	2	0	0	100
<b>Totals:</b>	<b>3</b>	<b>5</b>	<b>9</b>	<b>17</b>	<b>18%</b>	<b>29%</b>	<b>53%</b>
<b>Lab: AM</b> American Radiation Services, Inc., Baton Rouge							
VE	4	0	0	4	100	0	0



## QAP 48 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary				Evaluation Percentages		
	A	W	N	Total Analyses	%A	%W	%N
SO	2	4	0	6	33	67	0
WA	5	4	0	9	56	44	0
AI	5	4	4	13	38	31	31
<b>Totals:</b>	<b>16</b>	<b>12</b>	<b>4</b>	<b>32</b>	<b>50%</b>	<b>38%</b>	<b>13%</b>
<b>Lab: AN</b> Argonne National Laboratory							
SO	7	0	0	7	100	0	0
WA	10	0	0	10	100	0	0
AI	11	2	0	13	85	15	0
<b>Totals:</b>	<b>28</b>	<b>2</b>	<b>0</b>	<b>30</b>	<b>93%</b>	<b>7%</b>	<b>0%</b>
<b>Lab: AR</b> Accu-Labs Research Inc., Golden, CO							
WA	14	6	9	29	48	21	31
SO	14	1	2	17	82	6	12
VE	10	4	0	14	71	29	0
AI	19	8	8	35	54	23	23
<b>Totals:</b>	<b>57</b>	<b>19</b>	<b>19</b>	<b>95</b>	<b>60%</b>	<b>20%</b>	<b>20%</b>
<b>Lab: AT</b> ATL International inc., Germantown, MD							
SO	0	3	0	3	0	100	0
WA	3	1	0	4	75	25	0
<b>Totals:</b>	<b>3</b>	<b>4</b>	<b>0</b>	<b>7</b>	<b>43%</b>	<b>57%</b>	<b>0%</b>
<b>Lab: AU</b> ORISE EESD/ESSAP, Oak Ridge							
VE	6	0	0	6	100	0	0
SO	7	0	0	7	100	0	0
WA	7	4	1	12	58	33	8
AI	2	6	6	14	14	43	43
<b>Totals:</b>	<b>22</b>	<b>10</b>	<b>7</b>	<b>39</b>	<b>56%</b>	<b>26%</b>	<b>18%</b>
<b>Lab: BA</b> Bettis Atomic Power Lab, West Mifflin, PA							
VE	1	0	0	1	100	0	0
SO	1	0	0	1	100	0	0
WA	6	0	0	6	100	0	0
AI	4	1	0	5	80	20	0

## QAP 48 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
<b>Totals:</b>	<b>12</b>	<b>1</b>	<b>0</b>	<b>13</b>	<b>92%</b>	<b>8%</b>	<b>0%</b>
<b>Lab: BC</b> Babcock & Wilcox MC #42, Lynchburg, VA							
SO	3	1	0	4	75	25	0
WA	4	4	0	8	50	50	0
VE	3	1	0	4	75	25	0
AI	2	3	7	12	17	25	58
<b>Totals:</b>	<b>12</b>	<b>9</b>	<b>7</b>	<b>28</b>	<b>43%</b>	<b>32%</b>	<b>25%</b>
<b>Lab: BE</b> RUST Geotech, Grand Junction, CO							
VE	6	1	0	7	86	14	0
SO	8	0	0	8	100	0	0
WA	11	1	1	13	85	8	8
AI	15	0	1	16	94	0	6
<b>Totals:</b>	<b>40</b>	<b>2</b>	<b>2</b>	<b>44</b>	<b>91%</b>	<b>5%</b>	<b>5%</b>
<b>Lab: BL</b> Barringer Laboratories Inc., Golden, CO							
VE	5	0	3	8	63	0	38
SO	10	0	0	10	100	0	0
WA	17	5	0	22	77	23	0
AI	16	2	0	18	89	11	0
<b>Totals:</b>	<b>48</b>	<b>7</b>	<b>3</b>	<b>58</b>	<b>83%</b>	<b>12%</b>	<b>5%</b>
<b>Lab: BM</b> Battelle Memorial Institute, Columbus, OH							
WA	8	0	0	8	100	0	0
AI	9	1	0	10	90	10	0
SO	6	1	0	7	86	14	0
VE	6	0	0	6	100	0	0
<b>Totals:</b>	<b>29</b>	<b>2</b>	<b>0</b>	<b>31</b>	<b>94%</b>	<b>6%</b>	<b>0%</b>
<b>Lab: BN</b> Brookhaven National Laboratory, Upton, NY							
SO	4	2	0	6	67	33	0
WA	16	2	2	20	80	10	10
AI	9	11	7	27	33	41	26
VE	9	0	0	9	100	0	0

## QAP 48 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
<b>Totals:</b>	<b>38</b>	<b>15</b>	<b>9</b>	<b>62</b>	<b>61%</b>	<b>24%</b>	<b>15%</b>
<b>Lab: BP</b> Battelle Pacific Northwest National Laboratory							
VE	7	0	0	7	100	0	0
SO	4	1	0	5	80	20	0
WA	12	0	0	12	100	0	0
AI	13	1	0	14	93	7	0
<b>Totals:</b>	<b>36</b>	<b>2</b>	<b>0</b>	<b>38</b>	<b>95%</b>	<b>5%</b>	<b>0%</b>
<b>Lab: BQ</b> Becquerel Laboratories Inc., Mississauga, Ontario, Canada							
VE	1	1	0	2	50	50	0
SO	2	0	1	3	67	0	33
WA	4	1	0	5	80	20	0
AI	7	0	1	8	88	0	13
<b>Totals:</b>	<b>14</b>	<b>2</b>	<b>2</b>	<b>18</b>	<b>78%</b>	<b>11%</b>	<b>11%</b>
<b>Lab: BR</b> US Army Research Laboratory, Aberdeen Proving Ground							
VE	1	0	1	2	50	0	50
WA	0	4	0	4	0	100	0
<b>Totals:</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>6</b>	<b>17%</b>	<b>67%</b>	<b>17%</b>
<b>Lab: BS</b> B&W Nuclear Envir. Services, Leechburg, PA							
SO	2	0	0	2	100	0	0
WA	4	0	0	4	100	0	0
AI	6	2	1	9	67	22	11
VE	0	3	1	4	0	75	25
<b>Totals:</b>	<b>12</b>	<b>5</b>	<b>2</b>	<b>19</b>	<b>63%</b>	<b>26%</b>	<b>11%</b>
<b>Lab: BU</b> Autoridad Regulatoria, Buenos Aires, Argentina							
VE	7	1	0	8	88	13	0
SO	6	2	0	8	75	25	0
WA	10	1	0	11	91	9	0
AI	16	0	0	16	100	0	0
<b>Totals:</b>	<b>39</b>	<b>4</b>	<b>0</b>	<b>43</b>	<b>91%</b>	<b>9%</b>	<b>0%</b>

## QAP 48 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
<b>Lab: BX</b> B&W Nuclear Envir. Services, Lynchburg, VA							
AI	6	2	7	15	40	13	47
VE	2	5	0	7	29	71	0
SO	5	1	0	6	83	17	0
WA	10	3	0	13	77	23	0
<b>Totals:</b>	<b>23</b>	<b>11</b>	<b>7</b>	<b>41</b>	<b>56%</b>	<b>27%</b>	<b>17%</b>
<b>Lab: CA</b> Atomic Energy Control Board, Ottawa, Canada							
AI	9	0	0	9	100	0	0
SO	1	0	0	1	100	0	0
WA	3	2	0	5	60	40	0
<b>Totals:</b>	<b>13</b>	<b>2</b>	<b>0</b>	<b>15</b>	<b>87%</b>	<b>13%</b>	<b>0%</b>
<b>Lab: CB</b> Radiation Protection Bureau, Ontario, Canada							
WA	2	0	0	2	100	0	0
<b>Totals:</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>100%</b>	<b>0%</b>	<b>0%</b>
<b>Lab: CD</b> Gentilly-2 Nuclear Power Plant, Quebec, Canada							
VE	3	0	0	3	100	0	0
SO	1	1	0	2	50	50	0
WA	5	1	0	6	83	17	0
AI	5	3	1	9	56	33	11
<b>Totals:</b>	<b>14</b>	<b>5</b>	<b>1</b>	<b>20</b>	<b>70%</b>	<b>25%</b>	<b>5%</b>
<b>Lab: CH</b> California State Dept. Health Serv., Sanitation & Radiation Laboratory							
VE	7	0	0	7	100	0	0
AI	17	0	0	17	100	0	0
<b>Totals:</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>100%</b>	<b>0%</b>	<b>0%</b>
<b>Lab: CL</b> Core Laboratories, Casper, WY							
AI	12	1	1	14	86	7	7
VE	0	4	3	7	0	57	43
SO	7	1	0	8	88	13	0
WA	7	3	2	12	58	25	17

## QAP 48 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
<b>Totals:</b>	<b>26</b>	<b>9</b>	<b>6</b>	<b>41</b>	<b>63%</b>	<b>22%</b>	<b>15%</b>
<b>Lab: CN</b> China Institute for Radiation Protection							
AI	7	0	0	7	100	0	0
VE	3	0	0	3	100	0	0
SO	2	0	0	2	100	0	0
<b>Totals:</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>100%</b>	<b>0%</b>	<b>0%</b>
<b>Lab: CO</b> Bedford Institute of Oceanography, Dartmouth, Nova Scotia, Canada							
VE	2	0	0	2	100	0	0
SO	1	0	0	1	100	0	0
AI	6	1	0	7	86	14	0
<b>Totals:</b>	<b>9</b>	<b>1</b>	<b>0</b>	<b>10</b>	<b>90%</b>	<b>10%</b>	<b>0%</b>
<b>Lab: CR</b> Laboratorio de Fisica Nuclear Aplicada, Costa Rica							
AI	2	3	0	5	40	60	0
VE	1	2	0	3	33	67	0
SO	0	2	0	2	0	100	0
WA	3	0	0	3	100	0	0
<b>Totals:</b>	<b>6</b>	<b>7</b>	<b>0</b>	<b>13</b>	<b>46%</b>	<b>54%</b>	<b>0%</b>
<b>Lab: CS</b> Boeing North American, Canoga Park, CA							
WA	4	0	0	4	100	0	0
AI	1	2	7	10	10	20	70
VE	3	0	1	4	75	0	25
SO	3	0	1	4	75	0	25
<b>Totals:</b>	<b>11</b>	<b>2</b>	<b>9</b>	<b>22</b>	<b>50%</b>	<b>9%</b>	<b>41%</b>
<b>Lab: DC</b> Datachem Laboratories, Salt Lake City							
VE	3	0	0	3	100	0	0
SO	1	0	1	2	50	0	50
WA	2	1	3	6	33	17	50
AI	7	1	1	9	78	11	11
<b>Totals:</b>	<b>13</b>	<b>2</b>	<b>5</b>	<b>20</b>	<b>65%</b>	<b>10%</b>	<b>25%</b>

## QAP 48 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
<b>Lab: DH</b> Duke Engineering Services Hanford							
AI	9	0	0	9	100	0	0
SO	2	0	0	2	100	0	0
WA	3	1	3	7	43	14	43
<b>Totals:</b>	<b>14</b>	<b>1</b>	<b>3</b>	<b>18</b>	<b>78%</b>	<b>6%</b>	<b>17%</b>
<b>Lab: DP</b> Duke Power Company, Huntersville, NC							
WA	9	8	7	24	38	33	29
AI	3	3	0	6	50	50	0
<b>Totals:</b>	<b>12</b>	<b>11</b>	<b>7</b>	<b>30</b>	<b>40%</b>	<b>37%</b>	<b>23%</b>
<b>Lab: EG</b> LMITCO/INEL, Scoville							
AI	13	0	0	13	100	0	0
VE	8	0	0	8	100	0	0
SO	7	0	0	7	100	0	0
WA	10	1	0	11	91	9	0
<b>Totals:</b>	<b>38</b>	<b>1</b>	<b>0</b>	<b>39</b>	<b>97%</b>	<b>3%</b>	<b>0%</b>
<b>Lab: EI</b> Eichrom Industries, Inc., Argonne							
AI	3	2	0	5	60	40	0
WA	3	3	1	7	43	43	14
VE	1	0	0	1	100	0	0
SO	1	2	0	3	33	67	0
<b>Totals:</b>	<b>8</b>	<b>7</b>	<b>1</b>	<b>16</b>	<b>50%</b>	<b>44%</b>	<b>6%</b>
<b>Lab: EL</b> Energy Laboratories, Inc., Casper, WY							
VE	1	0	2	3	33	0	67
SO	1	2	0	3	33	67	0
WA	0	1	3	4	0	25	75
AI	0	0	7	7	0	0	100
<b>Totals:</b>	<b>2</b>	<b>3</b>	<b>12</b>	<b>17</b>	<b>12%</b>	<b>18%</b>	<b>71%</b>
<b>Lab: EP</b> US EPA, Las Vegas							
VE	3	0	0	3	100	0	0
SO	2	0	0	2	100	0	0
WA	7	1	0	8	88	13	0

## QAP 48 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
AI	10	0	0	10	100	0	0
<b>Totals:</b>	<b>22</b>	<b>1</b>	<b>0</b>	<b>23</b>	<b>96%</b>	<b>4%</b>	<b>0%</b>
<b>Lab: EG</b> EGL Environmental, Santa Paula, CA							
SO	2	1	0	3	67	33	0
AI	9	0	1	10	90	0	10
WA	6	2	2	10	60	20	20
<b>Totals:</b>	<b>17</b>	<b>3</b>	<b>3</b>	<b>23</b>	<b>74%</b>	<b>13%</b>	<b>13%</b>
<b>Lab: FI</b> The University of the South Pacific, Fiji Islands							
VE	2	0	0	2	100	0	0
SO	3	0	0	3	100	0	0
AI	2	3	3	8	25	38	38
<b>Totals:</b>	<b>7</b>	<b>3</b>	<b>3</b>	<b>13</b>	<b>54%</b>	<b>23%</b>	<b>23%</b>
<b>Lab: FL</b> Florida Dept of Health & Rehab. Serv., Orlando							
VE	3	1	0	4	75	25	0
SO	4	0	0	4	100	0	0
WA	5	1	1	7	71	14	14
AI	8	1	2	11	73	9	18
<b>Totals:</b>	<b>20</b>	<b>3</b>	<b>3</b>	<b>26</b>	<b>77%</b>	<b>12%</b>	<b>12%</b>
<b>Lab: FM</b> Florida Mobile Emergency Radiological Laboratory, Orlando							
WA	3	0	0	3	100	0	0
AI	7	0	0	7	100	0	0
<b>Totals:</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>100%</b>	<b>0%</b>	<b>0%</b>
<b>Lab: FN</b> Fermi Lab, Batavia, IL							
WA	4	0	0	4	100	0	0
AI	7	0	0	7	100	0	0
SO	3	0	0	3	100	0	0
VE	1	2	0	3	33	67	0
<b>Totals:</b>	<b>15</b>	<b>2</b>	<b>0</b>	<b>17</b>	<b>88%</b>	<b>12%</b>	<b>0%</b>

## QAP 48 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
<b>Lab: FR</b> CEA/DAM - SPR/B3							
SO	5	2	0	7	71	29	0
WA	9	3	0	12	75	25	0
AI	8	2	0	10	80	20	0
VE	5	0	0	5	100	0	0
<b>Totals:</b>	<b>27</b>	<b>7</b>	<b>0</b>	<b>34</b>	<b>79%</b>	<b>21%</b>	<b>0%</b>
<b>Lab: FS</b> Florida State University, Tallahassee							
SO	3	0	0	3	100	0	0
<b>Totals:</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>100%</b>	<b>0%</b>	<b>0%</b>
<b>Lab: GA</b> Lockheed Martin, Pikton, OH							
AI	11	2	0	13	85	15	0
VE	6	0	0	6	100	0	0
SO	5	2	0	7	71	29	0
WA	7	2	0	9	78	22	0
<b>Totals:</b>	<b>29</b>	<b>6</b>	<b>0</b>	<b>35</b>	<b>83%</b>	<b>17%</b>	<b>0%</b>
<b>Lab: GC</b> Georgia Power Company Environmental Lab							
AI	1	1	0	2	50	50	0
WA	7	1	0	8	88	13	0
SO	2	0	0	2	100	0	0
VE	3	0	0	3	100	0	0
<b>Totals:</b>	<b>13</b>	<b>2</b>	<b>0</b>	<b>15</b>	<b>87%</b>	<b>13%</b>	<b>0%</b>
<b>Lab: GE</b> Environmental Physics, Inc., Charleston, SC							
VE	6	1	0	7	86	14	0
SO	6	0	1	7	86	0	14
WA	13	1	0	14	93	7	0
AI	14	1	1	16	88	6	6
<b>Totals:</b>	<b>39</b>	<b>3</b>	<b>2</b>	<b>44</b>	<b>89%</b>	<b>7%</b>	<b>5%</b>
<b>Lab: GP</b> GPU Nuclear, Inc., Harrisburg, PA							
VE	4	0	0	4	100	0	0
SO	2	0	0	2	100	0	0
WA	12	0	2	14	86	0	14



## QAP 48 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary				Evaluation Percentages		
	A	W	N	Total Analyses	%A	%W	%N
AI	13	2	1	16	81	13	6
<b>Totals:</b>	<b>31</b>	<b>2</b>	<b>3</b>	<b>36</b>	<b>86%</b>	<b>6%</b>	<b>8%</b>
<b>Lab: GS</b> USGS/NWQL, Arvada, CO							
WA	2	0	1	3	67	0	33
<b>Totals:</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>67%</b>	<b>0%</b>	<b>33%</b>
<b>Lab: GT</b> Georgia Institute of Technology							
SO	5	0	0	5	100	0	0
WA	9	2	0	11	82	18	0
VE	6	0	0	6	100	0	0
AI	13	1	0	14	93	7	0
<b>Totals:</b>	<b>33</b>	<b>3</b>	<b>0</b>	<b>36</b>	<b>92%</b>	<b>8%</b>	<b>0%</b>
<b>Lab: HC</b> Lawrence Livermore Laboratory, California							
WA	3	0	0	3	100	0	0
AI	0	2	0	2	0	100	0
<b>Totals:</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>5</b>	<b>60%</b>	<b>40%</b>	<b>0%</b>
<b>Lab: HU</b> Water Resources Research Centre (VITUKI), Hungary							
VE	3	0	0	3	100	0	0
SO	1	1	0	2	50	50	0
AI	6	0	1	7	86	0	14
<b>Totals:</b>	<b>10</b>	<b>1</b>	<b>1</b>	<b>12</b>	<b>83%</b>	<b>8%</b>	<b>8%</b>
<b>Lab: IA</b> Bhabha Atomic Research Centre, India							
VE	0	9	4	13	0	69	31
SO	1	2	6	9	11	22	67
AI	11	10	3	24	46	42	13
<b>Totals:</b>	<b>12</b>	<b>21</b>	<b>13</b>	<b>46</b>	<b>26%</b>	<b>46%</b>	<b>28%</b>
<b>Lab: ID</b> DPRA - IRD/CNEN, Rio de Janeiro, Brazil							
SO	5	1	0	6	83	17	0
WA	8	1	0	9	89	11	0

## QAP 48 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
AI	3	7	3	13	23	54	23
VE	6	0	0	6	100	0	0
<b>Totals:</b>	<b>22</b>	<b>9</b>	<b>3</b>	<b>34</b>	<b>65%</b>	<b>26%</b>	<b>9%</b>
<b>Lab: IE</b> IEA, Inc., Morrisville, NC							
VE	5	2	0	7	71	29	0
SO	9	0	0	9	100	0	0
WA	14	0	0	14	100	0	0
AI	14	1	0	15	93	7	0
<b>Totals:</b>	<b>42</b>	<b>3</b>	<b>0</b>	<b>45</b>	<b>93%</b>	<b>7%</b>	<b>0%</b>
<b>Lab: IL</b> ISU Environmental Monitoring Program, Pocatello, ID							
VE	0	2	1	3	0	67	33
SO	0	0	2	2	0	0	100
WA	3	0	0	3	100	0	0
AI	7	0	0	7	100	0	0
<b>Totals:</b>	<b>10</b>	<b>2</b>	<b>3</b>	<b>15</b>	<b>67%</b>	<b>13%</b>	<b>20%</b>
<b>Lab: IN</b> Lockheed Martin Idaho Technical Corp., Analytical Laboratory							
WA	7	2	0	9	78	22	0
AI	7	0	0	7	100	0	0
SO	5	2	0	7	71	29	0
VE	3	0	0	3	100	0	0
<b>Totals:</b>	<b>22</b>	<b>4</b>	<b>0</b>	<b>26</b>	<b>85%</b>	<b>15%</b>	<b>0%</b>
<b>Lab: IS</b> Quanterra- St. Louis							
SO	3	1	1	5	60	20	20
WA	6	5	0	11	55	45	0
AI	10	1	1	12	83	8	8
VE	1	4	1	6	17	67	17
<b>Totals:</b>	<b>20</b>	<b>11</b>	<b>3</b>	<b>34</b>	<b>59%</b>	<b>32%</b>	<b>9%</b>
<b>Lab: IT</b> Quanterra- Richland Laboratory							
VE	5	2	0	7	71	29	0
SO	8	0	0	8	100	0	0
WA	12	1	0	13	92	8	0
AI	16	0	0	16	100	0	0

## QAP 48 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
<b>Totals:</b>	<b>41</b>	<b>3</b>	<b>0</b>	<b>44</b>	<b>93%</b>	<b>7%</b>	<b>0%</b>
<b>Lab: JE</b> Jacobs Engineering, Oak Ridge, TN							
WA	3	1	1	5	60	20	20
AI	2	0	0	2	100	0	0
SO	2	0	0	2	100	0	0
<b>Totals:</b>	<b>7</b>	<b>1</b>	<b>1</b>	<b>9</b>	<b>78%</b>	<b>11%</b>	<b>11%</b>
<b>Lab: JL</b> Jefferson Lab, Newport News, VA							
WA	2	1	1	4	50	25	25
AI	6	1	1	8	75	13	13
<b>Totals:</b>	<b>8</b>	<b>2</b>	<b>2</b>	<b>12</b>	<b>67%</b>	<b>17%</b>	<b>17%</b>
<b>Lab: KA</b> Knolls Atomic Power Lab, Schenectady							
SO	4	0	0	4	100	0	0
WA	9	1	0	10	90	10	0
AI	2	0	0	2	100	0	0
<b>Totals:</b>	<b>15</b>	<b>1</b>	<b>0</b>	<b>16</b>	<b>94%</b>	<b>6%</b>	<b>0%</b>
<b>Lab: KO</b> Korea Institute of Nuclear Safety]							
VE	7	0	0	7	100	0	0
SO	9	0	0	9	100	0	0
WA	11	0	1	12	92	0	8
AI	16	0	1	17	94	0	6
<b>Totals:</b>	<b>43</b>	<b>0</b>	<b>2</b>	<b>45</b>	<b>96%</b>	<b>0%</b>	<b>4%</b>
<b>Lab: KR</b> Korea Atomic Energy Research Institute							
VE	4	0	0	4	100	0	0
SO	3	0	0	3	100	0	0
AI	2	0	0	2	100	0	0
<b>Totals:</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>100%</b>	<b>0%</b>	<b>0%</b>
<b>Lab: LA</b> Los Alamos National Laboratory, NM							
SO	12	2	4	18	67	11	22

## QAP 48 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
WA	19	9	2	30	63	30	7
VE	13	1	0	14	93	7	0
AI	25	2	3	30	83	7	10
<b>Totals:</b>	<b>69</b>	<b>14</b>	<b>9</b>	<b>92</b>	<b>75%</b>	<b>15%</b>	<b>10%</b>
<b>Lab: LL</b> LLNL Chemistry and Material Science/Environmental							
VE	6	0	0	6	100	0	0
SO	5	0	1	6	83	0	17
WA	11	0	0	11	100	0	0
AI	10	1	3	14	71	7	21
<b>Totals:</b>	<b>32</b>	<b>1</b>	<b>4</b>	<b>37</b>	<b>86%</b>	<b>3%</b>	<b>11%</b>
<b>Lab: LM</b> Los Alamos National Lab, Mercury, NV							
SO	2	0	0	2	100	0	0
WA	1	0	2	3	33	0	67
AI	2	1	6	9	22	11	67
<b>Totals:</b>	<b>5</b>	<b>1</b>	<b>8</b>	<b>14</b>	<b>36%</b>	<b>7%</b>	<b>57%</b>
<b>Lab: LN</b> Los Alamos National Lab, ES&H							
WA	1	1	2	4	25	25	50
AI	9	0	0	9	100	0	0
<b>Totals:</b>	<b>10</b>	<b>1</b>	<b>2</b>	<b>13</b>	<b>77%</b>	<b>8%</b>	<b>15%</b>
<b>Lab: LV</b> UNLV, Dept of Health Physics							
SO	1	2	2	5	20	40	40
WA	2	3	4	9	22	33	44
VE	2	0	1	3	67	0	33
AI	6	1	3	10	60	10	30
<b>Totals:</b>	<b>11</b>	<b>6</b>	<b>10</b>	<b>27</b>	<b>41%</b>	<b>22%</b>	<b>37%</b>
<b>Lab: LW</b> Lawrence Livermore National Lab, Waste							
WA	1	0	0	1	100	0	0
<b>Totals:</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>100%</b>	<b>0%</b>	<b>0%</b>

## QAP 48 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
<b>Lab: MA</b> ORNL Health Sciences Research Div.							
VE	1	3	0	4	25	75	0
SO	2	2	0	4	50	50	0
<b>Totals:</b>	<b>3</b>	<b>5</b>	<b>0</b>	<b>8</b>	<b>38%</b>	<b>63%</b>	<b>0%</b>
<b>Lab: ME</b> Radiation Control Program, Jamaica Plain, MA							
VE	0	1	2	3	0	33	67
SO	3	0	0	3	100	0	0
WA	4	1	0	5	80	20	0
AI	3	6	1	10	30	60	10
<b>Totals:</b>	<b>10</b>	<b>8</b>	<b>3</b>	<b>21</b>	<b>48%</b>	<b>38%</b>	<b>14%</b>
<b>Lab: MH</b> Maine Health & Environmental Testing Laboratory							
VE	3	0	0	3	100	0	0
SO	2	0	0	2	100	0	0
WA	6	3	0	9	67	33	0
AI	2	5	0	7	29	71	0
<b>Totals:</b>	<b>13</b>	<b>8</b>	<b>0</b>	<b>21</b>	<b>62%</b>	<b>38%</b>	<b>0%</b>
<b>Lab: ML</b> EG&G Mound Applied Technologies, Miamisburg, OH							
VE	5	0	0	5	100	0	0
AI	7	4	0	11	64	36	0
SO	6	0	0	6	100	0	0
WA	9	0	0	9	100	0	0
<b>Totals:</b>	<b>27</b>	<b>4</b>	<b>0</b>	<b>31</b>	<b>87%</b>	<b>13%</b>	<b>0%</b>
<b>Lab: MS</b> Manufacturing Sciences Corporation, Oak Ridge							
WA	4	0	1	5	80	0	20
AI	7	0	0	7	100	0	0
<b>Totals:</b>	<b>11</b>	<b>0</b>	<b>1</b>	<b>12</b>	<b>92%</b>	<b>0%</b>	<b>8%</b>
<b>Lab: NA</b> US EPA NAREL, Montgomery, AL							
VE	5	1	0	6	83	17	0
SO	5	0	0	5	100	0	0
WA	5	2	0	7	71	29	0
AI	9	1	0	10	90	10	0

## QAP 48 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
<b>Totals:</b>	<b>24</b>	<b>4</b>	<b>0</b>	<b>28</b>	<b>86%</b>	<b>14%</b>	<b>0%</b>
<b>Lab: NF</b> Nuclear Fuel Services, Erwin, TN							
VE	0	1	0	1	0	100	0
SO	0	1	1	2	0	50	50
WA	3	0	0	3	100	0	0
<b>Totals:</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>6</b>	<b>50%</b>	<b>33%</b>	<b>17%</b>
<b>Lab: NL</b> Fluor Daniel Fernald, Inc., Ohio							
SO	4	1	0	5	80	20	0
WA	3	4	0	7	43	57	0
AI	9	2	0	11	82	18	0
<b>Totals:</b>	<b>16</b>	<b>7</b>	<b>0</b>	<b>23</b>	<b>70%</b>	<b>30%</b>	<b>0%</b>
<b>Lab: NM</b> Environmental Evaluation Group, Carlsbad, NM							
SO	3	0	0	3	100	0	0
WA	3	1	0	4	75	25	0
AI	4	0	0	4	100	0	0
<b>Totals:</b>	<b>10</b>	<b>1</b>	<b>0</b>	<b>11</b>	<b>91%</b>	<b>9%</b>	<b>0%</b>
<b>Lab: NP</b> IAF Environmental Laboratory, New York Power Authority							
VE	1	1	0	2	50	50	0
SO	0	1	0	1	0	100	0
WA	3	2	0	5	60	40	0
AI	7	1	0	8	88	13	0
<b>Totals:</b>	<b>11</b>	<b>5</b>	<b>0</b>	<b>16</b>	<b>69%</b>	<b>31%</b>	<b>0%</b>
<b>Lab: NR</b> Naval Reactors Facility Chemistry, Scoville, ID							
VE	3	0	0	3	100	0	0
SO	2	0	0	2	100	0	0
<b>Totals:</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>100%</b>	<b>0%</b>	<b>0%</b>
<b>Lab: NS</b> State Lab of Public Health, North Carolina							
WA	4	1	0	5	80	20	0

## QAP 48 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
AI	7	2	0	9	78	22	0
<b>Totals:</b>	<b>11</b>	<b>3</b>	<b>0</b>	<b>14</b>	<b>79%</b>	<b>21%</b>	<b>0%</b>
<b>Lab: OB</b> OBG Laboratories, East Syracuse, NY							
AI	2	0	0	2	100	0	0
WA	1	1	0	2	50	50	0
<b>Totals:</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>75%</b>	<b>25%</b>	<b>0%</b>
<b>Lab: OD</b> ORNL, Radiobioassay Lab							
WA	10	0	0	10	100	0	0
AI	9	0	0	9	100	0	0
<b>Totals:</b>	<b>19</b>	<b>0</b>	<b>0</b>	<b>19</b>	<b>100%</b>	<b>0%</b>	<b>0%</b>
<b>Lab: OK</b> Southwest Laboratory of Oklahoma							
WA	3	0	0	3	100	0	0
AI	1	1	0	2	50	50	0
<b>Totals:</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>80%</b>	<b>20%</b>	<b>0%</b>
<b>Lab: OL</b> ORNL Environmental Sciences Div.							
VE	3	0	0	3	100	0	0
SO	2	0	0	2	100	0	0
WA	3	0	0	3	100	0	0
AI	6	1	0	7	86	14	0
<b>Totals:</b>	<b>14</b>	<b>1</b>	<b>0</b>	<b>15</b>	<b>93%</b>	<b>7%</b>	<b>0%</b>
<b>Lab: OT</b> ORNL Radioactive Material Analysis Lab							
AI	12	1	1	14	86	7	7
VE	5	2	0	7	71	29	0
SO	6	0	0	6	100	0	0
WA	8	3	0	11	73	27	0
<b>Totals:</b>	<b>31</b>	<b>6</b>	<b>1</b>	<b>38</b>	<b>82%</b>	<b>16%</b>	<b>3%</b>
<b>Lab: OU</b> Outreach Laboratory, Broken Arrow, OK							
AI	6	2	1	9	67	22	11

## QAP 48 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary				Evaluation Percentages		
	A	W	N	Total Analyses	%A	%W	%N
WA	7	1	1	9	78	11	11
VE	0	1	2	3	0	33	67
SO	1	2	0	3	33	67	0
<b>Totals:</b>	<b>14</b>	<b>6</b>	<b>4</b>	<b>24</b>	<b>58%</b>	<b>25%</b>	<b>17%</b>
<b>Lab: PA</b> Mason & Hanger-Silas Mason Co., Inc., Battelle Pantex, Amarillo, TX							
AI	2	0	0	2	100	0	0
<b>Totals:</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>100%</b>	<b>0%</b>	<b>0%</b>
<b>Lab: PK</b> Pakistan Institute of Nuclear Science & Technology							
VE	2	0	0	2	100	0	0
SO	2	0	0	2	100	0	0
AI	0	0	2	2	0	0	100
<b>Totals:</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>6</b>	<b>67%</b>	<b>0%</b>	<b>33%</b>
<b>Lab: PO</b> Institute of Oceanology PAN, Poland							
VE	3	0	0	3	100	0	0
SO	2	0	0	2	100	0	0
AI	6	0	1	7	86	0	14
<b>Totals:</b>	<b>11</b>	<b>0</b>	<b>1</b>	<b>12</b>	<b>92%</b>	<b>0%</b>	<b>8%</b>
<b>Lab: PR</b> Princeton Plasma Physics Lab							
WA	1	0	0	1	100	0	0
<b>Totals:</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>100%</b>	<b>0%</b>	<b>0%</b>
<b>Lab: RA</b> V. G. Khlopin Radium Institute, St. Petersburg, Russia							
AI	10	0	0	10	100	0	0
VE	5	1	0	6	83	17	0
SO	4	3	0	7	57	43	0
<b>Totals:</b>	<b>19</b>	<b>4</b>	<b>0</b>	<b>23</b>	<b>83%</b>	<b>17%</b>	<b>0%</b>
<b>Lab: RC</b> US NRC Region I Laboratory, PA							
AI	9	0	0	9	100	0	0
SO	2	0	0	2	100	0	0



## QAP 48 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
WA	4	0	0	4	100	0	0
<b>Totals:</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>100%</b>	<b>0%</b>	<b>0%</b>
<b>Lab: RD</b> Radiation Detection Company, CA							
AI	0	1	1	2	0	50	50
<b>Totals:</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>0%</b>	<b>50%</b>	<b>50%</b>
<b>Lab: RE</b> Bechtel Nevada, Mercury, NV							
VE	6	0	0	6	100	0	0
SO	7	0	0	7	100	0	0
WA	10	0	2	12	83	0	17
AI	15	0	0	15	100	0	0
<b>Totals:</b>	<b>38</b>	<b>0</b>	<b>2</b>	<b>40</b>	<b>95%</b>	<b>0%</b>	<b>5%</b>
<b>Lab: RG</b> Thermo Nutech Rocky Flats Plant, Golden							
WA	2	0	0	2	100	0	0
<b>Totals:</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>100%</b>	<b>0%</b>	<b>0%</b>
<b>Lab: RI</b> Rust Federal Services of Hanford, Inc., 222S Lab							
VE	6	0	1	7	86	0	14
AI	11	1	0	12	92	8	0
WA	6	0	3	9	67	0	33
SO	1	0	2	3	33	0	67
<b>Totals:</b>	<b>24</b>	<b>1</b>	<b>6</b>	<b>31</b>	<b>77%</b>	<b>3%</b>	<b>19%</b>
<b>Lab: RK</b> Rock Island Arsenal, Illinois							
AI	1	2	0	3	33	67	0
<b>Totals:</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>3</b>	<b>33%</b>	<b>67%</b>	<b>0%</b>
<b>Lab: RL</b> Thermo Hanford							
VE	2	0	0	2	100	0	0
SO	0	2	0	2	0	100	0
WA	2	3	1	6	33	50	17
AI	9	0	1	10	90	0	10

## QAP 48 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
<b>Totals:</b>	<b>13</b>	<b>5</b>	<b>2</b>	<b>20</b>	<b>65%</b>	<b>25%</b>	<b>10%</b>
<b>Lab: SA</b> Sandia Labs Radioactive Sample Diag. Prog., NM							
SO	3	0	0	3	100	0	0
WA	5	1	0	6	83	17	0
AI	10	0	0	10	100	0	0
<b>Totals:</b>	<b>18</b>	<b>1</b>	<b>0</b>	<b>19</b>	<b>95%</b>	<b>5%</b>	<b>0%</b>
<b>Lab: SH</b> Savannah River Ecology Lab							
VE	2	0	0	2	100	0	0
SO	4	0	0	4	100	0	0
WA	1	3	1	5	20	60	20
<b>Totals:</b>	<b>7</b>	<b>3</b>	<b>1</b>	<b>11</b>	<b>64%</b>	<b>27%</b>	<b>9%</b>
<b>Lab: SK</b> Savannah River Plant							
SO	2	1	0	3	67	33	0
WA	7	2	0	9	78	22	0
VE	3	0	0	3	100	0	0
AI	8	0	0	8	100	0	0
<b>Totals:</b>	<b>20</b>	<b>3</b>	<b>0</b>	<b>23</b>	<b>87%</b>	<b>13%</b>	<b>0%</b>
<b>Lab: SL</b> Stanford Linear Accelerator Center							
WA	3	0	0	3	100	0	0
<b>Totals:</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>100%</b>	<b>0%</b>	<b>0%</b>
<b>Lab: SN</b> Sanford Cohen Associates, Inc., Montgomery, AL							
VE	4	1	1	6	67	17	17
SO	5	1	0	6	83	17	0
WA	10	0	0	10	100	0	0
AI	4	0	0	4	100	0	0
<b>Totals:</b>	<b>23</b>	<b>2</b>	<b>1</b>	<b>26</b>	<b>88%</b>	<b>8%</b>	<b>4%</b>
<b>Lab: SR</b> Savannah River Environmental Laboratory							
VE	6	0	1	7	86	0	14

## QAP 48 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
SO	2	0	3	5	40	0	60
WA	11	0	0	11	100	0	0
AI	12	2	0	14	86	14	0
<b>Totals:</b>	<b>31</b>	<b>2</b>	<b>4</b>	<b>37</b>	<b>84%</b>	<b>5%</b>	<b>11%</b>
<b>Lab: ST</b> SC DHEC, Aiken, South Carolina							
WA	1	0	0	1	100	0	0
<b>Totals:</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>100%</b>	<b>0%</b>	<b>0%</b>
<b>Lab: SW</b> Southwest Research Institute, San Antonio, TX							
AI	9	4	1	14	64	29	7
WA	7	0	4	11	64	0	36
SO	1	2	3	6	17	33	50
VE	0	1	5	6	0	17	83
<b>Totals:</b>	<b>17</b>	<b>7</b>	<b>13</b>	<b>37</b>	<b>46%</b>	<b>19%</b>	<b>35%</b>
<b>Lab: TE</b> Teledyne Isotopes Midwest Lab, Northbrook, IL							
VE	5	0	1	6	83	0	17
SO	3	2	1	6	50	33	17
WA	8	1	2	11	73	9	18
AI	11	0	1	12	92	0	8
<b>Totals:</b>	<b>27</b>	<b>3</b>	<b>5</b>	<b>35</b>	<b>77%</b>	<b>9%</b>	<b>14%</b>
<b>Lab: TI</b> Teledyne Brown Engineering Environmental Services, Westwood, NJ							
VE	5	0	2	7	71	0	29
SO	6	0	0	6	100	0	0
WA	10	2	0	12	83	17	0
AI	12	0	2	14	86	0	14
<b>Totals:</b>	<b>33</b>	<b>2</b>	<b>4</b>	<b>39</b>	<b>85%</b>	<b>5%</b>	<b>10%</b>
<b>Lab: TM</b> Thermo Nutech Albuquerque Lab, NM							
WA	8	6	0	14	57	43	0
AI	9	4	3	16	56	25	19
SO	7	1	0	8	88	13	0
VE	6	0	1	7	86	0	14

## QAP 48 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
<b>Totals:</b>	<b>30</b>	<b>11</b>	<b>4</b>	<b>45</b>	<b>67%</b>	<b>24%</b>	<b>9%</b>
<b>Lab: TN</b> Thermo NuTech, Richmond, CA							
SO	4	2	1	7	57	29	14
WA	9	3	2	14	64	21	14
AI	13	3	0	16	81	19	0
VE	4	3	0	7	57	43	0
<b>Totals:</b>	<b>30</b>	<b>11</b>	<b>3</b>	<b>44</b>	<b>68%</b>	<b>25%</b>	<b>7%</b>
<b>Lab: TO</b> Thermo NUtech Oak Ridge Laboratory							
VE	4	0	1	5	80	0	20
SO	5	0	2	7	71	0	29
WA	9	4	0	13	69	31	0
AI	2	4	3	9	22	44	33
<b>Totals:</b>	<b>20</b>	<b>8</b>	<b>6</b>	<b>34</b>	<b>59%</b>	<b>24%</b>	<b>18%</b>
<b>Lab: TP</b> Taiwan Power Company, Taipei, Taiwan							
SO	3	0	0	3	100	0	0
WA	6	0	0	6	100	0	0
VE	4	0	0	4	100	0	0
AI	9	1	0	10	90	10	0
<b>Totals:</b>	<b>22</b>	<b>1</b>	<b>0</b>	<b>23</b>	<b>96%</b>	<b>4%</b>	<b>0%</b>
<b>Lab: TT</b> Tracer Technologies International, Inc., Cleveland							
SO	0	1	1	2	0	50	50
WA	3	1	0	4	75	25	0
<b>Totals:</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>6</b>	<b>50%</b>	<b>33%</b>	<b>17%</b>
<b>Lab: TW</b> Taiwan Radiation Monitoring Center							
VE	8	0	0	8	100	0	0
SO	7	0	0	7	100	0	0
WA	11	0	1	12	92	0	8
AI	15	0	0	15	100	0	0
<b>Totals:</b>	<b>41</b>	<b>0</b>	<b>1</b>	<b>42</b>	<b>98%</b>	<b>0%</b>	<b>2%</b>

## QAP 48 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
<b>Lab: TX</b> Texas Dept. of Health/Laboratories, Austin							
VE	6	0	0	6	100	0	0
SO	8	0	0	8	100	0	0
WA	10	3	0	13	77	23	0
AI	11	1	0	12	92	8	0
<b>Totals:</b>	<b>35</b>	<b>4</b>	<b>0</b>	<b>39</b>	<b>90%</b>	<b>10%</b>	<b>0%</b>
<b>Lab: UC</b> Lockheed Martin, Paducah, KY							
WA	6	0	0	6	100	0	0
AI	3	1	0	4	75	25	0
SO	1	1	0	2	50	50	0
VE	3	0	0	3	100	0	0
<b>Totals:</b>	<b>13</b>	<b>2</b>	<b>0</b>	<b>15</b>	<b>87%</b>	<b>13%</b>	<b>0%</b>
<b>Lab: UP</b> Lockheed Martin Energy Systems, Y-12 Plant, Oak Ridge							
WA	8	2	1	11	73	18	9
AI	3	4	3	10	30	40	30
SO	6	0	0	6	100	0	0
<b>Totals:</b>	<b>17</b>	<b>6</b>	<b>4</b>	<b>27</b>	<b>63%</b>	<b>22%</b>	<b>15%</b>
<b>Lab: UY</b> Lockheed Martin Energy Systems, Y-12 Plant, Oak Ridge							
VE	5	2	0	7	71	29	0
SO	6	0	0	6	100	0	0
WA	11	0	0	11	100	0	0
AI	13	1	0	14	93	7	0
<b>Totals:</b>	<b>35</b>	<b>3</b>	<b>0</b>	<b>38</b>	<b>92%</b>	<b>8%</b>	<b>0%</b>
<b>Lab: WA</b> Environmental Radiation Lab, Off. of Public Health Labs, Seattle							
AI	13	3	0	16	81	19	0
VE	6	1	0	7	86	14	0
SO	8	0	0	8	100	0	0
WA	13	0	0	13	100	0	0
<b>Totals:</b>	<b>40</b>	<b>4</b>	<b>0</b>	<b>44</b>	<b>91%</b>	<b>9%</b>	<b>0%</b>
<b>Lab: WC</b> Westinghouse Hanford Co.							
AI	12	2	1	15	80	13	7

## QAP 48 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
WA	12	0	0	12	100	0	0
VE	7	0	0	7	100	0	0
SO	3	3	1	7	43	43	14
<b>Totals:</b>	<b>34</b>	<b>5</b>	<b>2</b>	<b>41</b>	<b>83%</b>	<b>12%</b>	<b>5%</b>
<b>Lab: WI</b> WIPP Site, Westinghouse Electric Corp							
WA	5	2	2	9	56	22	22
AI	13	0	0	13	100	0	0
<b>Totals:</b>	<b>18</b>	<b>2</b>	<b>2</b>	<b>22</b>	<b>82%</b>	<b>9%</b>	<b>9%</b>
<b>Lab: WP</b> Washington Public Power Supply System, Richland							
VE	2	1	0	3	67	33	0
SO	3	0	0	3	100	0	0
WA	4	1	1	6	67	17	17
AI	6	0	0	6	100	0	0
<b>Totals:</b>	<b>15</b>	<b>2</b>	<b>1</b>	<b>18</b>	<b>83%</b>	<b>11%</b>	<b>6%</b>
<b>Lab: WS</b> Weldon Springs Site, St Charles, MO							
SO	4	0	0	4	100	0	0
AI	1	0	0	1	100	0	0
<b>Totals:</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>100%</b>	<b>0%</b>	<b>0%</b>
<b>Lab: WV</b> West Valley Nuclear Services Co, Inc, NY							
AI	1	1	0	2	50	50	0
WA	7	0	0	7	100	0	0
<b>Totals:</b>	<b>8</b>	<b>1</b>	<b>0</b>	<b>9</b>	<b>89%</b>	<b>11%</b>	<b>0%</b>
<b>Lab: YA</b> Duke Engineering Environmental Lab, Westboro, MA							
AI	14	0	1	15	93	0	7
WA	12	2	0	14	86	14	0
VE	7	0	0	7	100	0	0
SO	6	1	0	7	86	14	0
<b>Totals:</b>	<b>39</b>	<b>3</b>	<b>1</b>	<b>43</b>	<b>91%</b>	<b>7%</b>	<b>2%</b>

## QAP 48 Summary of Matrix Evaluations by Laboratory

Matrix	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
<b>Lab: YP</b> US Army Proving Ground, Yuma, AZ							
SO	1	0	0	1	100	0	0
WA	1	0	0	1	100	0	0
AI	1	0	0	1	100	0	0
<b>Totals:</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>100%</b>	<b>0%</b>	<b>0%</b>
<b>Lab: YU</b> Institute of Occupational and Radiological Health, Yugoslavia							
AI	0	7	0	7	0	100	0
VE	0	3	0	3	0	100	0
SO	2	0	0	2	100	0	0
WA	3	0	0	3	100	0	0
<b>Totals:</b>	<b>5</b>	<b>10</b>	<b>0</b>	<b>15</b>	<b>33%</b>	<b>67%</b>	<b>0%</b>

## QAP 48 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	4	0	14	71	29	0
AG	12	3	0	15	80	20	0
AI	4	8	1	13	31	62	8
AL	2	3	4	9	22	33	44
AM	5	4	4	13	38	31	31
AN	11	2	0	13	85	15	0
AR	19	8	8	35	54	23	23
AU	2	6	6	14	14	43	43
BA	4	1	0	5	80	20	0
BC	2	3	7	12	17	25	58
BE	15	0	1	16	94	0	6
BL	16	2	0	18	89	11	0
BM	9	1	0	10	90	10	0
BN	9	11	7	27	33	41	26
BP	13	1	0	14	93	7	0
BQ	7	0	1	8	88	0	13
BS	6	2	1	9	67	22	11
BU	16	0	0	16	100	0	0
BX	6	2	7	15	40	13	47
CA	9	0	0	9	100	0	0
CD	5	3	1	9	56	33	11
CH	17	0	0	17	100	0	0
CL	12	1	1	14	86	7	7
CN	7	0	0	7	100	0	0
CO	6	1	0	7	86	14	0
CR	2	3	0	5	40	60	0
CS	1	2	7	10	10	20	70
DC	7	1	1	9	78	11	11
DH	9	0	0	9	100	0	0
DP	3	3	0	6	50	50	0
EG	13	0	0	13	100	0	0
EI	3	2	0	5	60	40	0
EL	0	0	7	7	0	0	100
EP	10	0	0	10	100	0	0
FG	9	0	1	10	90	0	10
FJ	2	3	3	8	25	38	38
FL	8	1	2	11	73	9	18
FM	7	0	0	7	100	0	0
FN	7	0	0	7	100	0	0
FR	8	2	0	10	80	20	0
GA	11	2	0	13	85	15	0
GC	1	1	0	2	50	50	0
GE	14	1	1	16	88	6	6
GP	13	2	1	16	81	13	6
GT	13	1	0	14	93	7	0
HC	0	2	0	2	0	100	0
HU	6	0	1	7	86	0	14
IA	11	10	3	24	46	42	13
ID	3	7	3	13	23	54	23
IE	14	1	0	15	93	7	0
IL	7	0	0	7	100	0	0
IN	7	0	0	7	100	0	0
IS	10	1	1	12	83	8	8
IT	16	0	0	16	100	0	0



## QAP 48 Summary of Laboratory Evaluations by Matrix

Matrix: AI Air Filter

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
JE	2	0	0	2	100	0	0
JL	6	1	1	8	75	13	13
KA	2	0	0	2	100	0	0
KO	16	0	1	17	94	0	6
KR	2	0	0	2	100	0	0
LA	25	2	3	30	83	7	10
LL	10	1	3	14	71	7	21
LM	2	1	6	9	22	11	67
LN	9	0	0	9	100	0	0
LV	6	1	3	10	60	10	30
ME	3	6	1	10	30	60	10
MH	2	5	0	7	29	71	0
ML	7	4	0	11	64	36	0
MS	7	0	0	7	100	0	0
NA	9	1	0	10	90	10	0
NL	9	2	0	11	82	18	0
NM	4	0	0	4	100	0	0
NP	7	1	0	8	88	13	0
NS	7	2	0	9	78	22	0
OB	2	0	0	2	100	0	0
OD	9	0	0	9	100	0	0
OK	1	1	0	2	50	50	0
OL	6	1	0	7	86	14	0
OT	12	1	1	14	86	7	7
OU	6	2	1	9	67	22	11
PA	2	0	0	2	100	0	0
PK	0	0	2	2	0	0	100
PO	6	0	1	7	86	0	14
RA	10	0	0	10	100	0	0
RC	9	0	0	9	100	0	0
RD	0	1	1	2	0	50	50
RE	15	0	0	15	100	0	0
RI	11	1	0	12	92	8	0
RK	1	2	0	3	33	67	0
RL	9	0	1	10	90	0	10
SA	10	0	0	10	100	0	0
SK	8	0	0	8	100	0	0
SN	4	0	0	4	100	0	0
SR	12	2	0	14	86	14	0
SW	9	4	1	14	64	29	7
TE	11	0	1	12	92	0	8
TI	12	0	2	14	86	0	14
TM	9	4	3	16	56	25	19
TN	13	3	0	16	81	19	0
TO	2	4	3	9	22	44	33
TP	9	1	0	10	90	10	0
TW	15	0	0	15	100	0	0
TX	11	1	0	12	92	8	0
UC	3	1	0	4	75	25	0
UP	3	4	3	10	30	40	30
UY	13	1	0	14	93	7	0
WA	13	3	0	16	81	19	0
WC	12	2	1	15	80	13	7
WI	13	0	0	13	100	0	0
WP	6	0	0	6	100	0	0

## QAP 48 Summary of Laboratory Evaluations by Matrix

**Matrix: AI** Air Filter

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
WS	1	0	0	1	100	0	0
WV	1	1	0	2	50	50	0
YA	14	0	1	15	93	0	7
YP	1	0	0	1	100	0	0
YU	0	7	0	7	0	100	0
<hr/>							
<b>Totals</b>							
<b>115 Labs:</b>	<b>888</b>	<b>187</b>	<b>120</b>	<b>1195</b>	<b>74%</b>	<b>16%</b>	<b>10%</b>

## QAP 48 Summary of Laboratory Evaluations by Matrix

Matrix: SO Soil

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
AC	3	0	1	4	75	0	25
AF	3	2	2	7	43	29	29
AG	9	0	0	9	100	0	0
AI	7	2	2	11	64	18	18
AL	0	0	2	2	0	0	100
AM	2	4	0	6	33	67	0
AN	7	0	0	7	100	0	0
AR	14	1	2	17	82	6	12
AT	0	3	0	3	0	100	0
AU	7	0	0	7	100	0	0
BA	1	0	0	1	100	0	0
BC	3	1	0	4	75	25	0
BE	8	0	0	8	100	0	0
BL	10	0	0	10	100	0	0
BM	6	1	0	7	86	14	0
BN	4	2	0	6	67	33	0
BP	4	1	0	5	80	20	0
BQ	2	0	1	3	67	0	33
BS	2	0	0	2	100	0	0
BU	6	2	0	8	75	25	0
BX	5	1	0	6	83	17	0
CA	1	0	0	1	100	0	0
CD	1	1	0	2	50	50	0
CL	7	1	0	8	88	13	0
CN	2	0	0	2	100	0	0
CO	1	0	0	1	100	0	0
CR	0	2	0	2	0	100	0
CS	3	0	1	4	75	0	25
DC	1	0	1	2	50	0	50
DH	2	0	0	2	100	0	0
EG	7	0	0	7	100	0	0
EI	1	2	0	3	33	67	0
EL	1	2	0	3	33	67	0
EP	2	0	0	2	100	0	0
FG	2	1	0	3	67	33	0
FJ	3	0	0	3	100	0	0
FL	4	0	0	4	100	0	0
FN	3	0	0	3	100	0	0
FR	5	2	0	7	71	29	0
FS	3	0	0	3	100	0	0
GA	5	2	0	7	71	29	0
GC	2	0	0	2	100	0	0
GE	6	0	1	7	86	0	14
GP	2	0	0	2	100	0	0
GT	5	0	0	5	100	0	0
HU	1	1	0	2	50	50	0
IA	1	2	6	9	11	22	67
ID	5	1	0	6	83	17	0
IE	9	0	0	9	100	0	0
IL	0	0	2	2	0	0	100
IN	5	2	0	7	71	29	0
IS	3	1	1	5	60	20	20
IT	8	0	0	8	100	0	0
JE	2	0	0	2	100	0	0
KA	4	0	0	4	100	0	0

## QAP 48 Summary of Laboratory Evaluations by Matrix

Matrix: SO Soil

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
KO	9	0	0	9	100	0	0
KR	3	0	0	3	100	0	0
LA	12	2	4	18	67	11	22
LL	5	0	1	6	83	0	17
LM	2	0	0	2	100	0	0
LV	1	2	2	5	20	40	40
MA	2	2	0	4	50	50	0
ME	3	0	0	3	100	0	0
MH	2	0	0	2	100	0	0
ML	6	0	0	6	100	0	0
NA	5	0	0	5	100	0	0
NF	0	1	1	2	0	50	50
NL	4	1	0	5	80	20	0
NM	3	0	0	3	100	0	0
NP	0	1	0	1	0	100	0
NR	2	0	0	2	100	0	0
OL	2	0	0	2	100	0	0
OT	6	0	0	6	100	0	0
OU	1	2	0	3	33	67	0
PK	2	0	0	2	100	0	0
PO	2	0	0	2	100	0	0
RA	4	3	0	7	57	43	0
RC	2	0	0	2	100	0	0
RE	7	0	0	7	100	0	0
RI	1	0	2	3	33	0	67
RL	0	2	0	2	0	100	0
SA	3	0	0	3	100	0	0
SH	4	0	0	4	100	0	0
SK	2	1	0	3	67	33	0
SN	5	1	0	6	83	17	0
SR	2	0	3	5	40	0	60
SW	1	2	3	6	17	33	50
TE	3	2	1	6	50	33	17
TI	6	0	0	6	100	0	0
TM	7	1	0	8	88	13	0
TN	4	2	1	7	57	29	14
TO	5	0	2	7	71	0	29
TP	3	0	0	3	100	0	0
TT	0	1	1	2	0	50	50
TW	7	0	0	7	100	0	0
TX	8	0	0	8	100	0	0
UC	1	1	0	2	50	50	0
UP	6	0	0	6	100	0	0
UY	6	0	0	6	100	0	0
WA	8	0	0	8	100	0	0
WC	3	3	1	7	43	43	14
WP	3	0	0	3	100	0	0
WS	4	0	0	4	100	0	0
YA	6	1	0	7	86	14	0
YP	1	0	0	1	100	0	0
YU	2	0	0	2	100	0	0

## QAP 48 Summary of Laboratory Evaluations by Matrix

Matrix: SO Soil

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
<hr/>							
<b>Totals</b> <b>106 Labs:</b>	<b>396</b>	<b>71</b>	<b>44</b>	<b>511</b>	<b>77%</b>	<b>14%</b>	<b>9%</b>

## QAP 48 Summary of Laboratory Evaluations by Matrix

Matrix: VE Vegetation

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
AF	1	3	2	6	17	50	33
AG	7	0	0	7	100	0	0
AI	10	1	1	12	83	8	8
AL	0	0	3	3	0	0	100
AM	4	0	0	4	100	0	0
AR	10	4	0	14	71	29	0
AU	6	0	0	6	100	0	0
BA	1	0	0	1	100	0	0
BC	3	1	0	4	75	25	0
BE	6	1	0	7	86	14	0
BL	5	0	3	8	63	0	38
BM	6	0	0	6	100	0	0
BN	9	0	0	9	100	0	0
BP	7	0	0	7	100	0	0
BQ	1	1	0	2	50	50	0
BR	1	0	1	2	50	0	50
BS	0	3	1	4	0	75	25
BU	7	1	0	8	88	13	0
BX	2	5	0	7	29	71	0
CD	3	0	0	3	100	0	0
CH	7	0	0	7	100	0	0
CL	0	4	3	7	0	57	43
CN	3	0	0	3	100	0	0
CO	2	0	0	2	100	0	0
CR	1	2	0	3	33	67	0
CS	3	0	1	4	75	0	25
DC	3	0	0	3	100	0	0
EG	8	0	0	8	100	0	0
EI	1	0	0	1	100	0	0
EL	1	0	2	3	33	0	67
EP	3	0	0	3	100	0	0
FJ	2	0	0	2	100	0	0
FL	3	1	0	4	75	25	0
FN	1	2	0	3	33	67	0
FR	5	0	0	5	100	0	0
GA	6	0	0	6	100	0	0
GC	3	0	0	3	100	0	0
GE	6	1	0	7	86	14	0
GP	4	0	0	4	100	0	0
GT	6	0	0	6	100	0	0
HU	3	0	0	3	100	0	0
IA	0	9	4	13	0	69	31
ID	6	0	0	6	100	0	0
IE	5	2	0	7	71	29	0
IL	0	2	1	3	0	67	33
IN	3	0	0	3	100	0	0
IS	1	4	1	6	17	67	17
IT	5	2	0	7	71	29	0
KO	7	0	0	7	100	0	0
KR	4	0	0	4	100	0	0
LA	13	1	0	14	93	7	0
LL	6	0	0	6	100	0	0
LV	2	0	1	3	67	0	33
MA	1	3	0	4	25	75	0
ME	0	1	2	3	0	33	67

## QAP 48 Summary of Laboratory Evaluations by Matrix

Matrix: VE Vegetation

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
MH	3	0	0	3	100	0	0
ML	5	0	0	5	100	0	0
NA	5	1	0	6	83	17	0
NF	0	1	0	1	0	100	0
NP	1	1	0	2	50	50	0
NR	3	0	0	3	100	0	0
OL	3	0	0	3	100	0	0
OT	5	2	0	7	71	29	0
OU	0	1	2	3	0	33	67
PK	2	0	0	2	100	0	0
PO	3	0	0	3	100	0	0
RA	5	1	0	6	83	17	0
RE	6	0	0	6	100	0	0
RI	6	0	1	7	86	0	14
RL	2	0	0	2	100	0	0
SH	2	0	0	2	100	0	0
SK	3	0	0	3	100	0	0
SN	4	1	1	6	67	17	17
SR	6	0	1	7	86	0	14
SW	0	1	5	6	0	17	83
TE	5	0	1	6	83	0	17
TI	5	0	2	7	71	0	29
TM	6	0	1	7	86	0	14
TN	4	3	0	7	57	43	0
TO	4	0	1	5	80	0	20
TP	4	0	0	4	100	0	0
TW	8	0	0	8	100	0	0
TX	6	0	0	6	100	0	0
UC	3	0	0	3	100	0	0
UY	5	2	0	7	71	29	0
WA	6	1	0	7	86	14	0
WC	7	0	0	7	100	0	0
WP	2	1	0	3	67	33	0
YA	7	0	0	7	100	0	0
YU	0	3	0	3	0	100	0
<b>Totals</b>							
<b>90 Labs:</b>	<b>349</b>	<b>73</b>	<b>41</b>	<b>463</b>	<b>75%</b>	<b>16%</b>	<b>9%</b>

## QAP 48 Summary of Laboratory Evaluations by Matrix

Matrix: WAWater

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
AC	5	2	1	8	63	25	13
AF	9	1	2	12	75	8	17
AG	11	1	0	12	92	8	0
AI	6	0	3	9	67	0	33
AL	1	2	0	3	33	67	0
AM	5	4	0	9	56	44	0
AN	10	0	0	10	100	0	0
AR	14	6	9	29	48	21	31
AT	3	1	0	4	75	25	0
AU	7	4	1	12	58	33	8
BA	6	0	0	6	100	0	0
BC	4	4	0	8	50	50	0
BE	11	1	1	13	85	8	8
BL	17	5	0	22	77	23	0
BM	8	0	0	8	100	0	0
BN	16	2	2	20	80	10	10
BP	12	0	0	12	100	0	0
BQ	4	1	0	5	80	20	0
BR	0	4	0	4	0	100	0
BS	4	0	0	4	100	0	0
BU	10	1	0	11	91	9	0
BX	10	3	0	13	77	23	0
CA	3	2	0	5	60	40	0
CB	2	0	0	2	100	0	0
CD	5	1	0	6	83	17	0
CL	7	3	2	12	58	25	17
CR	3	0	0	3	100	0	0
CS	4	0	0	4	100	0	0
DC	2	1	3	6	33	17	50
DH	3	1	3	7	43	14	43
DP	9	8	7	24	38	33	29
EG	10	1	0	11	91	9	0
EI	3	3	1	7	43	43	14
EL	0	1	3	4	0	25	75
EP	7	1	0	8	88	13	0
FG	6	2	2	10	60	20	20
FL	5	1	1	7	71	14	14
FM	3	0	0	3	100	0	0
FN	4	0	0	4	100	0	0
FR	9	3	0	12	75	25	0
GA	7	2	0	9	78	22	0
GC	7	1	0	8	88	13	0
GE	13	1	0	14	93	7	0
GP	12	0	2	14	86	0	14
GS	2	0	1	3	67	0	33
GT	9	2	0	11	82	18	0
HC	3	0	0	3	100	0	0
ID	8	1	0	9	89	11	0
IE	14	0	0	14	100	0	0
IL	3	0	0	3	100	0	0
IN	7	2	0	9	78	22	0
IS	6	5	0	11	55	45	0
IT	12	1	0	13	92	8	0
JE	3	1	1	5	60	20	20
JL	2	1	1	4	50	25	25



## QAP 48 Summary of Laboratory Evaluations by Matrix

Matrix: WAWater

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
KA	9	1	0	10	90	10	0
KO	11	0	1	12	92	0	8
LA	19	9	2	30	63	30	7
LL	11	0	0	11	100	0	0
LM	1	0	2	3	33	0	67
LN	1	1	2	4	25	25	50
LV	2	3	4	9	22	33	44
LW	1	0	0	1	100	0	0
ME	4	1	0	5	80	20	0
MH	6	3	0	9	67	33	0
ML	9	0	0	9	100	0	0
MS	4	0	1	5	80	0	20
NA	5	2	0	7	71	29	0
NF	3	0	0	3	100	0	0
NL	3	4	0	7	43	57	0
NM	3	1	0	4	75	25	0
NP	3	2	0	5	60	40	0
NS	4	1	0	5	80	20	0
OB	1	1	0	2	50	50	0
OD	10	0	0	10	100	0	0
OK	3	0	0	3	100	0	0
OL	3	0	0	3	100	0	0
OT	8	3	0	11	73	27	0
OU	7	1	1	9	78	11	11
PR	1	0	0	1	100	0	0
RC	4	0	0	4	100	0	0
RE	10	0	2	12	83	0	17
RG	2	0	0	2	100	0	0
RI	6	0	3	9	67	0	33
RL	2	3	1	6	33	50	17
SA	5	1	0	6	83	17	0
SH	1	3	1	5	20	60	20
SK	7	2	0	9	78	22	0
SL	3	0	0	3	100	0	0
SN	10	0	0	10	100	0	0
SR	11	0	0	11	100	0	0
ST	1	0	0	1	100	0	0
SW	7	0	4	11	64	0	36
TE	8	1	2	11	73	9	18
TI	10	2	0	12	83	17	0
TM	8	6	0	14	57	43	0
TN	9	3	2	14	64	21	14
TO	9	4	0	13	69	31	0
TP	6	0	0	6	100	0	0
TT	3	1	0	4	75	25	0
TW	11	0	1	12	92	0	8
TX	10	3	0	13	77	23	0
UC	6	0	0	6	100	0	0
UP	8	2	1	11	73	18	9
UY	11	0	0	11	100	0	0
WA	13	0	0	13	100	0	0
WC	12	0	0	12	100	0	0
WI	5	2	2	9	56	22	22
WP	4	1	1	6	67	17	17
WV	7	0	0	7	100	0	0

## QAP 48 Summary of Laboratory Evaluations by Matrix

Matrix: WAWater

Labcode	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
YA	12	2	0	14	86	14	0
YP	1	0	0	1	100	0	0
YU	3	0	0	3	100	0	0
<hr/>							
<b>Totals</b>							
<b>113 Labs:</b>	<b>723</b>	<b>156</b>	<b>79</b>	<b>958</b>	<b>75%</b>	<b>16%</b>	<b>8%</b>

## QAP 48 Summary of Matrix Evaluations by Radionuclide

**Matrix:** Air Filter

Radio-Nuclide	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
CO60	84	15	6	105	80	14	6
K40	0	0	0	0	***	***	***
CO57	76	13	12	101	75	13	12
SB125	71	21	11	103	69	20	11
CS134	76	9	16	101	75	9	16
CS137	79	16	12	107	74	15	11
CE144	77	9	15	101	76	9	15
SR90	25	6	8	39	64	15	21
PU238	34	12	4	50	68	24	8
AM241	41	10	11	62	66	16	18
U234	29	7	2	38	76	18	5
U238	34	5	4	43	79	12	9
Bq U	13	2	0	15	87	13	0
ug U	20	3	2	25	80	12	8
GROSS	50	24	2	76	66	32	3
GROSS	64	7	4	75	85	9	5
PU239	38	10	3	51	75	20	6
MN54	77	18	8	103	75	17	8
<b>Totals:</b>	<b>888</b>	<b>187</b>	<b>120</b>	<b>1195</b>	<b>74%</b>	<b>16%</b>	<b>10%</b>

## QAP 48 Summary of Matrix Evaluations by Radionuclide

Matrix: Soil

Radio-Nuclide	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
U234	34	5	1	40	85	13	3
MN54	0	0	0	0	***	***	***
CS137	82	16	10	108	76	15	9
SR90	35	4	8	47	74	9	17
K40	79	18	6	103	77	17	6
ug U	21	2	3	26	81	8	12
PU238	0	0	0	0	***	***	***
U238	36	10	5	51	71	20	10
AM241	47	8	6	61	77	13	10
PU239	48	6	5	59	81	10	8
CO60	0	0	0	0	***	***	***
Bq U	14	2	0	16	88	13	0
<b>Totals:</b>	<b>396</b>	<b>71</b>	<b>44</b>	<b>511</b>	<b>77%</b>	<b>14%</b>	<b>9%</b>

## QAP 48 Summary of Matrix Evaluations by Radionuclide

Matrix: Vegetation

Radio-Nuclide	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
PU239	38	11	3	52	73	21	6
CO60	64	18	5	87	74	21	6
K40	67	13	10	90	74	14	11
CM244	25	4	3	32	78	13	9
Bq U	0	0	0	0	***	***	***
U238	0	0	0	0	***	***	***
AM241	39	9	6	54	72	17	11
PU238	5	0	0	5	100	0	0
SR90	37	7	6	50	74	14	12
CS137	74	11	8	93	80	12	9
U234	0	0	0	0	***	***	***
<b>Totals:</b>	<b>349</b>	<b>73</b>	<b>41</b>	<b>463</b>	<b>75%</b>	<b>16%</b>	<b>9%</b>

## QAP 48 Summary of Matrix Evaluations by Radionuclide

Matrix: Water

Radio-Nuclide	Evaluation Summary			Total Analyses	Evaluation Percentages		
	A	W	N		%A	%W	%N
PU239	53	6	7	66	80	9	11
MN54	82	14	9	105	78	13	9
CO60	68	22	17	107	64	21	16
CS137	88	12	8	108	81	11	7
PU238	46	13	7	66	70	20	11
AM241	48	15	2	65	74	23	3
U234	39	6	0	45	87	13	0
U238	41	7	1	49	84	14	2
Bq U	18	2	1	21	86	10	5
ug U	20	6	1	27	74	22	4
GROSS	45	16	9	70	64	23	13
GROSS	60	4	3	67	90	6	4
H3	58	16	7	81	72	20	9
FE55	7	7	4	18	39	39	22
K40	0	0	0	0	***	***	***
SR90	50	10	3	63	79	16	5
<b>Totals:</b>	<b>723</b>	<b>156</b>	<b>79</b>	<b>958</b>	<b>75%</b>	<b>16%</b>	<b>8%</b>

## QAP 48 Results by Laboratory

**Lab:** Environmental Measurements Laboratory

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Radionuclide	Reported Value	Reported Error
<b>Matrix:</b> Soil SO Bq/kg		
40K	313.500	10.150
90Sr	13.091	0.279
137Cs	329.500	9.260
234U	31.133	0.802
238U	31.900	2.552
Bq U	64.600	2.858
ug U	2.583	0.200
239Pu	5.305	0.253
241Am	2.678	0.212

<b>Matrix:</b> Vegetation VE Bq/kg		
40K	707.500	24.987
60Co	10.575	0.206
90Sr	359.005	6.021
137Cs	181.500	7.141
238Pu	0.116	0.035
239Pu	1.770	0.154
241Am	1.105	0.051
244Cm	2.174	0.066

<b>Matrix:</b> Water WA Bq/L		
3H	218.300	6.505
54Mn	57.000	1.900
55Fe	202.800	2.921
60Co	13.600	1.200
90Sr	4.357	0.192
137Cs	46.000	1.700
234U	0.396	0.026
238U	0.396	0.037
Bq U	0.801	0.067
ug U	0.032	0.003
238Pu	2.526	0.060
239Pu	1.650	0.061
241Am	1.226	0.050
Gross Alpha	1421.000	100.000
Gross Beta	2200.000	100.000

<b>Matrix:</b> Air Filter AI Bq/filter		
Gross Alpha	1.400	0.100
Gross Beta	1.960	0.300
54Mn	5.440	0.485
57Co	11.110	0.846
60Co	9.090	0.732
90Sr	1.758	0.042

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**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** Environmental Measurements Laboratory

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Radionuclide	Reported Value	Reported Error
<b>Matrix:</b> Air Filter AI Bq/filter		
125Sb	12.160	1.151
134Cs	19.740	1.380
137Cs	11.860	0.957
144Ce	8.210	0.796
234U	0.031	0.003
238U	0.030	0.001
Bq U	0.063	0.004
ug U	2.472	0.101
238Pu	0.069	0.003
239Pu	0.062	0.002
241Am	0.069	0.003

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**Values for elemental uranium are reported in  $\mu\text{g}/\text{filter}$ , g, or mL.       $\text{pCi}/\text{g}$  or  $\text{mL}=\text{Bq} \times 0.027$**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	MN54	5.910	0.240	5.440	0.485	1.086	A	
1	CO57	11.000	0.600	11.110	0.846	0.990	A	
1	CO60	9.020	0.330	9.090	0.732	0.992	A	
1	SB125	12.500	1.200	12.160	1.151	1.028	A	
1	CS134	20.800	0.400	19.740	1.380	1.054	A	
1	CS137	12.000	0.400	11.860	0.957	1.012	A	
1	CE144	8.490	1.030	8.210	0.796	1.034	A	
1	U234	0.026	0.002	0.031	0.003	0.831	W	
1	U238	0.027	0.002	0.030	0.001	0.879	W	
1	PU238	0.062	0.008	0.069	0.003	0.889	A	
1	PU239	0.067	0.009	0.062	0.002	1.079	A	
1	AM241	0.078	0.009	0.069	0.003	1.135	A	
<b>Matrix:</b> WA Water Bq / L								
1	MN54	71.900	1.000	57.000	1.900	1.261	N	
1	CO60	14.600	0.700	13.600	1.200	1.074	A	
1	CS137	47.600	0.900	46.000	1.700	1.035	A	
1	U234	0.320	0.040	0.396	0.026	0.808	W	
1	U238	0.320	0.026	0.396	0.037	0.807	W	
1	PU238	2.490	0.130	2.526	0.060	0.986	A	
1	PU239	1.730	0.090	1.650	0.061	1.048	A	
1	AM241	1.180	0.100	1.226	0.050	0.963	A	
<b>Matrix:</b> SO Soil Bq / kg								
1	K40	325.000	13.000	313.500	10.150	1.037	A	
1	CS137	350.000	2.000	329.500	9.260	1.062	A	
1	PU239	5.700	0.740	5.305	0.253	1.075	A	
1	AM241	30.300	0.300	2.678	0.212	11.317	N	

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** AF Air Force Analytical Lab, Brooks AFB

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	GROSS ALPHA	1.290	0.100	1.400	0.100	0.921	A	W
1	GROSS BETA	2.200	0.100	1.960	0.300	1.122	A	N
1	MN54	5.200	1.200	5.440	0.485	0.956	A	A
1	CO57	9.500	1.300	11.110	0.846	0.855	A	A
1	CO60	9.100	1.600	9.090	0.732	1.001	A	N
1	SR90	2.500	0.200	1.758	0.042	1.422	W	N
1	SB125	12.500	3.100	12.160	1.151	1.028	A	W
1	CS134	16.500	2.200	19.740	1.380	0.836	A	N
1	CS137	10.900	1.600	11.860	0.957	0.919	A	A
1	CE144	9.100	4.200	8.210	0.796	1.108	W	A
1	U234	0.037	0.010	0.031	0.003	1.201	A	
1	U238	0.030	0.010	0.030	0.001	0.984	A	
1	PU239	0.050	0.030	0.062	0.002	0.802	W	W
1	AM241	0.050	0.020	0.069	0.003	0.728	W	

**Matrix:** WA Water Bq / L

1	GROSS ALPHA	1346.800	44.100	1421.000	100.000	0.948	A	N
1	GROSS BETA	1798.200	37.000	2200.000	100.000	0.817	A	N
1	H3	1579.900	3.700	218.300	6.505	7.237	N	
1	MN54	59.200	7.400	57.000	1.900	1.039	A	N
1	CO60	18.100	3.000	13.600	1.200	1.331	N	N
1	SR90	4.500	0.400	4.357	0.192	1.033	A	N
1	CS137	51.800	7.400	46.000	1.700	1.126	A	N
1	U234	0.400	0.100	0.396	0.026	1.010	A	
1	U238	0.400	0.100	0.396	0.037	1.009	A	
1	PU238	2.000	0.500	2.526	0.060	0.792	W	
1	PU239	1.600	0.400	1.650	0.061	0.970	A	N
1	AM241	1.300	0.400	1.226	0.050	1.061	A	

**Matrix:** SO Soil Bq / kg

1	K40	299.700	40.700	313.500	10.150	0.956	A	A
1	SR90	51.100	18.500	13.091	0.279	3.904	N	
1	CS137	270.100	25.900	329.500	9.260	0.820	W	A
1	U234	32.900	20.000	31.133	0.802	1.057	A	
1	U238	20.000	15.500	31.900	2.552	0.627	W	
1	PU239	5.500	3.500	5.305	0.253	1.037	A	N
1	AM241	38.900	16.700	2.678	0.212	14.528	N	A

**Matrix:** VE Vegetation Bq / kg

1	K40	625.300	62.900	707.500	24.987	0.884	W	N
1	CO60	9.300	1.500	10.575	0.206	0.879	A	
1	SR90	66.200	4.600	359.005	6.021	0.184	N	N
1	CS137	155.400	18.500	181.500	7.141	0.856	W	N
1	PU239	0.100	0.060	1.770	0.154	0.056	N	

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

**Lab:** AF Air Force Analytical Lab, Brooks AFB

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<b>No. Test</b>	<b>Radionuclide</b>	<b>Reported Value</b>	<b>Reported Error</b>	<b>EML Value</b>	<b>EML Error</b>	<b>Reported EML</b>	<b>QAP 47 Evaluation</b>
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**Matrix:** VE Vegetation Bq / kg

1	AM241	0.800	0.200	1.105	0.051	0.724	W
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**Values for elemental uranium are reported in  $\mu\text{g}/\text{filter}$ , g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation	QAP 47 Evaluation
<b>Matrix: SO Soil Bq / kg</b>								
1	K40	352.000	36.000	313.500	10.150	1.123	A	A
1	CS137	385.000	25.000	329.500	9.260	1.168	A	A
1	SR90	11.100	2.400	13.091	0.279	0.848	A	A
1	U234	28.400	3.600	31.133	0.802	0.912	A	A
1	U238	27.900	3.500	31.900	2.552	0.875	A	A
1	Bq U	59.400	5.100	64.600	2.858	0.920	A	A
1	ug U	1.750	0.250	2.583	0.200	0.677	A	A
1	PU239	5.400	0.880	5.305	0.253	1.018	A	A
1	AM241	2.620	0.390	2.678	0.212	0.979	A	A
<b>Matrix: WA Water Bq / L</b>								
1	H3	209.000	35.000	218.300	6.505	0.957	A	A
1	MN54	62.300	4.100	57.000	1.900	1.093	A	A
1	CO60	14.000	1.100	13.600	1.200	1.029	A	A
1	SR90	3.890	0.700	4.357	0.192	0.893	A	A
1	CS137	51.100	3.400	46.000	1.700	1.111	A	A
1	U234	0.429	0.059	0.396	0.026	1.083	A	A
1	U238	0.429	0.059	0.396	0.037	1.083	A	A
1	Bq U	0.884	0.084	0.801	0.067	1.103	A	A
1	ug U	0.037	0.005	0.032	0.003	1.156	A	N
1	PU238	2.160	0.260	2.526	0.060	0.855	W	A
1	PU239	1.530	0.190	1.650	0.061	0.927	A	A
1	AM241	1.150	0.150	1.226	0.050	0.938	A	A
<b>Matrix: VE Vegetation Bq / kg</b>								
1	K40	814.000	64.000	707.500	24.987	1.151	A	A
1	CO60	10.800	1.300	10.575	0.206	1.021	A	A
1	SR90	306.000	58.000	359.005	6.021	0.852	A	A
1	CS137	211.000	14.000	181.500	7.141	1.163	A	A
1	PU239	1.540	0.260	1.770	0.154	0.870	A	W
1	AM241	1.150	0.160	1.105	0.051	1.041	A	A
1	CM244	1.990	0.260	2.174	0.066	0.916	A	W
<b>Matrix: AI Air Filter Bq / filter</b>								
1	MN54	5.640	0.410	5.440	0.485	1.037	A	A
1	CO57	10.400	0.690	11.110	0.846	0.936	A	A
1	CO60	8.990	0.610	9.090	0.732	0.989	A	A
1	SR90	1.500	0.270	1.758	0.042	0.853	A	A
1	SB125	13.280	0.910	12.160	1.151	1.092	A	A
1	CS134	19.000	1.200	19.740	1.380	0.963	A	A
1	CS137	12.010	0.800	11.860	0.957	1.013	A	A
1	CE144	7.550	0.710	8.210	0.796	0.920	A	A
1	U234	0.045	0.008	0.031	0.003	1.451	W	A
1	U238	0.035	0.007	0.030	0.001	1.155	A	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	Bq U	0.082	0.010	0.063	0.004	1.306	A	A
1	ug U	2.990	0.410	2.472	0.101	1.210	A	A
1	PU238	0.060	0.010	0.069	0.003	0.863	W	A
1	PU239	0.063	0.011	0.062	0.002	1.010	A	A
1	AM241	0.056	0.010	0.069	0.003	0.814	W	A

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	MN54	6.830	0.109	5.440	0.485	1.256	W	
1	CO57	13.000	0.076	11.110	0.846	1.170	W	
1	CO60	9.710	0.094	9.090	0.732	1.068	A	
1	SB125	14.400	0.191	12.160	1.151	1.184	W	
1	CS134	20.200	0.108	19.740	1.380	1.023	A	
1	CS137	14.300	0.132	11.860	0.957	1.206	W	
1	CE144	8.820	0.296	8.210	0.796	1.074	A	
1	U234	0.029	0.001	0.031	0.003	0.948	A	
1	U238	0.027	0.001	0.030	0.001	0.873	W	
1	Bq U	0.057	0.003	0.063	0.004	0.897	W	
1	PU238	0.089	0.006	0.069	0.003	1.279	W	
1	PU239	0.080	0.005	0.062	0.002	1.288	W	
1	AM241	0.043	0.003	0.069	0.003	0.630	N	

**Matrix:** WA Water Bq / L

1	H3	3810.000	175.000	218.300	6.505	17.453	N	N
1	MN54	60.500	0.953	57.000	1.900	1.061	A	A
1	CO60	14.000	0.396	13.600	1.200	1.029	A	A
1	CS137	49.400	0.881	46.000	1.700	1.074	A	A
1	U234	0.408	0.025	0.396	0.026	1.030	A	
1	U238	0.431	0.026	0.396	0.037	1.088	A	
1	Bq U	0.860	0.060	0.801	0.067	1.073	A	A
1	PU238	1.660	0.052	2.526	0.060	0.657	N	A
1	PU239	1.200	0.039	1.650	0.061	0.727	N	A

**Matrix:** VE Vegetation Bq / kg

1	K40	758.000	38.900	707.500	24.987	1.071	A	A
1	CO60	12.300	1.320	10.575	0.206	1.163	A	W
1	CS137	20.900	4.140	181.500	7.141	0.115	N	A
1	PU239	1.910	0.135	1.770	0.154	1.079	A	A
1	AM241	1.210	0.099	1.105	0.051	1.095	A	W
1	CM244	2.490	0.240	2.174	0.066	1.146	A	
2	PU239	1.230	0.076	1.770	0.154	0.695	W	A
2	AM241	1.380	0.107	1.105	0.051	1.249	A	W
2	CM244	2.690	0.247	2.174	0.066	1.238	A	
3	PU239	1.650	0.108	1.770	0.154	0.932	A	A
3	AM241	1.140	0.095	1.105	0.051	1.031	A	W
3	CM244	2.610	0.253	2.174	0.066	1.201	A	

**Matrix:** SO Soil Bq / kg

1	K40	424.000	54.700	313.500	10.150	1.352	W	A
1	CS137	507.000	8.540	329.500	9.260	1.539	N	A
1	U234	31.100	1.180	31.133	0.802	0.999	A	
1	U238	33.100	1.230	31.900	2.552	1.038	A	

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> SO Soil Bq/kg								
1	Bq U	67.000	3.350	64.600	2.858	1.037	A	
1	PU239	5.280	0.342	5.305	0.253	0.995	A	W
1	AM241	6.270	1.010	2.678	0.212	2.342	N	N
2	PU239	5.030	0.413	5.305	0.253	0.948	A	W
2	AM241	4.770	0.510	2.678	0.212	1.782	W	N
3	PU239	4.880	0.360	5.305	0.253	0.920	A	W
4	PU239	6.000	0.550	5.305	0.253	1.131	A	W

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## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter							
1	GROSS ALPHA	1.523	0.060	1.400	0.100	1.088	A
1	GROSS BETA	1.580	0.040	1.960	0.300	0.806	W
1	MN54	4.566	0.271	5.440	0.485	0.839	W
1	CO57	3.107	0.200	11.110	0.846	0.280	N
1	CO60	7.649	0.289	9.090	0.732	0.841	A
1	SB125	1.730	0.517	12.160	1.151	0.142	N
1	CS134	1.150	0.036	19.740	1.380	0.058	N
1	CS137	9.446	0.482	11.860	0.957	0.797	W
1	CE144	3.082	0.810	8.210	0.796	0.375	N

**Matrix:** WA Water Bq / L

1	MN54	58.726	1.820	57.000	1.900	1.030	A
1	CO60	15.900	0.828	13.600	1.200	1.169	W
1	CS137	56.432	1.970	46.000	1.700	1.227	W

**Matrix:** VE Vegetation Bq / kg

1	K40	1204.800	94.900	707.500	24.987	1.703	N
1	CO60	29.427	8.860	10.575	0.206	2.783	N
1	CS137	313.290	12.100	181.500	7.141	1.726	N

**Matrix:** SO Soil Bq / kg

1	K40	532.660	44.700	313.500	10.150	1.699	N
1	CS137	570.170	11.300	329.500	9.260	1.730	N

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	GROSS ALPHA	1.940	0.050	1.400	0.100	1.386	W	A
1	GROSS BETA	2.990	0.050	1.960	0.300	1.526	W	A
1	MN54	4.820	0.100	5.440	0.485	0.886	A	W
1	CO57	9.230	0.080	11.110	0.846	0.831	A	A
1	CO60	7.620	0.110	9.090	0.732	0.838	A	W
1	SB125	8.040	0.190	12.160	1.151	0.661	W	W
1	CS134	13.200	0.110	19.740	1.380	0.669	N	N
1	CS137	10.310	0.160	11.860	0.957	0.869	A	W
1	CE144	7.360	0.390	8.210	0.796	0.896	A	A
1	U234	0.064	0.014	0.031	0.003	2.078	N	N
1	U238	0.095	0.011	0.030	0.001	3.117	N	N
1	AM241	0.034	0.030	0.069	0.003	0.495	N	W
<b>Matrix:</b> VE Vegetation Bq / kg								
1	K40	770.960	24.080	707.500	24.987	1.090	A	A
1	CO60	10.540	1.000	10.575	0.206	0.997	A	A
1	CS137	183.040	2.670	181.500	7.141	1.008	A	A
1	AM241	1.660	1.250	1.105	0.051	1.502	A	A
<b>Matrix:</b> WA Water Bq / L								
1	GROSS ALPHA	931.750	31.320	1421.000	100.000	0.656	W	W
1	GROSS BETA	1757.350	72.130	2200.000	100.000	0.799	A	A
1	MN54	66.500	0.870	57.000	1.900	1.167	A	W
1	CO60	15.410	0.420	13.600	1.200	1.133	W	W
1	CS137	55.310	0.740	46.000	1.700	1.202	W	A
1	U234	0.330	0.050	0.396	0.026	0.833	W	N
1	U238	0.410	0.050	0.396	0.037	1.035	A	N
1	Bq U	0.740	0.070	0.801	0.067	0.923	A	N
1	AM241	1.290	0.450	1.226	0.050	1.052	A	A
<b>Matrix:</b> AI Air Filter Bq / filter								
1	Bq U	0.159	0.013	0.063	0.004	2.520	W	W
<b>Matrix:</b> SO Soil Bq / kg								
1	K40	369.380	13.120	313.500	10.150	1.178	A	A
1	CS137	349.590	2.390	329.500	9.260	1.061	A	A
1	U234	36.510	8.280	31.133	0.802	1.173	W	A
1	U238	42.180	7.180	31.900	2.552	1.322	W	A
1	Bq U	78.430	15.540	64.600	2.858	1.214	W	A
1	AM241	4.260	0.980	2.678	0.212	1.591	W	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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## QAP 48 Results by Laboratory

**Lab:** AN Argonne National Laboratory

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix: SO Soil Bq / kg</b>								
1	K40	327.000	14.000	313.500	10.150	1.043	A	A
1	SR90	13.220	0.510	13.091	0.279	1.010	A	A
1	CS137	371.000	11.000	329.500	9.260	1.126	A	A
1	U234	30.260	0.300	31.133	0.802	0.972	A	A
1	U238	31.350	1.240	31.900	2.552	0.983	A	W
1	PU239	5.860	0.460	5.305	0.253	1.105	A	A
1	AM241	3.030	0.390	2.678	0.212	1.132	A	A

**Matrix: WA Water Bq / L**

1	H3	221.500	1.400	218.300	6.505	1.015	A	A
1	MN54	65.480	6.950	57.000	1.900	1.149	A	A
1	CO60	14.890	1.370	13.600	1.200	1.095	A	A
1	SR90	4.170	0.140	4.357	0.192	0.957	A	A
1	CS137	50.590	1.990	46.000	1.700	1.100	A	A
1	U234	0.430	0.020	0.396	0.026	1.085	A	W
1	U238	0.430	0.020	0.396	0.037	1.085	A	A
1	PU238	2.480	0.030	2.526	0.060	0.982	A	A
1	PU239	1.690	0.060	1.650	0.061	1.024	A	A
1	AM241	1.200	0.050	1.226	0.050	0.979	A	A

**Matrix: AI Air Filter Bq / filter**

1	MN54	5.940	0.230	5.440	0.485	1.092	A	A
1	CO57	12.570	1.040	11.110	0.846	1.131	W	W
1	CO60	10.060	0.720	9.090	0.732	1.107	W	A
1	SR90	1.580	0.010	1.758	0.042	0.899	A	A
1	SB125	13.790	0.250	12.160	1.151	1.134	A	W
1	CS134	19.500	0.470	19.740	1.380	0.988	A	A
1	CS137	13.220	1.070	11.860	0.957	1.115	A	A
1	CE144	8.710	1.020	8.210	0.796	1.061	A	A
1	U234	0.033	0.003	0.031	0.003	1.071	A	A
1	U238	0.033	0.003	0.030	0.001	1.083	A	A
1	PU238	0.072	0.003	0.069	0.003	1.036	A	A
1	PU239	0.069	0.005	0.062	0.002	1.107	A	A
1	AM241	0.071	0.004	0.069	0.003	1.033	A	A

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

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix: AI Air Filter Bq / filter</b>								
1	MN54	6.124	0.562	5.440	0.485	1.126	A	A
1	SR90	15.970	4.500	1.758	0.042	9.083	N	W
1	CO57	11.640	0.790	11.110	0.846	1.048	A	A
1	CO60	10.060	0.750	9.090	0.732	1.107	W	A
1	SB125	12.070	1.440	12.160	1.151	0.993	A	A
1	CS137	12.810	0.800	11.860	0.957	1.080	A	A
1	CS134	20.030	1.220	19.740	1.380	1.015	A	A
1	CE144	27.250	3.280	8.210	0.796	3.319	N	N
1	PU238	0.055	0.010	0.069	0.003	0.791	W	A
1	PU239	0.074	0.012	0.062	0.002	1.187	W	A
1	AM241	0.632	0.129	0.069	0.003	9.199	N	W
1	ug U	3.105		2.472	0.101	1.256	W	A
<b>Matrix: SO Soil Bq / kg</b>								
1	K40	331.700	33.000	313.500	10.150	1.058	A	A
1	SR90	17.020	15.610	13.091	0.279	1.300	A	A
1	CS137	382.200	24.200	329.500	9.260	1.160	A	W
1	PU239	5.400	1.110	5.305	0.253	1.018	A	W
1	ug U	1.812		2.583	0.200	0.701	A	
<b>Matrix: WA Water Bq / L</b>								
1	MN54	0.068	0.006	57.000	1.900	0.001	N	W
1	CO60	0.016	0.040	13.600	1.200	0.001	N	A
1	SR90	4.900	1.060	4.357	0.192	1.125	A	N
1	CS137	0.059	0.006	46.000	1.700	0.001	N	A
1	PU238	2.110	0.200	2.526	0.060	0.835	W	A
1	PU239	1.530	0.140	1.650	0.061	0.927	A	A
1	AM241	0.990	0.097	1.226	0.050	0.808	W	A
1	ug U	0.033		0.032	0.003	1.025	A	A
<b>Matrix: VE Vegetation Bq / kg</b>								
1	K40	684.500	62.530	707.500	24.987	0.967	A	A
1	CO60	12.220	2.700	10.575	0.206	1.156	A	A
1	SR90	315.400	47.100	359.005	6.021	0.879	A	A
1	CS137	185.800	10.900	181.500	7.141	1.024	A	A
1	PU239	1.440	0.260	1.770	0.154	0.813	W	A
1	AM241	1.790	1.420	1.105	0.051	1.620	W	A
<b>Matrix: AI Air Filter Bq / filter</b>								
2	MN54	5.600	0.510	5.440	0.485	1.029	A	A
3	MN54	6.200	0.520	5.440	0.485	1.140	A	A
2	CO57	11.690	0.790	11.110	0.846	1.052	A	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix: AI Air Filter Bq / filter</b>								
3	CO57	11.290	0.770	11.110	0.846	1.016	A	A
2	CO60	9.900	0.740	9.090	0.732	1.089	A	A
3	CO60	10.270	0.740	9.090	0.732	1.130	W	A
2	SR90	19.310	4.840	1.758	0.042	10.982	N	W
3	SR90	15.830	4.330	1.758	0.042	9.003	N	W
2	SB125	13.500	1.740	12.160	1.151	1.110	A	A
3	SB125	12.140	1.440	12.160	1.151	0.998	A	A
2	CS137	13.410	0.860	11.860	0.957	1.131	W	A
3	CS137	12.480	0.790	11.860	0.957	1.052	A	A
2	CS134	20.960	1.250	19.740	1.380	1.062	A	A
3	CS134	19.700	1.200	19.740	1.380	0.998	A	A
2	CE144	28.220	2.940	8.210	0.796	3.437	N	N
3	CE144	26.370	3.280	8.210	0.796	3.212	N	N
2	PU238	0.055	0.011	0.069	0.003	0.791	W	A
2	PU239	0.067	0.012	0.062	0.002	1.075	A	A
2	AM241	0.734	0.128	0.069	0.003	10.684	N	W
2	ug U	2.920		2.472	0.101	1.181	A	A
3	ug U	3.018		2.472	0.101	1.221	A	A
<b>Matrix: SO Soil Bq / kg</b>								
2	K40	350.800	34.290	313.500	10.150	1.119	A	A
3	K40	330.960	32.890	313.500	10.150	1.056	A	A
2	SR90	15.680	9.470	13.091	0.279	1.198	A	A
3	SR90	19.540	16.090	13.091	0.279	1.493	A	A
2	CS137	379.600	24.000	329.500	9.260	1.152	A	W
3	CS137	385.200	24.300	329.500	9.260	1.169	A	W
2	PU239	5.330	1.180	5.305	0.253	1.005	A	W
3	PU239	5.620	1.070	5.305	0.253	1.059	A	W
1	AM241	0.590	2.110	2.678	0.212	0.220	N	A
2	AM241	0.960	2.290	2.678	0.212	0.359	N	A
2	ug U	1.745		2.583	0.200	0.676	A	
3	ug U	1.655		2.583	0.200	0.641	W	
<b>Matrix: WA Water Bq / L</b>								
2	MN54	0.071	0.006	57.000	1.900	0.001	N	W
3	MN54	0.068	0.005	57.000	1.900	0.001	N	W
2	CO60	0.017	0.004	13.600	1.200	0.001	N	A
3	CO60	0.015	0.004	13.600	1.200	0.001	N	A
2	SR90	4.923	1.124	4.357	0.192	1.130	A	N
2	CS137	0.059	0.006	46.000	1.700	0.001	N	A
3	CS137	0.057	0.005	46.000	1.700	0.001	N	A
2	PU238	2.130	0.200	2.526	0.060	0.843	W	A
3	PU238	2.098	0.180	2.526	0.060	0.831	W	A
2	PU239	1.500	0.150	1.650	0.061	0.909	A	A
3	PU239	1.534	0.149	1.650	0.061	0.930	A	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> WA Water Bq / L								
2	AM241	1.072	0.109	1.226	0.050	0.875	W	A
3	AM241	0.945	0.104	1.226	0.050	0.771	W	A
2	ug U	0.032		0.032	0.003	0.991	A	A
3	ug U	0.033		0.032	0.003	1.024	A	A
<b>Matrix:</b> VE Vegetation Bq / kg								
2	K40	705.600	63.860	707.500	24.987	0.997	A	A
2	CO60	12.520	3.440	10.575	0.206	1.184	A	A
2	SR90	332.400	41.400	359.005	6.021	0.926	A	A
3	SR90	297.000	38.800	359.005	6.021	0.827	A	A
2	CS137	185.990	11.220	181.500	7.141	1.025	A	A
2	PU239	1.480	0.260	1.770	0.154	0.836	W	A
3	PU239	1.410	0.260	1.770	0.154	0.797	W	A
2	AM241	1.170	0.620	1.105	0.051	1.059	A	A
<b>Matrix:</b> WA Water Bq / L								
1	GROSS ALPHA	1435.000	262.000	1421.000	100.000	1.010	A	A
1	GROSS BETA	2146.000	376.000	2200.000	100.000	0.975	A	A
2	GROSS ALPHA	1524.000	289.000	1421.000	100.000	1.072	A	A
2	GROSS BETA	2115.000	433.000	2200.000	100.000	0.961	A	A
3	GROSS ALPHA	1566.000	296.000	1421.000	100.000	1.102	A	A
3	GROSS BETA	2126.000	435.000	2200.000	100.000	0.966	A	A
<b>Matrix:</b> AI Air Filter Bq / filter								
1	GROSS ALPHA	1.910	0.200	1.400	0.100	1.364	W	N
1	GROSS BETA	2.400	0.310	1.960	0.300	1.224	A	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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## QAP 48 Results by Laboratory

**Lab:** AT ATL International inc., Germantown, MD

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	QAP 47 Evaluation
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**Matrix:** WA Water Bq/L

1	MN54	65.890	6.810	57.000	1.900	1.156	A
1	CO60	16.170	1.530	13.600	1.200	1.189	W
1	CS137	53.850	5.270	46.000	1.700	1.171	A
1	AM241	1.390	0.210	1.226	0.050	1.134	A

**Matrix:** SO Soil Bq/kg

1	K40	410.250	45.120	313.500	10.150	1.309	W
1	CS137	431.400	43.100	329.500	9.260	1.309	W
1	AM241	4.050	1.220	2.678	0.212	1.513	W

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix: SO Soil Bq / kg</b>								
1	K40	336.000	27.000	313.500	10.150	1.072	A	A
1	SR90	16.700	4.700	13.091	0.279	1.276	A	A
1	CS137	366.000	18.000	329.500	9.260	1.111	A	A
1	U234	31.600	4.200	31.133	0.802	1.015	A	A
1	U238	31.300	4.300	31.900	2.552	0.981	A	A
1	PU239	5.500	1.000	5.305	0.253	1.037	A	A
1	AM241	2.480	0.500	2.678	0.212	0.926	A	A
<b>Matrix: WA Water Bq / L</b>								
1	GROSS ALPHA	1470.000	473.000	1421.000	100.000	1.034	A	W
1	GROSS BETA	2329.000	715.000	2200.000	100.000	1.059	A	A
1	H3	221.000	27.000	218.300	6.505	1.012	A	A
1	MN54	60.600	3.400	57.000	1.900	1.063	A	A
1	CO60	15.400	0.800	13.600	1.200	1.132	W	A
1	SR90	4.130	0.530	4.357	0.192	0.948	A	A
1	CS137	50.800	2.100	46.000	1.700	1.104	A	A
1	U234	0.503	0.065	0.396	0.026	1.270	W	A
1	U238	0.514	0.066	0.396	0.037	1.297	N	A
1	PU238	2.340	0.140	2.526	0.060	0.926	A	N
1	PU239	2.080	0.130	1.650	0.061	1.260	W	N
1	AM241	1.823	0.116	1.226	0.050	1.487	W	N
<b>Matrix: AI Air Filter Bq / filter</b>								
1	GROSS ALPHA	1.740	0.070	1.400	0.100	1.243	A	A
1	GROSS BETA	2.540	0.140	1.960	0.300	1.296	A	A
1	MN54	7.390	0.780	5.440	0.485	1.358	W	W
1	CO57	13.430	0.600	11.110	0.846	1.209	W	A
1	CO60	11.210	0.780	9.090	0.732	1.233	W	A
1	SB125	15.500	1.900	12.160	1.151	1.275	W	A
1	CS134	26.400	1.900	19.740	1.380	1.337	N	A
1	CS137	7.990	0.700	11.860	0.957	0.674	N	A
1	CE144	20.900	3.000	8.210	0.796	2.546	N	A
1	U234	0.059	0.009	0.031	0.003	1.916	W	A
1	U238	0.064	0.009	0.030	0.001	2.100	W	A
1	PU238	0.236	0.016	0.069	0.003	3.396	N	A
1	PU239	0.119	0.010	0.062	0.002	1.909	N	A
1	AM241	0.207	0.012	0.069	0.003	3.013	N	A
<b>Matrix: VE Vegetation Bq / kg</b>								
1	K40	735.000	45.000	707.500	24.987	1.039	A	A
1	CO60	12.600	1.800	10.575	0.206	1.191	A	A
1	SR90	335.000	9.000	359.005	6.021	0.933	A	A
1	CS137	195.000	10.000	181.500	7.141	1.074	A	A
1	PU239	1.860	0.300	1.770	0.154	1.051	A	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> VE Vegetation Bq / kg								
1	AM241	1.190	0.210	1.105	0.051	1.077	A	A

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## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> WA Water Bq / L								
1	MN54	65.800	4.000	57.000	1.900	1.154	A	A
1	CO60	15.100	1.200	13.600	1.200	1.110	A	A
1	SR90	4.070	0.260	4.357	0.192	0.934	A	A
1	CS137	51.200	2.900	46.000	1.700	1.113	A	A
1	PU238	2.520	0.450	2.526	0.060	0.998	A	A
1	PU239	1.630	0.300	1.650	0.061	0.988	A	A
<b>Matrix:</b> AI Air Filter Bq / filter								
1	MN54	6.340	0.310	5.440	0.485	1.165	W	A
1	CO60	9.380	0.430	9.090	0.732	1.032	A	A
1	SB125	14.300	0.330	12.160	1.151	1.176	A	A
1	CS134	16.700	0.360	19.740	1.380	0.846	A	A
1	CS137	13.100	0.500	11.860	0.957	1.105	A	A
<b>Matrix:</b> SO Soil Bq / kg								
1	CS137	351.000	16.000	329.500	9.260	1.065	A	A
<b>Matrix:</b> VE Vegetation Bq / kg								
1	CS137	190.000	10.000	181.500	7.141	1.047	A	A

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix: WA Water Bq/L</b>								
1	GROSS ALPHA	1710.000	100.000	1421.000	100.000	1.203	W	A
1	GROSS BETA	2210.000	110.000	2200.000	100.000	1.005	A	A
1	MN54	62.500	2.200	57.000	1.900	1.096	A	A
1	CO60	15.000	0.700	13.600	1.200	1.103	A	A
1	SR90	3.470	0.330	4.357	0.192	0.796	W	A
1	CS137	51.100	1.500	46.000	1.700	1.111	A	A
1	U234	0.525	0.041	0.396	0.026	1.325	W	N
1	U238	0.477	0.048	0.396	0.037	1.204	W	A
<b>Matrix: SO Soil Bq/kg</b>								
1	K40	392.000	22.000	313.500	10.150	1.250	W	A
1	CS137	385.000	26.000	329.500	9.260	1.168	A	A
1	U234	31.100	1.900	31.133	0.802	0.999	A	W
1	U238	30.300	2.200	31.900	2.552	0.950	A	A
<b>Matrix: VE Vegetation Bq/kg</b>								
1	K40	747.000	41.000	707.500	24.987	1.056	A	A
1	CO60	11.700	0.900	10.575	0.206	1.106	A	A
1	SR90	219.000	17.000	359.005	6.021	0.610	W	A
1	CS137	175.000	14.000	181.500	7.141	0.964	A	A
<b>Matrix: AI Air Filter Bq/filter</b>								
1	GROSS ALPHA	1.390	0.030	1.400	0.100	0.993	A	A
1	GROSS BETA	1.810	0.030	1.960	0.300	0.923	A	A
1	MN54	9.180	0.520	5.440	0.485	1.688	N	A
1	CO57	16.900	0.800	11.110	0.846	1.521	N	A
1	CO60	13.400	0.700	9.090	0.732	1.474	N	A
1	SR90	1.450	0.110	1.758	0.042	0.825	W	A
1	SB125	17.900	1.000	12.160	1.151	1.472	N	A
1	CS134	29.100	1.700	19.740	1.380	1.474	N	A
1	CS137	19.200	1.300	11.860	0.957	1.619	N	A
1	CE144	12.100	0.600	8.210	0.796	1.474	N	A
1	U234	0.052	0.006	0.031	0.003	1.682	W	W
1	U238	0.043	0.007	0.030	0.001	1.407	W	W

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** BE RUST Geotech, Grand Junction, CO

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation	QAP 47 Evaluation
<b>Matrix: SO Soil Bq / kg</b>								
1	K40	390.000	30.000	313.500	10.150	1.244	A	A
1	SR90	14.300	3.000	13.091	0.279	1.092	A	A
1	CS137	386.000	30.000	329.500	9.260	1.171	A	A
1	PU239	5.680	0.800	5.305	0.253	1.071	A	A
1	AM241	2.880	0.340	2.678	0.212	1.076	A	A
1	ug U	2.600	0.000	2.583	0.200	1.007	A	A
1	U234	30.910	3.760	31.133	0.802	0.993	A	A
1	U238	31.540	3.800	31.900	2.552	0.989	A	A

**Matrix: VE Vegetation Bq / kg**

1	K40	893.000	50.000	707.500	24.987	1.262	W	A
1	CO60	12.700	2.000	10.575	0.206	1.201	A	A
1	SR90	350.000	17.000	359.005	6.021	0.975	A	A
1	CS137	209.000	20.000	181.500	7.141	1.152	A	A
1	PU239	1.790	0.250	1.770	0.154	1.011	A	A
1	AM241	1.160	0.280	1.105	0.051	1.050	A	A
1	CM244	2.310	0.390	2.174	0.066	1.063	A	A

**Matrix: WA Water Bq / L**

1	H3	230.000	14.000	218.300	6.505	1.054	A	A
1	MN54	69.800	7.000	57.000	1.900	1.225	W	N
1	CO60	16.700	1.500	13.600	1.200	1.228	N	N
1	SR90	4.460	0.450	4.357	0.192	1.024	A	A
1	CS137	51.400	5.000	46.000	1.700	1.117	A	N
1	PU238	2.460	0.230	2.526	0.060	0.974	A	A
1	PU239	1.670	0.170	1.650	0.061	1.012	A	A
1	AM241	1.270	0.130	1.226	0.050	1.036	A	A
1	ug U	0.035	0.000	0.032	0.003	1.094	A	A
1	U234	0.432	0.062	0.396	0.026	1.090	A	A
1	U238	0.411	0.060	0.396	0.037	1.037	A	A
1	GROSS ALPHA	1541.000	88.000	1421.000	100.000	1.084	A	A
1	GROSS BETA	1995.000	73.000	2200.000	100.000	0.907	A	A

**Matrix: AI Air Filter Bq / filter**

1	MN54	5.600	1.000	5.440	0.485	1.029	A	A
1	CO57	10.600	0.400	11.110	0.846	0.954	A	A
1	CO60	8.500	0.200	9.090	0.732	0.935	A	A
1	SR90	1.690	0.140	1.758	0.042	0.961	A	A
1	SB125	12.300	0.600	12.160	1.151	1.012	A	A
1	CS134	12.500	0.600	19.740	1.380	0.633	N	W
1	CS137	11.200	1.100	11.860	0.957	0.944	A	A
1	CE144	7.300	0.500	8.210	0.796	0.889	A	A
1	PU238	0.065	0.010	0.069	0.003	0.935	A	A
1	PU239	0.063	0.010	0.062	0.002	1.010	A	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

**Lab:** BE RUST Geotech, Grand Junction, CO

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	AM241	0.074	0.010	0.069	0.003	1.077	A	A
1	ug U	2.700	0.000	2.472	0.101	1.092	A	A
1	U234	0.032	0.010	0.031	0.003	1.039	A	A
1	U238	0.030	0.009	0.030	0.001	0.984	A	A
1	GROSS ALPHA	1.300	0.080	1.400	0.100	0.929	A	A
1	GROSS BETA	1.890	0.070	1.960	0.300	0.964	A	A

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	GROSS ALPHA	1.584	0.053	1.400	0.100	1.131	A	W
1	GROSS BETA	1.837	0.056	1.960	0.300	0.937	A	A
<b>Matrix:</b> WA Water Bq / L								
1	GROSS ALPHA	1788.630	41.920	1421.000	100.000	1.259	W	A
2	GROSS ALPHA	1581.610	38.610	1421.000	100.000	1.113	A	A
1	GROSS BETA	1828.980	33.950	2200.000	100.000	0.831	A	A
2	GROSS BETA	1725.910	32.450	2200.000	100.000	0.785	A	A
1	Bq U	0.980		0.801	0.067	1.223	A	A
2	Bq U	0.780	0.030	0.801	0.067	0.973	A	A
<b>Matrix:</b> SO Soil Bq / kg								
1	Bq U	67.600		64.600	2.858	1.046	A	A
2	Bq U	66.400	1.500	64.600	2.858	1.028	A	A
<b>Matrix:</b> AI Air Filter Bq / filter								
1	Bq U	0.070	0.000	0.063	0.004	1.109	A	A
<b>Matrix:</b> WA Water Bq / L								
1	FE55	283.000	31.000	202.800	2.921	1.395	W	A
<b>Matrix:</b> AI Air Filter Bq / filter								
1	CE144	8.000	0.600	8.210	0.796	0.974	A	A
1	MN54	5.900	0.300	5.440	0.485	1.085	A	A
1	CO57	11.600	0.700	11.110	0.846	1.044	A	A
1	CO60	9.100	0.400	9.090	0.732	1.001	A	A
1	SB125	11.300	0.700	12.160	1.151	0.929	A	A
1	CS134	18.000	0.900	19.740	1.380	0.912	A	A
1	CS137	12.100	0.600	11.860	0.957	1.020	A	A
<b>Matrix:</b> VE Vegetation Bq / kg								
1	K40	871.000	41.000	707.500	24.987	1.231	A	A
1	CO60	12.700	1.200	10.575	0.206	1.201	A	A
1	CS137	224.000	9.000	181.500	7.141	1.234	A	W
<b>Matrix:</b> SO Soil Bq / kg								
1	K40	348.000	17.000	313.500	10.150	1.110	A	A
1	CS137	351.000	13.000	329.500	9.260	1.065	A	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> WA Water Bq / L								
1	MN54	57.900	1.900	57.000	1.900	1.016	A	A
1	CO60	13.900	0.600	13.600	1.200	1.022	A	A
1	CS137	47.300	1.800	46.000	1.700	1.028	A	A
1	SR90	4.604	0.386	4.357	0.192	1.057	A	A
<b>Matrix:</b> SO Soil Bq / kg								
1	SR90	12.510	2.870	13.091	0.279	0.956	A	A
<b>Matrix:</b> VE Vegetation Bq / kg								
1	SR90	300.400	5.200	359.005	6.021	0.837	A	A
<b>Matrix:</b> AI Air Filter Bq / filter								
1	SR90	1.679	0.344	1.758	0.042	0.955	A	A
<b>Matrix:</b> WA Water Bq / L								
1	U234	0.480		0.396	0.026	1.212	A	A
1	U238	0.470		0.396	0.037	1.186	W	A
2	U234	0.380	0.010	0.396	0.026	0.959	A	A
2	U238	0.370	0.010	0.396	0.037	0.934	A	A
<b>Matrix:</b> SO Soil Bq / kg								
1	U234	33.500		31.133	0.802	1.076	A	A
1	U238	32.600		31.900	2.552	1.022	A	A
2	U234	32.900	0.700	31.133	0.802	1.057	A	A
2	U238	32.000	0.700	31.900	2.552	1.003	A	A
<b>Matrix:</b> AI Air Filter Bq / filter								
1	U234	0.035	0.001	0.031	0.003	1.136	A	A
1	U238	0.034	0.001	0.030	0.001	1.119	A	A
<b>Matrix:</b> WA Water Bq / L								
1	H3	288.330	12.540	218.300	6.505	1.321	W	A
1	PU238	2.850	0.110	2.526	0.060	1.128	W	W
2	PU238	2.480	0.130	2.526	0.060	0.982	A	W
1	PU239	1.800	0.090	1.650	0.061	1.091	A	A
2	PU239	1.600	0.100	1.650	0.061	0.970	A	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	PU238	0.076	0.016	0.069	0.003	1.094	A	W
1	PU239	0.057	0.016	0.062	0.002	0.914	A	
2	PU238	0.065	0.012	0.069	0.003	0.935	A	W
2	PU239	0.083	0.012	0.062	0.002	1.331	W	
<b>Matrix:</b> SO Soil Bq / kg								
1	PU239	5.330	0.390	5.305	0.253	1.005	A	A
<b>Matrix:</b> VE Vegetation Bq / kg								
1	PU239	2.060	0.260	1.770	0.154	1.164	A	A
<b>Matrix:</b> WA Water Bq / L								
1	AM241	1.260	0.200	1.226	0.050	1.028	A	A
2	AM241	1.210	1.040	1.226	0.050	0.987	A	A
<b>Matrix:</b> AI Air Filter Bq / filter								
1	AM241	0.144	0.044	0.069	0.003	2.096	W	A
<b>Matrix:</b> VE Vegetation Bq / kg								
1	AM241	0.153	0.668	1.105	0.051	0.138	N	W
1	CM244	0.395	0.433	2.174	0.066	0.182	N	N
2	CM244	0.590	0.440	2.174	0.066	0.271	N	N

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If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> WA Water Bq / L								
1	CO60	14.300	2.600	13.600	1.200	1.051	A	A
1	SR90	4.560	0.300	4.357	0.192	1.046	A	A
1	CS137	47.600	3.500	46.000	1.700	1.035	A	A
1	U234	0.440	0.070	0.396	0.026	1.111	A	A
1	U238	0.460	0.070	0.396	0.037	1.161	A	A
1	PU238	2.680	0.380	2.526	0.060	1.061	A	W
1	PU239	1.780	0.260	1.650	0.061	1.079	A	A
1	AM241	1.180	0.180	1.226	0.050	0.963	A	A

**Matrix:** AI Air Filter Bq / filter

1	CO57	13.300	0.160	11.110	0.846	1.197	W	A
1	CO60	9.420	0.260	9.090	0.732	1.036	A	A
1	SR90	1.580	0.040	1.758	0.042	0.899	A	A
1	CS134	21.800	0.300	19.740	1.380	1.104	A	A
1	CS137	13.200	0.280	11.860	0.957	1.113	A	A
1	U234	0.034	0.006	0.031	0.003	1.104	A	A
1	U238	0.034	0.006	0.030	0.001	1.115	A	A
1	PU238	0.071	0.011	0.069	0.003	1.022	A	W
1	PU239	0.072	0.011	0.062	0.002	1.155	A	A
1	AM241	0.068	0.014	0.069	0.003	0.990	A	A

**Matrix:** SO Soil Bq / kg

1	K40	340.000	19.000	313.500	10.150	1.085	A	A
1	SR90	12.700	1.150	13.091	0.279	0.970	A	A
1	CS137	359.000	3.900	329.500	9.260	1.090	A	A
1	U234	29.780	4.920	31.133	0.802	0.957	A	A
1	U238	27.440	4.580	31.900	2.552	0.860	A	A
1	PU239	6.800	2.040	5.305	0.253	1.282	W	A
1	AM241	3.380	1.710	2.678	0.212	1.262	A	A

**Matrix:** VE Vegetation Bq / kg

1	K40	795.000	28.000	707.500	24.987	1.124	A	N
1	CO60	12.200	1.400	10.575	0.206	1.154	A	A
1	SR90	350.000	5.100	359.005	6.021	0.975	A	A
1	CS137	206.000	3.400	181.500	7.141	1.135	A	W
1	PU239	1.930	0.420	1.770	0.154	1.090	A	A
1	AM241	1.150	0.380	1.105	0.051	1.041	A	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.



## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation	QAP 47 Evaluation
<b>Matrix: SO Soil Bq / kg</b>								
1	K40	284.720	8.790	313.500	10.150	0.908	A	W
1	CS137	325.340	1.530	329.500	9.260	0.987	A	A
2	K40	264.400	8.790	313.500	10.150	0.843	W	W
2	CS137	328.820	1.530	329.500	9.260	0.998	A	A
3	K40	280.720	8.790	313.500	10.150	0.895	W	W
3	CS137	325.900	1.530	329.500	9.260	0.989	A	A

**Matrix: WA Water Bq / L**

1	H3	179.710	0.320	218.300	6.505	0.823	A	A
1	MN54	65.860	0.790	57.000	1.900	1.155	A	W
1	CO60	14.430	0.200	13.600	1.200	1.061	A	A
1	CS137	58.160	0.910	46.000	1.700	1.264	N	W
2	H3	180.360	0.320	218.300	6.505	0.826	A	A
2	MN54	66.300	0.790	57.000	1.900	1.163	A	W
2	CO60	14.890	0.200	13.600	1.200	1.095	A	A
2	CS137	56.870	0.910	46.000	1.700	1.236	W	W
3	MN54	67.710	0.790	57.000	1.900	1.188	W	W
3	CO60	14.530	0.200	13.600	1.200	1.068	A	A
3	CS137	59.090	0.910	46.000	1.700	1.285	N	W
1	GROSS ALPHA	1397.170	43.310	1421.000	100.000	0.983	A	A
1	GROSS BETA	2295.870	24.680	2200.000	100.000	1.044	A	A
2	GROSS ALPHA	1487.580	43.310	1421.000	100.000	1.047	A	A
2	GROSS BETA	2275.890	24.680	2200.000	100.000	1.034	A	A
3	GROSS ALPHA	1490.430	43.310	1421.000	100.000	1.049	A	A
3	GROSS BETA	2236.480	24.680	2200.000	100.000	1.017	A	A

**Matrix: AI Air Filter Bq / filter**

1	MN54	7.040	0.230	5.440	0.485	1.294	W	W
1	CO57	14.560	0.380	11.110	0.846	1.311	W	N
1	CO60	8.780	0.280	9.090	0.732	0.966	A	A
1	SB125	16.940	0.370	12.160	1.151	1.393	W	N
1	CS134	17.530	0.730	19.740	1.380	0.888	A	A
1	CS137	15.040	0.580	11.860	0.957	1.268	W	N
1	CE144	10.340	0.130	8.210	0.796	1.259	W	W
2	MN54	7.520	0.230	5.440	0.485	1.382	N	W
2	CO57	15.450	0.380	11.110	0.846	1.391	N	N
2	CO60	8.840	0.280	9.090	0.732	0.972	A	A
2	SB125	17.750	0.370	12.160	1.151	1.460	N	N
2	CS134	18.040	0.730	19.740	1.380	0.914	A	A
2	CS137	16.330	0.580	11.860	0.957	1.377	N	N
2	CE144	10.620	0.130	8.210	0.796	1.294	W	W
3	MN54	7.510	0.230	5.440	0.485	1.381	N	W
3	CO57	15.210	0.380	11.110	0.846	1.369	N	N
3	CO60	9.400	0.280	9.090	0.732	1.034	A	A
3	SB125	16.990	0.370	12.160	1.151	1.397	W	N

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
3	CS134	19.280	0.730	19.740	1.380	0.977	A	A
3	CS137	16.190	0.580	11.860	0.957	1.365	N	N
3	CE144	10.360	0.130	8.210	0.796	1.262	W	W
1	GROSS ALPHA	1.070	0.020	1.400	0.100	0.764	W	A
1	GROSS BETA	1.790	0.020	1.960	0.300	0.913	A	A
2	GROSS ALPHA	1.060	0.020	1.400	0.100	0.757	W	A
2	GROSS BETA	1.780	0.020	1.960	0.300	0.908	A	A
3	GROSS ALPHA	1.040	0.020	1.400	0.100	0.743	W	A
3	GROSS BETA	1.740	0.020	1.960	0.300	0.888	A	A

**Matrix:** VE Vegetation Bq / kg

1	K40	648.980	28.310	707.500	24.987	0.917	A	N
1	CO60	10.070	0.180	10.575	0.206	0.952	A	W
1	CS137	201.210	2.320	181.500	7.141	1.109	A	W
2	K40	712.990	28.310	707.500	24.987	1.008	A	N
2	CO60	10.250	0.180	10.575	0.206	0.969	A	W
2	CS137	200.650	2.320	181.500	7.141	1.106	A	W
3	K40	657.860	28.310	707.500	24.987	0.930	A	N
3	CO60	9.820	0.180	10.575	0.206	0.929	A	W
3	CS137	196.030	2.320	181.500	7.141	1.080	A	W

**Matrix:** WA Water Bq / L

1	SR90	4.960	0.130	4.357	0.192	1.138	A	A
2	SR90	5.090	0.130	4.357	0.192	1.168	A	A
3	SR90	4.780	0.130	4.357	0.192	1.097	A	A

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**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** BP Battelle Pacific Northwest National Laboratory

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	MN54	5.280	0.270	5.440	0.485	0.971	A	A
1	CO57	10.420	0.150	11.110	0.846	0.938	A	A
1	CO60	8.360	0.490	9.090	0.732	0.920	A	A
1	SR90	1.470	0.120	1.758	0.042	0.836	W	A
1	SB125	12.570	0.830	12.160	1.151	1.034	A	W
1	CS134	19.570	0.410	19.740	1.380	0.991	A	A
1	CS137	11.010	0.400	11.860	0.957	0.928	A	A
1	CE144	6.810	0.850	8.210	0.796	0.829	A	A
1	U238	0.033	0.001	0.030	0.001	1.073	A	W
1	PU238	0.067	0.003	0.069	0.003	0.957	A	A
1	PU239	0.068	0.003	0.062	0.002	1.086	A	A
1	AM241	0.083	0.004	0.069	0.003	1.214	A	A
1	GROSS ALPHA	1.240	0.050	1.400	0.100	0.886	A	A
1	GROSS BETA	2.050	0.050	1.960	0.300	1.046	A	A

**Matrix:** WA Water Bq / L

1	GROSS ALPHA	1559.000	78.000	1421.000	100.000	1.097	A	A
1	GROSS BETA	2534.000	80.000	2200.000	100.000	1.152	A	W
1	H3	246.000	8.000	218.300	6.505	1.127	A	A
1	MN54	63.700	0.900	57.000	1.900	1.118	A	A
1	FE55	246.000	11.000	202.800	2.921	1.213	A	A
1	CO60	15.100	0.400	13.600	1.200	1.110	A	A
1	SR90	4.100	0.100	4.357	0.192	0.941	A	A
1	CS137	50.200	0.800	46.000	1.700	1.091	A	A
1	U238	0.444	0.008	0.396	0.037	1.120	A	N
1	PU238	2.490	0.060	2.526	0.060	0.986	A	A
1	PU239	1.690	0.040	1.650	0.061	1.024	A	A
1	AM241	1.500	0.160	1.226	0.050	1.224	A	A

**Matrix:** VE Vegetation Bq / kg

1	K40	694.000	35.000	707.500	24.987	0.981	A	W
1	CO60	10.000	0.500	10.575	0.206	0.946	A	A
1	SR90	347.000	15.000	359.005	6.021	0.967	A	A
1	CS137	166.000	8.000	181.500	7.141	0.915	A	A
1	PU239	1.580	0.040	1.770	0.154	0.893	A	A
1	AM241	1.050	0.050	1.105	0.051	0.950	A	A
1	CM244	1.910	0.160	2.174	0.066	0.879	A	W

**Matrix:** SO Soil Bq / kg

1	K40	329.000	5.000	313.500	10.150	1.049	A	A
1	SR90	27.500	4.600	13.091	0.279	2.101	W	A
1	CS137	329.000	4.000	329.500	9.260	0.998	A	A
1	PU239	5.110	0.190	5.305	0.253	0.963	A	A
1	AM241	2.960	0.420	2.678	0.212	1.106	A	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix: WA Water Bq / L</b>								
1	H3	316.000	11.000	218.300	6.505	1.448	W	
1	ug U	0.033	0.001	0.032	0.003	1.031	A	N
1	MN54	54.000	1.000	57.000	1.900	0.947	A	A
1	CO60	14.900	0.800	13.600	1.200	1.096	A	A
1	CS137	44.000	1.000	46.000	1.700	0.957	A	A
<b>Matrix: SO Soil Bq / kg</b>								
1	K40	328.000	5.000	313.500	10.150	1.046	A	A
1	CS137	230.000	9.000	329.500	9.260	0.698	N	A
1	ug U	2.600	0.500	2.583	0.200	1.007	A	N
<b>Matrix: VE Vegetation Bq / kg</b>								
1	K40	625.000	13.000	707.500	24.987	0.883	W	A
1	CS137	175.000	12.000	181.500	7.141	0.964	A	A
<b>Matrix: AI Air Filter Bq / filter</b>								
1	ug U	2.600	0.100	2.472	0.101	1.052	A	A
1	MN54	5.200	0.200	5.440	0.485	0.956	A	A
1	CO57	8.700	0.080	11.110	0.846	0.783	A	A
1	CO60	8.300	0.300	9.090	0.732	0.913	A	A
1	SB125	2.700	0.300	12.160	1.151	0.222	N	A
1	CS134	17.800	0.300	19.740	1.380	0.902	A	A
1	CS137	12.100	0.200	11.860	0.957	1.020	A	A
1	CE144	6.100	0.200	8.210	0.796	0.743	A	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	<u>QAP 47</u> Evaluation
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**Matrix:** VE Vegetation Bq / kg

1	CS137	206.000	33.020	181.500	7.141	1.135	A	A
1	K40	940.000	183.350	707.500	24.987	1.329	N	A

**Matrix:** WA Water Bq / L

1	MN54	70.300	2.570	57.000	1.900	1.233	W	W
1	CO60	16.100	1.000	13.600	1.200	1.184	W	W
1	CS137	56.610	2.090	46.000	1.700	1.231	W	A
1	AM241	1.680	0.550	1.226	0.050	1.371	W	W

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	GROSS ALPHA	1.550	0.010	1.400	0.100	1.107	A	W
1	GROSS BETA	2.260	0.010	1.960	0.300	1.153	A	A
1	MN54	6.780	0.110	5.440	0.485	1.246	W	A
1	CO57	12.300	0.060	11.110	0.846	1.107	W	A
1	CO60	9.560	0.130	9.090	0.732	1.052	A	A
1	SB125	2.910	0.180	12.160	1.151	0.239	N	W
1	CS134	21.220	0.160	19.740	1.380	1.075	A	A
1	CS137	12.480	0.110	11.860	0.957	1.052	A	A
1	CE144	8.780	0.180	8.210	0.796	1.069	A	
<b>Matrix:</b> VE Vegetation Bq / kg								
1	K40	620.000	12.460	707.500	24.987	0.876	W	N
1	CO60	8.220	0.690	10.575	0.206	0.777	W	W
1	CS137	151.370	1.410	181.500	7.141	0.834	W	N
1	AM241	51.590	1.220	1.105	0.051	46.679	N	W
<b>Matrix:</b> WA Water Bq / L								
1	MN54	61.110	0.610	57.000	1.900	1.072	A	A
1	CO60	15.070	0.370	13.600	1.200	1.108	A	A
1	CS137	48.520	0.510	46.000	1.700	1.055	A	A
1	AM241	1.250	0.200	1.226	0.050	1.020	A	W
<b>Matrix:</b> SO Soil Bq / kg								
1	K40	359.630	9.140	313.500	10.150	1.147	A	A
1	CS137	347.410	1.980	329.500	9.260	1.054	A	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	MN54	5.500	1.000	5.440	0.485	1.011	A	A
1	CO57	11.000	1.000	11.110	0.846	0.990	A	A
1	CO60	8.800	0.700	9.090	0.732	0.968	A	A
1	SB125	12.000	1.000	12.160	1.151	0.987	A	A
1	CS134	19.000	1.300	19.740	1.380	0.963	A	A
1	CS137	12.000	1.000	11.860	0.957	1.012	A	A
1	CE144	8.300	0.800	8.210	0.796	1.011	A	A
1	PU238	0.068	0.006	0.069	0.003	0.978	A	N
1	PU239	0.062	0.006	0.062	0.002	0.994	A	
1	Bq U	0.066	0.006	0.063	0.004	1.046	A	A
1	U234	0.033	0.005	0.031	0.003	1.071	A	
1	U238	0.032	0.004	0.030	0.001	1.050	A	
1	ug U	2.700	0.500	2.472	0.101	1.092	A	
1	AM241	0.074	0.003	0.069	0.003	1.077	A	
1	GROSS ALPHA	1.310	0.130	1.400	0.100	0.936	A	A
1	GROSS BETA	2.300	0.200	1.960	0.300	1.173	A	A

**Matrix:** WA Water Bq / L

1	GROSS ALPHA	1690.000	250.000	1421.000	100.000	1.189	W	A
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**Matrix:** SO Soil Bq / kg

1	K40	280.000	40.000	313.500	10.150	0.893	W	A
1	CS137	290.000	30.000	329.500	9.260	0.880	W	A
1	PU239	5.800	0.700	5.305	0.253	1.093	A	A
1	Bq U	52.200	5.400	64.600	2.858	0.808	A	
1	U234	25.400	2.800	31.133	0.802	0.816	A	
1	U238	25.800	2.600	31.900	2.552	0.809	A	
1	ug U	2.100	0.400	2.583	0.200	0.813	A	
1	AM241	2.700	0.400	2.678	0.212	1.008	A	A

**Matrix:** VE Vegetation Bq / kg

1	K40	660.000	80.000	707.500	24.987	0.933	A	W
1	CO60	11.000	1.300	10.575	0.206	1.040	A	A
1	SR90	340.000	34.000	359.005	6.021	0.947	A	A
1	CS137	160.000	15.000	181.500	7.141	0.882	W	A
1	PU238	0.110	0.030	0.116	0.035	0.951	A	A
1	PU239	1.600	0.300	1.770	0.154	0.904	A	A
1	AM241	1.100	0.140	1.105	0.051	0.995	A	A
1	CM244	1.900	0.150	2.174	0.066	0.874	A	

**Matrix:** WA Water Bq / L

1	H3	213.770	10.690	218.300	6.505	0.979	A	A
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**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> WA Water Bq/L								
1	CO60	15.000	1.200	13.600	1.200	1.103	A	A
1	CS137	45.000	4.000	46.000	1.700	0.978	A	A
1	PU238	2.430	0.200	2.526	0.060	0.962	A	
1	PU239	1.550	0.100	1.650	0.061	0.939	A	A
1	Bq U	0.880	0.040	0.801	0.067	1.098	A	W
1	U234	0.430	0.020	0.396	0.026	1.085	A	
1	U238	0.420	0.020	0.396	0.037	1.060	A	
1	ug U	0.034	0.004	0.032	0.003	1.063	A	
1	AM241	1.290	0.100	1.226	0.050	1.052	A	A

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation	QAP 47 Evaluation
<b>Matrix: WA Water Bq / L</b>								
1	GROSS ALPHA	1740.000	100.000	1421.000	100.000	1.224	W	A
1	GROSS BETA	2270.000	110.000	2200.000	100.000	1.032	A	A
1	H3	246.000	23.000	218.300	6.505	1.127	A	A
1	MN54	65.900	3.300	57.000	1.900	1.156	A	W
1	FE55	209.000	17.000	202.800	2.921	1.031	A	A
1	CO60	15.700	0.900	13.600	1.200	1.154	W	A
1	SR90	3.390	0.340	4.357	0.192	0.778	W	A
1	CS137	53.300	3.300	46.000	1.700	1.159	A	A
1	U234	0.411	0.033	0.396	0.026	1.037	A	N
1	U238	0.462	0.048	0.396	0.037	1.166	A	A
1	PU238	2.470	0.081	2.526	0.060	0.978	A	A
1	PU239	1.710	0.063	1.650	0.061	1.036	A	A
1	AM241	1.290	0.059	1.226	0.050	1.052	A	A
<b>Matrix: SO Soil Bq / kg</b>								
1	K40	418.000	2.000	313.500	10.150	1.333	W	A
1	CS137	389.000	26.000	329.500	9.260	1.181	A	A
1	U234	28.900	1.900	31.133	0.802	0.928	A	N
1	U238	30.300	2.200	31.900	2.552	0.950	A	A
1	PU239	5.140	0.440	5.305	0.253	0.969	A	W
1	AM241	2.310	1.100	2.678	0.212	0.863	A	W
<b>Matrix: VE Vegetation Bq / kg</b>								
1	K40	903.000	48.000	707.500	24.987	1.276	W	A
1	CO60	11.800	0.800	10.575	0.206	1.116	A	A
1	SR90	209.000	16.000	359.005	6.021	0.582	W	A
1	CS137	208.000	16.000	181.500	7.141	1.146	A	A
1	PU239	1.050	0.370	1.770	0.154	0.593	W	A
1	AM241	2.680	0.550	1.105	0.051	2.425	W	W
1	CM244	1.570	0.440	2.174	0.066	0.722	W	W
<b>Matrix: AI Air Filter Bq / filter</b>								
1	GROSS ALPHA	1.440	0.030	1.400	0.100	1.029	A	A
1	GROSS BETA	1.880	0.030	1.960	0.300	0.959	A	A
1	MN54	8.730	0.520	5.440	0.485	1.605	N	A
1	CO57	16.700	0.810	11.110	0.846	1.503	N	A
1	CO60	13.500	0.700	9.090	0.732	1.485	N	A
1	SR90	1.620	0.130	1.758	0.042	0.921	A	A
1	SB125	20.200	1.000	12.160	1.151	1.661	N	A
1	CS134	28.900	1.700	19.740	1.380	1.464	N	A
1	CS137	18.900	1.300	11.860	0.957	1.594	N	A
1	CE144	11.700	0.600	8.210	0.796	1.425	N	A
1	U234	0.051	0.009	0.031	0.003	1.669	W	W
1	U238	0.037	0.010	0.030	0.001	1.227	A	W

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	PU238	0.082	0.009	0.069	0.003	1.177	W	A
1	AM241	0.079	0.011	0.069	0.003	1.147	A	A
1	PU239	0.060	0.007	0.062	0.002	0.956	A	

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> WA Water Bq / L								
1	H3	268.000	22.000	218.300	6.505	1.228	W	A
1	MN54	58.100	4.300	57.000	1.900	1.019	A	A
1	CO60	13.100	0.100	13.600	1.200	0.963	A	A
1	CS137	49.900	2.400	46.000	1.700	1.085	A	A
1	ug U	0.041	0.002	0.032	0.003	1.266	W	N
<b>Matrix:</b> AI Air Filter Bq / filter								
1	GROSS ALPHA	1.380	0.020	1.400	0.100	0.986	A	W
1	GROSS BETA	2.030	0.100	1.960	0.300	1.036	A	A
1	MN54	5.200	0.200	5.440	0.485	0.956	A	A
1	CO57	10.100	0.100	11.110	0.846	0.909	A	A
1	CO60	8.580	0.080	9.090	0.732	0.944	A	A
1	SB125	11.500	0.500	12.160	1.151	0.946	A	A
1	CS134	19.700	0.300	19.740	1.380	0.998	A	A
1	CS137	11.500	0.400	11.860	0.957	0.970	A	A
1	CE144	6.800	1.500	8.210	0.796	0.828	A	A
<b>Matrix:</b> SO Soil Bq / kg								
1	ug U	2.064	0.038	2.583	0.200	0.799	A	W

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

**Lab:** CB Radiation Protection Bureau, Ontario, Canada

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> WA Water Bq/L								
1	SR90	4.780	0.460	4.357	0.192	1.097	A	
2	SR90	4.520	0.460	4.357	0.192	1.037	A	

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** CD Gentilly-2 Nuclear Power Plant, Quebec Canada

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter							
1	GROSS ALPHA	1.100	0.100	1.400	0.100	0.786	W
1	GROSS BETA	1.000	0.100	1.960	0.300	0.510	N
1	MN54	5.000	0.200	5.440	0.485	0.919	A
1	CO57	9.500	0.100	11.110	0.846	0.855	A
1	CO60	7.800	0.200	9.090	0.732	0.858	A
1	SB125	10.500	0.300	12.160	1.151	0.863	A
1	CS134	15.500	0.200	19.740	1.380	0.785	W
1	CS137	9.700	0.200	11.860	0.957	0.818	W
1	CE144	6.600	0.300	8.210	0.796	0.804	A
<b>Matrix:</b> SO Soil Bq / kg							
1	K40	400.000	20.000	313.500	10.150	1.276	W
1	CS137	388.000	6.000	329.500	9.260	1.178	A
<b>Matrix:</b> VE Vegetation Bq / kg							
1	K40	800.000	40.000	707.500	24.987	1.131	A
1	CO60	12.000	2.000	10.575	0.206	1.135	A
1	CS137	188.000	6.000	181.500	7.141	1.036	A
<b>Matrix:</b> WA Water Bq / L							
1	GROSS ALPHA	910.000	90.000	1421.000	100.000	0.640	W
1	GROSS BETA	2100.000	200.000	2200.000	100.000	0.955	A
1	H3	220.000	20.000	218.300	6.505	1.008	A
1	MN54	64.000	1.000	57.000	1.900	1.123	A
1	CO60	15.300	0.800	13.600	1.200	1.125	A
1	CS137	51.000	1.000	46.000	1.700	1.109	A

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**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	GROSS ALPHA	1.420	0.116	1.400	0.100	1.014	A	A
1	GROSS BETA	2.080	0.016	1.960	0.300	1.061	A	A
1	MN54	5.090	0.253	5.440	0.485	0.936	A	A
1	CO57	10.320	0.226	11.110	0.846	0.929	A	A
1	CO60	8.570	0.281	9.090	0.732	0.943	A	A
1	SR90	1.630	0.112	1.758	0.042	0.927	A	A
1	SB125	11.600	0.555	12.160	1.151	0.954	A	A
1	CS134	18.600	0.589	19.740	1.380	0.942	A	A
1	CS137	10.800	0.301	11.860	0.957	0.911	A	A
1	CE144	7.410	0.418	8.210	0.796	0.903	A	A
1	U234	0.035	0.004	0.031	0.003	1.140	A	A
1	U238	0.032	0.003	0.030	0.001	1.060	A	A
1	Bq U	0.069	0.009	0.063	0.004	1.095	A	A
1	ug U	2.700	0.052	2.472	0.101	1.092	A	A
1	PU238	0.066	0.002	0.069	0.003	0.954	A	A
1	PU239	0.067	0.003	0.062	0.002	1.075	A	A
1	AM241	0.081	0.005	0.069	0.003	1.179	A	A

**Matrix:** VE Vegetation Bq / kg

1	K40	851.000	51.300	707.500	24.987	1.203	A	A
1	CO60	11.800	0.407	10.575	0.206	1.116	A	A
1	SR90	362.000	11.000	359.005	6.021	1.008	A	A
1	CS137	188.000	5.520	181.500	7.141	1.036	A	A
1	PU239	1.860	0.271	1.770	0.154	1.051	A	A
1	AM241	1.400	0.219	1.105	0.051	1.267	A	A
1	CM244	1.990	0.135	2.174	0.066	0.916	A	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation	QAP 47 Evaluation
<b>Matrix:</b> WA Water Bq / L								
1	H3	220.000	15.000	218.300	6.505	1.008	A	A
1	MN54	61.100	2.020	57.000	1.900	1.072	A	W
1	FE55	189.000	13.900	202.800	2.921	0.932	A	A
1	CO60	14.700	0.780	13.600	1.200	1.081	A	A
1	SR90	3.900	0.430	4.357	0.192	0.895	A	A
1	CS137	50.000	1.750	46.000	1.700	1.087	A	W
1	U234	0.490	0.120	0.396	0.026	1.237	W	W
1	U238	0.440	0.090	0.396	0.037	1.110	A	W
1	Bq U	1.050	0.090	0.801	0.067	1.310	W	W
1	PU238	1.230	0.310	2.526	0.060	0.487	N	W
1	PU239	1.090	0.260	1.650	0.061	0.661	N	A
1	AM241	1.560	0.360	1.226	0.050	1.273	W	A

**Matrix:** AI Air Filter Bq / filter

1	MN54	5.650	0.480	5.440	0.485	1.039	A	A
1	CO57	10.400	0.360	11.110	0.846	0.936	A	A
1	CO60	8.830	0.380	9.090	0.732	0.971	A	A
1	SR90	0.990	0.230	1.758	0.042	0.563	N	W
1	SB125	13.100	0.690	12.160	1.151	1.077	A	A
1	CS134	17.300	0.590	19.740	1.380	0.876	A	N
1	CS137	11.300	0.440	11.860	0.957	0.953	A	A
1	CE144	7.650	1.500	8.210	0.796	0.932	A	A
1	U234	0.040	0.010	0.031	0.003	1.299	A	W
1	U238	0.040	0.010	0.030	0.001	1.312	A	A
1	Bq U	0.090	0.010	0.063	0.004	1.426	A	A
1	PU238	0.080	0.020	0.069	0.003	1.151	W	N
1	PU239	0.070	0.020	0.062	0.002	1.123	A	A
1	AM241	0.070	0.020	0.069	0.003	1.019	A	N

**Matrix:** VE Vegetation Bq / kg

1	K40	618.000	46.700	707.500	24.987	0.873	W	A
1	CO60	13.400	3.200	10.575	0.206	1.267	W	A
1	SR90	565.000	23.700	359.005	6.021	1.574	N	N
1	CS137	154.000	6.080	181.500	7.141	0.848	W	A
1	PU239	1.240	0.300	1.770	0.154	0.700	W	A
1	AM241	0.650	0.150	1.105	0.051	0.588	N	A
1	CM244	0.930	0.040	2.174	0.066	0.428	N	W

**Matrix:** SO Soil Bq / kg

1	K40	375.000	43.500	313.500	10.150	1.196	A	A
1	SR90	22.100	7.880	13.091	0.279	1.688	W	W
1	CS137	323.000	11.100	329.500	9.260	0.980	A	A
1	U234	27.000	6.230	31.133	0.802	0.867	A	W
1	U238	28.600	6.570	31.900	2.552	0.897	A	W

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> SO Soil Bq / kg								
1	Bq U	60.500	12.100	64.600	2.858	0.937	A	W
1	PU239	5.940	1.400	5.305	0.253	1.120	A	A
1	AM241	3.030	0.730	2.678	0.212	1.132	A	A

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** CN China Institute for Radiation Protection

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	CO57	10.450	0.550	11.110	0.846	0.941	A	N
1	SB125	12.430	0.790	12.160	1.151	1.022	A	W
1	CS134	18.120	0.940	19.740	1.380	0.918	A	A
1	CS137	11.440	0.590	11.860	0.957	0.965	A	A
1	MN54	5.130	0.280	5.440	0.485	0.943	A	N
1	CO60	8.660	0.460	9.090	0.732	0.953	A	A
1	CE144	7.820	0.540	8.210	0.796	0.952	A	

**Matrix:** SO Soil Bq / kg

1	CS137	366.800	18.000	329.500	9.260	1.113	A	A
1	K40	325.800	18.400	313.500	10.150	1.039	A	A

**Matrix:** VE Vegetation Bq / kg

1	CS137	198.600	10.000	181.500	7.141	1.094	A	A
1	CO60	9.760	0.720	10.575	0.206	0.923	A	A
1	K40	677.500	34.900	707.500	24.987	0.958	A	A

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**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> SO Soil Bq / kg								
1	CS137	371.000	17.000	329.500	9.260	1.126	A	A
<b>Matrix:</b> VE Vegetation Bq / kg								
1	CO60	11.000	2.000	10.575	0.206	1.040	A	A
1	CS137	193.000	9.000	181.500	7.141	1.063	A	A
<b>Matrix:</b> AI Air Filter Bq / filter								
1	MN54	5.700	0.200	5.440	0.485	1.048	A	A
1	CO57	12.600	0.200	11.110	0.846	1.134	W	W
1	CO60	8.900	0.300	9.090	0.732	0.979	A	A
1	SB125	12.400	0.300	12.160	1.151	1.020	A	A
1	CS134	18.800	0.600	19.740	1.380	0.952	A	A
1	CS137	11.600	0.300	11.860	0.957	0.978	A	A
1	CE144	6.000	1.000	8.210	0.796	0.731	A	A

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** CR Laboratorio de Fisica Nuclear Aplicada, Costa Rica

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	MN54	4.700	0.200	5.440	0.485	0.864	A	W
1	CO60	7.700	0.400	9.090	0.732	0.847	A	W
1	SB125	10.000	0.600	12.160	1.151	0.822	W	W
1	CS134	15.300	0.600	19.740	1.380	0.775	W	W
1	CS137	9.100	0.400	11.860	0.957	0.767	W	W
<b>Matrix:</b> VE Vegetation Bq / kg								
1	K40	919.600	83.000	707.500	24.987	1.300	W	A
1	CO60	13.200	4.700	10.575	0.206	1.248	W	A
1	CS137	224.500	9.900	181.500	7.141	1.237	A	A
<b>Matrix:</b> SO Soil Bq / kg								
1	K40	453.800	63.500	313.500	10.150	1.448	W	A
1	CS137	428.800	17.600	329.500	9.260	1.301	W	A
<b>Matrix:</b> WA Water Bq / L								
1	MN54	61.100	2.100	57.000	1.900	1.072	A	
1	CO60	14.700	0.800	13.600	1.200	1.081	A	
1	CS137	49.300	2.000	46.000	1.700	1.072	A	

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

**Lab:** CS Boeing North American, Canoga Park, CA

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> SO Soil Bq / kg								
1	K40	351.000	16.290	313.500	10.150	1.120	A	A
1	CS137	354.300	15.310	329.500	9.260	1.075	A	A
1	U238	45.290	13.830	31.900	2.552	1.420	N	
1	AM241	3.220	0.300	2.678	0.212	1.203	A	A
<b>Matrix:</b> VE Vegetation Bq / kg								
1	K40	736.400	35.050	707.500	24.987	1.041	A	A
1	CO60	11.740	0.440	10.575	0.206	1.110	A	A
1	CS137	173.500	7.550	181.500	7.141	0.956	A	A
1	AM241	0.721	0.220	1.105	0.051	0.653	N	A
<b>Matrix:</b> AI Air Filter Bq / filter								
1	MN54	2.666	0.130	5.440	0.485	0.490	N	W
1	CO57	6.172	0.210	11.110	0.846	0.556	N	W
1	CO60	4.390	0.140	9.090	0.732	0.483	N	N
1	SB125	5.793	0.180	12.160	1.151	0.476	N	W
1	CS134	9.370	0.260	19.740	1.380	0.475	N	W
1	CS137	5.353	0.240	11.860	0.957	0.451	N	W
1	CE144	4.187	0.240	8.210	0.796	0.510	N	W
1	AM241	0.141	0.030	0.069	0.003	2.048	W	A
<b>Matrix:</b> WA Water Bq / L								
1	MN54	60.650	2.720	57.000	1.900	1.064	A	A
1	CO60	14.480	0.470	13.600	1.200	1.065	A	A
1	CS137	49.590	2.150	46.000	1.700	1.078	A	A
1	AM241	1.380	0.100	1.226	0.050	1.126	A	W
<b>Matrix:</b> AI Air Filter Bq / filter								
1	GROSS ALPHA	1.450	0.070	1.400	0.100	1.036	A	A
1	GROSS BETA	3.000	0.230	1.960	0.300	1.531	W	W

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	GROSS ALPHA	1.240	0.242	1.400	0.100	0.886	A	A
1	GROSS BETA	1.770	0.349	1.960	0.300	0.903	A	A
1	MN54	6.060	2.410	5.440	0.485	1.114	A	W
1	CO57	12.000	1.270	11.110	0.846	1.080	A	A
1	CO60	9.280	0.700	9.090	0.732	1.021	A	A
1	SB125	13.700	2.080	12.160	1.151	1.127	A	W
1	CS134	19.300	2.820	19.740	1.380	0.978	A	A
1	CS137	13.600	1.470	11.860	0.957	1.147	W	A
1	CE144	10.800	3.260	8.210	0.796	1.315	N	N

**Matrix:** WA Water Bq / L

1	GROSS ALPHA	1620.000	319.000	1421.000	100.000	1.140	A	W
1	GROSS BETA	2330.000	456.000	2200.000	100.000	1.059	A	W
1	H3	302.000	57.900	218.300	6.505	1.383	W	W
1	MN54	92.200	45.500	57.000	1.900	1.618	N	A
1	CO60	21.800	3.290	13.600	1.200	1.603	N	A
1	CS137	74.300	17.700	46.000	1.700	1.615	N	A

**Matrix:** VE Vegetation Bq / kg

1	K40	662.000	184.000	707.500	24.987	0.936	A	A
1	CO60	10.300	2.110	10.575	0.206	0.974	A	N
1	CS137	212.000	56.600	181.500	7.141	1.168	A	N

**Matrix:** SO Soil Bq / kg

1	K40	329.000	94.400	313.500	10.150	1.049	A	A
1	CS137	466.000	149.000	329.500	9.260	1.414	N	W

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**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** DH Duke Engineering Services Hanford

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	<u>QAP 47</u> Evaluation
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**Matrix:** WA Water Bq / L

1	CO60	151.700	4.050	13.600	1.200	11.154	N	A
1	CS137	49.600	0.600	46.000	1.700	1.078	A	A
1	AM241	1.820	0.840	1.226	0.050	1.485	W	
1	MN54	61.400	0.700	57.000	1.900	1.077	A	A
1	H3	229.800	53.000	218.300	6.505	1.053	A	

**Matrix:** SO Soil Bq / kg

1	K40	322.100	21.100	313.500	10.150	1.027	A	A
1	CS137	333.200	3.330	329.500	9.260	1.011	A	A

**Matrix:** AI Air Filter Bq / filter

1	GROSS ALPHA	1.328	0.139	1.400	0.100	0.949	A	A
1	GROSS BETA	2.110	0.156	1.960	0.300	1.077	A	A
1	MN54	5.360	0.139	5.440	0.485	0.985	A	
1	CO57	10.500	0.096	11.110	0.846	0.945	A	
1	CO60	8.650	0.192	9.090	0.732	0.952	A	
1	SB125	12.240	0.374	12.160	1.151	1.007	A	
1	CS134	18.950	0.227	19.740	1.380	0.960	A	
1	CS137	11.230	0.184	11.860	0.957	0.947	A	
1	CE144	6.950	0.279	8.210	0.796	0.847	A	

**Matrix:** WA Water Bq / L

1	GROSS ALPHA	2.808	0.293	1421.000	100.000	0.002	N	
1	GROSS BETA	3.870	0.286	2200.000	100.000	0.002	N	

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## QAP 48 Results by Laboratory

**Lab:** DP Duke Power Company, Huntersville, NC

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> WA Water Bq / L								
1	H3	275.000	4.100	218.300	6.505	1.260	W	A
1	MN54	68.800	1.600	57.000	1.900	1.207	W	W
1	CO60	16.900	0.900	13.600	1.200	1.243	N	A
1	SR90	4.700	0.400	4.357	0.192	1.079	A	A
1	CS137	50.500	1.300	46.000	1.700	1.098	A	A
2	H3	283.000	4.100	218.300	6.505	1.296	W	A
2	MN54	61.500	2.000	57.000	1.900	1.079	A	W
2	CO60	15.100	1.300	13.600	1.200	1.110	A	A
2	SR90	4.100	0.400	4.357	0.192	0.941	A	A
2	CS137	46.800	1.600	46.000	1.700	1.017	A	A
3	H3	283.000	4.100	218.300	6.505	1.296	W	A
3	MN54	69.600	1.700	57.000	1.900	1.221	W	W
3	CO60	14.600	1.000	13.600	1.200	1.074	A	A
3	SR90	4.100	0.400	4.357	0.192	0.941	A	A
3	CS137	52.300	1.400	46.000	1.700	1.137	A	A
1	GROSS ALPHA	603.400	15.600	1421.000	100.000	0.425	N	N
1	GROSS BETA	1392.000	16.400	2200.000	100.000	0.633	W	N
1	FE55	324.900	3.200	202.800	2.921	1.602	N	W
2	GROSS ALPHA	586.200	15.400	1421.000	100.000	0.413	N	N
2	GROSS BETA	1366.000	16.200	2200.000	100.000	0.621	W	N
2	FE55	311.200	3.100	202.800	2.921	1.535	N	W
3	GROSS ALPHA	703.100	16.800	1421.000	100.000	0.495	N	N
3	GROSS BETA	1438.000	16.600	2200.000	100.000	0.654	W	N
3	FE55	342.300	3.600	202.800	2.921	1.688	N	W

**Matrix:** AI Air Filter Bq / filter

1	GROSS ALPHA	1.300	0.050	1.400	0.100	0.929	A	A
1	GROSS BETA	1.600	0.040	1.960	0.300	0.816	W	A
2	GROSS ALPHA	1.400	0.050	1.400	0.100	1.000	A	A
2	GROSS BETA	1.500	0.040	1.960	0.300	0.765	W	A
3	GROSS ALPHA	1.400	0.050	1.400	0.100	1.000	A	A
3	GROSS BETA	1.700	0.040	1.960	0.300	0.867	W	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	SR90	1.660	0.050	1.758	0.042	0.944	A	A
<b>Matrix:</b> WA Water Bq / L								
1	SR90	4.730	0.170	4.357	0.192	1.086	A	A
<b>Matrix:</b> AI Air Filter Bq / filter								
1	U234	0.033	0.005	0.031	0.003	1.071	A	A
<b>Matrix:</b> WA Water Bq / L								
1	U234	0.409	0.056	0.396	0.026	1.032	A	A
<b>Matrix:</b> SO Soil Bq / kg								
1	U234	33.100	3.800	31.133	0.802	1.063	A	A
<b>Matrix:</b> AI Air Filter Bq / filter								
1	U238	0.033	0.005	0.030	0.001	1.083	A	A
<b>Matrix:</b> WA Water Bq / L								
1	U238	0.415	0.064	0.396	0.037	1.047	A	A
<b>Matrix:</b> SO Soil Bq / kg								
1	U238	32.600	4.400	31.900	2.552	1.022	A	W
<b>Matrix:</b> AI Air Filter Bq / filter								
1	PU238	0.068	0.006	0.069	0.003	0.978	A	A
<b>Matrix:</b> WA Water Bq / L								
1	PU238	2.380	0.190	2.526	0.060	0.942	A	A
<b>Matrix:</b> VE Vegetation Bq / kg								
1	PU238	0.129	0.032	0.116	0.035	1.115	A	

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	PU239	0.062	0.006	0.062	0.002	0.994	A	
<b>Matrix:</b> WA Water Bq / L								
1	PU239	1.580	0.130	1.650	0.061	0.957	A	A
<b>Matrix:</b> VE Vegetation Bq / kg								
1	PU239	1.900	0.220	1.770	0.154	1.073	A	A
<b>Matrix:</b> SO Soil Bq / kg								
1	PU239	5.220	0.520	5.305	0.253	0.984	A	A
<b>Matrix:</b> AI Air Filter Bq / filter								
1	AM241	0.071	0.006	0.069	0.003	1.033	A	A
<b>Matrix:</b> WA Water Bq / L								
1	AM241	1.260	0.090	1.226	0.050	1.028	A	A
<b>Matrix:</b> VE Vegetation Bq / kg								
1	AM241	1.320	0.150	1.105	0.051	1.194	A	A
<b>Matrix:</b> SO Soil Bq / kg								
1	AM241	2.650	0.390	2.678	0.212	0.990	A	A
<b>Matrix:</b> VE Vegetation Bq / kg								
1	CM244	2.210	0.210	2.174	0.066	1.017	A	W
<b>Matrix:</b> WA Water Bq / L								
1	MN54	60.200	3.500	57.000	1.900	1.056	A	A
1	CO60	14.700	1.000	13.600	1.200	1.081	A	A
1	CS137	48.100	2.800	46.000	1.700	1.046	A	A
<b>Matrix:</b> VE Vegetation Bq / kg								
1	K40	694.000	92.000	707.500	24.987	0.981	A	A
1	CO60	11.100	2.300	10.575	0.206	1.050	A	A

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**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> VE Vegetation Bq / kg								
1	CS137	174.000	14.000	181.500	7.141	0.959	A	A
<b>Matrix:</b> SO Soil Bq / kg								
1	K40	339.000	51.000	313.500	10.150	1.081	A	A
1	CS137	391.000	21.000	329.500	9.260	1.187	A	A
<b>Matrix:</b> AI Air Filter Bq / filter								
1	MN54	5.560	0.310	5.440	0.485	1.022	A	A
1	CO57	11.300	0.600	11.110	0.846	1.017	A	A
1	CO60	8.980	0.470	9.090	0.732	0.988	A	A
1	SB125	13.800	0.700	12.160	1.151	1.135	A	A
1	CS134	20.100	1.000	19.740	1.380	1.018	A	A
1	CS137	11.800	0.600	11.860	0.957	0.995	A	A
1	CE144	7.650	0.510	8.210	0.796	0.932	A	A
<b>Matrix:</b> VE Vegetation Bq / kg								
1	SR90	362.000	11.000	359.005	6.021	1.008	A	A
<b>Matrix:</b> SO Soil Bq / kg								
1	SR90	14.400	1.400	13.091	0.279	1.100	A	N
<b>Matrix:</b> WA Water Bq / L								
1	GROSS ALPHA	1723.000	93.000	1421.000	100.000	1.213	W	A
1	FE55	225.000	100.000	202.800	2.921	1.109	A	

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** EI Eichrom Industries, Inc., Argonne

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> SO Soil Bq / kg								
1	SR90	15.300	1.230	13.091	0.279	1.169	A	
<b>Matrix:</b> WA Water Bq / L								
1	SR90	5.320	0.340	4.357	0.192	1.221	A	A
<b>Matrix:</b> VE Vegetation Bq / kg								
1	SR90	289.700	14.000	359.005	6.021	0.807	A	
<b>Matrix:</b> WA Water Bq / L								
1	H3	229.840	14.850	218.300	6.505	1.053	A	N
<b>Matrix:</b> AI Air Filter Bq / filter								
1	GROSS ALPHA	2.010	0.180	1.400	0.100	1.436	W	A
<b>Matrix:</b> WA Water Bq / L								
1	GROSS ALPHA	1881.680	189.560	1421.000	100.000	1.324	N	W
<b>Matrix:</b> SO Soil Bq / kg								
1	U234	21.210	1.240	31.133	0.802	0.681	W	
1	U238	21.150	1.240	31.900	2.552	0.663	W	
<b>Matrix:</b> WA Water Bq / L								
1	PU239	1.400	0.080	1.650	0.061	0.848	W	
1	PU238	2.170	0.120	2.526	0.060	0.859	W	
1	U234	0.410	0.020	0.396	0.026	1.035	A	
1	U238	0.350	0.020	0.396	0.037	0.883	W	
<b>Matrix:</b> AI Air Filter Bq / filter								
1	PU239	0.070	0.007	0.062	0.002	1.123	A	
1	PU238	0.060	0.008	0.069	0.003	0.863	W	
1	U234	0.040	0.040	0.031	0.003	1.299	A	
1	U238	0.030	0.040	0.030	0.001	0.984	A	

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**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix: SO Soil Bq / kg</b>								
1	K40	451.000	21.000	313.500	10.150	1.439	W	
1	CS137	402.000	20.000	329.500	9.260	1.220	W	
1	AM241	3.300	0.200	2.678	0.212	1.232	A	
<b>Matrix: WA Water Bq / L</b>								
1	MN54	89.000	5.000	57.000	1.900	1.561	N	
1	CO60	21.000	1.000	13.600	1.200	1.544	N	
1	CS137	74.000	4.000	46.000	1.700	1.609	N	
1	AM241	1.700	0.100	1.226	0.050	1.387	W	
<b>Matrix: AI Air Filter Bq / filter</b>								
1	MN54	12.200	0.600	5.440	0.485	2.243	N	
1	CO57	32.000	1.600	11.110	0.846	2.880	N	
1	CO60	18.500	0.900	9.090	0.732	2.035	N	
1	SB125	28.500	1.400	12.160	1.151	2.344	N	
1	CS134	36.500	1.800	19.740	1.380	1.849	N	
1	CS137	24.000	1.200	11.860	0.957	2.024	N	
1	CE144	19.200	0.900	8.210	0.796	2.339	N	
<b>Matrix: VE Vegetation Bq / kg</b>								
1	K40	964.000	48.000	707.500	24.987	1.363	N	
1	CO60	19.300	0.900	10.575	0.206	1.825	N	
1	CS137	224.000	11.000	181.500	7.141	1.234	A	

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** EP US EPA, Las Vegas

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> WA Water Bq / L								
1	MN54	60.930	4.380	57.000	1.900	1.069	A	
1	CO60	15.400	1.230	13.600	1.200	1.132	W	A
1	CS137	49.300	3.520	46.000	1.700	1.072	A	A
<b>Matrix:</b> AI Air Filter Bq / filter								
1	MN54	5.520	0.436	5.440	0.485	1.015	A	
1	CO57	10.580	0.745	11.110	0.846	0.952	A	A
1	CO60	8.830	0.652	9.090	0.732	0.971	A	A
1	SB125	13.300	1.077	12.160	1.151	1.094	A	
1	CS134	18.280	1.299	19.740	1.380	0.926	A	A
1	CS137	11.420	0.828	11.860	0.957	0.963	A	A
1	CE144	7.380	1.085	8.210	0.796	0.899	A	
<b>Matrix:</b> WA Water Bq / L								
1	SR90	4.480	0.396	4.357	0.192	1.028	A	A
1	H3	234.500	8.410	218.300	6.505	1.074	A	A
<b>Matrix:</b> SO Soil Bq / kg								
1	PU239	5.510	0.460	5.305	0.253	1.039	A	
<b>Matrix:</b> VE Vegetation Bq / kg								
1	PU239	1.580	0.139	1.770	0.154	0.893	A	
<b>Matrix:</b> AI Air Filter Bq / filter								
1	PU238	0.071	0.006	0.069	0.003	1.014	A	
1	PU239	0.069	0.006	0.062	0.002	1.100	A	
<b>Matrix:</b> WA Water Bq / L								
1	PU238	2.510	0.182	2.526	0.060	0.994	A	
1	PU239	1.680	0.123	1.650	0.061	1.018	A	
<b>Matrix:</b> SO Soil Bq / kg								
1	AM241	2.720	0.245	2.678	0.212	1.016	A	
<b>Matrix:</b> VE Vegetation Bq / kg								
1	AM241	1.140	0.111	1.105	0.051	1.031	A	

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

**Lab:** EP US EPA, Las Vegas

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter							
1	AM241	0.071	0.006	0.069	0.003	1.036	A
<b>Matrix:</b> WA Water Bq / L							
1	AM241	1.190	0.091	1.226	0.050	0.971	A
<b>Matrix:</b> VE Vegetation Bq / kg							
1	CM244	1.980	0.178	2.174	0.066	0.911	A

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

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## QAP 48 Results by Laboratory

**Lab:** FG FGL Environmental, Santa Paula, CA

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	<u>QAP 47</u> Evaluation
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**Matrix:** WA Water Bq/L

1	GROSS ALPHA	1777.000	85.000	1421.000	100.000	1.251	W	A
1	GROSS BETA	2201.000	110.000	2200.000	100.000	1.000	A	A
1	H3	199.000	20.400	218.300	6.505	0.912	A	
1	MN54	88.960	14.950	57.000	1.900	1.561	N	W
1	CO60	15.030	3.270	13.600	1.200	1.105	A	A
1	CS137	50.960	9.400	46.000	1.700	1.108	A	A
1	Bq U	1.120	0.040	0.801	0.067	1.398	W	
1	PU238	2.570	0.100	2.526	0.060	1.018	A	
1	PU239	1.720	0.100	1.650	0.061	1.042	A	
1	AM241	0.760	0.200	1.226	0.050	0.620	N	A

**Matrix:** AI Air Filter Bq / filter

1	GROSS ALPHA	1.195	0.080	1.400	0.100	0.854	A	A
1	GROSS BETA	1.991	0.090	1.960	0.300	1.016	A	A
1	MN54	5.330	2.200	5.440	0.485	0.980	A	A
1	CO57	10.580	1.900	11.110	0.846	0.952	A	A
1	CO60	8.020	3.800	9.090	0.732	0.882	A	A
1	SB125	12.390	3.900	12.160	1.151	1.019	A	A
1	CS134	16.950	6.300	19.740	1.380	0.859	A	A
1	CS137	12.450	4.300	11.860	0.957	1.050	A	A
1	CE144	7.640	1.600	8.210	0.796	0.931	A	A
1	AM241	0.340	0.100	0.069	0.003	4.949	N	N

**Matrix:** SO Soil Bq / kg

1	K40	368.500	38.200	313.500	10.150	1.175	A	A
1	CS137	381.300	18.390	329.500	9.260	1.157	A	A
1	AM241	2.000	0.500	2.678	0.212	0.747	W	W

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** FJ The University of the South Pacific, Fiji Islands

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	CO57	18.410	0.330	11.110	0.846	1.657	N	
1	CO60	10.430	0.080	9.090	0.732	1.147	W	
1	SB125	14.850	0.190	12.160	1.151	1.221	W	
1	CS134	23.920	0.730	19.740	1.380	1.212	W	
1	CS137	12.470	0.420	11.860	0.957	1.051	A	
1	CE144	12.330	0.960	8.210	0.796	1.502	N	
1	AM241	0.089	0.030	0.069	0.003	1.295	A	
<b>Matrix:</b> VE Vegetation Bq / kg								
1	CS137	189.000	3.600	181.500	7.141	1.041	A	
<b>Matrix:</b> SO Soil Bq / kg								
1	CS137	340.000	27.000	329.500	9.260	1.032	A	
1	K40	354.000	26.000	313.500	10.150	1.129	A	
1	AM241	3.000	0.500	2.678	0.212	1.120	A	
<b>Matrix:</b> VE Vegetation Bq / kg								
1	K40	745.000	55.000	707.500	24.987	1.053	A	
<b>Matrix:</b> AI Air Filter Bq / filter								
1	MN54	8.730	0.540	5.440	0.485	1.605	N	

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.



## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	GROSS ALPHA	1.140	0.030	1.400	0.100	0.814	W	A
1	GROSS BETA	2.300	0.040	1.960	0.300	1.173	A	A
1	MN54	5.950	0.080	5.440	0.485	1.094	A	A
1	CO57	10.180	0.040	11.110	0.846	0.916	A	A
1	CO60	8.960	0.070	9.090	0.732	0.986	A	A
1	SB125	11.100	0.300	12.160	1.151	0.913	A	A
1	CS134	17.100	0.100	19.740	1.380	0.866	A	W
1	CS137	12.700	0.100	11.860	0.957	1.071	A	A
1	CE144	7.700	0.100	8.210	0.796	0.938	A	A
1	U238	0.800	0.100	0.030	0.001	26.247	N	
1	AM241	0.170	0.030	0.069	0.003	2.475	N	N

**Matrix:** WA Water Bq / L

1	GROSS ALPHA	2059.900	70.500	1421.000	100.000	1.450	N	N
1	GROSS BETA	2543.600	51.350	2200.000	100.000	1.156	A	W
1	H3	240.100	4.800	218.300	6.505	1.100	A	A
1	MN54	63.500	0.600	57.000	1.900	1.114	A	W
1	CO60	15.000	0.300	13.600	1.200	1.103	A	A
1	CS137	51.500	0.600	46.000	1.700	1.120	A	A
1	AM241	1.600	0.500	1.226	0.050	1.305	W	

**Matrix:** VE Vegetation Bq / kg

1	K40	757.000	10.000	707.500	24.987	1.070	A	A
1	CO60	11.100	0.500	10.575	0.206	1.050	A	A
1	CS137	186.000	1.000	181.500	7.141	1.025	A	A
1	AM241	2.000	0.500	1.105	0.051	1.810	W	A

**Matrix:** SO Soil Bq / kg

1	K40	313.000	6.000	313.500	10.150	0.998	A	A
1	CS137	325.000	1.000	329.500	9.260	0.986	A	A
1	U238	27.000	4.000	31.900	2.552	0.846	A	A
1	AM241	2.300	0.400	2.678	0.212	0.859	A	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	MN54	6.020	0.060	5.440	0.485	1.107	A	A
1	CO57	10.650	0.080	11.110	0.846	0.959	A	A
1	CO60	9.160	0.050	9.090	0.732	1.008	A	A
1	SB125	12.800	0.100	12.160	1.151	1.053	A	A
1	CS134	18.750	0.110	19.740	1.380	0.950	A	N
1	CS137	12.530	0.090	11.860	0.957	1.056	A	A
1	CE144	7.430	0.090	8.210	0.796	0.905	A	A

**Matrix:** WA Water Bq / L

1	MN54	58.100	0.400	57.000	1.900	1.019	A	A
1	CO60	13.700	0.100	13.600	1.200	1.007	A	A
1	CS137	47.900	0.300	46.000	1.700	1.041	A	A

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**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** FN Fermi Lab, Batavia, IL

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> WA Water Bq / L								
1	H3	239.000	11.000	218.300	6.505	1.095	A	A
1	MN54	56.600	5.800	57.000	1.900	0.993	A	A
1	CO60	15.000	1.200	13.600	1.200	1.103	A	A
1	CS137	47.000	4.800	46.000	1.700	1.022	A	A
<b>Matrix:</b> VE Vegetation Bq / kg								
1	K40	661.000	67.000	707.500	24.987	0.934	A	A
1	CO60	8.720	0.860	10.575	0.206	0.825	W	A
1	CS137	155.000	16.000	181.500	7.141	0.854	W	A
<b>Matrix:</b> SO Soil Bq / kg								
1	K40	340.000	35.000	313.500	10.150	1.085	A	A
1	CS137	367.000	37.000	329.500	9.260	1.114	A	A
1	U238	26.600	1.400	31.900	2.552	0.834	A	A
<b>Matrix:</b> AI Air Filter Bq / filter								
1	MN54	5.030	0.560	5.440	0.485	0.925	A	N
1	CO57	9.740	0.780	11.110	0.846	0.877	A	N
1	CO60	7.990	0.610	9.090	0.732	0.879	A	N
1	SB125	13.300	0.700	12.160	1.151	1.094	A	W
1	CS134	19.800	1.200	19.740	1.380	1.003	A	N
1	CS137	11.500	1.200	11.860	0.957	0.970	A	W
1	CE144	7.720	0.720	8.210	0.796	0.940	A	W

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** FR CEA/DAM - SPR/B3

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	<u>QAP 47</u> Evaluation
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**Matrix:** AI Air Filter Bq / filter

1	GROSS ALPHA	1.020	0.200	1.400	0.100	0.729	W	A
1	GROSS BETA	2.100	0.300	1.960	0.300	1.071	A	A
1	MN54	4.880	1.000	5.440	0.485	0.897	A	N
1	CO57	9.560	1.500	11.110	0.846	0.860	A	W
1	CO60	8.110	1.500	9.090	0.732	0.892	A	N
1	SB125	10.600	1.500	12.160	1.151	0.872	A	W
1	CS134	14.850	2.000	19.740	1.380	0.752	W	N
1	CS137	10.360	1.000	11.860	0.957	0.874	A	N
1	CE144	6.690	1.300	8.210	0.796	0.815	A	A
1	AM241	0.081	0.025	0.069	0.003	1.179	A	N

**Matrix:** WA Water Bq / L

1	GROSS ALPHA	840.000	200.000	1421.000	100.000	0.591	W	W
1	GROSS BETA	1720.000	350.000	2200.000	100.000	0.782	A	A
1	H3	235.000	20.000	218.300	6.505	1.077	A	N
1	MN54	62.610	10.000	57.000	1.900	1.098	A	A
1	CO60	15.410	2.000	13.600	1.200	1.133	W	A
1	CS137	51.620	5.000	46.000	1.700	1.122	A	A
1	U234	0.435	0.052	0.396	0.026	1.098	A	A
1	U238	0.445	0.020	0.396	0.037	1.123	A	A
1	Bq U	0.901	0.056	0.801	0.067	1.124	A	A
1	PU238	2.390	0.360	2.526	0.060	0.946	A	A
1	PU239	1.630	0.250	1.650	0.061	0.988	A	A
1	AM241	1.700	0.510	1.226	0.050	1.387	W	W

**Matrix:** VE Vegetation Bq / kg

1	K40	713.800	110.000	707.500	24.987	1.009	A	A
1	CO60	10.950	1.650	10.575	0.206	1.035	A	A
1	CS137	180.800	20.000	181.500	7.141	0.996	A	A
1	PU239	2.010	0.300	1.770	0.154	1.135	A	A
1	AM241	1.320	0.400	1.105	0.051	1.194	A	A

**Matrix:** SO Soil Bq / kg

1	K40	323.700	50.000	313.500	10.150	1.033	A	A
1	CS137	332.500	35.000	329.500	9.260	1.009	A	A
1	U234	17.910	1.230	31.133	0.802	0.575	W	A
1	U238	17.340	0.860	31.900	2.552	0.544	W	A
1	Bq U	36.040	1.500	64.600	2.858	0.558	A	A
1	PU239	5.720	0.860	5.305	0.253	1.078	A	A
1	AM241	2.920	0.900	2.678	0.212	1.091	A	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> SO Soil Bq / kg								
1	CS137	316.000	4.000	329.500	9.260	0.959	A	A
1	K40	315.000	6.000	313.500	10.150	1.005	A	A
1	AM241	3.000	0.600	2.678	0.212	1.120	A	A

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	MN54	5.620	0.560	5.440	0.485	1.033	A	A
1	CO57	10.700	0.700	11.110	0.846	0.963	A	A
1	CO60	8.730	0.370	9.090	0.732	0.960	A	A
1	SB125	12.400	2.300	12.160	1.151	1.020	A	W
1	CS134	17.900	2.100	19.740	1.380	0.907	A	A
1	CS137	11.300	0.700	11.860	0.957	0.953	A	A
1	CE144	8.140	1.480	8.210	0.796	0.991	A	A
1	U234	0.043		0.031	0.003	1.396	W	A
1	U238	0.036		0.030	0.001	1.181	A	A
1	Bq U	0.079		0.063	0.004	1.252	A	
1	PU238	0.078		0.069	0.003	1.122	A	W
1	PU239	0.083		0.062	0.002	1.331	W	
1	AM241	0.079		0.069	0.003	1.150	A	A
<b>Matrix:</b> SO Soil Bq / kg								
1	K40	363.000	20.000	313.500	10.150	1.158	A	A
1	CS137	359.000	87.000	329.500	9.260	1.090	A	A
1	U234	37.560		31.133	0.802	1.206	W	A
1	U238	36.710		31.900	2.552	1.151	W	A
1	ug U	2.100		2.583	0.200	0.813	A	A
1	PU239	6.000		5.305	0.253	1.131	A	A
1	AM241	3.140		2.678	0.212	1.173	A	A
<b>Matrix:</b> VE Vegetation Bq / kg								
1	K40	782.000	91.000	707.500	24.987	1.105	A	A
1	CO60	11.400	3.300	10.575	0.206	1.078	A	A
1	CS137	189.000	11.000	181.500	7.141	1.041	A	A
1	PU239	1.920		1.770	0.154	1.085	A	A
1	AM241	1.370		1.105	0.051	1.240	A	A
1	CM244	2.230		2.174	0.066	1.026	A	A
<b>Matrix:</b> WA Water Bq / L								
1	MN54	60.500	8.800	57.000	1.900	1.061	A	A
1	CO60	15.600	2.500	13.600	1.200	1.147	W	A
1	CS137	49.600	3.900	46.000	1.700	1.078	A	A
1	U234	0.480		0.396	0.026	1.212	A	W
1	U238	0.440		0.396	0.037	1.110	A	W
1	Bq U	0.920		0.801	0.067	1.148	A	
1	PU238	2.810		2.526	0.060	1.113	W	W
1	PU239	1.880		1.650	0.061	1.139	A	A
1	AM241	1.400		1.226	0.050	1.142	A	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

**Lab:** GC Georgia Power Company Environmental Lab

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	GROSS ALPHA	1.100	0.050	1.400	0.100	0.786	W	
1	GROSS BETA	2.000	0.040	1.960	0.300	1.020	A	
<b>Matrix:</b> WA Water Bq / L								
1	GROSS ALPHA	1440.600	59.220	1421.000	100.000	1.014	A	W
1	GROSS BETA	1205.000	55.400	2200.000	100.000	0.548	W	A
1	H3	242.720	4.700	218.300	6.505	1.112	A	A
1	MN54	63.060	3.040	57.000	1.900	1.106	A	A
1	FE55	249.000		202.800	2.921	1.228	A	
1	CO60	14.850	0.740	13.600	1.200	1.092	A	A
1	SR90	4.300		4.357	0.192	0.987	A	A
1	CS137	52.000	2.400	46.000	1.700	1.130	A	A
<b>Matrix:</b> VE Vegetation Bq / kg								
1	K40	730.640	33.060	707.500	24.987	1.033	A	A
1	CO60	10.500	0.470	10.575	0.206	0.993	A	A
1	CS137	178.230	2.570	181.500	7.141	0.982	A	A
<b>Matrix:</b> SO Soil Bq / kg								
1	K40	350.300	37.000	313.500	10.150	1.117	A	A
1	CS137	334.900	16.900	329.500	9.260	1.016	A	A

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**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation	QAP 47 Evaluation
<b>Matrix: SO Soil Bq / kg</b>								
1	K40	354.090	42.032	313.500	10.150	1.129	A	A
1	SR90	11.285	1.480	13.091	0.279	0.862	A	
1	CS137	353.184	34.021	329.500	9.260	1.072	A	A
1	U234	26.999	3.126	31.133	0.802	0.867	A	A
1	U238	27.517	3.175	31.900	2.552	0.863	A	A
1	ug U	0.950	0.060	2.583	0.200	0.368	N	A
1	PU239	5.420	0.709	5.305	0.253	1.022	A	A
<b>Matrix: VE Vegetation Bq / kg</b>								
1	K40	812.520	98.013	707.500	24.987	1.148	A	W
1	CO60	11.141	1.929	10.575	0.206	1.053	A	A
1	SR90	339.956	4.893	359.005	6.021	0.947	A	
1	CS137	189.403	17.394	181.500	7.141	1.044	A	W
1	PU239	2.277	0.334	1.770	0.154	1.286	W	A
1	AM241	1.432	0.256	1.105	0.051	1.296	A	A
1	CM244	2.664	0.403	2.174	0.066	1.226	A	A
<b>Matrix: WA Water Bq / L</b>								
1	GROSS ALPHA	1650.859	29.071	1421.000	100.000	1.162	W	W
1	GROSS BETA	2156.404	25.711	2200.000	100.000	0.980	A	A
1	H3	212.044	18.807	218.300	6.505	0.971	A	A
1	MN54	63.233	6.993	57.000	1.900	1.109	A	A
1	FE55	260.369	61.161	202.800	2.921	1.284	A	A
1	CO60	14.728	1.545	13.600	1.200	1.083	A	A
1	SR90	4.518	0.168	4.357	0.192	1.037	A	A
1	CS137	51.597	6.494	46.000	1.700	1.122	A	A
1	U234	0.385	0.047	0.396	0.026	0.971	A	A
1	U238	0.392	0.048	0.396	0.037	0.990	A	A
1	ug U	0.035	0.001	0.032	0.003	1.085	A	A
1	PU238	2.322	0.297	2.526	0.060	0.919	A	A
1	PU239	1.595	0.206	1.650	0.061	0.966	A	A
1	AM241	1.358	0.169	1.226	0.050	1.108	A	A
<b>Matrix: AI Air Filter Bq / filter</b>								
1	MN54	5.396	0.598	5.440	0.485	0.992	A	A
1	CO57	10.665	0.971	11.110	0.846	0.960	A	A
1	CO60	9.006	0.921	9.090	0.732	0.991	A	A
1	SR90	1.025	0.071	1.758	0.042	0.583	N	N
1	SB125	13.220	1.430	12.160	1.151	1.087	A	A
1	CS134	18.271	1.774	19.740	1.380	0.926	A	A
1	CS137	11.579	1.090	11.860	0.957	0.976	A	A
1	CE144	7.505	1.358	8.210	0.796	0.914	A	A
1	U234	0.034	0.006	0.031	0.003	1.107	A	A
1	U238	0.035	0.006	0.030	0.001	1.142	A	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.



## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	ug U	2.933	0.063	2.472	0.101	1.187	A	A
1	PU238	0.066	0.010	0.069	0.003	0.945	A	A
1	PU239	0.071	0.011	0.062	0.002	1.145	A	
1	GROSS ALPHA	1.376	0.007	1.400	0.100	0.983	A	N
1	GROSS BETA	1.935	0.004	1.960	0.300	0.987	A	A
1	AM241	0.134	0.017	0.069	0.003	1.955	W	A

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**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> WA Water Bq / L								
1	FE55	310.000	30.000	202.800	2.921	1.529	N	N
<b>Matrix:</b> AI Air Filter Bq / filter								
1	SR90	2.200	0.300	1.758	0.042	1.251	A	N
1	GROSS ALPHA	1.300	0.100	1.400	0.100	0.929	A	W
1	GROSS BETA	1.900	0.200	1.960	0.300	0.969	A	N
<b>Matrix:</b> WA Water Bq / L								
1	SR90	5.300	0.900	4.357	0.192	1.216	A	N
<b>Matrix:</b> VE Vegetation Bq / kg								
1	SR90	300.000	30.000	359.005	6.021	0.836	A	N
<b>Matrix:</b> WA Water Bq / L								
1	MN54	63.000	6.000	57.000	1.900	1.105	A	N
1	CO60	17.000	2.000	13.600	1.200	1.250	N	N
1	CS137	53.000	5.000	46.000	1.700	1.152	A	N
<b>Matrix:</b> VE Vegetation Bq / kg								
1	K40	785.000	80.000	707.500	24.987	1.110	A	W
1	CO60	11.000	2.000	10.575	0.206	1.040	A	N
1	CS137	195.000	20.000	181.500	7.141	1.074	A	N
<b>Matrix:</b> WA Water Bq / L								
1	GROSS ALPHA	1500.000	100.000	1421.000	100.000	1.056	A	N
1	GROSS BETA	2200.000	200.000	2200.000	100.000	1.000	A	A
<b>Matrix:</b> AI Air Filter Bq / filter								
1	MN54	5.300	0.600	5.440	0.485	0.974	A	W
1	CO57	11.000	1.000	11.110	0.846	0.990	A	A
1	CO60	10.000	1.000	9.090	0.732	1.100	A	N
1	SB125	10.000	1.100	12.160	1.151	0.822	W	W
1	CS134	18.000	2.000	19.740	1.380	0.912	A	N
1	CS137	27.000	3.000	11.860	0.957	2.277	N	W
1	CE144	7.700	0.900	8.210	0.796	0.938	A	A
1	U234	0.032	0.004	0.031	0.003	1.039	A	W
1	U238	0.033	0.004	0.030	0.001	1.083	A	W
1	Bq U	0.066		0.063	0.004	1.046	A	W

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	PU238	0.060	0.006	0.069	0.003	0.863	W	N
1	PU239	0.063	0.006	0.062	0.002	1.010	A	A
1	AM241	0.076	0.008	0.069	0.003	1.106	A	W
<b>Matrix:</b> SO Soil Bq / kg								
1	K40	380.000	40.000	313.500	10.150	1.212	A	A
1	CS137	370.000	40.000	329.500	9.260	1.123	A	A
<b>Matrix:</b> WA Water Bq / L								
1	U234	0.460	0.060	0.396	0.026	1.161	A	N
1	U238	0.460	0.060	0.396	0.037	1.161	A	N
1	Bq U	0.940		0.801	0.067	1.173	A	N
1	PU238	2.500	0.300	2.526	0.060	0.990	A	N
1	PU239	1.700	0.200	1.650	0.061	1.030	A	A
1	AM241	1.400	0.100	1.226	0.050	1.142	A	A
1	H3	240.000	30.000	218.300	6.505	1.099	A	N

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> WA Water Bq/L								
1	GROSS ALPHA	1948.000	146.000	1421.000	100.000	1.371	N	A
1	GROSS BETA	2436.000	125.000	2200.000	100.000	1.107	A	A
1	ug U	0.032	0.002	0.032	0.003	1.000	A	A

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** GT Georgia Institute of Technology

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix: SO Soil Bq / kg</b>								
1	K40	340.000	40.000	313.500	10.150	1.085	A	A
1	CS137	340.000	70.000	329.500	9.260	1.032	A	A
1	U238	28.000	6.000	31.900	2.552	0.878	A	A
1	PU239	5.900	1.300	5.305	0.253	1.112	A	A
1	AM241	3.100	2.400	2.678	0.212	1.158	A	W
<b>Matrix: WA Water Bq / L</b>								
1	GROSS ALPHA	1400.000	100.000	1421.000	100.000	0.985	A	A
1	GROSS BETA	1800.000	100.000	2200.000	100.000	0.818	A	W
1	H3	220.000	10.000	218.300	6.505	1.008	A	A
1	MN54	62.000	14.000	57.000	1.900	1.088	A	A
1	CO60	15.000	1.700	13.600	1.200	1.103	A	A
1	SR90	3.900	0.100	4.357	0.192	0.895	A	W
1	CS137	50.000	10.000	46.000	1.700	1.087	A	A
1	U238	0.400	0.100	0.396	0.037	1.009	A	N
1	PU238	2.100	0.400	2.526	0.060	0.831	W	N
1	PU239	1.400	0.300	1.650	0.061	0.848	W	N
1	AM241	1.400	0.700	1.226	0.050	1.142	A	A
<b>Matrix: AI Air Filter Bq / filter</b>								
1	GROSS ALPHA	1.400	0.100	1.400	0.100	1.000	A	A
1	GROSS BETA	2.300	0.100	1.960	0.300	1.173	A	A
1	MN54	5.000	0.800	5.440	0.485	0.919	A	A
1	CO57	8.200	1.000	11.110	0.846	0.738	A	A
1	CO60	7.800	0.800	9.090	0.732	0.858	A	W
1	SR90	1.500	0.100	1.758	0.042	0.853	A	A
1	SB125	9.700	0.900	12.160	1.151	0.798	W	W
1	CS134	17.000	1.100	19.740	1.380	0.861	A	N
1	CS137	9.900	1.500	11.860	0.957	0.835	A	W
1	CE144	5.800	1.500	8.210	0.796	0.706	A	A
1	U238	0.034	0.010	0.030	0.001	1.115	A	A
1	PU238	0.075	0.020	0.069	0.003	1.079	A	A
1	PU239	0.066	0.020	0.062	0.002	1.059	A	A
1	AM241	0.079	0.040	0.069	0.003	1.150	A	A
<b>Matrix: VE Vegetation Bq / kg</b>								
1	K40	690.000	70.000	707.500	24.987	0.975	A	A
1	CO60	9.900	1.600	10.575	0.206	0.936	A	A
1	SR90	310.000	20.000	359.005	6.021	0.863	A	A
1	CS137	170.000	40.000	181.500	7.141	0.937	A	A
1	PU239	1.800	0.500	1.770	0.154	1.017	A	A
1	AM241	1.100	0.600	1.105	0.051	0.995	A	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	QAP 47 Evaluation
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**Matrix:** AI Air Filter Bq / filter

1	GROSS ALPHA	0.989	0.099	1.400	0.100	0.706	W	A
1	GROSS BETA	1.710	0.170	1.960	0.300	0.872	W	A

**Matrix:** WA Water Bq / L

1	GROSS ALPHA	1515.000	80.000	1421.000	100.000	1.066	A	A
1	GROSS BETA	2422.000	120.000	2200.000	100.000	1.101	A	A
1	H3	223.000	19.000	218.300	6.505	1.022	A	A

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** HU Water Resources Research Centre (VITUKI), Hungary

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	MN54	5.240	0.160	5.440	0.485	0.963	A	N
1	CO57	9.340	0.260	11.110	0.846	0.841	A	N
1	CO60	7.750	0.150	9.090	0.732	0.853	A	A
1	SB125	10.800	0.200	12.160	1.151	0.888	A	A
1	CS134	14.200	0.300	19.740	1.380	0.719	N	A
1	CS137	10.300	0.300	11.860	0.957	0.868	A	W
1	CE144	6.940	0.530	8.210	0.796	0.845	A	N

**Matrix:** SO Soil Bq / kg

1	K40	335.000	28.000	313.500	10.150	1.069	A	
1	CS137	296.300	8.600	329.500	9.260	0.899	W	A

**Matrix:** VE Vegetation Bq / kg

1	K40	850.000	60.000	707.500	24.987	1.201	A	N
1	CO60	11.800	0.800	10.575	0.206	1.116	A	A
1	CS137	189.200	5.400	181.500	7.141	1.042	A	N

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

**Lab:** IA Bhabha Atomic Research Centre, India

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix:</b> SO Soil Bq / kg							
1	CS137	243.000	2.000	329.500	9.260	0.737	N
2	CS137	238.000	2.000	329.500	9.260	0.722	N
3	CS137	244.000	2.000	329.500	9.260	0.741	N
1	K40	212.000	6.000	313.500	10.150	0.676	N
2	K40	224.000	6.000	313.500	10.150	0.715	N
3	K40	220.000	6.000	313.500	10.150	0.702	N
1	U238	19.800	2.480	31.900	2.552	0.621	W
2	U238	23.520	2.480	31.900	2.552	0.737	A
3	U238	19.800	2.480	31.900	2.552	0.621	W

**Matrix:** VE Vegetation Bq / kg

1	CS137	145.000	2.000	181.500	7.141	0.799	N
2	CS137	144.000	2.000	181.500	7.141	0.793	N
3	CS137	144.000	2.000	181.500	7.141	0.793	N
1	CO60	7.600	0.600	10.575	0.206	0.719	W
2	CO60	7.800	0.600	10.575	0.206	0.738	W
3	CO60	7.800	0.600	10.575	0.206	0.738	W
1	K40	561.000	12.000	707.500	24.987	0.793	W
2	K40	588.000	12.000	707.500	24.987	0.831	W
3	K40	537.000	12.000	707.500	24.987	0.759	N
1	SR90	217.800	5.500	359.005	6.021	0.607	W
2	SR90	204.500	2.300	359.005	6.021	0.570	W
3	SR90	214.700	5.500	359.005	6.021	0.598	W
4	SR90	194.400	8.900	359.005	6.021	0.541	W

**Matrix:** AI Air Filter Bq / filter

1	MN54	4.300	0.060	5.440	0.485	0.790	W
2	MN54	4.310	0.070	5.440	0.485	0.792	W
3	MN54	4.270	0.060	5.440	0.485	0.785	W
1	CO57	7.840	0.040	11.110	0.846	0.706	W
2	CO57	8.490	0.050	11.110	0.846	0.764	A
3	CO57	8.230	0.050	11.110	0.846	0.741	A
1	CO60	6.930	0.090	9.090	0.732	0.762	W
2	CO60	7.180	0.090	9.090	0.732	0.790	W
3	CO60	7.220	0.090	9.090	0.732	0.794	W
1	SB125	12.610	0.140	12.160	1.151	1.037	A
2	SB125	12.100	0.150	12.160	1.151	0.995	A
3	SB125	12.140	0.140	12.160	1.151	0.998	A
1	CS134	14.290	0.120	19.740	1.380	0.724	N
2	CS134	13.230	0.130	19.740	1.380	0.670	N
3	CS134	13.870	0.120	19.740	1.380	0.703	N
1	CS137	10.570	0.100	11.860	0.957	0.891	A
2	CS137	10.180	0.100	11.860	0.957	0.858	A
3	CS137	10.340	0.100	11.860	0.957	0.872	A
1	CE144	7.010	0.160	8.210	0.796	0.854	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.



## QAP 48 Results by Laboratory

**Lab:** IA Bhabha Atomic Research Centre, India

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter							
2	CE144	7.220	0.160	8.210	0.796	0.879	A
3	CE144	7.380	0.160	8.210	0.796	0.899	A
1	AM241	0.120	0.050	0.069	0.003	1.747	W
2	AM241	0.140	0.060	0.069	0.003	2.038	W
3	AM241	0.100	0.060	0.069	0.003	1.456	W

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**Values for elemental uranium are reported in  $\mu\text{g}/\text{filter}$ , g, or mL.       $\text{pCi/g or mL}=\text{Bq} \times 0.027$**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix: SO Soil Bq / kg</b>								
1	K40	361.670	19.420	313.500	10.150	1.154	A	A
1	SR90	18.130	1.310	13.091	0.279	1.385	A	A
1	CS137	357.670	18.140	329.500	9.260	1.085	A	A
1	PU239	6.757	0.887	5.305	0.253	1.274	W	A
1	AM241	2.300	0.301	2.678	0.212	0.859	A	A
1	Bq U	55.400	2.870	64.600	2.858	0.858	A	N

**Matrix: WA Water Bq / L**

1	H3	249.500	14.120	218.300	6.505	1.143	A	N
1	MN54	61.200	3.110	57.000	1.900	1.074	A	A
1	CO60	15.000	0.830	13.600	1.200	1.103	A	A
1	SR90	3.867	0.225	4.357	0.192	0.887	W	A
1	CS137	50.630	2.640	46.000	1.700	1.101	A	A
1	U238	0.457	0.024	0.396	0.037	1.153	A	
1	PU238	2.653	0.289	2.526	0.060	1.050	A	N
1	PU239	1.740	0.203	1.650	0.061	1.054	A	A
1	Bq U	0.883	0.046	0.801	0.067	1.102	A	A

**Matrix: AI Air Filter Bq / filter**

1	MN54	7.343	0.381	5.440	0.485	1.350	W	A
1	CO57	15.700	0.820	11.110	0.846	1.413	N	A
1	CO60	11.520	0.600	9.090	0.732	1.267	W	A
1	SB125	17.110	0.960	12.160	1.151	1.407	W	A
1	CS134	23.080	1.160	19.740	1.380	1.169	W	A
1	CS137	15.250	0.770	11.860	0.957	1.286	W	A
1	CE144	10.500	0.670	8.210	0.796	1.279	W	A
1	U238	0.032	0.002	0.030	0.001	1.050	A	
1	PU238	0.357	0.066	0.069	0.003	5.137	N	A
1	PU239	0.277	0.038	0.062	0.002	4.443	N	
1	Bq U	0.062	0.003	0.063	0.004	0.983	A	A
1	GROSS ALPHA	0.723	0.038	1.400	0.100	0.516	W	A
1	GROSS BETA	2.373	0.119	1.960	0.300	1.211	A	A

**Matrix: VE Vegetation Bq / kg**

1	K40	769.000	46.550	707.500	24.987	1.087	A	A
1	CO60	11.200	0.820	10.575	0.206	1.059	A	A
1	SR90	350.570	17.740	359.005	6.021	0.977	A	A
1	CS137	201.670	12.570	181.500	7.141	1.111	A	A
1	PU239	1.540	0.414	1.770	0.154	0.870	A	A
1	AM241	1.039	0.218	1.105	0.051	0.940	A	

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	MN54	5.540	0.260	5.440	0.485	1.018	A	A
1	CO57	11.200	0.500	11.110	0.846	1.008	A	W
1	CO60	9.360	0.620	9.090	0.732	1.030	A	A
1	SR90	1.630	0.260	1.758	0.042	0.927	A	A
1	SB125	12.000	0.600	12.160	1.151	0.987	A	W
1	CS134	20.000	1.500	19.740	1.380	1.013	A	A
1	CS137	12.100	0.700	11.860	0.957	1.020	A	A
1	CE144	8.020	0.700	8.210	0.796	0.977	A	W
1	PU238	0.058	0.008	0.069	0.003	0.835	W	A
1	PU239	0.071	0.004	0.062	0.002	1.139	A	A
1	AM241	0.064	0.004	0.069	0.003	0.932	A	A
1	U234	0.039	0.006	0.031	0.003	1.266	A	A
1	U238	0.031	0.003	0.030	0.001	1.017	A	A
1	ug U	2.480	0.240	2.472	0.101	1.003	A	A
1	Bq U	0.070	0.009	0.063	0.004	1.109	A	

**Matrix:** VE Vegetation Bq / kg

1	K40	802.000	70.000	707.500	24.987	1.134	A	A
1	CO60	12.000	0.800	10.575	0.206	1.135	A	A
1	SR90	308.000	98.000	359.005	6.021	0.858	A	A
1	CS137	195.000	8.000	181.500	7.141	1.074	A	A
1	PU239	2.210	0.300	1.770	0.154	1.248	W	A
1	AM241	2.240	0.280	1.105	0.051	2.027	W	A
1	CM244	2.200	0.490	2.174	0.066	1.012	A	A

**Matrix:** WA Water Bq / L

1	H3	220.000	8.000	218.300	6.505	1.008	A	A
1	MN54	59.800	3.400	57.000	1.900	1.049	A	A
1	CO60	14.400	0.500	13.600	1.200	1.059	A	A
1	SR90	4.640	0.130	4.357	0.192	1.065	A	A
1	CS137	49.100	3.300	46.000	1.700	1.067	A	A
1	PU238	2.480	0.260	2.526	0.060	0.982	A	A
1	PU239	1.680	0.120	1.650	0.061	1.018	A	A
1	AM241	1.260	0.070	1.226	0.050	1.028	A	A
1	U234	0.440	0.028	0.396	0.026	1.111	A	A
1	U238	0.440	0.028	0.396	0.037	1.110	A	A
1	ug U	0.036	0.002	0.032	0.003	1.125	A	A
1	Bq U	0.900	0.056	0.801	0.067	1.123	A	

**Matrix:** SO Soil Bq / kg

1	K40	317.000	15.000	313.500	10.150	1.011	A	A
1	SR90	11.100	1.300	13.091	0.279	0.848	A	A
1	CS137	338.000	10.000	329.500	9.260	1.026	A	A
1	PU239	5.390	0.520	5.305	0.253	1.016	A	A

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

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## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> SO Soil Bq/kg								
1	AM241	3.210	0.480	2.678	0.212	1.199	A	A
1	U234	28.300	1.200	31.133	0.802	0.909	A	A
1	U238	28.400	0.900	31.900	2.552	0.890	A	A
1	ug U	2.300	0.070	2.583	0.200	0.890	A	A
1	Bq U	58.000	2.100	64.600	2.858	0.898	A	
<b>Matrix:</b> WA Water Bq/L								
1	GROSS ALPHA	1599.000	80.000	1421.000	100.000	1.125	A	A
1	GROSS BETA	2068.000	88.000	2200.000	100.000	0.940	A	A

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

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## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	MN54	5.700	0.200	5.440	0.485	1.048	A	
1	CO57	11.000	0.200	11.110	0.846	0.990	A	
1	CO60	9.600	0.200	9.090	0.732	1.056	A	
1	SB125	11.300	0.200	12.160	1.151	0.929	A	
1	CS134	19.800	0.200	19.740	1.380	1.003	A	
1	CS137	12.300	0.300	11.860	0.957	1.037	A	
1	CE144	7.900	0.600	8.210	0.796	0.962	A	
<b>Matrix:</b> VE Vegetation Bq / kg								
1	K40	975.850	48.590	707.500	24.987	1.379	N	
1	CO60	14.410	0.890	10.575	0.206	1.363	W	
1	CS137	246.960	5.210	181.500	7.141	1.361	W	
<b>Matrix:</b> SO Soil Bq / kg								
1	K40	506.170	31.110	313.500	10.150	1.615	N	
1	CS137	496.340	9.810	329.500	9.260	1.506	N	
<b>Matrix:</b> WA Water Bq / L								
1	MN54	62.900	1.400	57.000	1.900	1.104	A	
1	CO60	14.700	0.300	13.600	1.200	1.081	A	
1	CS137	52.000	1.000	46.000	1.700	1.130	A	

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	MN54	5.300	0.200	5.440	0.485	0.974	A	A
1	CO57	10.800	0.800	11.110	0.846	0.972	A	A
1	CO60	8.500	0.300	9.090	0.732	0.935	A	A
1	SB125	13.300	1.000	12.160	1.151	1.094	A	A
1	CS134	18.800	0.400	19.740	1.380	0.952	A	A
1	CS137	10.700	0.300	11.860	0.957	0.902	A	W
1	CE144	7.800	0.800	8.210	0.796	0.950	A	A

**Matrix:** WA Water Bq / L

1	MN54	67.200	1.600	57.000	1.900	1.179	W	A
1	CO60	15.900	1.000	13.600	1.200	1.169	W	A
1	SR90	4.420	0.440	4.357	0.192	1.014	A	A
1	CS137	51.900	2.200	46.000	1.700	1.128	A	A
1	U234	0.424	0.060	0.396	0.026	1.070	A	
1	U238	0.426	0.060	0.396	0.037	1.075	A	
1	PU238	2.490	0.210	2.526	0.060	0.986	A	A
1	PU239	1.580	0.110	1.650	0.061	0.957	A	A
1	AM241	1.340	0.120	1.226	0.050	1.093	A	A

**Matrix:** VE Vegetation Bq / kg

1	K40	723.200	46.300	707.500	24.987	1.022	A	A
1	CO60	12.200	2.700	10.575	0.206	1.154	A	A
1	CS137	202.400	3.600	181.500	7.141	1.115	A	A

**Matrix:** SO Soil Bq / kg

1	K40	339.200	38.800	313.500	10.150	1.082	A	A
1	SR90	13.900	3.100	13.091	0.279	1.062	A	W
1	CS137	345.000	10.200	329.500	9.260	1.047	A	A
1	U234	38.600	6.200	31.133	0.802	1.240	W	
1	U238	38.900	6.200	31.900	2.552	1.219	W	
1	PU239	5.750	1.100	5.305	0.253	1.084	A	A
1	AM241	2.820	0.600	2.678	0.212	1.053	A	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

**Lab:** IS    Quanterra- St. Louis

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	MN54	5.540	0.680	5.440	0.485	1.018	A	N
1	CO57	11.200	1.420	11.110	0.846	1.008	A	A
1	CO60	8.680	1.080	9.090	0.732	0.955	A	N
1	SB125	12.800	1.730	12.160	1.151	1.053	A	W
1	CS134	18.600	2.100	19.740	1.380	0.942	A	W
1	CS137	11.000	1.250	11.860	0.957	0.927	A	W
1	CE144	6.860	1.900	8.210	0.796	0.836	A	A
<b>Matrix:</b> WA Water Bq / L								
1	MN54	67.600	6.600	57.000	1.900	1.186	W	A
1	CO60	15.900	1.670	13.600	1.200	1.169	W	A
1	CS137	55.200	5.610	46.000	1.700	1.200	W	A
<b>Matrix:</b> VE Vegetation Bq / kg								
1	K40	886.000	154.000	707.500	24.987	1.252	W	A
1	CO60	13.300	3.500	10.575	0.206	1.258	W	W
1	CS137	189.000	22.600	181.500	7.141	1.041	A	A
<b>Matrix:</b> SO Soil Bq / kg								
1	K40	434.000	81.000	313.500	10.150	1.384	W	A
1	CS137	368.000	43.600	329.500	9.260	1.117	A	A
1	AM241	2.470	2.060	2.678	0.212	0.923	A	A
<b>Matrix:</b> WA Water Bq / L								
1	AM241	1.560	0.650	1.226	0.050	1.273	W	A
1	PU238	2.400	0.770	2.526	0.060	0.950	A	W
1	PU239	1.470	0.510	1.650	0.061	0.891	W	W
<b>Matrix:</b> VE Vegetation Bq / kg								
1	AM241	3.020	2.060	1.105	0.051	2.733	N	A
1	PU239	2.510	2.180	1.770	0.154	1.418	W	A
<b>Matrix:</b> SO Soil Bq / kg								
1	ug U	1.080	0.190	2.583	0.200	0.418	N	A
<b>Matrix:</b> WA Water Bq / L								
1	Bq U	0.870	0.150	0.801	0.067	1.086	A	

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	ug U	3.220	0.560	2.472	0.101	1.303	W	W
1	AM241	2.290	0.240	0.069	0.003	33.333	N	W
<b>Matrix:</b> WA Water Bq / L								
1	GROSS ALPHA	1590.000	160.000	1421.000	100.000	1.119	A	A
1	GROSS BETA	2260.000	230.000	2200.000	100.000	1.027	A	A
<b>Matrix:</b> AI Air Filter Bq / filter								
1	GROSS ALPHA	1.550	0.160	1.400	0.100	1.107	A	A
1	GROSS BETA	2.170	0.220	1.960	0.300	1.107	A	A
<b>Matrix:</b> WA Water Bq / L								
1	H3	207.000	1.000	218.300	6.505	0.948	A	A
<b>Matrix:</b> SO Soil Bq / kg								
1	SR90	18.600	0.300	13.091	0.279	1.421	A	A
<b>Matrix:</b> WA Water Bq / L								
1	SR90	4.010	0.030	4.357	0.192	0.920	A	N
<b>Matrix:</b> AI Air Filter Bq / filter								
1	SR90	2.050	0.020	1.758	0.042	1.166	A	W
<b>Matrix:</b> VE Vegetation Bq / kg								
1	SR90	213.000	2.000	359.005	6.021	0.593	W	A

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**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** IT Quanterra- Richland Laboratory

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation	QAP 47 Evaluation
<b>Matrix: SO Soil Bq / kg</b>								
1	K40	350.000	20.000	313.500	10.150	1.116	A	A
1	SR90	13.600	0.900	13.091	0.279	1.039	A	A
1	CS137	372.000	6.000	329.500	9.260	1.129	A	A
1	U234	29.100	3.300	31.133	0.802	0.935	A	A
1	U238	30.500	0.500	31.900	2.552	0.956	A	A
1	ug U	2.280	0.040	2.583	0.200	0.883	A	A
1	PU239	5.360	0.500	5.305	0.253	1.010	A	A
1	AM241	2.670	0.250	2.678	0.212	0.997	A	A

**Matrix: WA Water Bq / L**

1	GROSS ALPHA	1262.000	32.000	1421.000	100.000	0.888	A	A
1	GROSS BETA	2007.000	245.000	2200.000	100.000	0.912	A	A
1	H3	238.000	1.500	218.300	6.505	1.090	A	A
1	MN54	65.400	4.300	57.000	1.900	1.147	A	A
1	CO60	16.000	3.000	13.600	1.200	1.176	W	A
1	SR90	4.990	0.160	4.357	0.192	1.145	A	A
1	CS137	52.100	0.700	46.000	1.700	1.133	A	A
1	U234	0.450	0.040	0.396	0.026	1.136	A	A
1	U238	0.430	0.010	0.396	0.037	1.085	A	A
1	ug U	0.033	0.000	0.032	0.003	1.041	A	A
1	PU238	2.420	0.170	2.526	0.060	0.958	A	A
1	PU239	1.660	0.170	1.650	0.061	1.006	A	A
1	AM241	1.120	0.060	1.226	0.050	0.914	A	A

**Matrix: AI Air Filter Bq / filter**

1	GROSS ALPHA	1.560	0.050	1.400	0.100	1.114	A	W
1	GROSS BETA	2.320	0.040	1.960	0.300	1.184	A	A
1	MN54	5.770	0.150	5.440	0.485	1.061	A	A
1	CO57	10.300	0.500	11.110	0.846	0.927	A	A
1	CO60	8.500	0.200	9.090	0.732	0.935	A	A
1	SR90	1.750	0.150	1.758	0.042	0.995	A	A
1	SB125	12.800	1.000	12.160	1.151	1.053	A	N
1	CS134	17.500	0.600	19.740	1.380	0.887	A	A
1	CS137	11.000	0.100	11.860	0.957	0.927	A	A
1	CE144	7.500	0.400	8.210	0.796	0.914	A	A
1	U234	0.037	0.001	0.031	0.003	1.214	A	A
1	U238	0.035	0.002	0.030	0.001	1.145	A	A
1	ug U	2.690	0.010	2.472	0.101	1.088	A	A
1	PU238	0.070	0.010	0.069	0.003	1.007	A	A
1	PU239	0.064	0.010	0.062	0.002	1.026	A	A
1	AM241	0.074	0.006	0.069	0.003	1.077	A	A

**Matrix: VE Vegetation Bq / kg**

1	K40	811.000	5.000	707.500	24.987	1.146	A	A
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**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

**Lab:** IT Quanterra- Richland Laboratory

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> VE Vegetation Bq / kg								
1	CO60	13.500	0.500	10.575	0.206	1.277	W	A
1	SR90	380.000	17.000	359.005	6.021	1.058	A	A
1	CS137	202.000	4.000	181.500	7.141	1.113	A	A
1	PU239	1.670	0.240	1.770	0.154	0.943	A	A
1	AM241	1.290	0.250	1.105	0.051	1.167	A	A
1	CM244	1.590	0.160	2.174	0.066	0.732	W	W

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**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** JE Jacobs Engineering, Oak Ridge, TN

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> WA Water Bq / L								
1	CS137	53.880	1.490	46.000	1.700	1.171	A	
1	MN54	68.340	1.890	57.000	1.900	1.199	W	
1	CO60	16.370	0.780	13.600	1.200	1.204	N	
<b>Matrix:</b> SO Soil Bq / kg								
1	K40	321.250	29.290	313.500	10.150	1.025	A	
1	CS137	384.660	9.250	329.500	9.260	1.167	A	
<b>Matrix:</b> WA Water Bq / L								
1	GROSS ALPHA	1359.000	6.460	1421.000	100.000	0.956	A	
1	GROSS BETA	2396.000	6.160	2200.000	100.000	1.089	A	
<b>Matrix:</b> AI Air Filter Bq / filter								
1	GROSS ALPHA	1.470	0.180	1.400	0.100	1.050	A	
1	GROSS BETA	2.250	0.200	1.960	0.300	1.148	A	

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**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

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## QAP 48 Results by Laboratory

**Lab:** JL Jefferson Lab, Newport News, VA

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	<u>QAP 47</u> Evaluation
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**Matrix:** WA Water Bq / L

1	MN54	63.880	4.400	57.000	1.900	1.121	A	A
1	CO60	16.880	1.400	13.600	1.200	1.241	N	A
1	CS137	48.390	3.700	46.000	1.700	1.052	A	A
1	AM241	0.930	0.500	1.226	0.050	0.759	W	N

**Matrix:** AI Air Filter Bq / filter

1	MN54	5.260	0.700	5.440	0.485	0.967	A	W
1	CO57	10.000	0.600	11.110	0.846	0.900	A	A
1	CO60	8.200	0.600	9.090	0.732	0.902	A	A
1	SB125	10.400	0.800	12.160	1.151	0.855	A	A
1	CS134	16.200	0.700	19.740	1.380	0.821	A	A
1	CS137	16.200	0.700	11.860	0.957	1.366	N	A
1	CE144	6.600	1.500	8.210	0.796	0.804	A	
1	AM241	0.110	0.090	0.069	0.003	1.601	W	

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	<u>QAP 47</u> Evaluation
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**Matrix:** SO Soil Bq / kg

1	K40	323.000	50.000	313.500	10.150	1.030	A	A
1	SR90	12.870	0.100	13.091	0.279	0.983	A	A
1	CS137	356.000	40.000	329.500	9.260	1.080	A	A
1	PU239	6.258	0.101	5.305	0.253	1.180	A	A

**Matrix:** WA Water Bq / L

1	GROSS ALPHA	1527.000	96.000	1421.000	100.000	1.075	A	W
1	GROSS BETA	2190.000	72.000	2200.000	100.000	0.995	A	A
1	H3	236.000	12.000	218.300	6.505	1.081	A	A
1	MN54	58.000	3.500	57.000	1.900	1.018	A	A
1	FE55	271.000	7.000	202.800	2.921	1.336	W	A
1	CO60	14.600	1.700	13.600	1.200	1.074	A	A
1	SR90	4.490	0.330	4.357	0.192	1.030	A	A
1	CS137	51.000	3.500	46.000	1.700	1.109	A	A
1	ug U	0.034	0.000	0.032	0.003	1.053	A	A
1	PU239	1.738	0.012	1.650	0.061	1.053	A	A

**Matrix:** AI Air Filter Bq / filter

1	GROSS ALPHA	1.520	0.060	1.400	0.100	1.086	A	A
1	GROSS BETA	2.143	0.051	1.960	0.300	1.093	A	A

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## QAP 48 Results by Laboratory

**Lab:** KO Korea Institute of Nuclear Safety]

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	AM241	0.063	0.004	0.069	0.003	0.913	A	
1	U234	0.035	0.001	0.031	0.003	1.149	A	
1	U238	0.033	0.001	0.030	0.001	1.086	A	
1	Bq U	0.070	0.002	0.063	0.004	1.108	A	
1	ug U	2.680	0.099	2.472	0.101	1.084	A	
1	PU238	0.062	0.002	0.069	0.003	0.885	A	
1	PU239	0.058	0.002	0.062	0.002	0.937	A	
<b>Matrix:</b> WA Water Bq / L								
1	U234	0.440	0.014	0.396	0.026	1.111	A	
1	U238	0.435	0.014	0.396	0.037	1.098	A	
1	Bq U	0.892	0.019	0.801	0.067	1.113	A	
1	ug U	0.035	0.001	0.032	0.003	1.100	A	
1	PU238	2.290	0.081	2.526	0.060	0.907	A	
1	PU239	1.520	0.055	1.650	0.061	0.921	A	
<b>Matrix:</b> SO Soil Bq / kg								
1	U234	30.400	0.840	31.133	0.802	0.976	A	
1	U238	28.800	0.800	31.900	2.552	0.903	A	
1	Bq U	60.500	1.160	64.600	2.858	0.937	A	
1	ug U	2.330	0.064	2.583	0.200	0.902	A	
1	SR90	13.030	1.130	13.091	0.279	0.995	A	
<b>Matrix:</b> VE Vegetation Bq / kg								
1	SR90	351.930	11.420	359.005	6.021	0.980	A	
<b>Matrix:</b> WA Water Bq / L								
1	SR90	1.516	0.060	4.357	0.192	0.348	N	
<b>Matrix:</b> AI Air Filter Bq / filter								
1	SR90	4.310	0.240	1.758	0.042	2.451	N	
1	GROSS ALPHA	1.250	0.060	1.400	0.100	0.893	A	A
1	GROSS BETA	1.960	0.070	1.960	0.300	1.000	A	A
<b>Matrix:</b> WA Water Bq / L								
1	GROSS ALPHA	1523.000	60.400	1421.000	100.000	1.072	A	

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

**Lab:** KO Korea Institute of Nuclear Safety]

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	MN54	5.451	0.087	5.440	0.485	1.002	A	A
1	CO57	11.260	0.041	11.110	0.846	1.014	A	A
1	CO60	9.031	0.145	9.090	0.732	0.994	A	A
1	SB125	13.350	0.180	12.160	1.151	1.098	A	A
1	CS134	19.350	0.232	19.740	1.380	0.980	A	A
1	CS137	11.540	0.139	11.860	0.957	0.973	A	A
1	CE144	7.523	0.133	8.210	0.796	0.916	A	A

**Matrix:** SO Soil Bq / kg

1	K40	348.100	7.175	313.500	10.150	1.110	A	A
1	CS137	343.900	2.327	329.500	9.260	1.044	A	A

**Matrix:** VE Vegetation Bq / kg

1	K40	764.980	12.570	707.500	24.987	1.081	A	A
1	CO60	11.530	0.535	10.575	0.206	1.090	A	A
1	CS137	187.360	1.626	181.500	7.141	1.032	A	A

**Matrix:** WA Water Bq / L

1	MN54	61.350	0.728	57.000	1.900	1.076	A	
1	CO60	14.630	0.435	13.600	1.200	1.076	A	
1	CS137	50.020	0.625	46.000	1.700	1.087	A	

**Matrix:** SO Soil Bq / kg

1	PU239	5.230	0.260	5.305	0.253	0.986	A	
1	AM241	2.910	0.170	2.678	0.212	1.087	A	

**Matrix:** VE Vegetation Bq / kg

1	PU239	1.790	0.080	1.770	0.154	1.011	A	
1	AM241	1.100	0.060	1.105	0.051	0.995	A	
1	CM244	2.030	0.090	2.174	0.066	0.934	A	

**Matrix:** WA Water Bq / L

1	H3	249.050	1.951	218.300	6.505	1.141	A	
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**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

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## QAP 48 Results by Laboratory

**Lab:** KR Korea Atomic Energy Research Institute

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix:</b> SO Soil Bq / kg							
1	K40	350.500	24.400	313.500	10.150	1.118	A
1	SR90	12.080	0.500	13.091	0.279	0.923	A
1	CS137	360.500	24.500	329.500	9.260	1.094	A
<b>Matrix:</b> VE Vegetation Bq / kg							
1	K40	785.100	60.100	707.500	24.987	1.110	A
1	CO60	12.400	1.500	10.575	0.206	1.173	A
1	SR90	386.670	2.860	359.005	6.021	1.077	A
1	CS137	202.200	14.200	181.500	7.141	1.114	A
<b>Matrix:</b> AI Air Filter Bq / filter							
1	GROSS ALPHA	1.300	0.030	1.400	0.100	0.929	A
1	GROSS BETA	2.120	0.030	1.960	0.300	1.082	A

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix: SO Soil Bq / kg</b>								
1	K40	332.000	33.000	313.500	10.150	1.059	A	
1	CS137	296.000	22.000	329.500	9.260	0.898	W	A
2	K40	320.000	32.000	313.500	10.150	1.021	A	
3	K40	321.000	32.000	313.500	10.150	1.024	A	
2	CS137	300.000	22.000	329.500	9.260	0.910	A	A
3	CS137	294.000	22.000	329.500	9.260	0.892	W	A
1	PU239	5.580	0.220	5.305	0.253	1.052	A	A
2	PU239	5.580	0.220	5.305	0.253	1.052	A	A
3	PU239	5.320	0.200	5.305	0.253	1.003	A	A
1	AM241	2.700	0.300	2.678	0.212	1.008	A	A
2	AM241	3.030	0.320	2.678	0.212	1.132	A	A
3	AM241	3.050	0.380	2.678	0.212	1.139	A	A
1	ug U	2.410	0.240	2.583	0.200	0.933	A	A
2	ug U	3.580	0.360	2.583	0.200	1.386	N	A
3	ug U	2.390	0.240	2.583	0.200	0.925	A	A

**Matrix: WA Water Bq / L**

1	GROSS ALPHA	1305.000	160.000	1421.000	100.000	0.918	A	A
2	GROSS ALPHA	1444.000	176.000	1421.000	100.000	1.016	A	A
3	GROSS ALPHA	1468.000	179.000	1421.000	100.000	1.033	A	A
1	GROSS BETA	2405.000	296.000	2200.000	100.000	1.093	A	A
2	GROSS BETA	2475.000	304.000	2200.000	100.000	1.125	A	A
3	GROSS BETA	2602.000	319.000	2200.000	100.000	1.183	A	A
1	H3	233.000	37.000	218.300	6.505	1.067	A	W
2	H3	237.000	37.000	218.300	6.505	1.086	A	W
3	H3	229.000	37.000	218.300	6.505	1.049	A	W
1	MN54	70.500	7.100	57.000	1.900	1.237	W	W
2	MN54	71.100	7.100	57.000	1.900	1.247	N	W
3	MN54	68.900	7.000	57.000	1.900	1.209	W	W
1	CO60	15.500	1.700	13.600	1.200	1.140	W	
2	CO60	15.100	1.700	13.600	1.200	1.110	A	
3	CO60	17.400	1.900	13.600	1.200	1.279	N	
1	CS137	56.900	5.800	46.000	1.700	1.237	W	W
2	CS137	57.000	5.800	46.000	1.700	1.239	W	W
3	CS137	56.600	5.900	46.000	1.700	1.230	W	W
1	PU238	2.460	0.100	2.526	0.060	0.974	A	A
2	PU238	2.420	0.100	2.526	0.060	0.958	A	A
3	PU238	2.410	0.100	2.526	0.060	0.954	A	A
1	PU239	1.710	0.070	1.650	0.061	1.036	A	A
2	PU239	1.610	0.070	1.650	0.061	0.976	A	A
3	PU239	1.620	0.070	1.650	0.061	0.982	A	A
1	AM241	1.170	0.060	1.226	0.050	0.955	A	A
2	AM241	1.250	0.060	1.226	0.050	1.020	A	A
3	AM241	1.260	0.060	1.226	0.050	1.028	A	A
1	ug U	0.040	0.010	0.032	0.003	1.250	W	N
2	ug U	0.040	0.010	0.032	0.003	1.250	W	N

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> WA Water Bq / L								
3	ug U	0.040	0.010	0.032	0.003	1.250	W	N
<b>Matrix:</b> AI Air Filter Bq / filter								
1	MN54	5.770	0.470	5.440	0.485	1.061	A	A
2	MN54	5.860	0.480	5.440	0.485	1.077	A	A
3	MN54	5.660	0.470	5.440	0.485	1.040	A	A
1	CO57	9.850	0.710	11.110	0.846	0.887	A	A
2	CO57	9.930	0.710	11.110	0.846	0.894	A	A
3	CO57	9.740	0.700	11.110	0.846	0.877	A	A
1	CO60	8.500	0.690	9.090	0.732	0.935	A	A
2	CO60	8.440	0.690	9.090	0.732	0.928	A	A
3	CO60	8.580	0.700	9.090	0.732	0.944	A	A
1	SB125	13.800	1.100	12.160	1.151	1.135	A	A
2	SB125	13.200	1.100	12.160	1.151	1.086	A	A
3	SB125	13.600	1.100	12.160	1.151	1.118	A	A
1	CS137	11.900	0.900	11.860	0.957	1.003	A	A
2	CS137	12.100	0.900	11.860	0.957	1.020	A	A
3	CS137	11.600	0.900	11.860	0.957	0.978	A	A
1	CE144	6.070	0.750	8.210	0.796	0.739	A	A
2	CE144	4.530	0.640	8.210	0.796	0.552	N	A
3	CE144	5.190	0.730	8.210	0.796	0.632	W	A
1	PU238	0.068	0.008	0.069	0.003	0.978	A	A
2	PU238	0.068	0.012	0.069	0.003	0.978	A	A
3	PU238	0.066	0.008	0.069	0.003	0.950	A	A
1	PU239	0.061	0.007	0.062	0.002	0.978	A	A
2	PU239	0.071	0.008	0.062	0.002	1.139	A	A
3	PU239	0.067	0.008	0.062	0.002	1.075	A	A
1	AM241	0.074	0.009	0.069	0.003	1.077	A	A
2	AM241	0.068	0.008	0.069	0.003	0.990	A	A
3	AM241	0.074	0.009	0.069	0.003	1.077	A	A
1	ug U	4.780	0.480	2.472	0.101	1.934	N	
2	ug U	5.550	0.560	2.472	0.101	2.245	N	
3	ug U	3.780	0.380	2.472	0.101	1.529	W	
<b>Matrix:</b> VE Vegetation Bq / kg								
1	K40	625.000	57.000	707.500	24.987	0.883	W	
2	K40	679.000	60.000	707.500	24.987	0.960	A	
3	K40	671.000	60.000	707.500	24.987	0.948	A	
1	CO60	10.000	1.500	10.575	0.206	0.946	A	
2	CO60	10.900	1.200	10.575	0.206	1.031	A	
3	CO60	9.400	1.100	10.575	0.206	0.889	A	
1	CS137	175.000	13.000	181.500	7.141	0.964	A	A
2	CS137	178.000	14.000	181.500	7.141	0.981	A	A
3	CS137	170.000	13.000	181.500	7.141	0.937	A	A
1	PU239	1.558	0.122	1.770	0.154	0.880	A	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	<u>QAP 47</u> Evaluation
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**Matrix:** VE Vegetation Bq / kg

2	PU239	1.757	0.122	1.770	0.154	0.993	A	A
3	PU239	1.890	0.104	1.770	0.154	1.068	A	A
1	AM241	1.188	0.081	1.105	0.051	1.075	A	A
2	AM241	1.028	0.052	1.105	0.051	0.931	A	A

**Matrix:** SO Soil Bq / kg

1	SR90	39.600	28.900	13.091	0.279	3.025	N	
2	SR90	51.400	31.800	13.091	0.279	3.926	N	
3	SR90	60.700	30.000	13.091	0.279	4.637	N	

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** LL LLNL Chemistry and Material Science/Environmental

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix: SO Soil Bq / kg</b>								
1	K40	327.000	24.900	313.500	10.150	1.043	A	A
1	CS137	374.000	8.200	329.500	9.260	1.135	A	A
1	U234	25.100	2.040	31.133	0.802	0.806	A	A
1	U238	2.520	2.040	31.900	2.552	0.079	N	A
1	PU239	5.420	0.580	5.305	0.253	1.022	A	A
1	AM241	3.870	1.300	2.678	0.212	1.445	A	W
<b>Matrix: VE Vegetation Bq / kg</b>								
1	K40	718.000	47.400	707.500	24.987	1.015	A	A
1	CO60	12.200	2.100	10.575	0.206	1.154	A	A
1	CS137	203.000	5.300	181.500	7.141	1.118	A	A
1	PU239	1.870	0.241	1.770	0.154	1.056	A	A
1	AM241	1.290	0.167	1.105	0.051	1.167	A	A
1	CM244	2.170	0.242	2.174	0.066	0.998	A	N
<b>Matrix: WA Water Bq / L</b>								
1	H3	231.000	5.070	218.300	6.505	1.058	A	A
1	MN54	62.100	2.600	57.000	1.900	1.089	A	A
1	CO60	13.000	1.800	13.600	1.200	0.956	A	A
1	CS137	49.700	2.300	46.000	1.700	1.080	A	A
1	U234	0.428	0.058	0.396	0.026	1.080	A	A
1	U238	0.396	0.055	0.396	0.037	0.999	A	A
1	PU238	2.590	0.238	2.526	0.060	1.025	A	A
1	PU239	1.800	0.171	1.650	0.061	1.091	A	A
1	AM241	1.270	0.086	1.226	0.050	1.036	A	A
1	GROSS ALPHA	1560.000	18.600	1421.000	100.000	1.098	A	A
1	GROSS BETA	2680.000	20.200	2200.000	100.000	1.218	A	W
<b>Matrix: AI Air Filter Bq / filter</b>								
1	MN54	5.780	0.230	5.440	0.485	1.063	A	A
1	CO57	11.600	0.300	11.110	0.846	1.044	A	A
1	CO60	9.100	0.230	9.090	0.732	1.001	A	A
1	SB125	14.600	0.438	12.160	1.151	1.201	W	A
1	CS134	20.800	0.333	19.740	1.380	1.054	A	A
1	CS137	1.200	0.031	11.860	0.957	0.101	N	A
1	CE144	8.060	0.870	8.210	0.796	0.982	A	A
1	U234	0.009	0.002	0.031	0.003	0.284	N	A
1	U238	0.009	0.003	0.030	0.001	0.305	N	A
1	PU238	0.069	0.008	0.069	0.003	0.993	A	A
1	PU239	0.065	0.007	0.062	0.002	1.049	A	A
1	AM241	0.076	0.006	0.069	0.003	1.105	A	A
1	GROSS ALPHA	1.310	0.016	1.400	0.100	0.936	A	A
1	GROSS BETA	2.500	0.020	1.960	0.300	1.276	A	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter							
1	GROSS ALPHA	1.300	0.200	1.400	0.100	0.929	A
1	GROSS BETA	2.100	0.400	1.960	0.300	1.071	A
1	MN54	8.800	0.650	5.440	0.485	1.618	N
1	CO57	18.900	0.710	11.110	0.846	1.701	N
1	CO60	14.500	0.890	9.090	0.732	1.595	N
1	SB125	17.100	1.300	12.160	1.151	1.406	W
1	CS134	27.500	1.200	19.740	1.380	1.393	N
1	CS137	19.600	0.990	11.860	0.957	1.653	N
1	CE144	21.200	2.000	8.210	0.796	2.582	N

**Matrix:** WA Water Bq / L

1	H3	96.600	10.000	218.300	6.505	0.443	N
1	MN54	51.900	5.000	57.000	1.900	0.911	A
1	CO60	19.900	2.300	13.600	1.200	1.463	N

**Matrix:** SO Soil Bq / kg

1	K40	325.000	40.000	313.500	10.150	1.037	A
1	CS137	352.000	15.000	329.500	9.260	1.068	A

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**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** LN Los Alamos National Lab, ES&H

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	<u>QAP 47</u> Evaluation
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**Matrix:** WA Water Bq / L

1	H3	316.000	31.000	218.300	6.505	1.448	W	
1	MN54	64.000	6.000	57.000	1.900	1.123	A	
1	CO60	17.000	1.200	13.600	1.200	1.250	N	
1	CS137	58.000	6.000	46.000	1.700	1.261	N	

**Matrix:** AI Air Filter Bq / filter

1	GROSS ALPHA	1.530	0.060	1.400	0.100	1.093	A	
1	GROSS BETA	2.140	0.080	1.960	0.300	1.092	A	
1	MN54	5.900	0.300	5.440	0.485	1.085	A	
1	CO57	9.900	1.000	11.110	0.846	0.891	A	
1	CO60	8.700	0.500	9.090	0.732	0.957	A	
1	SB125	10.300	0.800	12.160	1.151	0.847	A	
1	CS134	16.300	1.000	19.740	1.380	0.826	A	
1	CS137	11.700	0.600	11.860	0.957	0.987	A	
1	CE144	7.000	0.900	8.210	0.796	0.853	A	

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	GROSS ALPHA	0.800	0.022	1.400	0.100	0.571	W	W
1	GROSS BETA	0.099	0.031	1.960	0.300	0.051	N	W
1	MN54	4.980	0.400	5.440	0.485	0.915	A	A
1	CO57	10.000	0.600	11.110	0.846	0.900	A	A
1	CO60	8.540	0.090	9.090	0.732	0.939	A	
1	SB125	10.800	0.100	12.160	1.151	0.888	A	
1	CS134	18.400	0.100	19.740	1.380	0.932	A	A
1	CS137	12.000	0.100	11.860	0.957	1.012	A	A
1	CE144	11.000	0.200	8.210	0.796	1.340	N	W
1	AM241	0.200	0.014	0.069	0.003	2.911	N	N
<b>Matrix:</b> WA Water Bq / L								
1	GROSS ALPHA	2470.000	270.000	1421.000	100.000	1.738	N	W
1	GROSS BETA	4490.000	580.000	2200.000	100.000	2.041	N	W
1	H3	237.000	4.000	218.300	6.505	1.086	A	W
1	MN54	67.000	1.200	57.000	1.900	1.175	W	A
1	CO60	15.600	0.500	13.600	1.200	1.147	W	A
1	CS137	51.600	0.700	46.000	1.700	1.122	A	A
1	PU238	1.860	0.100	2.526	0.060	0.736	N	
1	PU239	1.050	0.060	1.650	0.061	0.636	N	
1	AM241	1.550	0.270	1.226	0.050	1.265	W	W
<b>Matrix:</b> VE Vegetation Bq / kg								
1	K40	7250.000	100.000	707.500	24.987	10.247	N	A
1	CO60	10.500	0.600	10.575	0.206	0.993	A	A
1	CS137	177.000	2.000	181.500	7.141	0.975	A	A
<b>Matrix:</b> SO Soil Bq / kg								
1	K40	390.000	7.000	313.500	10.150	1.244	A	A
1	CS137	406.000	2.000	329.500	9.260	1.232	W	A
1	U238	59.000	3.900	31.900	2.552	1.850	N	N
1	AM241	4.200	0.480	2.678	0.212	1.569	W	W
1	PU239	3.080	0.920	5.305	0.253	0.581	N	

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**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> WA Water Bq/L								
1	H3	214.000	16.700	218.300	6.505	0.980	A	A

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** MA ORNL Health Sciences Research Div.

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	<u>QAP 47</u> Evaluation
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**Matrix:** SO Soil Bq / kg

1	K40	359.000	81.000	313.500	10.150	1.145	A	A
1	CS137	407.000	33.000	329.500	9.260	1.235	W	A
1	U238	44.000	18.000	31.900	2.552	1.379	W	A
1	AM241	3.600	1.900	2.678	0.212	1.345	A	A

**Matrix:** VE Vegetation Bq / kg

1	K40	740.000	118.000	707.500	24.987	1.046	A	A
1	CO60	13.700	4.100	10.575	0.206	1.296	W	A
1	CS137	233.000	20.000	181.500	7.141	1.284	W	A
1	AM241	2.900	1.500	1.105	0.051	2.624	W	W

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	GROSS ALPHA	1.980	0.050	1.400	0.100	1.414	W	W
1	GROSS BETA	2.620	0.050	1.960	0.300	1.337	A	A
1	MN54	6.740	0.400	5.440	0.485	1.239	W	W
1	CO57	13.300	0.550	11.110	0.846	1.197	W	W
1	CO60	10.200	0.320	9.090	0.732	1.122	W	W
1	SB125	13.800	0.620	12.160	1.151	1.135	A	W
1	CS134	18.200	0.560	19.740	1.380	0.922	A	A
1	CS137	13.700	0.590	11.860	0.957	1.155	W	W
1	CE144	9.460	0.550	8.210	0.796	1.152	W	A
1	AM241	0.270	0.070	0.069	0.003	3.930	N	N
<b>Matrix:</b> WA Water Bq / L								
1	H3	266.000	6.170	218.300	6.505	1.219	W	
1	MN54	56.300	2.040	57.000	1.900	0.988	A	N
1	CO60	13.100	0.360	13.600	1.200	0.963	A	A
1	CS137	46.300	2.090	46.000	1.700	1.007	A	A
1	AM241	1.370	0.250	1.226	0.050	1.118	A	W
<b>Matrix:</b> VE Vegetation Bq / kg								
1	K40	1003.000	46.900	707.500	24.987	1.418	N	A
1	CO60	14.900	0.700	10.575	0.206	1.409	W	A
1	CS137	264.000	11.300	181.500	7.141	1.455	N	A
<b>Matrix:</b> SO Soil Bq / kg								
1	K40	363.000	18.000	313.500	10.150	1.158	A	A
1	CS137	361.000	15.300	329.500	9.260	1.096	A	A
1	AM241	3.500	0.440	2.678	0.212	1.307	A	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

**Lab:** MH Maine Health & Environmental Testing Laboratory

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	MN54	6.710	0.220	5.440	0.485	1.233	W	
1	CO57	12.740	0.390	11.110	0.846	1.147	W	
1	CO60	10.130	0.220	9.090	0.732	1.114	W	
1	SB125	16.340	0.460	12.160	1.151	1.344	W	
1	CS134	20.910	0.460	19.740	1.380	1.059	A	
1	CS137	14.350	0.450	11.860	0.957	1.210	W	
1	CE144	8.980	0.430	8.210	0.796	1.094	A	
<b>Matrix:</b> VE Vegetation Bq / kg								
1	K40	735.900	35.600	707.500	24.987	1.040	A	
1	CO60	11.200	0.500	10.575	0.206	1.059	A	
1	CS137	191.000	9.300	181.500	7.141	1.052	A	
<b>Matrix:</b> WA Water Bq / L								
1	SR90	3.750	0.290	4.357	0.192	0.861	W	
1	H3	211.800	7.100	218.300	6.505	0.970	A	
1	MN54	64.400	2.300	57.000	1.900	1.130	A	
1	CO60	15.400	0.500	13.600	1.200	1.132	W	
1	CS137	52.100	2.200	46.000	1.700	1.133	A	
1	U238	0.410	0.040	0.396	0.037	1.035	A	
1	U234	0.380	0.040	0.396	0.026	0.959	A	
1	GROSS BETA	2359.800	9.600	2200.000	100.000	1.073	A	
1	GROSS ALPHA	1664.300	4.000	1421.000	100.000	1.171	W	
<b>Matrix:</b> SO Soil Bq / kg								
1	K40	337.500	18.500	313.500	10.150	1.077	A	
1	CS137	346.700	16.800	329.500	9.260	1.052	A	

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**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	MN54	6.190	0.600	5.440	0.485	1.138	A	W
1	CO57	12.620	1.300	11.110	0.846	1.136	W	W
1	CO60	10.040	1.000	9.090	0.732	1.105	W	A
1	SB125	14.580	1.500	12.160	1.151	1.199	W	W
1	CS134	22.310	2.200	19.740	1.380	1.130	W	W
1	CS137	12.970	1.300	11.860	0.957	1.094	A	W
1	CE144	8.240	0.800	8.210	0.796	1.004	A	
1	U234	0.040	0.003	0.031	0.003	1.299	A	A
1	U238	0.040	0.003	0.030	0.001	1.312	A	A
1	PU238	0.070	0.005	0.069	0.003	1.007	A	A
1	PU239	0.070	0.005	0.062	0.002	1.123	A	
<b>Matrix:</b> WA Water Bq / L								
1	H3	248.680	13.920	218.300	6.505	1.139	A	A
1	MN54	54.600	5.500	57.000	1.900	0.958	A	A
1	CO60	14.800	1.500	13.600	1.200	1.088	A	A
1	CS137	48.560	4.900	46.000	1.700	1.056	A	A
1	U234	0.390	0.030	0.396	0.026	0.984	A	A
1	U238	0.390	0.030	0.396	0.037	0.984	A	A
1	PU238	2.450	0.020	2.526	0.060	0.970	A	A
1	PU239	1.700	0.110	1.650	0.061	1.030	A	A
1	AM241	1.400	0.100	1.226	0.050	1.142	A	W
<b>Matrix:</b> VE Vegetation Bq / kg								
1	K40	816.000	81.600	707.500	24.987	1.153	A	A
1	CO60	11.650	1.200	10.575	0.206	1.102	A	A
1	CS137	197.000	19.700	181.500	7.141	1.085	A	A
1	PU239	1.880	0.130	1.770	0.154	1.062	A	A
1	AM241	1.090	0.100	1.105	0.051	0.986	A	A
<b>Matrix:</b> SO Soil Bq / kg								
1	K40	334.250	33.400	313.500	10.150	1.066	A	A
1	CS137	330.260	33.000	329.500	9.260	1.002	A	N
1	U234	30.010	2.020	31.133	0.802	0.964	A	A
1	U238	31.130	2.090	31.900	2.552	0.976	A	A
1	PU239	5.230	0.350	5.305	0.253	0.986	A	A
1	AM241	2.710	0.300	2.678	0.212	1.012	A	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	<u>QAP 47</u> Evaluation
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**Matrix:** WA Water Bq / L

1	MN54	60.250	6.030	57.000	1.900	1.057	A	A
1	CO60	14.400	1.400	13.600	1.200	1.059	A	A
1	CS137	51.300	5.100	46.000	1.700	1.115	A	A
1	AM241	1.300	0.130	1.226	0.050	1.061	A	W
1	H3	674.000	67.000	218.300	6.505	3.087	N	

**Matrix:** AI Air Filter Bq / filter

1	MN54	5.060	0.510	5.440	0.485	0.930	A	A
1	CO60	9.110	0.910	9.090	0.732	1.002	A	A
1	CS137	11.450	1.150	11.860	0.957	0.965	A	A
1	CO57	10.450	1.050	11.110	0.846	0.941	A	A
1	SB125	12.300	1.230	12.160	1.151	1.012	A	A
1	CS134	19.000	1.900	19.740	1.380	0.963	A	A
1	CE144	7.640	0.760	8.210	0.796	0.931	A	A

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix: SO Soil Bq / kg</b>								
1	K40	321.000	11.200	313.500	10.150	1.024	A	A
1	CS137	341.000	2.500	329.500	9.260	1.035	A	A
1	PU239	5.400	1.040	5.305	0.253	1.018	A	A
1	U234	30.400	2.450	31.133	0.802	0.976	A	A
1	U238	27.200	2.290	31.900	2.552	0.853	A	A
<b>Matrix: WA Water Bq / L</b>								
1	H3	157.000	3.710	218.300	6.505	0.719	W	A
1	MN54	61.500	0.922	57.000	1.900	1.079	A	A
1	CO60	14.400	0.369	13.600	1.200	1.059	A	A
1	SR90	4.630	0.740	4.357	0.192	1.063	A	W
1	CS137	50.700	0.820	46.000	1.700	1.102	A	A
1	PU238	2.250	0.102	2.526	0.060	0.891	W	
1	PU239	1.590	0.075	1.650	0.061	0.964	A	
<b>Matrix: AI Air Filter Bq / filter</b>								
1	MN54	5.660	0.167	5.440	0.485	1.040	A	
1	CO57	10.100	0.135	11.110	0.846	0.909	A	
1	CO60	8.460	0.149	9.090	0.732	0.931	A	W
1	SR90	1.570	0.138	1.758	0.042	0.893	A	N
1	SB125	12.200	0.345	12.160	1.151	1.003	A	
1	CS134	18.300	0.185	19.740	1.380	0.927	A	
1	CS137	11.900	0.213	11.860	0.957	1.003	A	
1	CE144	6.760	0.565	8.210	0.796	0.823	A	
1	U234	0.048	0.006	0.031	0.003	1.558	W	
1	U238	0.036	0.005	0.030	0.001	1.181	A	
<b>Matrix: VE Vegetation Bq / kg</b>								
1	K40	866.000	22.300	707.500	24.987	1.224	A	N
1	CO60	13.100	6.720	10.575	0.206	1.239	W	N
1	SR90	333.000	14.100	359.005	6.021	0.928	A	N
1	CS137	224.000	2.690	181.500	7.141	1.234	A	N
1	PU239	1.620	0.266	1.770	0.154	0.915	A	N
1	AM241	1.200	0.258	1.105	0.051	1.086	A	

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

**Lab:** NF Nuclear Fuel Services, Erwin, TN

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> WA Water Bq/L								
1	PU238	2.457	0.119	2.526	0.060	0.973	A	
1	PU239	1.603	0.085	1.650	0.061	0.971	A	
1	Bq U	0.840	0.036	0.801	0.067	1.048	A	
<b>Matrix:</b> VE Vegetation Bq/kg								
1	PU239	1.185	0.161	1.770	0.154	0.669	W	
<b>Matrix:</b> SO Soil Bq/kg								
1	Bq U	79.925	2.719	64.600	2.858	1.237	W	
1	PU239	3.656	0.950	5.305	0.253	0.689	N	

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**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** NL Fluor Daniel Fernald, Inc., Ohio

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	MN54	5.280	0.529	5.440	0.485	0.971	A	
1	CO57	10.500	1.030	11.110	0.846	0.945	A	
1	CO60	8.350	0.586	9.090	0.732	0.919	A	
1	SB125	12.400	0.916	12.160	1.151	1.020	A	
1	CS134	17.700	1.240	19.740	1.380	0.897	A	
1	CS137	11.300	1.120	11.860	0.957	0.953	A	
1	CE144	7.580	0.798	8.210	0.796	0.923	A	
1	U234	0.035	0.011	0.031	0.003	1.146	A	
1	U238	0.040	0.011	0.030	0.001	1.325	W	
1	PU238	0.059	0.017	0.069	0.003	0.849	W	
1	PU239	0.062	0.018	0.062	0.002	1.001	A	
<b>Matrix:</b> SO Soil Bq / kg								
1	K40	328.000	47.500	313.500	10.150	1.046	A	
1	CS137	327.000	62.100	329.500	9.260	0.992	A	
1	U234	24.900	7.700	31.133	0.802	0.800	A	
1	U238	28.000	7.900	31.900	2.552	0.878	A	
1	PU239	6.530	1.780	5.305	0.253	1.231	W	
<b>Matrix:</b> WA Water Bq / L								
1	MN54	69.900	11.200	57.000	1.900	1.226	W	
1	CO60	15.600	1.910	13.600	1.200	1.147	W	
1	CS137	54.400	10.700	46.000	1.700	1.183	W	
1	U234	0.434	0.104	0.396	0.026	1.095	A	
1	U238	0.431	0.102	0.396	0.037	1.088	A	
1	PU238	2.240	0.510	2.526	0.060	0.887	W	
1	PU239	1.590	0.360	1.650	0.061	0.964	A	

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.



## QAP 48 Results by Laboratory

**Lab:** NM Environmental Evaluation Group, Carlsbad, NM

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter							
1	CS137	10.500	0.900	11.860	0.957	0.885	A
1	PU238	0.069	0.002	0.069	0.003	0.988	A
1	PU239	0.069	0.002	0.062	0.002	1.108	A
1	AM241	0.076	0.004	0.069	0.003	1.105	A
<b>Matrix:</b> WA Water Bq / L							
1	CS137	55.100	4.700	46.000	1.700	1.198	W
1	PU238	2.310	0.070	2.526	0.060	0.915	A
1	PU239	1.590	0.050	1.650	0.061	0.964	A
1	AM241	1.210	0.040	1.226	0.050	0.987	A
<b>Matrix:</b> SO Soil Bq / kg							
1	CS137	298.000	27.000	329.500	9.260	0.904	A
1	PU239	5.660	0.400	5.305	0.253	1.067	A
1	AM241	2.940	0.330	2.678	0.212	1.098	A

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** NP JAF Environmental Laboratory, New York Power Authority

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	GROSS BETA	2.150	0.020	1.960	0.300	1.097	A	
1	MN54	6.300	0.300	5.440	0.485	1.158	W	
1	CO57	11.600	0.400	11.110	0.846	1.044	A	
1	CO60	8.800	0.200	9.090	0.732	0.968	A	
1	SB125	13.400	0.600	12.160	1.151	1.102	A	
1	CS134	17.600	0.400	19.740	1.380	0.892	A	
1	CS137	11.600	0.300	11.860	0.957	0.978	A	
1	CE144	7.800	0.500	8.210	0.796	0.950	A	

**Matrix:** WA Water Bq / L

1	GROSS BETA	2150.000	18.000	2200.000	100.000	0.977	A	
1	H3	289.000	33.000	218.300	6.505	1.324	W	
1	MN54	66.300	2.100	57.000	1.900	1.163	A	
1	CO60	16.300	0.800	13.600	1.200	1.199	W	
1	CS137	52.900	1.800	46.000	1.700	1.150	A	

**Matrix:** VE Vegetation Bq / kg

1	CO60	9.100	0.600	10.575	0.206	0.861	A	
1	CS137	152.000	2.100	181.500	7.141	0.837	W	

**Matrix:** SO Soil Bq / kg

1	CS137	427.000	4.000	329.500	9.260	1.296	W	
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**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** NR Naval Reactors Facility Chemistry, Scoville, ID

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	<u>QAP 47</u> Evaluation
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**Matrix:** SO Soil Bq / kg

1	K40	335.000	67.000	313.500	10.150	1.069	A
1	CS137	356.000	71.000	329.500	9.260	1.080	A

**Matrix:** VE Vegetation Bq / kg

1	K40	739.000	148.000	707.500	24.987	1.045	A
1	CO60	11.500	2.300	10.575	0.206	1.087	A
1	CS137	186.000	37.000	181.500	7.141	1.025	A

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** NS State Lab of Public Health, North Carolina

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	<u>QAP 47</u> Evaluation
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**Matrix:** AI Air Filter Bq / filter

1	GROSS ALPHA	1.170	0.090	1.400	0.100	0.836	W
1	GROSS BETA	2.090	0.090	1.960	0.300	1.066	A
1	MN54	6.040	0.080	5.440	0.485	1.110	A
1	CO57	11.070	0.410	11.110	0.846	0.996	A
1	CO60	10.540	0.330	9.090	0.732	1.160	W
1	SB125	13.260	0.490	12.160	1.151	1.090	A
1	CS134	16.190	0.600	19.740	1.380	0.820	A
1	CS137	11.700	0.430	11.860	0.957	0.987	A
1	CE144	7.300	0.270	8.210	0.796	0.889	A

**Matrix:** WA Water Bq / L

1	H3	189.600	13.900	218.300	6.505	0.869	A
1	MN54	65.850	0.480	57.000	1.900	1.155	A
1	CO60	15.700	0.290	13.600	1.200	1.154	W
1	SR90	3.980	0.860	4.357	0.192	0.913	A
1	CS137	51.480	0.370	46.000	1.700	1.119	A

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	<u>QAP 47</u> Evaluation
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**Matrix:** AI Air Filter Bq / filter

1	GROSS ALPHA	1.370	0.140	1.400	0.100	0.979	A
1	GROSS BETA	1.840	0.180	1.960	0.300	0.939	A

**Matrix:** WA Water Bq / L

1	GROSS ALPHA	1020.000	101.000	1421.000	100.000	0.718	W
1	GROSS BETA	1680.000	165.000	2200.000	100.000	0.764	A

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** OD ORNL, Radiobioassay Lab

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter							
1	GROSS ALPHA	1.230	0.040	1.400	0.100	0.879	A
1	GROSS BETA	2.460	0.060	1.960	0.300	1.255	A
1	MN54	5.680	0.370	5.440	0.485	1.044	A
1	CO57	11.300	0.190	11.110	0.846	1.017	A
1	CO60	8.930	0.240	9.090	0.732	0.982	A
1	SB125	13.780	0.460	12.160	1.151	1.133	A
1	CS134	19.510	0.820	19.740	1.380	0.988	A
1	CS137	12.070	0.760	11.860	0.957	1.018	A
1	CE144	7.620	0.230	8.210	0.796	0.928	A

**Matrix:** WA Water Bq / L

1	SR90	4.240	0.520	4.357	0.192	0.973	A
1	PU238	2.420	0.250	2.526	0.060	0.958	A
1	PU239	1.620	0.170	1.650	0.061	0.982	A
1	AM241	1.410	0.150	1.226	0.050	1.150	A
1	U234	0.384	0.043	0.396	0.026	0.969	A
1	U238	0.441	0.048	0.396	0.037	1.113	A
1	MN54	64.290	3.970	57.000	1.900	1.128	A
1	CO60	13.740	1.570	13.600	1.200	1.010	A
1	CS137	49.020	3.330	46.000	1.700	1.066	A
1	H3	246.000	62.670	218.300	6.505	1.127	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

**Lab:** OK Southwest Laboratory of Oklahoma

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	<u>QAP 47</u> Evaluation
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**Matrix:** WA Water Bq / L

1	H3	262.700	17.500	218.300	6.505	1.203	A
1	U234	0.433	0.036	0.396	0.026	1.093	A
1	U238	0.374	0.033	0.396	0.037	0.944	A

**Matrix:** AI Air Filter Bq / filter

1	GROSS ALPHA	1.099	0.053	1.400	0.100	0.785	W
1	GROSS BETA	2.024	0.060	1.960	0.300	1.033	A

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	MN54	6.250	0.250	5.440	0.485	1.149	A	
1	CO57	11.880	0.380	11.110	0.846	1.069	A	
1	CO60	9.520	0.230	9.090	0.732	1.047	A	
1	SB125	14.720	0.430	12.160	1.151	1.211	W	
1	CS134	17.970	0.660	19.740	1.380	0.910	A	
1	CS137	12.530	0.700	11.860	0.957	1.056	A	
1	CE144	8.750	0.810	8.210	0.796	1.066	A	
<b>Matrix:</b> WA Water Bq / L								
1	MN54	62.580	0.670	57.000	1.900	1.098	A	
1	CO60	15.070	0.400	13.600	1.200	1.108	A	
1	CS137	50.680	0.800	46.000	1.700	1.102	A	
<b>Matrix:</b> VE Vegetation Bq / kg								
1	CS137	182.100	4.800	181.500	7.141	1.003	A	
1	CO60	11.400	1.040	10.575	0.206	1.078	A	
1	K40	750.000	22.900	707.500	24.987	1.060	A	
<b>Matrix:</b> SO Soil Bq / kg								
1	CS137	354.900	3.800	329.500	9.260	1.077	A	
1	K40	343.400	11.100	313.500	10.150	1.095	A	

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.



## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix: SO Soil Bq / kg</b>							
1	Bq U	45.000	9.000	64.600	2.858	0.697	A
1	K40	300.000	30.000	313.500	10.150	0.957	A
1	SR90	14.000	4.000	13.091	0.279	1.069	A
1	CS137	310.000	10.000	329.500	9.260	0.941	A
1	PU239	6.000	0.800	5.305	0.253	1.131	A
1	AM241	2.800	0.700	2.678	0.212	1.046	A
<b>Matrix: WA Water Bq / L</b>							
1	H3	300.000	20.000	218.300	6.505	1.374	W
1	MN54	63.000	1.000	57.000	1.900	1.105	A
1	CO60	15.000	1.000	13.600	1.200	1.103	A
1	SR90	4.300	0.500	4.357	0.192	0.987	A
1	CS137	52.000	1.000	46.000	1.700	1.130	A
1	PU238	2.200	0.100	2.526	0.060	0.871	W
1	PU239	1.600	0.100	1.650	0.061	0.970	A
1	AM241	1.100	0.100	1.226	0.050	0.897	W
1	GROSS ALPHA	1300.000	100.000	1421.000	100.000	0.915	A
1	GROSS BETA	2200.000	100.000	2200.000	100.000	1.000	A
1	Bq U	0.750	0.060	0.801	0.067	0.936	A
<b>Matrix: AI Air Filter Bq / filter</b>							
1	GROSS ALPHA	1.300	0.100	1.400	0.100	0.929	A
1	GROSS BETA	2.200	0.100	1.960	0.300	1.122	A
1	MN54	6.300	0.200	5.440	0.485	1.158	W
1	CO57	12.000	1.000	11.110	0.846	1.080	A
1	CO60	9.500	0.200	9.090	0.732	1.045	A
1	SR90	1.000	0.100	1.758	0.042	0.569	N
1	SB125	14.000	1.000	12.160	1.151	1.151	A
1	CS134	19.000	1.000	19.740	1.380	0.963	A
1	CS137	13.000	1.000	11.860	0.957	1.096	A
1	CE144	8.600	0.300	8.210	0.796	1.048	A
1	PU238	0.068	0.007	0.069	0.003	0.978	A
1	PU239	0.070	0.007	0.062	0.002	1.123	A
1	AM241	0.075	0.013	0.069	0.003	1.092	A
1	Bq U	0.072	0.016	0.063	0.004	1.141	A
<b>Matrix: VE Vegetation Bq / kg</b>							
1	K40	670.000	40.000	707.500	24.987	0.947	A
1	CO60	9.700	1.500	10.575	0.206	0.917	A
1	SR90	360.000	20.000	359.005	6.021	1.003	A
1	CS137	160.000	10.000	181.500	7.141	0.882	W
1	PU239	1.800	0.300	1.770	0.154	1.017	A
1	AM241	1.600	0.500	1.105	0.051	1.448	A
1	CM244	1.700	0.500	2.174	0.066	0.782	W

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

**Lab:** OU Outreach Laboratory, Broken Arrow, OK

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	<u>QAP 47</u> Evaluation
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**Matrix:** VE Vegetation Bq / kg

1	K40	529.000	43.300	707.500	24.987	0.748	N
1	CO60	7.370	2.460	10.575	0.206	0.697	W
1	CS137	139.000	6.330	181.500	7.141	0.766	N

**Matrix:** WA Water Bq / L

1	GROSS ALPHA	1260.000	76.500	1421.000	100.000	0.887	A
1	GROSS BETA	1640.000	67.800	2200.000	100.000	0.745	A
1	H3	267.000	21.900	218.300	6.505	1.223	W
1	MN54	61.300	4.500	57.000	1.900	1.075	A
1	CO60	16.400	2.600	13.600	1.200	1.206	N
1	CS137	51.200	3.800	46.000	1.700	1.113	A
1	U234	0.409	0.100	0.396	0.026	1.032	A
1	U238	0.411	0.100	0.396	0.037	1.037	A
1	ug U	0.034	0.001	0.032	0.003	1.047	A

**Matrix:** AI Air Filter Bq / filter

1	GROSS ALPHA	3.150	0.140	1.400	0.100	2.250	N
1	GROSS BETA	2.270	0.090	1.960	0.300	1.158	A
1	MN54	6.140	1.020	5.440	0.485	1.129	A
1	CO57	10.400	3.970	11.110	0.846	0.936	A
1	CO60	8.540	2.450	9.090	0.732	0.939	A
1	SB125	14.400	5.300	12.160	1.151	1.184	W
1	CS134	18.540	2.350	19.740	1.380	0.939	A
1	CS137	13.460	1.000	11.860	0.957	1.135	W
1	CE144	8.080	3.340	8.210	0.796	0.984	A

**Matrix:** SO Soil Bq / kg

1	K40	248.000	46.600	313.500	10.150	0.791	W
1	CS137	278.000	13.100	329.500	9.260	0.844	W
1	ug U	2.000	0.200	2.583	0.200	0.774	A

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	GROSS ALPHA	1.280	0.080	1.400	0.100	0.914	A	
1	GROSS BETA	2.200	0.080	1.960	0.300	1.122	A	

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** PK Pakistan Institute of Nuclear Science & Technology

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix: SO Soil Bq / kg</b>							
1	K40	362.400	28.300	313.500	10.150	1.156	A
1	CS137	380.200	8.800	329.500	9.260	1.154	A
<b>Matrix: VE Vegetation Bq / kg</b>							
1	K40	783.300	9.400	707.500	24.987	1.107	A
1	CS137	189.600	8.600	181.500	7.141	1.045	A
<b>Matrix: AI Air Filter Bq / filter</b>							
1	CS134	346.800	37.400	19.740	1.380	17.568	N
1	CS137	218.900	9.500	11.860	0.957	18.457	N

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**Values for elemental uranium are reported in  $\mu\text{g}/\text{filter}$ , g, or mL.       $\text{pCi/g}$  or  $\text{mL}=\text{Bq} \times 0.027$**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	<u>QAP 47</u> Evaluation
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**Matrix:** SO Soil Bq / kg

1	K40	325.000	12.000	313.500	10.150	1.037	A
1	CS137	353.000	10.000	329.500	9.260	1.071	A

**Matrix:** AI Air Filter Bq / filter

1	MN54	5.500	0.100	5.440	0.485	1.011	A
1	CO57	11.400	0.500	11.110	0.846	1.026	A
1	CO60	9.600	0.300	9.090	0.732	1.056	A
1	SB125	12.300	0.300	12.160	1.151	1.012	A
1	CS134	1.400	0.300	19.740	1.380	0.071	N
1	CS137	12.400	0.800	11.860	0.957	1.046	A
1	CE144	8.000	0.500	8.210	0.796	0.974	A

**Matrix:** VE Vegetation Bq / kg

1	K40	747.000	19.000	707.500	24.987	1.056	A
1	CO60	12.000	1.000	10.575	0.206	1.135	A
1	CS137	200.000	6.000	181.500	7.141	1.102	A

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** PR Princeton Plasma Physics Lab

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> WA Water Bq/L								
1	H3	223.030	4.280	218.300	6.505	1.022	A	

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter							
1	MN54	5.710	0.230	5.440	0.485	1.050	A
1	CO57	11.800	0.280	11.110	0.846	1.062	A
1	CO60	9.170	0.250	9.090	0.732	1.009	A
1	SB125	12.500	0.380	12.160	1.151	1.028	A
1	CS134	21.100	0.500	19.740	1.380	1.069	A
1	CS137	12.300	0.450	11.860	0.957	1.037	A
1	CE144	7.610	0.370	8.210	0.796	0.927	A
<b>Matrix:</b> SO Soil Bq / kg							
1	K40	280.000	40.000	313.500	10.150	0.893	W
1	CS137	282.000	12.000	329.500	9.260	0.856	W
<b>Matrix:</b> VE Vegetation Bq / kg							
1	K40	780.000	70.000	707.500	24.987	1.102	A
1	CO60	9.460	0.480	10.575	0.206	0.895	A
1	CS137	171.000	7.000	181.500	7.141	0.942	A
<b>Matrix:</b> SO Soil Bq / kg							
1	SR90	14.000	4.000	13.091	0.279	1.069	A
1	U234	28.400	4.300	31.133	0.802	0.912	A
1	U238	28.800	4.300	31.900	2.552	0.903	A
1	ug U	2.250	0.200	2.583	0.200	0.871	A
1	PU239	6.900	0.800	5.305	0.253	1.301	W
<b>Matrix:</b> VE Vegetation Bq / kg							
1	SR90	400.000	100.000	359.005	6.021	1.114	A
1	PU238	0.170	0.060	0.116	0.035	1.469	A
1	PU239	2.200	0.300	1.770	0.154	1.243	W
<b>Matrix:</b> AI Air Filter Bq / filter							
1	U234	0.034	0.005	0.031	0.003	1.104	A
1	U238	0.035	0.005	0.030	0.001	1.148	A
1	ug U	2.950	0.200	2.472	0.101	1.193	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

**Lab:** RC US NRC Region I Laboratory, PA

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix:</b> WA Water Bq/L							
1	H3	226.000	15.000	218.300	6.505	1.035	A
1	MN54	59.000	5.000	57.000	1.900	1.035	A
1	CO60	14.500	1.400	13.600	1.200	1.066	A
1	CS137	48.000	4.000	46.000	1.700	1.043	A
<b>Matrix:</b> SO Soil Bq/kg							
1	K40	333.000	33.000	313.500	10.150	1.062	A
1	CS137	342.000	34.000	329.500	9.260	1.038	A
<b>Matrix:</b> AI Air Filter Bq / filter							
1	GROSS ALPHA	1.330	0.070	1.400	0.100	0.950	A
1	GROSS BETA	1.990	0.100	1.960	0.300	1.015	A
1	MN54	5.850	0.580	5.440	0.485	1.075	A
1	CO57	10.900	0.900	11.110	0.846	0.981	A
1	CO60	9.000	0.900	9.090	0.732	0.990	A
1	SB125	13.300	1.500	12.160	1.151	1.094	A
1	CS134	20.900	1.700	19.740	1.380	1.059	A
1	CS137	12.100	1.100	11.860	0.957	1.020	A
1	CE144	8.100	1.200	8.210	0.796	0.987	A

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** RD Radiation Detection Company, CA

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	GROSS ALPHA	1.050	0.030	1.400	0.100	0.750	W	
1	GROSS BETA	1.010	0.050	1.960	0.300	0.515	N	

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** RE Bechtel Nevada, Mercury, NV

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix: SO Soil Bq / kg</b>							
1	K40	297.000	33.000	313.500	10.150	0.947	A
1	SR90	12.400	1.500	13.091	0.279	0.947	A
1	CS137	322.000	25.000	329.500	9.260	0.977	A
1	PU239	5.120	0.700	5.305	0.253	0.965	A
1	AM241	2.340	0.440	2.678	0.212	0.874	A
1	U234	25.500	2.400	31.133	0.802	0.819	A
1	U238	27.300	2.500	31.900	2.552	0.856	A

**Matrix: WA Water Bq / L**

1	H3	236.000	22.000	218.300	6.505	1.081	A
1	MN54	61.700	6.300	57.000	1.900	1.082	A
1	CO60	15.100	2.200	13.600	1.200	1.110	A
1	SR90	4.300	0.250	4.357	0.192	0.987	A
1	CS137	50.500	5.300	46.000	1.700	1.098	A
1	PU238	1.770	0.320	2.526	0.060	0.701	N
1	PU239	1.240	0.230	1.650	0.061	0.751	N
1	AM241	1.230	0.100	1.226	0.050	1.004	A
1	U234	0.396	0.044	0.396	0.026	0.999	A
1	U238	0.424	0.047	0.396	0.037	1.070	A
1	GROSS ALPHA	1450.000	101.000	1421.000	100.000	1.020	A
1	GROSS BETA	2080.000	146.000	2200.000	100.000	0.945	A

**Matrix: AI Air Filter Bq / filter**

1	MN54	5.440	0.650	5.440	0.485	1.000	A
1	CO57	10.800	1.000	11.110	0.846	0.972	A
1	CO60	8.310	0.920	9.090	0.732	0.914	A
1	SR90	1.720	0.090	1.758	0.042	0.978	A
1	SB125	12.000	1.500	12.160	1.151	0.987	A
1	CS134	16.900	1.600	19.740	1.380	0.856	A
1	CS137	11.100	1.100	11.860	0.957	0.936	A
1	CE144	6.060	1.440	8.210	0.796	0.738	A
1	PU238	0.068	0.008	0.069	0.003	0.978	A
1	PU239	0.058	0.007	0.062	0.002	0.930	A
1	AM241	0.074	0.008	0.069	0.003	1.077	A
1	U234	0.032	0.005	0.031	0.003	1.039	A
1	U238	0.033	0.005	0.030	0.001	1.083	A
1	GROSS ALPHA	1.260	0.190	1.400	0.100	0.900	A
1	GROSS BETA	2.250	0.320	1.960	0.300	1.148	A

**Matrix: VE Vegetation Bq / kg**

1	K40	715.000	84.000	707.500	24.987	1.011	A
1	CO60	12.400	2.500	10.575	0.206	1.173	A
1	SR90	325.000	17.000	359.005	6.021	0.905	A
1	CS137	173.000	16.000	181.500	7.141	0.953	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

**Lab:** RE Bechtel Nevada, Mercury, NV

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> VE Vegetation Bq / kg								
1	PU239	1.710	0.230	1.770	0.154	0.966	A	
1	AM241	1.250	0.180	1.105	0.051	1.131	A	

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** RG Thermo Nutech Rocky Flats Plant, Golden

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> WA Water Bq/L								
1	GROSS ALPHA	1531.000	65.600	1421.000	100.000	1.077	A	
1	GROSS BETA	2277.400	64.100	2200.000	100.000	1.035	A	

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix: WA Water Bq / L</b>							
1	H3	501.000	44.300	218.300	6.505	2.295	N
1	MN54	59.900	5.850	57.000	1.900	1.051	A
1	CO60	17.000	2.790	13.600	1.200	1.250	N
1	SR90	5.410	0.325	4.357	0.192	1.242	A
1	CS137	53.200	6.690	46.000	1.700	1.157	A
1	ug U	0.725	0.022	0.032	0.003	22.656	N
1	PU238	2.400	0.225	2.526	0.060	0.950	A
1	PU239	1.550	0.155	1.650	0.061	0.939	A
1	AM241	1.220	0.126	1.226	0.050	0.995	A
<b>Matrix: SO Soil Bq / kg</b>							
1	K40	490.000	133.000	313.500	10.150	1.563	N
1	SR90	91.400	2.650	13.091	0.279	6.982	N
1	CS137	383.000	19.800	329.500	9.260	1.162	A
<b>Matrix: VE Vegetation Bq / kg</b>							
1	K40	852.000	149.000	707.500	24.987	1.204	A
1	CO60	16.700	4.960	10.575	0.206	1.579	N
1	SR90	351.000	8.420	359.005	6.021	0.978	A
1	CS137	216.000	15.300	181.500	7.141	1.190	A
1	PU239	1.700	0.232	1.770	0.154	0.960	A
1	AM241	1.080	0.170	1.105	0.051	0.977	A
1	CM244	2.300	0.299	2.174	0.066	1.058	A
<b>Matrix: AI Air Filter Bq / filter</b>							
1	MN54	5.870	1.170	5.440	0.485	1.079	A
1	CO57	9.660	0.854	11.110	0.846	0.869	A
1	CO60	8.590	0.991	9.090	0.732	0.945	A
1	SR90	2.020	0.116	1.758	0.042	1.149	A
1	SB125	10.200	2.090	12.160	1.151	0.839	A
1	CS134	19.300	1.020	19.740	1.380	0.978	A
1	CS137	11.200	1.520	11.860	0.957	0.944	A
1	CE144	5.720	5.230	8.210	0.796	0.697	A
1	ug U	2.850	0.082	2.472	0.101	1.153	A
1	PU238	0.069	0.008	0.069	0.003	0.990	A
1	PU239	0.074	0.009	0.062	0.002	1.193	W
1	AM241	0.078	0.019	0.069	0.003	1.141	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

**Lab:** RK Rock Island Arsenal, Illinois

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	GROSS ALPHA	0.730	0.070	1.400	0.100	0.521	W	
1	GROSS BETA	1.840	0.100	1.960	0.300	0.939	A	
2	GROSS ALPHA	0.790	0.070	1.400	0.100	0.564	W	

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**Values for elemental uranium are reported in  $\mu\text{g}/\text{filter}$ , g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** RL Thermo Hanford

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter							
1	GROSS ALPHA	1.360	0.120	1.400	0.100	0.971	A
1	GROSS BETA	2.600	0.070	1.960	0.300	1.327	A
1	MN54	5.120	1.300	5.440	0.485	0.941	A
1	CO57	8.810	2.100	11.110	0.846	0.793	A
1	CO60	8.510	0.620	9.090	0.732	0.936	A
1	SB125	12.200	0.180	12.160	1.151	1.003	A
1	CS134	16.200	1.100	19.740	1.380	0.821	A
1	CS137	11.900	0.400	11.860	0.957	1.003	A
1	CE144	5.890	1.100	8.210	0.796	0.717	A
1	AM241	0.204	0.030	0.069	0.003	2.969	N

**Matrix:** VE Vegetation Bq / kg

1	K40	873.000	79.000	707.500	24.987	1.234	A
1	CS137	214.000	16.000	181.500	7.141	1.179	A

**Matrix:** WA Water Bq / L

1	GROSS ALPHA	1204.000	24.000	1421.000	100.000	0.847	A
1	GROSS BETA	1901.000	210.000	2200.000	100.000	0.864	A
1	MN54	68.000	8.700	57.000	1.900	1.193	W
1	CO60	15.500	1.800	13.600	1.200	1.140	W
1	CS137	56.000	9.500	46.000	1.700	1.217	W
1	PU238	1.800	0.600	2.526	0.060	0.713	N

**Matrix:** SO Soil Bq / kg

1	K40	415.000	88.000	313.500	10.150	1.324	W
1	CS137	401.000	84.000	329.500	9.260	1.217	W

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**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	<u>QAP 47</u> Evaluation
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**Matrix:** AI Air Filter Bq / filter

1	GROSS ALPHA	1.470	0.190	1.400	0.100	1.050	A	
1	GROSS BETA	2.120	0.240	1.960	0.300	1.082	A	
1	MN54	5.700	0.900	5.440	0.485	1.048	A	
1	CO57	11.000	1.500	11.110	0.846	0.990	A	
1	CO60	8.700	0.800	9.090	0.732	0.957	A	
1	SB125	12.900	2.200	12.160	1.151	1.061	A	
1	CS134	19.100	2.900	19.740	1.380	0.968	A	
1	CS137	11.700	1.600	11.860	0.957	0.987	A	
1	CE144	7.900	0.900	8.210	0.796	0.962	A	
1	ug U	3.030	0.080	2.472	0.101	1.226	A	

**Matrix:** WA Water Bq / L

1	GROSS ALPHA	976.000	98.000	1421.000	100.000	0.687	W	
1	GROSS BETA	1608.000	161.000	2200.000	100.000	0.731	A	
1	MN54	65.000	4.000	57.000	1.900	1.140	A	
1	CO60	15.000	0.500	13.600	1.200	1.103	A	
1	CS137	51.000	2.100	46.000	1.700	1.109	A	
1	ug U	0.034	0.004	0.032	0.003	1.063	A	

**Matrix:** SO Soil Bq / kg

1	K40	341.000	30.000	313.500	10.150	1.088	A	
1	CS137	349.000	11.000	329.500	9.260	1.059	A	
1	ug U	2.520	0.026	2.583	0.200	0.976	A	

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** SH Savannah River Ecology Lab

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> VE Vegetation Bq / kg								
1	SR90	340.485	4.933	359.005	6.021	0.948	A	
<b>Matrix:</b> WA Water Bq / L								
1	CS137	51.200	1.020	46.000	1.700	1.113	A	
1	SR90	6.517	0.173	4.357	0.192	1.496	W	
1	MN54	78.950	1.500	57.000	1.900	1.385	N	
<b>Matrix:</b> SO Soil Bq / kg								
1	CS137	351.800	8.200	329.500	9.260	1.068	A	
1	SR90	14.473	0.566	13.091	0.279	1.106	A	
<b>Matrix:</b> VE Vegetation Bq / kg								
1	CS137	206.500	8.700	181.500	7.141	1.138	A	
<b>Matrix:</b> WA Water Bq / L								
2	SR90	6.528	0.177	4.357	0.192	1.498	W	
3	SR90	6.078	0.169	4.357	0.192	1.395	W	
<b>Matrix:</b> SO Soil Bq / kg								
2	SR90	13.948	0.567	13.091	0.279	1.065	A	
3	SR90	14.335	0.574	13.091	0.279	1.095	A	

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**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** SK Savannah River Plant

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> WA Water Bq / L								
1	H3	227.000	4.000	218.300	6.505	1.040	A	
1	MN54	60.200	3.000	57.000	1.900	1.056	A	
1	CO60	15.300	0.800	13.600	1.200	1.125	A	
1	CS137	50.400	2.100	46.000	1.700	1.096	A	
1	U234	0.517	0.026	0.396	0.026	1.305	W	
1	U238	0.501	0.025	0.396	0.037	1.264	W	
1	PU238	2.620	0.090	2.526	0.060	1.037	A	
1	PU239	1.770	0.060	1.650	0.061	1.073	A	
1	AM241	1.230	0.040	1.226	0.050	1.004	A	
<b>Matrix:</b> VE Vegetation Bq / kg								
1	K40	742.000	43.000	707.500	24.987	1.049	A	
1	CO60	11.900	0.500	10.575	0.206	1.125	A	
1	CS137	199.000	10.000	181.500	7.141	1.096	A	
<b>Matrix:</b> SO Soil Bq / kg								
1	K40	355.000	19.000	313.500	10.150	1.132	A	
1	CS137	399.000	18.000	329.500	9.260	1.211	W	
1	AM241	3.850	0.230	2.678	0.212	1.438	A	
<b>Matrix:</b> AI Air Filter Bq / filter								
1	MN54	5.100	0.200	5.440	0.485	0.938	A	
1	CO57	11.400	0.100	11.110	0.846	1.026	A	
1	CO60	8.900	0.400	9.090	0.732	0.979	A	
1	SB125	12.800	0.500	12.160	1.151	1.053	A	
1	CS134	19.600	1.100	19.740	1.380	0.993	A	
1	CS137	11.200	0.100	11.860	0.957	0.944	A	
1	CE144	8.200	0.400	8.210	0.796	0.999	A	
1	AM241	0.088	0.014	0.069	0.003	1.281	A	

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**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** SL Stanford Linear Accelerator Center

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> WA Water Bq/L								
1	MN54	60.000	3.000	57.000	1.900	1.053	A	
1	CO60	14.700	1.000	13.600	1.200	1.081	A	
1	CS137	50.800	3.000	46.000	1.700	1.104	A	

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter							
1	U234	0.039	0.007	0.031	0.003	1.266	A
1	U238	0.040	0.007	0.030	0.001	1.312	A
1	PU239	0.062	0.011	0.062	0.002	0.994	A
1	AM241	0.067	0.012	0.069	0.003	0.975	A
<b>Matrix:</b> WA Water Bq / L							
1	GROSS ALPHA	1185.720	56.080	1421.000	100.000	0.834	A
1	GROSS BETA	1777.520	62.880	2200.000	100.000	0.808	A
1	MN54	60.830	6.360	57.000	1.900	1.067	A
1	CO60	14.600	1.420	13.600	1.200	1.074	A
1	CS137	46.750	4.170	46.000	1.700	1.016	A
1	U234	0.435	0.073	0.396	0.026	1.098	A
1	U238	0.447	0.074	0.396	0.037	1.128	A
1	PU238	2.550	0.364	2.526	0.060	1.010	A
1	PU239	1.682	0.253	1.650	0.061	1.019	A
1	AM241	1.354	0.209	1.226	0.050	1.105	A
<b>Matrix:</b> SO Soil Bq / kg							
1	K40	406.710	45.960	313.500	10.150	1.297	W
1	CS137	390.680	40.950	329.500	9.260	1.186	A
1	U234	28.290	5.720	31.133	0.802	0.909	A
1	U238	34.670	6.460	31.900	2.552	1.087	A
1	PU239	4.936	2.395	5.305	0.253	0.930	A
1	AM241	2.649	2.004	2.678	0.212	0.989	A
<b>Matrix:</b> VE Vegetation Bq / kg							
1	K40	947.220	89.540	707.500	24.987	1.339	N
1	CO60	12.880	1.940	10.575	0.206	1.218	A
1	CS137	217.280	21.910	181.500	7.141	1.197	A
1	PU239	1.865	0.851	1.770	0.154	1.054	A
1	AM241	0.903	0.675	1.105	0.051	0.817	W
1	CM244	2.094	0.928	2.174	0.066	0.963	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

**Lab:** SR Savannah River Environmental Laboratory

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix: VE Vegetation Bq / kg</b>							
1	K40	805.000	84.000	707.500	24.987	1.138	A
1	CS137	193.000	18.000	181.500	7.141	1.063	A
1	CO60	11.500	1.300	10.575	0.206	1.087	A
1	SR90	494.000	52.000	359.005	6.021	1.376	N
1	PU239	1.700	0.290	1.770	0.154	0.960	A
1	AM241	1.190	0.230	1.105	0.051	1.077	A
1	CM244	2.040	0.310	2.174	0.066	0.939	A
<b>Matrix: SO Soil Bq / kg</b>							
1	CS137	368.000	41.000	329.500	9.260	1.117	A
1	K40	371.000	40.000	313.500	10.150	1.183	A
1	PU239	2.880	0.540	5.305	0.253	0.543	N
1	U234	9.000	1.400	31.133	0.802	0.289	N
1	U238	9.400	1.400	31.900	2.552	0.295	N
<b>Matrix: WA Water Bq / L</b>							
1	MN54	62.500	6.300	57.000	1.900	1.096	A
1	CO60	15.000	1.000	13.600	1.200	1.103	A
1	CS137	50.500	4.800	46.000	1.700	1.098	A
1	H3	208.000	15.000	218.300	6.505	0.953	A
1	SR90	5.100	1.900	4.357	0.192	1.170	A
1	PU239	1.570	0.190	1.650	0.061	0.951	A
1	PU238	2.280	0.270	2.526	0.060	0.903	A
1	U234	0.380	0.070	0.396	0.026	0.959	A
1	U238	0.370	0.060	0.396	0.037	0.934	A
<b>Matrix: AI Air Filter Bq / filter</b>							
1	MN54	5.500	0.200	5.440	0.485	1.011	A
1	CO57	11.100	1.000	11.110	0.846	0.999	A
1	CO60	8.900	1.000	9.090	0.732	0.979	A
1	SR90	1.210	0.100	1.758	0.042	0.688	W
1	SB125	13.300	1.800	12.160	1.151	1.094	A
1	CS134	19.300	1.400	19.740	1.380	0.978	A
1	CS137	11.500	1.500	11.860	0.957	0.970	A
1	CE144	8.000	2.600	8.210	0.796	0.974	A
1	PU238	0.066	0.008	0.069	0.003	0.950	A
1	PU239	0.067	0.008	0.062	0.002	1.075	A
1	U234	0.032	0.005	0.031	0.003	1.039	A
1	U238	0.032	0.005	0.030	0.001	1.050	A
1	AM241	0.082	0.008	0.069	0.003	1.194	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

**Lab:** SR Savannah River Environmental Laboratory

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	<u>QAP 47</u> Evaluation
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**Matrix:** WA Water Bq / L

1	GROSS ALPHA	1399.000	236.000	1421.000	100.000	0.985	A
1	GROSS BETA	2460.000	604.000	2200.000	100.000	1.118	A

**Matrix:** AI Air Filter Bq / filter

1	GROSS ALPHA	2.170	0.200	1.400	0.100	1.550	W
1	GROSS BETA	2.140	0.140	1.960	0.300	1.092	A

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** ST SC DHEC, Aiken, South Carolina

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	<u>QAP 47</u> Evaluation
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**Matrix:** WA Water Bq/L

1	H3	226.460	8.760	218.300	6.505	1.037	A	
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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	<u>QAP 47</u> Evaluation
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**Matrix:** SO Soil Bq / kg

1	SR90	44.800	11.500	13.091	0.279	3.422	N	
1	CS137	437.100	4.500	329.500	9.260	1.327	N	
1	K40	424.900	22.300	313.500	10.150	1.355	W	
1	PU239	1.390	0.260	5.305	0.253	0.262	N	
1	AM241	4.690	1.820	2.678	0.212	1.752	W	

**Matrix:** WA Water Bq / L

1	GROSS ALPHA	1529.000	23.000	1421.000	100.000	1.076	A	
1	GROSS BETA	2089.000	23.000	2200.000	100.000	0.950	A	
1	H3	1212.000	24.000	218.300	6.505	5.552	N	
1	MN54	58.000	0.500	57.000	1.900	1.018	A	
1	CO60	15.300	0.200	13.600	1.200	1.125	A	
1	SR90	7.550	0.650	4.357	0.192	1.733	N	
1	CS137	51.100	0.500	46.000	1.700	1.111	A	
1	PU238	2.310	0.190	2.526	0.060	0.915	A	
1	PU239	1.090	0.100	1.650	0.061	0.661	N	
1	AM241	1.310	0.160	1.226	0.050	1.069	A	

**Matrix:** AI Air Filter Bq / filter

1	GROSS ALPHA	1.160	0.040	1.400	0.100	0.829	W	
1	GROSS BETA	2.110	0.060	1.960	0.300	1.077	A	
1	MN54	5.060	0.100	5.440	0.485	0.930	A	
1	CO57	10.100	0.100	11.110	0.846	0.909	A	
1	CO60	8.840	0.110	9.090	0.732	0.972	A	
1	SR90	3.240	0.190	1.758	0.042	1.843	W	
1	SB125	12.100	0.300	12.160	1.151	0.995	A	
1	CS134	15.900	1.400	19.740	1.380	0.805	W	
1	CS137	11.500	0.200	11.860	0.957	0.970	A	
1	CE144	6.860	0.300	8.210	0.796	0.836	A	
1	PU238	0.420	0.040	0.069	0.003	6.043	N	
1	PU239	0.080	0.010	0.062	0.002	1.283	W	
1	AM241	0.090	0.020	0.069	0.003	1.310	A	

**Matrix:** VE Vegetation Bq / kg

1	K40	998.000	25.000	707.500	24.987	1.411	N	
1	CO60	15.600	1.100	10.575	0.206	1.475	N	
1	SR90	554.000	32.000	359.005	6.021	1.543	N	
1	CS137	254.000	3.000	181.500	7.141	1.399	N	
1	PU239	0.960	0.200	1.770	0.154	0.542	N	
1	AM241	2.200	0.200	1.105	0.051	1.991	W	

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.



## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> WA Water Bq / L								
1	Bq U	0.035		0.801	0.067	0.043	N	
<b>Matrix:</b> AI Air Filter Bq / filter								
1	ug U	2.650		2.472	0.101	1.072	A	
<b>Matrix:</b> SO Soil Bq / kg								
1	ug U	2.260		2.583	0.200	0.875	A	

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**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix: SO Soil Bq / kg</b>							
1	K40	322.100	24.320	313.500	10.150	1.027	A
1	SR90	9.890	3.830	13.091	0.279	0.755	A
1	CS137	322.590	4.570	329.500	9.260	0.979	A
1	PU239	4.650	1.660	5.305	0.253	0.877	W
1	AM241	1.670	1.110	2.678	0.212	0.624	W
1	U238	13.440	2.490	31.900	2.552	0.421	N
<b>Matrix: WA Water Bq / L</b>							
1	MN54	61.700	1.300	57.000	1.900	1.082	A
1	FE55	243.000	29.400	202.800	2.921	1.198	A
1	CO60	14.800	0.600	13.600	1.200	1.088	A
1	SR90	1.700	0.400	4.357	0.192	0.390	N
1	CS137	51.200	1.200	46.000	1.700	1.113	A
1	PU238	2.610	0.270	2.526	0.060	1.033	A
1	PU239	1.790	0.210	1.650	0.061	1.085	A
1	U238	0.500	0.200	0.396	0.037	1.262	W
1	H3	399.700	32.500	218.300	6.505	1.831	N
1	GROSS ALPHA	1592.900	63.800	1421.000	100.000	1.121	A
1	GROSS BETA	2509.000	67.100	2200.000	100.000	1.140	A
<b>Matrix: AI Air Filter Bq / filter</b>							
1	MN54	6.177	0.201	5.440	0.485	1.136	A
1	CO57	10.152	0.114	11.110	0.846	0.914	A
1	CO60	9.243	0.160	9.090	0.732	1.017	A
1	SR90	1.820	0.210	1.758	0.042	1.035	A
1	SB125	13.542	0.561	12.160	1.151	1.114	A
1	CS134	18.976	0.204	19.740	1.380	0.961	A
1	CS137	12.876	0.204	11.860	0.957	1.086	A
1	CE144	7.773	0.621	8.210	0.796	0.947	A
1	PU238	0.068	0.023	0.069	0.003	0.976	A
1	PU239	0.067	0.015	0.062	0.002	1.081	A
1	AM241	0.070	0.012	0.069	0.003	1.019	A
1	U238	0.391	0.075	0.030	0.001	12.844	N
<b>Matrix: VE Vegetation Bq / kg</b>							
1	K40	677.161	31.469	707.500	24.987	0.957	A
1	CO60	10.173	1.539	10.575	0.206	0.962	A
1	SR90	315.309	15.062	359.005	6.021	0.878	A
1	CS137	166.025	3.456	181.500	7.141	0.915	A
1	AM241	0.667	0.370	1.105	0.051	0.603	N
1	CM244	1.778	0.333	2.174	0.066	0.818	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix: WA Water Bq / L</b>							
1	GROSS ALPHA	1500.000	100.000	1421.000	100.000	1.056	A
1	GROSS BETA	2200.000	100.000	2200.000	100.000	1.000	A
1	H3	260.000	50.000	218.300	6.505	1.191	A
1	MN54	60.300	6.000	57.000	1.900	1.058	A
1	FE55	280.000	30.000	202.800	2.921	1.381	W
1	CO60	14.500	1.400	13.600	1.200	1.066	A
1	SR90	4.300	0.500	4.357	0.192	0.987	A
1	CS137	49.900	5.000	46.000	1.700	1.085	A
1	ug U	0.032	0.005	0.032	0.003	1.000	A
1	PU238	2.800	0.300	2.526	0.060	1.109	A
1	PU239	1.900	0.300	1.650	0.061	1.151	W
1	AM241	1.200	0.200	1.226	0.050	0.979	A
<b>Matrix: AI Air Filter Bq / filter</b>							
1	GROSS ALPHA	1.500	0.100	1.400	0.100	1.071	A
1	GROSS BETA	1.900	0.100	1.960	0.300	0.969	A
1	MN54	5.990	0.600	5.440	0.485	1.101	A
1	CO57	12.100	1.200	11.110	0.846	1.089	A
1	CO60	9.060	0.910	9.090	0.732	0.997	A
1	SR90	1.600	0.300	1.758	0.042	0.910	A
1	SB125	13.700	1.400	12.160	1.151	1.127	A
1	CS134	19.800	2.000	19.740	1.380	1.003	A
1	CS137	13.000	1.300	11.860	0.957	1.096	A
1	CE144	8.040	0.590	8.210	0.796	0.979	A
1	ug U	2.300	0.300	2.472	0.101	0.930	A
1	PU238	0.048	0.013	0.069	0.003	0.691	N
1	PU239	0.041	0.012	0.062	0.002	0.658	N
1	AM241	0.082	0.017	0.069	0.003	1.194	A
<b>Matrix: SO Soil Bq / kg</b>							
1	K40	334.000	33.000	313.500	10.150	1.065	A
1	SR90	13.000	5.000	13.091	0.279	0.993	A
1	CS137	369.000	37.000	329.500	9.260	1.120	A
1	ug U	1.900	0.300	2.583	0.200	0.736	A
1	PU239	5.300	1.100	5.305	0.253	0.999	A
1	AM241	3.400	1.500	2.678	0.212	1.270	A
<b>Matrix: VE Vegetation Bq / kg</b>							
1	K40	751.000	75.000	707.500	24.987	1.061	A
1	CO60	12.200	1.300	10.575	0.206	1.154	A
1	SR90	570.000	20.000	359.005	6.021	1.588	N
1	CS137	203.000	20.000	181.500	7.141	1.118	A
1	PU239	7.100	1.300	1.770	0.154	4.011	N
1	AM241	1.300	0.300	1.105	0.051	1.176	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> VE Vegetation Bq / kg								
1	CM244	2.300	0.400	2.174	0.066	1.058	A	

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** TM Thermo Nutech Albuquerque Lab, NM

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter							
1	GROSS ALPHA	0.640	0.103	1.400	0.100	0.457	N
1	GROSS BETA	1.380	0.139	1.960	0.300	0.704	N
1	MN54	5.960	0.335	5.440	0.485	1.096	A
1	CO57	12.500	0.412	11.110	0.846	1.125	W
1	CO60	10.000	0.486	9.090	0.732	1.100	A
1	SR90	0.978	0.107	1.758	0.042	0.556	N
1	SB125	14.500	0.852	12.160	1.151	1.192	W
1	CS134	20.500	0.688	19.740	1.380	1.039	A
1	CS137	13.400	0.525	11.860	0.957	1.130	W
1	CE144	8.960	0.919	8.210	0.796	1.091	A
1	ug U	3.040	0.156	2.472	0.101	1.230	A
<b>Matrix:</b> WA Water Bq / L							
1	GROSS ALPHA	1630.000	189.000	1421.000	100.000	1.147	A
1	GROSS BETA	1970.000	155.000	2200.000	100.000	0.895	A
1	H3	227.000	10.200	218.300	6.505	1.040	A
1	MN54	68.000	2.100	57.000	1.900	1.193	W
1	CO60	15.600	0.631	13.600	1.200	1.147	W
1	SR90	3.450	0.294	4.357	0.192	0.792	W
1	CS137	54.800	1.710	46.000	1.700	1.191	W
1	ug U	0.039	0.002	0.032	0.003	1.231	W
<b>Matrix:</b> VE Vegetation Bq / kg							
1	K40	796.000	77.200	707.500	24.987	1.125	A
1	CO60	17.400	5.760	10.575	0.206	1.645	N
1	SR90	298.000	21.600	359.005	6.021	0.830	A
1	CS137	212.000	8.670	181.500	7.141	1.168	A
1	PU239	2.090	0.176	1.770	0.154	1.181	A
<b>Matrix:</b> SO Soil Bq / kg							
1	K40	358.000	37.000	313.500	10.150	1.142	A
1	SR90	22.200	5.480	13.091	0.279	1.696	W
1	CS137	355.000	11.500	329.500	9.260	1.077	A
1	ug U	2.280	0.140	2.583	0.200	0.883	A
1	PU239	4.750	0.620	5.305	0.253	0.895	A
1	U234	28.800	2.060	31.133	0.802	0.925	A
1	U238	28.000	1.980	31.900	2.552	0.878	A
<b>Matrix:</b> WA Water Bq / L							
1	U234	0.438	0.032	0.396	0.026	1.106	A
1	U238	0.449	0.033	0.396	0.037	1.133	A
1	PU238	2.530	0.103	2.526	0.060	1.002	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

**Lab:** TM Thermo Nutech Albuquerque Lab, NM

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> WA Water Bq / L								
1	PU239	1.830	0.079	1.650	0.061	1.109	A	
<b>Matrix:</b> AI Air Filter Bq / filter								
1	U234	0.031	0.003	0.031	0.003	0.990	A	
1	U238	0.031	0.003	0.030	0.001	1.027	A	
1	PU238	0.064	0.004	0.069	0.003	0.917	A	
1	PU239	0.055	0.004	0.062	0.002	0.889	W	
<b>Matrix:</b> VE Vegetation Bq / kg								
1	AM241	1.110	0.250	1.105	0.051	1.004	A	
1	CM244	2.370	0.361	2.174	0.066	1.090	A	
<b>Matrix:</b> AI Air Filter Bq / filter								
1	AM241	0.072	0.008	0.069	0.003	1.055	A	
<b>Matrix:</b> SO Soil Bq / kg								
1	AM241	3.550	0.536	2.678	0.212	1.326	A	
<b>Matrix:</b> WA Water Bq / L								
1	FE55	111.000	7.480	202.800	2.921	0.547	W	
1	AM241	1.420	0.110	1.226	0.050	1.159	A	

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## QAP 48 Results by Laboratory

**Lab:** TN Thermo NuTech, Richmond, CA

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix: SO Soil Bq / kg</b>							
1	K40	301.300	14.300	313.500	10.150	0.961	A
1	U234	27.390	2.594	31.133	0.802	0.880	A
1	U238	26.210	2.530	31.900	2.552	0.822	A
1	ug U	1.250	0.162	2.583	0.200	0.484	W
1	PU239	3.773	0.817	5.305	0.253	0.711	W
1	AM241	2.265	0.699	2.678	0.212	0.846	A
<b>Matrix: WA Water Bq / L</b>							
1	GROSS ALPHA	948.200	57.200	1421.000	100.000	0.667	W
1	GROSS BETA	2071.000	61.150	2200.000	100.000	0.941	A
1	MN54	57.870	0.740	57.000	1.900	1.015	A
1	FE55	274.600	6.464	202.800	2.921	1.354	W
1	CO60	13.720	0.440	13.600	1.200	1.009	A
1	CS137	47.110	0.690	46.000	1.700	1.024	A
1	U234	0.430	0.039	0.396	0.026	1.086	A
1	U238	0.407	0.038	0.396	0.037	1.026	A
1	ug U	0.032	0.004	0.032	0.003	0.987	A
1	PU238	1.662	0.091	2.526	0.060	0.658	N
1	PU239	2.436	0.127	1.650	0.061	1.476	N
1	AM241	1.208	0.186	1.226	0.050	0.986	A
<b>Matrix: AI Air Filter Bq / filter</b>							
1	GROSS ALPHA	1.805	0.093	1.400	0.100	1.289	A
1	GROSS BETA	2.052	0.085	1.960	0.300	1.047	A
1	MN54	5.818	0.776	5.440	0.485	1.069	A
1	CO57	10.380	0.840	11.110	0.846	0.934	A
1	CO60	8.682	0.899	9.090	0.732	0.955	A
1	SB125	11.750	2.030	12.160	1.151	0.966	A
1	CS134	22.290	1.750	19.740	1.380	1.129	W
1	CS137	11.600	0.975	11.860	0.957	0.978	A
1	CE144	7.959	1.862	8.210	0.796	0.969	A
1	U234	0.034	0.006	0.031	0.003	1.095	A
1	U238	0.034	0.006	0.030	0.001	1.111	A
1	ug U	2.705	0.347	2.472	0.101	1.094	A
1	PU238	0.056	0.006	0.069	0.003	0.801	W
1	PU239	0.052	0.006	0.062	0.002	0.836	W
1	AM241	0.072	0.007	0.069	0.003	1.041	A
<b>Matrix: VE Vegetation Bq / kg</b>							
1	K40	627.900	37.400	707.500	24.987	0.887	W
1	CO60	8.621	2.797	10.575	0.206	0.815	W
1	CS137	156.900	4.000	181.500	7.141	0.864	W
1	PU239	1.864	0.533	1.770	0.154	1.053	A
1	AM241	1.119	0.525	1.105	0.051	1.012	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

**Lab:** TN Thermo NuTech, Richmond, CA

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix:</b> VE Vegetation Bq / kg							
1	CM244	2.511	0.796	2.174	0.066	1.155	A
<b>Matrix:</b> WA Water Bq / L							
1	H3	171.220	15.521	218.300	6.505	0.784	W
1	SR90	4.328	0.166	4.357	0.192	0.993	A
<b>Matrix:</b> AI Air Filter Bq / filter							
1	SR90	1.572	0.072	1.758	0.042	0.894	A
<b>Matrix:</b> VE Vegetation Bq / kg							
1	SR90	364.600	13.000	359.005	6.021	1.016	A
<b>Matrix:</b> SO Soil Bq / kg							
1	SR90	57.765	5.075	13.091	0.279	4.413	N

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

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## QAP 48 Results by Laboratory

**Lab:** TO Thermo NUtech Oak Ridge Laboratory

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	QAP 47 Evaluation
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**Matrix:** SO Soil Bq / kg

1	K40	317.400	57.600	313.500	10.150	1.012	A	
1	SR90	16.000	2.300	13.091	0.279	1.222	A	
1	CS137	340.800	49.300	329.500	9.260	1.034	A	
1	U234	32.700	3.200	31.133	0.802	1.050	A	
1	U238	33.200	3.400	31.900	2.552	1.041	A	
1	PU239	3.600	1.400	5.305	0.253	0.679	N	
1	AM241	7.800	3.500	2.678	0.212	2.913	N	

**Matrix:** VE Vegetation Bq / kg

1	K40	636.600	101.000	707.500	24.987	0.900	A	
1	CO60	10.100	2.700	10.575	0.206	0.955	A	
1	SR90	138.700	6.300	359.005	6.021	0.386	N	
1	PU239	1.800	1.300	1.770	0.154	1.017	A	
1	AM241	1.300	1.200	1.105	0.051	1.176	A	

**Matrix:** AI Air Filter Bq / filter

1	GROSS ALPHA	1.900	1.200	1.400	0.100	1.357	W	
1	GROSS BETA	2.700	0.500	1.960	0.300	1.378	A	
1	MN54	7.300	1.300	5.440	0.485	1.342	W	
1	CO57	20.500	1.300	11.110	0.846	1.845	N	
1	CO60	12.000	1.500	9.090	0.732	1.320	N	
1	SB125	16.600	1.200	12.160	1.151	1.365	W	
1	CS134	21.900	1.600	19.740	1.380	1.109	A	
1	CS137	15.300	2.500	11.860	0.957	1.290	W	
1	CE144	15.900	1.700	8.210	0.796	1.937	N	

**Matrix:** WA Water Bq / L

1	GROSS ALPHA	1001.000	30.600	1421.000	100.000	0.704	W	
1	GROSS BETA	1662.000	28.500	2200.000	100.000	0.755	A	
1	H3	344.000	104.000	218.300	6.505	1.576	W	
1	MN54	61.700	11.100	57.000	1.900	1.082	A	
1	FE55	268.000	56.000	202.800	2.921	1.321	W	
1	CO60	14.300	1.200	13.600	1.200	1.051	A	
1	SR90	3.700	0.100	4.357	0.192	0.849	W	
1	CS137	50.600	6.000	46.000	1.700	1.100	A	
1	U234	0.400	0.150	0.396	0.026	1.010	A	
1	U238	0.460	0.170	0.396	0.037	1.161	A	
1	PU238	2.300	0.400	2.526	0.060	0.911	A	
1	PU239	1.600	0.300	1.650	0.061	0.970	A	
1	AM241	1.500	0.300	1.226	0.050	1.224	A	

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

**Lab:** TP Taiwan Power Company, Taipei, Taiwan

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter							
1	MN54	5.765	0.252	5.440	0.485	1.060	A
1	CO57	11.375	0.739	11.110	0.846	1.024	A
1	CO60	9.314	0.107	9.090	0.732	1.025	A
1	SB125	12.911	0.358	12.160	1.151	1.062	A
1	CS134	21.218	0.582	19.740	1.380	1.075	A
1	CS137	12.121	0.514	11.860	0.957	1.022	A
1	CE144	7.864	0.695	8.210	0.796	0.958	A
1	SR90	1.817	0.071	1.758	0.042	1.033	A
1	GROSS ALPHA	1.108	0.026	1.400	0.100	0.791	W
1	GROSS BETA	2.112	0.045	1.960	0.300	1.078	A
<b>Matrix:</b> SO Soil Bq / kg							
1	CS137	357.351	20.093	329.500	9.260	1.085	A
1	K40	334.230	16.493	313.500	10.150	1.066	A
1	SR90	14.152	1.411	13.091	0.279	1.081	A
<b>Matrix:</b> VE Vegetation Bq / kg							
1	CO60	11.728	1.284	10.575	0.206	1.109	A
1	CS137	176.426	13.376	181.500	7.141	0.972	A
1	K40	764.680	35.705	707.500	24.987	1.081	A
1	SR90	370.495	32.020	359.005	6.021	1.032	A
<b>Matrix:</b> WA Water Bq / L							
1	MN54	56.727	1.519	57.000	1.900	0.995	A
1	CO60	14.166	0.723	13.600	1.200	1.042	A
1	CS137	46.945	0.683	46.000	1.700	1.021	A
1	SR90	5.029	0.102	4.357	0.192	1.154	A
1	GROSS BETA	1949.569	46.555	2200.000	100.000	0.886	A
1	H3	223.315	13.736	218.300	6.505	1.023	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

**Lab:** TT Tracer Technologies International, Inc., Cleveland

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	<u>QAP 47</u> Evaluation
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**Matrix:** SO Soil Bq/kg

1	K40	257.000	6.030	313.500	10.150	0.820	W
1	CS137	261.000	9.250	329.500	9.260	0.792	N

**Matrix:** WA Water Bq/L

1	H3	213.000	3.630	218.300	6.505	0.976	A
1	MN54	66.200	7.020	57.000	1.900	1.161	A
1	CO60	15.500	3.580	13.600	1.200	1.140	W
1	CS137	53.600	6.830	46.000	1.700	1.165	A

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** TW Taiwan Radiation Monitoring Center

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix: SO Soil Bq / kg</b>							
1	K40	310.000	10.000	313.500	10.150	0.989	A
1	SR90	16.000	2.000	13.091	0.279	1.222	A
1	CS137	325.000	3.000	329.500	9.260	0.986	A
1	U234	27.000	0.900	31.133	0.802	0.867	A
1	U238	27.900	0.900	31.900	2.552	0.875	A
1	PU239	5.600	0.400	5.305	0.253	1.056	A
1	AM241	2.800	0.100	2.678	0.212	1.046	A

**Matrix: AI Air Filter Bq / filter**

1	GROSS ALPHA	1.400	0.030	1.400	0.100	1.000	A
1	GROSS BETA	2.280	0.030	1.960	0.300	1.163	A
1	MN54	5.400	0.200	5.440	0.485	0.993	A
1	CO57	11.000	0.200	11.110	0.846	0.990	A
1	CO60	8.900	0.200	9.090	0.732	0.979	A
1	SR90	1.730	0.090	1.758	0.042	0.984	A
1	SB125	12.000	0.200	12.160	1.151	0.987	A
1	CS134	18.500	0.200	19.740	1.380	0.937	A
1	CS137	11.200	0.200	11.860	0.957	0.944	A
1	CE144	7.700	0.500	8.210	0.796	0.938	A
1	U234	0.034	0.003	0.031	0.003	1.104	A
1	U238	0.036	0.003	0.030	0.001	1.181	A
1	PU238	0.072	0.005	0.069	0.003	1.036	A
1	PU239	0.065	0.005	0.062	0.002	1.043	A
1	AM241	0.076	0.005	0.069	0.003	1.106	A

**Matrix: VE Vegetation Bq / kg**

1	K40	700.000	20.000	707.500	24.987	0.989	A
1	CO60	11.100	0.600	10.575	0.206	1.050	A
1	SR90	312.000	8.000	359.005	6.021	0.869	A
1	CS137	183.000	2.000	181.500	7.141	1.008	A
1	PU238	0.130	0.030	0.116	0.035	1.124	A
1	PU239	1.700	0.100	1.770	0.154	0.960	A
1	AM241	1.030	0.060	1.105	0.051	0.932	A
1	CM244	2.040	0.090	2.174	0.066	0.939	A

**Matrix: WA Water Bq / L**

1	GROSS ALPHA	670.000	50.000	1421.000	100.000	0.471	N
1	GROSS BETA	2000.000	60.000	2200.000	100.000	0.909	A
1	H3	236.000	2.000	218.300	6.505	1.081	A
1	MN54	62.000	1.000	57.000	1.900	1.088	A
1	CO60	14.000	0.400	13.600	1.200	1.029	A
1	SR90	4.400	0.200	4.357	0.192	1.010	A
1	CS137	51.000	1.000	46.000	1.700	1.109	A
1	U234	0.430	0.030	0.396	0.026	1.085	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

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## QAP 48 Results by Laboratory

**Lab:** TW Taiwan Radiation Monitoring Center

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	<u>QAP 47</u> Evaluation
<b>Matrix:</b> WA Water Bq/L								
1	U238	0.420	0.030	0.396	0.037	1.060	A	
1	PU238	2.400	0.100	2.526	0.060	0.950	A	
1	PU239	1.660	0.080	1.650	0.061	1.006	A	
1	AM241	1.240	0.060	1.226	0.050	1.012	A	

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter							
1	GROSS ALPHA	1.410	0.050	1.400	0.100	1.007	A
1	GROSS BETA	1.890	0.080	1.960	0.300	0.964	A
1	MN54	6.120	0.100	5.440	0.485	1.125	A
1	CO57	11.210	0.130	11.110	0.846	1.009	A
1	CO60	9.180	0.080	9.090	0.732	1.010	A
1	SB125	8.470	0.150	12.160	1.151	0.697	W
1	CS134	18.240	0.090	19.740	1.380	0.924	A
1	CS137	11.870	0.110	11.860	0.957	1.001	A
1	CE144	7.900	0.180	8.210	0.796	0.962	A
1	PU238	0.065	0.004	0.069	0.003	0.935	A
1	PU239	0.065	0.005	0.062	0.002	1.043	A
1	AM241	0.066	0.004	0.069	0.003	0.961	A
<b>Matrix:</b> WA Water Bq / L							
1	GROSS ALPHA	1778.000	47.000	1421.000	100.000	1.251	W
1	GROSS BETA	2036.000	70.000	2200.000	100.000	0.925	A
1	H3	233.000	12.000	218.300	6.505	1.067	A
1	MN54	63.680	0.480	57.000	1.900	1.117	A
1	CO60	15.090	0.200	13.600	1.200	1.110	A
1	SR90	4.260	0.650	4.357	0.192	0.978	A
1	CS137	50.280	0.440	46.000	1.700	1.093	A
1	U234	0.455	0.027	0.396	0.026	1.148	A
1	U238	0.474	0.026	0.396	0.037	1.196	W
1	Bq U	0.961	0.062	0.801	0.067	1.199	A
1	PU238	2.357	0.063	2.526	0.060	0.933	A
1	PU239	1.602	0.043	1.650	0.061	0.971	A
1	AM241	1.008	0.034	1.226	0.050	0.822	W
<b>Matrix:</b> VE Vegetation Bq / kg							
1	K40	795.000	17.000	707.500	24.987	1.124	A
1	CO60	11.160	0.070	10.575	0.206	1.055	A
1	SR90	327.820	21.830	359.005	6.021	0.913	A
1	CS137	185.000	2.000	181.500	7.141	1.019	A
1	PU239	1.769	0.130	1.770	0.154	0.999	A
1	AM241	1.070	0.110	1.105	0.051	0.968	A
<b>Matrix:</b> SO Soil Bq / kg							
1	K40	345.000	9.000	313.500	10.150	1.100	A
1	SR90	18.000	5.000	13.091	0.279	1.375	A
1	CS137	355.000	2.000	329.500	9.260	1.077	A
1	U234	32.856	0.866	31.133	0.802	1.055	A
1	U238	32.889	0.907	31.900	2.552	1.031	A
1	Bq U	68.136	2.061	64.600	2.858	1.055	A
1	PU239	5.487	0.270	5.305	0.253	1.034	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	<u>QAP 47</u> Evaluation
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**Matrix:** SO Soil Bq / kg

1	AM241	2.675	0.218	2.678	0.212	0.999	A	
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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

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## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> SO Soil Bq / kg								
1	CS137	400.620	41.210	329.500	9.260	1.216	W	
1	K40	363.920	16.060	313.500	10.150	1.161	A	
<b>Matrix:</b> AI Air Filter Bq / filter								
1	GROSS ALPHA	1.330	0.060	1.400	0.100	0.950	A	
1	GROSS BETA	2.750	0.080	1.960	0.300	1.403	A	
1	CS137	15.560	1.950	11.860	0.957	1.312	W	
1	CO60	9.090	0.270	9.090	0.732	1.000	A	
<b>Matrix:</b> VE Vegetation Bq / kg								
1	CS137	194.280	23.210	181.500	7.141	1.070	A	
1	CO60	11.360	0.550	10.575	0.206	1.074	A	
1	K40	761.740	28.270	707.500	24.987	1.077	A	
<b>Matrix:</b> WA Water Bq / L								
1	ug U	0.035		0.032	0.003	1.094	A	
1	PU238	2.343	0.298	2.526	0.060	0.928	A	
1	PU239	1.663	0.168	1.650	0.061	1.008	A	
1	GROSS ALPHA	1364.750	47.000	1421.000	100.000	0.960	A	
1	CS137	52.810	5.160	46.000	1.700	1.148	A	
1	CO60	15.070	0.360	13.600	1.200	1.108	A	

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**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix: WA Water Bq / L</b>							
1	ug U	0.035	0.004	0.032	0.003	1.094	A
1	AM241	0.694	0.229	1.226	0.050	0.566	N
1	PU238	2.230	0.412	2.526	0.060	0.883	W
1	PU239	1.380	0.292	1.650	0.061	0.836	W
1	CO60	15.300	0.852	13.600	1.200	1.125	A
1	MN54	62.600	4.530	57.000	1.900	1.098	A
1	CS137	51.200	3.160	46.000	1.700	1.113	A
1	SR90	4.010	1.070	4.357	0.192	0.920	A
1	H3	258.500	33.000	218.300	6.505	1.184	A
<b>Matrix: SO Soil Bq / kg</b>							
1	ug U	2.270	0.200	2.583	0.200	0.879	A
1	AM241	3.330	0.975	2.678	0.212	1.244	A
1	PU239	5.060	1.490	5.305	0.253	0.954	A
1	U234	31.630	6.740	31.133	0.802	1.016	A
1	U238	26.970	4.810	31.900	2.552	0.845	A
1	CS137	364.000	44.300	329.500	9.260	1.105	A
<b>Matrix: AI Air Filter Bq / filter</b>							
1	SB125	17.400	1.680	12.160	1.151	1.431	N
1	CE144	10.600	1.620	8.210	0.796	1.291	W
1	CS134	25.000	1.640	19.740	1.380	1.266	N
1	CS137	15.400	1.100	11.860	0.957	1.298	W
1	CO57	15.400	0.898	11.110	0.846	1.386	N
1	CO60	11.100	0.472	9.090	0.732	1.221	W
1	MN54	7.420	0.626	5.440	0.485	1.364	W
1	ug U	2.600	0.300	2.472	0.101	1.052	A
1	GROSS ALPHA	1.370	0.070	1.400	0.100	0.979	A
1	GROSS BETA	2.100	0.070	1.960	0.300	1.071	A
<b>Matrix: WA Water Bq / L</b>							
1	GROSS ALPHA	1560.000	90.200	1421.000	100.000	1.098	A
1	GROSS BETA	2960.000	93.600	2200.000	100.000	1.345	A
<b>Matrix: AI Air Filter Bq / filter</b>							
1	GROSS ALPHA	1.780	0.100	1.400	0.100	1.271	A
1	GROSS BETA	2.260	0.100	1.960	0.300	1.153	A
<b>Matrix: WA Water Bq / L</b>							
1	GROSS ALPHA	1493.000	60.000	1421.000	100.000	1.051	A
1	GROSS BETA	2425.000	70.000	2200.000	100.000	1.102	A

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter							
1	MN54	5.600	0.600	5.440	0.485	1.029	A
1	CO57	11.100	0.300	11.110	0.846	0.999	A
1	CO60	8.800	0.900	9.090	0.732	0.968	A
1	SB125	12.800	0.800	12.160	1.151	1.053	A
1	CS134	19.100	0.900	19.740	1.380	0.968	A
1	CS137	11.700	1.000	11.860	0.957	0.987	A
1	CE144	7.600	0.800	8.210	0.796	0.926	A
1	Bq U	0.070	0.010	0.063	0.004	1.109	A
1	PU238	0.064	0.011	0.069	0.003	0.921	A
1	PU239	0.060	0.010	0.062	0.002	0.962	A
1	AM241	0.069	0.012	0.069	0.003	1.004	A
<b>Matrix:</b> SO Soil Bq / kg							
1	K40	370.000	100.000	313.500	10.150	1.180	A
1	CS137	360.000	40.000	329.500	9.260	1.093	A
1	Bq U	48.700	8.500	64.600	2.858	0.754	A
1	AM241	2.600	1.100	2.678	0.212	0.971	A
<b>Matrix:</b> WA Water Bq / L							
1	MN54	62.400	7.400	57.000	1.900	1.095	A
1	CO60	14.100	1.200	13.600	1.200	1.037	A
1	CS137	50.900	7.400	46.000	1.700	1.107	A
1	Bq U	0.910	0.130	0.801	0.067	1.136	A
1	PU238	2.400	0.250	2.526	0.060	0.950	A
1	PU239	1.650	0.180	1.650	0.061	1.000	A
1	AM241	1.210	0.150	1.226	0.050	0.987	A
<b>Matrix:</b> VE Vegetation Bq / kg							
1	K40	770.000	140.000	707.500	24.987	1.088	A
1	CO60	14.800	5.100	10.575	0.206	1.400	W
1	CS137	204.000	23.000	181.500	7.141	1.124	A
1	PU239	2.080	0.270	1.770	0.154	1.175	A
1	AM241	1.240	0.280	1.105	0.051	1.122	A
1	CM244	1.410	0.340	2.174	0.066	0.649	W
<b>Matrix:</b> SO Soil Bq / kg							
1	PU239	4.930	1.000	5.305	0.253	0.929	A
<b>Matrix:</b> AI Air Filter Bq / filter							
1	SR90	1.260	0.100	1.758	0.042	0.717	W

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If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> SO Soil Bq / kg								
1	SR90	13.000	6.000	13.091	0.279	0.993	A	
<b>Matrix:</b> WA Water Bq / L								
1	H3	250.000	50.000	218.300	6.505	1.145	A	
1	SR90	4.510	0.450	4.357	0.192	1.035	A	
<b>Matrix:</b> VE Vegetation Bq / kg								
1	SR90	300.000	10.000	359.005	6.021	0.836	A	

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## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter							
1	GROSS ALPHA	1.500	0.100	1.400	0.100	1.071	A
1	GROSS BETA	2.300	0.100	1.960	0.300	1.173	A
1	MN54	6.300	0.300	5.440	0.485	1.158	W
1	CO57	11.700	0.200	11.110	0.846	1.053	A
1	CO60	9.300	0.200	9.090	0.732	1.023	A
1	SR90	1.730	0.160	1.758	0.042	0.984	A
1	SB125	14.900	0.500	12.160	1.151	1.225	W
1	CS134	17.600	0.300	19.740	1.380	0.892	A
1	CS137	12.400	0.300	11.860	0.957	1.046	A
1	CE144	8.300	0.500	8.210	0.796	1.011	A
1	U234	0.042	0.018	0.031	0.003	1.364	A
1	U238	0.033	0.016	0.030	0.001	1.083	A
1	Bq U	0.078	0.027	0.063	0.004	1.236	A
1	PU238	0.065	0.020	0.069	0.003	0.935	A
1	PU239	0.075	0.018	0.062	0.002	1.203	W
1	AM241	0.069	0.017	0.069	0.003	1.004	A

**Matrix:** WA Water Bq / L

1	GROSS ALPHA	1450.000	60.000	1421.000	100.000	1.020	A
1	GROSS BETA	2340.000	60.000	2200.000	100.000	1.064	A
1	H3	233.000	50.000	218.300	6.505	1.067	A
1	MN54	61.400	4.400	57.000	1.900	1.077	A
1	CO60	14.700	1.000	13.600	1.200	1.081	A
1	SR90	4.590	0.630	4.357	0.192	1.053	A
1	CS137	51.400	3.000	46.000	1.700	1.117	A
1	U234	0.410	0.060	0.396	0.026	1.035	A
1	U238	0.440	0.060	0.396	0.037	1.110	A
1	Bq U	0.880	0.090	0.801	0.067	1.098	A
1	PU238	2.590	0.160	2.526	0.060	1.025	A
1	PU239	1.700	0.190	1.650	0.061	1.030	A
1	AM241	1.110	0.090	1.226	0.050	0.906	A

**Matrix:** VE Vegetation Bq / kg

1	K40	773.000	44.000	707.500	24.987	1.093	A
1	CO60	11.800	1.000	10.575	0.206	1.116	A
1	SR90	369.000	19.000	359.005	6.021	1.028	A
1	CS137	192.000	21.000	181.500	7.141	1.058	A
1	PU238	0.200	0.120	0.116	0.035	1.729	A
1	PU239	1.640	0.240	1.770	0.154	0.926	A
1	AM241	0.940	0.220	1.105	0.051	0.851	W

**Matrix:** SO Soil Bq / kg

1	K40	367.000	26.000	313.500	10.150	1.171	A
1	SR90	12.200	2.100	13.091	0.279	0.932	A

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If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

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

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> SO Soil Bq / kg								
1	CS137	356.000	18.000	329.500	9.260	1.080	A	
1	U234	32.700	3.300	31.133	0.802	1.050	A	
1	U238	31.800	3.200	31.900	2.552	0.997	A	
1	Bq U	67.000	4.400	64.600	2.858	1.037	A	
1	PU239	5.400	0.470	5.305	0.253	1.018	A	
1	AM241	2.420	0.200	2.678	0.212	0.904	A	

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** WC Westinghouse Hanford Co.

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix: VE Vegetation Bq / kg</b>							
1	K40	873.000	103.000	707.500	24.987	1.234	A
1	CO60	11.200	1.300	10.575	0.206	1.059	A
1	SR90	278.000	39.000	359.005	6.021	0.774	A
1	CS137	202.000	30.000	181.500	7.141	1.113	A
1	PU239	1.750	0.310	1.770	0.154	0.989	A
1	AM241	1.440	0.190	1.105	0.051	1.303	A
1	CM244	2.090	0.230	2.174	0.066	0.962	A
<b>Matrix: SO Soil Bq / kg</b>							
1	K40	396.000	49.000	313.500	10.150	1.263	W
1	SR90	6.700	8.700	13.091	0.279	0.512	N
1	CS137	351.000	53.000	329.500	9.260	1.065	A
1	PU239	5.590	0.960	5.305	0.253	1.054	A
1	AM241	4.180	1.670	2.678	0.212	1.561	W
<b>Matrix: AI Air Filter Bq / filter</b>							
1	GROSS ALPHA	1.380	0.030	1.400	0.100	0.986	A
1	GROSS BETA	2.620	0.050	1.960	0.300	1.337	A
1	MN54	5.510	0.770	5.440	0.485	1.013	A
1	CO57	10.700	0.950	11.110	0.846	0.963	A
1	CO60	8.810	0.690	9.090	0.732	0.969	A
1	SR90	1.690	0.250	1.758	0.042	0.961	A
1	SB125	7.070	0.520	12.160	1.151	0.581	N
1	CS134	16.600	1.100	19.740	1.380	0.841	A
1	CS137	11.700	1.600	11.860	0.957	0.987	A
1	CE144	6.620	1.100	8.210	0.796	0.806	A
1	U234	0.039	0.009	0.031	0.003	1.256	A
1	U238	0.032	0.008	0.030	0.001	1.050	A
1	PU238	0.083	0.015	0.069	0.003	1.199	W
1	PU239	0.063	0.012	0.062	0.002	1.009	A
1	AM241	0.096	0.017	0.069	0.003	1.394	W
<b>Matrix: WA Water Bq / L</b>							
1	GROSS ALPHA	1460.000	146.000	1421.000	100.000	1.027	A
1	GROSS BETA	2150.000	215.000	2200.000	100.000	0.977	A
1	H3	192.000	40.000	218.300	6.505	0.880	A
1	MN54	64.900	9.000	57.000	1.900	1.139	A
1	CO60	14.700	1.300	13.600	1.200	1.081	A
1	SR90	4.420	0.610	4.357	0.192	1.014	A
1	CS137	53.500	7.300	46.000	1.700	1.163	A
1	U234	0.451	0.047	0.396	0.026	1.138	A
1	U238	0.433	0.046	0.396	0.037	1.093	A
1	PU238	2.520	0.430	2.526	0.060	0.998	A
1	PU239	1.700	0.290	1.650	0.061	1.030	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

**Lab:** WC Westinghouse Hanford Co.

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> WA Water Bq/L								
1	AM241	1.330	0.220	1.226	0.050	1.085	A	
<b>Matrix:</b> SO Soil Bq/kg								
1	U234	23.200	2.200	31.133	0.802	0.745	A	
1	U238	19.200	1.700	31.900	2.552	0.602	W	

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	AM241	0.074	0.015	0.069	0.003	1.077	A	
1	U234	0.032	0.008	0.031	0.003	1.055	A	
1	U238	0.034	0.008	0.030	0.001	1.115	A	
1	PU238	0.072	0.015	0.069	0.003	1.036	A	
1	PU239	0.060	0.013	0.062	0.002	0.954	A	
1	MN54	5.470	0.560	5.440	0.485	1.006	A	
1	CO57	10.800	0.920	11.110	0.846	0.972	A	
1	CO60	8.780	0.760	9.090	0.732	0.966	A	
1	SB125	12.100	0.810	12.160	1.151	0.995	A	
1	CS134	18.900	1.100	19.740	1.380	0.957	A	
1	CS137	11.400	1.200	11.860	0.957	0.961	A	
1	CE144	7.660	1.100	8.210	0.796	0.933	A	

**Matrix:** WA Water Bq / L

1	AM241	1.180	0.180	1.226	0.050	0.963	A	
1	U234	0.404	0.070	0.396	0.026	1.020	A	
1	U238	0.401	0.070	0.396	0.037	1.012	A	
1	PU238	1.828	0.290	2.526	0.060	0.724	N	
1	PU239	1.313	0.210	1.650	0.061	0.796	N	
1	MN54	64.700	5.900	57.000	1.900	1.135	A	
1	CO60	15.510	1.400	13.600	1.200	1.140	W	
1	CS137	51.500	5.300	46.000	1.700	1.120	A	
1	SR90	3.863	0.500	4.357	0.192	0.887	W	

**Matrix:** AI Air Filter Bq / filter

1	SR90	1.710	0.150	1.758	0.042	0.973	A	
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**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	GROSS BETA	2.110	0.074	1.960	0.300	1.077	A	
1	MN54	5.810	0.250	5.440	0.485	1.068	A	
1	CO60	8.710	0.330	9.090	0.732	0.958	A	
1	SB125	12.800	0.630	12.160	1.151	1.053	A	
1	CS137	12.200	0.330	11.860	0.957	1.029	A	
1	CE144	7.360	0.570	8.210	0.796	0.896	A	
<b>Matrix:</b> VE Vegetation Bq / kg								
1	K40	838.000	22.000	707.500	24.987	1.184	A	
1	CO60	13.300	1.200	10.575	0.206	1.258	W	
1	CS137	223.000	3.000	181.500	7.141	1.229	A	
<b>Matrix:</b> SO Soil Bq / kg								
1	K40	389.000	14.000	313.500	10.150	1.241	A	
1	SR90	13.000	2.200	13.091	0.279	0.993	A	
1	CS137	392.000	3.400	329.500	9.260	1.190	A	
<b>Matrix:</b> WA Water Bq / L								
1	GROSS ALPHA	1400.000	110.000	1421.000	100.000	0.985	A	
1	GROSS BETA	53.000	2.000	2200.000	100.000	0.024	N	
1	H3	340.000	48.000	218.300	6.505	1.557	W	
1	MN54	56.100	1.300	57.000	1.900	0.984	A	
1	CO60	13.600	0.800	13.600	1.200	1.000	A	
1	CS137	47.200	1.200	46.000	1.700	1.026	A	

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	GROSS ALPHA	1.400	0.027	1.400	0.100	1.000	A	
<b>Matrix:</b> SO Soil Bq / kg								
1	K40	335.600	13.400	313.500	10.150	1.070	A	
1	CS137	365.600	12.100	329.500	9.260	1.110	A	
1	U238	30.000	4.600	31.900	2.552	0.940	A	
1	AM241	3.500	0.740	2.678	0.212	1.307	A	

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**Values for elemental uranium are reported in  $\mu\text{g}/\text{filter}$ , g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

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

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	<u>Reported</u> EML	Evaluation	<u>QAP 47</u> Evaluation
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**Matrix:** AI Air Filter Bq / filter

1	GROSS ALPHA	1.150	0.027	1.400	0.100	0.821	W
1	GROSS BETA	2.180	0.035	1.960	0.300	1.112	A

**Matrix:** WA Water Bq / L

1	GROSS ALPHA	1228.000	73.000	1421.000	100.000	0.864	A
1	GROSS BETA	2391.000	87.000	2200.000	100.000	1.087	A
1	H3	234.000	8.800	218.300	6.505	1.072	A
1	MN54	61.900	0.670	57.000	1.900	1.086	A
1	CO60	14.900	0.400	13.600	1.200	1.096	A
1	SR90	4.520	0.300	4.357	0.192	1.037	A
1	CS137	48.600	0.520	46.000	1.700	1.057	A

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** YA Duke Engineering Environmental Lab, Westboro, MA

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	QAP 47 Evaluation
<b>Matrix: WA Water Bq / L</b>							
1	GROSS ALPHA	1382.813	10.980	1421.000	100.000	0.973	A
1	GROSS BETA	2123.183	23.187	2200.000	100.000	0.965	A
1	H3	246.790	6.290	218.300	6.505	1.131	A
1	MN54	60.594	0.814	57.000	1.900	1.063	A
1	FE55	281.077	23.063	202.800	2.921	1.386	W
1	CO60	14.040	0.368	13.600	1.200	1.032	A
1	SR90	4.121	0.199	4.357	0.192	0.946	A
1	CS137	49.074	0.752	46.000	1.700	1.067	A
1	U234	0.434	0.020	0.396	0.026	1.096	A
1	U238	0.430	0.020	0.396	0.037	1.086	A
1	ug U	0.039	0.004	0.032	0.003	1.209	W
1	PU238	2.464	0.043	2.526	0.060	0.976	A
1	PU239	1.643	0.030	1.650	0.061	0.996	A
1	AM241	1.157	0.023	1.226	0.050	0.944	A
<b>Matrix: SO Soil Bq / kg</b>							
1	K40	357.050	9.990	313.500	10.150	1.139	A
1	SR90	9.201	0.666	13.091	0.279	0.703	W
1	CS137	359.215	2.164	329.500	9.260	1.090	A
1	U234	31.092	1.122	31.133	0.802	0.999	A
1	U238	31.179	1.135	31.900	2.552	0.977	A
1	PU239	5.361	0.159	5.305	0.253	1.011	A
1	AM241	2.216	0.120	2.678	0.212	0.828	A
<b>Matrix: VE Vegetation Bq / kg</b>							
1	K40	775.705	12.210	707.500	24.987	1.096	A
1	CO60	10.156	0.426	10.575	0.206	0.960	A
1	SR90	358.653	18.870	359.005	6.021	0.999	A
1	CS137	187.719	1.480	181.500	7.141	1.034	A
1	PU239	1.674	0.060	1.770	0.154	0.945	A
1	AM241	1.088	0.051	1.105	0.051	0.984	A
1	CM244	1.998	0.073	2.174	0.066	0.919	A
<b>Matrix: AI Air Filter Bq / filter</b>							
1	GROSS ALPHA	1.215	0.015	1.400	0.100	0.868	A
1	GROSS BETA	1.956	0.020	1.960	0.300	0.998	A
1	MN54	5.426	0.096	5.440	0.485	0.997	A
1	CO57	10.386	0.078	11.110	0.846	0.935	A
1	CO60	8.743	0.087	9.090	0.732	0.962	A
1	SR90	1.560	0.142	1.758	0.042	0.887	A
1	SB125	6.272	0.167	12.160	1.151	0.516	N
1	CS134	20.663	0.154	19.740	1.380	1.047	A
1	CS137	11.281	0.118	11.860	0.957	0.951	A
1	CE144	6.401	0.274	8.210	0.796	0.780	A

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Laboratory

**Lab:** YA Duke Engineering Environmental Lab, Westboro, MA

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	U234	0.035	0.002	0.031	0.003	1.127	A	
1	U238	0.036	0.002	0.030	0.001	1.168	A	
1	PU238	0.075	0.002	0.069	0.003	1.073	A	
1	PU239	0.066	0.002	0.062	0.002	1.057	A	
1	AM241	0.071	0.002	0.069	0.003	1.031	A	

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**Values for elemental uranium are reported in  $\mu\text{g}/\text{filter}$ , g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** YP US Army Proving Ground, Yuma, AZ

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No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix:</b> AI Air Filter Bq / filter								
1	ug U	2.400	0.115	2.472	0.101	0.971	A	
<b>Matrix:</b> SO Soil Bq / kg								
1	ug U	2.600	0.650	2.583	0.200	1.007	A	
<b>Matrix:</b> WA Water Bq / L								
1	ug U	0.034	0.001	0.032	0.003	1.059	A	

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**Values for elemental uranium are reported in µg/filter, g, or mL.      pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

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## QAP 48 Results by Laboratory

**Lab:** YU Institute of Occupational and Radiological Health, Yugoslavia

No. Test	Radionuclide	Reported Value	Reported Error	EML Value	EML Error	Reported EML	Evaluation	QAP 47 Evaluation
<b>Matrix: AI</b> Air Filter Bq / filter								
1	MN54	6.600	0.500	5.440	0.485	1.213	W	
1	CO57	13.000	0.500	11.110	0.846	1.170	W	
1	CO60	10.800	0.300	9.090	0.732	1.188	W	
1	SB125	15.500	0.400	12.160	1.151	1.275	W	
1	CS134	22.800	0.500	19.740	1.380	1.155	W	
1	CS137	14.300	0.500	11.860	0.957	1.206	W	
1	CE144	9.500	0.500	8.210	0.796	1.157	W	
<b>Matrix: VE</b> Vegetation Bq / kg								
1	K40	890.000	20.000	707.500	24.987	1.258	W	
1	CO60	13.500	0.900	10.575	0.206	1.277	W	
1	CS137	230.000	20.000	181.500	7.141	1.267	W	
<b>Matrix: SO</b> Soil Bq / kg								
1	K40	355.000	20.000	313.500	10.150	1.132	A	
1	CS137	345.000	20.000	329.500	9.260	1.047	A	
<b>Matrix: WA</b> Water Bq / L								
1	MN54	54.000	1.400	57.000	1.900	0.947	A	
1	CO60	13.800	0.500	13.600	1.200	1.015	A	
1	CS137	45.800	1.500	46.000	1.700	0.996	A	

**Values for elemental uranium are reported in µg/filter, g, or mL. pCi/g or mL=Bq x 0.027**

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply a site specific evaluation.

## QAP 48 Results by Nuclide

Matrix: AI Air Filter Bq / filter  
Radionuclide: AM241

EML Value: 0.0687  
EML Error: 0.0031

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AC	1	0.0780	0.0090	1.135		A
AF	1	0.0500	0.0200	0.728		W
AG	1	0.0559	0.0097	0.814	A	W
AI	1	0.0433	0.0033	0.630		N
AM	1	0.0340	0.0300	0.495	W	N
AN	1	0.0710	0.0040	1.033	A	A
AR	1	0.6320	0.1290	9.199	W	N
AR	2	0.7340	0.1280	10.684	W	N
AU	1	0.2070	0.0120	3.013	A	N
BE	1	0.0740	0.0100	1.077	A	A
BL	1	0.1440	0.0440	2.096	A	W
BM	1	0.0680	0.0140	0.990	A	A
BP	1	0.0834	0.0037	1.214	A	A
BU	1	0.0740	0.0030	1.077		A
BX	1	0.0788	0.0107	1.147	A	A
CH	1	0.0810	0.0046	1.179	A	A
CL	1	0.0700	0.0200	1.019	N	A
CS	1	0.1407	0.0300	2.048	A	W
EG	1	0.0710	0.0060	1.033	A	A
EP	1	0.0712	0.0062	1.036		A
FG	1	0.3400	0.1000	4.949	N	N
FJ	1	0.0890	0.0300	1.295		A
FL	1	0.1700	0.0300	2.475	N	N
FR	1	0.0810	0.0250	1.179	N	A
GA	1	0.0790		1.150	A	A
GE	1	0.1343	0.0172	1.955	A	W
GP	1	0.0760	0.0080	1.106	W	A
GT	1	0.0790	0.0400	1.150	A	A
IA	1	0.1200	0.0500	1.747		W
IA	2	0.1400	0.0600	2.038		W
IA	3	0.1000	0.0600	1.456		W
IE	1	0.0640	0.0040	0.932	A	A
IS	1	2.2900	0.2400	33.333	W	N
IT	1	0.0740	0.0060	1.077	A	A
JL	1	0.1100	0.0900	1.601		W
KO	1	0.0627	0.0040	0.913		A
LA	1	0.0740	0.0090	1.077	A	A
LA	2	0.0680	0.0080	0.990	A	A
LA	3	0.0740	0.0090	1.077	A	A
LL	1	0.0759	0.0062	1.105	A	A
LV	1	0.2000	0.0140	2.911	N	N
ME	1	0.2700	0.0700	3.930	N	N
NM	1	0.0759	0.0043	1.105		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.



## QAP 48 Results by Nuclide

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**Matrix:** AI Air Filter Bq / filter  
**Radionuclide:** AM241

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**EML Value:** 0.0687  
**EML Error:** 0.0031

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
OT	1	0.0750	0.0130	1.092		A
RE	1	0.0740	0.0080	1.077		A
RI	1	0.0784	0.0191	1.141		A
RL	1	0.2040	0.0300	2.969		N
SK	1	0.0880	0.0140	1.281		A
SN	1	0.0670	0.0120	0.975		A
SR	1	0.0820	0.0080	1.194		A
SW	1	0.0900	0.0200	1.310		A
TE	1	0.0700	0.0122	1.019		A
TI	1	0.0820	0.0170	1.194		A
TM	1	0.0725	0.0083	1.055		A
TN	1	0.0715	0.0067	1.041		A
TW	1	0.0760	0.0050	1.106		A
TX	1	0.0660	0.0040	0.961		A
UY	1	0.0690	0.0120	1.004		A
WA	1	0.0690	0.0170	1.004		A
WC	1	0.0958	0.0172	1.394		W
WI	1	0.0740	0.0150	1.077		A
YA	1	0.0708	0.0023	1.031		A

**Total Number Reported: 62**

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

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**Matrix:** AI Air Filter Bq / filter  
**Radionuclide:** Bq U

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**EML Value:** 0.0631  
**EML Error:** 0.0037

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AG	1	0.0824	0.0100	1.306	A	A
AI	1	0.0566	0.0028	0.897		W
AM	1	0.1590	0.0130	2.520	W	W
BL	1	0.0700	0.0000	1.109	A	A
BU	1	0.0660	0.0060	1.046	A	A
CH	1	0.0691	0.0090	1.095	A	A
CL	1	0.0900	0.0100	1.426	A	A
GA	1	0.0790		1.252		A
GP	1	0.0660		1.046	W	A
ID	1	0.0620	0.0030	0.983	A	A
IE	1	0.0700	0.0090	1.109		A
KO	1	0.0699	0.0018	1.108		A
OT	1	0.0720	0.0160	1.141		A
UY	1	0.0700	0.0100	1.109		A
WA	1	0.0780	0.0270	1.236		A

**Total Number Reported: 15**

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: AI Air Filter Bq / filter  
Radionuclide: CE144

EML Value: 8.2100  
EML Error: 0.7960

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AC	1	8.4900	1.0300	1.034		A
AF	1	9.1000	4.2000	1.108	A	W
AG	1	7.5500	0.7100	0.920	A	A
AI	1	8.8200	0.2960	1.074		A
AL	1	3.0825	0.8100	0.375		N
AM	1	7.3600	0.3900	0.896	A	A
AN	1	8.7100	1.0200	1.061	A	A
AR	1	27.2500	3.2800	3.319	N	N
AR	2	28.2200	2.9400	3.437	N	N
AR	3	26.3700	3.2800	3.212	N	N
AU	1	20.9000	3.0000	2.546	A	N
BC	1	12.1000	0.6000	1.474	A	N
BE	1	7.3000	0.5000	0.889	A	A
BL	1	8.0000	0.6000	0.974	A	A
BN	1	10.3400	0.1300	1.259	W	W
BN	2	10.6200	0.1300	1.294	W	W
BN	3	10.3600	0.1300	1.262	W	W
BP	1	6.8100	0.8500	0.829	A	A
BQ	1	6.1000	0.2000	0.743	A	A
BS	1	8.7800	0.1800	1.069		A
BU	1	8.3000	0.8000	1.011	A	A
BX	1	11.7000	0.6000	1.425	A	N
CA	1	6.8000	1.5000	0.828	A	A
CD	1	6.6000	0.3000	0.804		A
CH	1	7.4100	0.4180	0.903	A	A
CL	1	7.6500	1.5000	0.932	A	A
CN	1	7.8200	0.5400	0.952		A
CO	1	6.0000	1.0000	0.731	A	A
CS	1	4.1870	0.2400	0.510	W	N
DC	1	10.8000	3.2600	1.315	N	N
DH	1	6.9500	0.2790	0.847		A
EG	1	7.6500	0.5100	0.932	A	A
EL	1	19.2000	0.9000	2.339		N
EP	1	7.3800	1.0850	0.899		A
FG	1	7.6400	1.6000	0.931	A	A
FJ	1	12.3300	0.9600	1.502		N
FL	1	7.7000	0.1000	0.938	A	A
FM	1	7.4300	0.0900	0.905	A	A
FN	1	7.7200	0.7200	0.940	W	A
FR	1	6.6900	1.3000	0.815	A	A
GA	1	8.1400	1.4800	0.991	A	A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

Matrix: AI Air Filter Bq / filter  
Radionuclide: CE144

EML Value: 8.2100  
EML Error: 0.7960

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
GE	1	7.5054	1.3579	0.914	A	A
GP	1	7.7000	0.9000	0.938	A	A
GT	1	5.8000	1.5000	0.706	A	A
HU	1	6.9400	0.5300	0.845	N	A
IA	1	7.0100	0.1600	0.854		A
IA	2	7.2200	0.1600	0.879		A
IA	3	7.3800	0.1600	0.899		A
ID	1	10.5000	0.6700	1.279	A	W
IE	1	8.0200	0.7000	0.977	W	A
IL	1	7.9000	0.6000	0.962		A
IN	1	7.8000	0.8000	0.950	A	A
IS	1	6.8600	1.9000	0.836	A	A
IT	1	7.5000	0.4000	0.914	A	A
JL	1	6.6000	1.5000	0.804		A
KO	1	7.5230	0.1330	0.916	A	A
LA	1	6.0700	0.7500	0.739	A	A
LA	2	4.5300	0.6400	0.552	A	N
LA	3	5.1900	0.7300	0.632	A	W
LL	1	8.0600	0.8700	0.982	A	A
LM	1	21.2000	2.0000	2.582		N
LN	1	7.0000	0.9000	0.853		A
LV	1	11.0000	0.2000	1.340	W	N
ME	1	9.4600	0.5500	1.152	A	W
MH	1	8.9800	0.4300	1.094		A
ML	1	8.2400	0.8000	1.004		A
MS	1	7.6400	0.7600	0.931	A	A
NA	1	6.7600	0.5650	0.823		A
NL	1	7.5800	0.7980	0.923		A
NP	1	7.8000	0.5000	0.950		A
NS	1	7.3000	0.2700	0.889		A
OD	1	7.6200	0.2300	0.928		A
OL	1	8.7500	0.8100	1.066		A
OT	1	8.6000	0.3000	1.048		A
OU	1	8.0800	3.3400	0.984		A
PO	1	8.0000	0.5000	0.974		A
RA	1	7.6100	0.3700	0.927		A
RC	1	8.1000	1.2000	0.987		A
RE	1	6.0600	1.4400	0.738		A
RI	1	5.7200	5.2300	0.697		A
RL	1	5.8900	1.1000	0.717		A
SA	1	7.9000	0.9000	0.962		A
SK	1	8.2000	0.4000	0.999		A
SR	1	8.0000	2.6000	0.974		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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**Matrix:** AI Air Filter Bq / filter  
**Radionuclide:** CE144

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**EML Value:** 8.2100  
**EML Error:** 0.7960

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
SW	1	6.8600	0.3000	0.836		A
TE	1	7.7735	0.6210	0.947		A
TI	1	8.0400	0.5900	0.979		A
TM	1	8.9600	0.9190	1.091		A
TN	1	7.9590	1.8620	0.969		A
TO	1	15.9000	1.7000	1.937		N
TP	1	7.8640	0.6950	0.958		A
TW	1	7.7000	0.5000	0.938		A
TX	1	7.9000	0.1800	0.962		A
UP	1	10.6000	1.6200	1.291		W
UY	1	7.6000	0.8000	0.926		A
WA	1	8.3000	0.5000	1.011		A
WC	1	6.6200	1.1000	0.806		A
WI	1	7.6600	1.1000	0.933		A
WP	1	7.3600	0.5700	0.896		A
YA	1	6.4010	0.2738	0.780		A
YU	1	9.5000	0.5000	1.157		W

**Total Number Reported: 101**

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: AI Air Filter Bq / filter  
Radionuclide: CO57

EML Value: 11.1100  
EML Error: 0.8464

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AC	1	11.0000	0.6000	0.990		A
AF	1	9.5000	1.3000	0.855	A	A
AG	1	10.4000	0.6900	0.936	A	A
AI	1	13.0000	0.0757	1.170		W
AL	1	3.1066	0.2000	0.280		N
AM	1	9.2300	0.0800	0.831	A	A
AN	1	12.5700	1.0400	1.131	W	W
AR	1	11.6400	0.7900	1.048	A	A
AR	2	11.6900	0.7900	1.052	A	A
AR	3	11.2900	0.7700	1.016	A	A
AU	1	13.4300	0.6000	1.209	A	W
BC	1	16.9000	0.8000	1.521	A	N
BE	1	10.6000	0.4000	0.954	A	A
BL	1	11.6000	0.7000	1.044	A	A
BM	1	13.3000	0.1600	1.197	A	W
BN	1	14.5600	0.3800	1.311	N	W
BN	2	15.4500	0.3800	1.391	N	N
BN	3	15.2100	0.3800	1.369	N	N
BP	1	10.4200	0.1500	0.938	A	A
BQ	1	8.7000	0.0800	0.783	A	A
BS	1	12.3000	0.0600	1.107	A	W
BU	1	11.0000	1.0000	0.990	A	A
BX	1	16.7000	0.8100	1.503	A	N
CA	1	10.1000	0.1000	0.909	A	A
CD	1	9.5000	0.1000	0.855		A
CH	1	10.3200	0.2260	0.929	A	A
CL	1	10.4000	0.3600	0.936	A	A
CN	1	10.4500	0.5500	0.941	N	A
CO	1	12.6000	0.2000	1.134	W	W
CS	1	6.1720	0.2100	0.556	W	N
DC	1	12.0000	1.2700	1.080	A	A
DH	1	10.5000	0.0958	0.945		A
EG	1	11.3000	0.6000	1.017	A	A
EL	1	32.0000	1.6000	2.880		N
EP	1	10.5800	0.7450	0.952	A	A
FG	1	10.5800	1.9000	0.952	A	A
FJ	1	18.4100	0.3300	1.657		N
FL	1	10.1800	0.0400	0.916	A	A
FM	1	10.6500	0.0800	0.959	A	A
FN	1	9.7400	0.7800	0.877	N	A
FR	1	9.5600	1.5000	0.860	W	A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

Matrix: AI Air Filter Bq / filter  
Radionuclide: CO57

EML Value: 11.1100  
EML Error: 0.8464

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
GA	1	10.7000	0.7000	0.963	A	A
GE	1	10.6652	0.9712	0.960	A	A
GP	1	11.0000	1.0000	0.990	A	A
GT	1	8.2000	1.0000	0.738	A	A
HU	1	9.3400	0.2600	0.841	N	A
IA	1	7.8400	0.0400	0.706		W
IA	2	8.4900	0.0500	0.764		A
IA	3	8.2300	0.0500	0.741		A
ID	1	15.7000	0.8200	1.413	A	N
IE	1	11.2000	0.5000	1.008	W	A
IL	1	11.0000	0.2000	0.990		A
IN	1	10.8000	0.8000	0.972	A	A
IS	1	11.2000	1.4200	1.008	A	A
IT	1	10.3000	0.5000	0.927	A	A
JL	1	10.0000	0.6000	0.900	A	A
KO	1	11.2600	0.0410	1.014	A	A
LA	1	9.8500	0.7100	0.887	A	A
LA	2	9.9300	0.7100	0.894	A	A
LA	3	9.7400	0.7000	0.877	A	A
LL	1	11.6000	0.3000	1.044	A	A
LM	1	18.9000	0.7100	1.701		N
LN	1	9.9000	1.0000	0.891		A
LV	1	10.0000	0.6000	0.900	A	A
ME	1	13.3000	0.5500	1.197	W	W
MH	1	12.7400	0.3900	1.147		W
ML	1	12.6200	1.3000	1.136	W	W
MS	1	10.4500	1.0500	0.941	A	A
NA	1	10.1000	0.1350	0.909		A
NL	1	10.5000	1.0300	0.945		A
NP	1	11.6000	0.4000	1.044		A
NS	1	11.0700	0.4100	0.996		A
OD	1	11.3000	0.1900	1.017		A
OL	1	11.8800	0.3800	1.069		A
OT	1	12.0000	1.0000	1.080		A
OU	1	10.4000	3.9700	0.936		A
PO	1	11.4000	0.5000	1.026		A
RA	1	11.8000	0.2800	1.062		A
RC	1	10.9000	0.9000	0.981		A
RE	1	10.8000	1.0000	0.972		A
RI	1	9.6600	0.8540	0.869		A
RL	1	8.8100	2.1000	0.793		A
SA	1	11.0000	1.5000	0.990		A
SK	1	11.4000	0.1000	1.026		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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**Matrix:** AI Air Filter Bq / filter  
**Radionuclide:** CO57

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**EML Value:** 11.1100  
**EML Error:** 0.8464

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
SR	1	11.1000	1.0000	0.999		A
SW	1	10.1000	0.1000	0.909		A
TE	1	10.1523	0.1143	0.914		A
TI	1	12.1000	1.2000	1.089		A
TM	1	12.5000	0.4120	1.125		W
TN	1	10.3800	0.8400	0.934		A
TO	1	20.5000	1.3000	1.845		N
TP	1	11.3750	0.7390	1.024		A
TW	1	11.0000	0.2000	0.990		A
TX	1	11.2100	0.1300	1.009		A
UP	1	15.4000	0.8980	1.386		N
UY	1	11.1000	0.3000	0.999		A
WA	1	11.7000	0.2000	1.053		A
WC	1	10.7000	0.9500	0.963		A
WI	1	10.8000	0.9200	0.972		A
YA	1	10.3860	0.0780	0.935		A
YU	1	13.0000	0.5000	1.170		W

**Total Number Reported: 101**

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: AI Air Filter Bq / filter  
Radionuclide: CO60

EML Value: 9.0900  
EML Error: 0.7319

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AC	1	9.0200	0.3300	0.992		A
AF	1	9.1000	1.6000	1.001	N	A
AG	1	8.9900	0.6100	0.989	A	A
AI	1	9.7100	0.0941	1.068		A
AL	1	7.6491	0.2890	0.841		A
AM	1	7.6200	0.1100	0.838	W	A
AN	1	10.0600	0.7200	1.107	A	W
AR	1	10.0600	0.7500	1.107	A	W
AR	2	9.9000	0.7400	1.089	A	A
AR	3	10.2700	0.7400	1.130	A	W
AU	1	11.2100	0.7800	1.233	A	W
BA	1	9.3800	0.4300	1.032	A	A
BC	1	13.4000	0.7000	1.474	A	N
BE	1	8.5000	0.2000	0.935	A	A
BL	1	9.1000	0.4000	1.001	A	A
BM	1	9.4200	0.2600	1.036	A	A
BN	1	8.7800	0.2800	0.966	A	A
BN	2	8.8400	0.2800	0.972	A	A
BN	3	9.4000	0.2800	1.034	A	A
BP	1	8.3600	0.4900	0.920	A	A
BQ	1	8.3000	0.3000	0.913	A	A
BS	1	9.5600	0.1300	1.052	A	A
BU	1	8.8000	0.7000	0.968	A	A
BX	1	13.5000	0.7000	1.485	A	N
CA	1	8.5800	0.0800	0.944	A	A
CD	1	7.8000	0.2000	0.858		A
CH	1	8.5700	0.2810	0.943	A	A
CL	1	8.8300	0.3800	0.971	A	A
CN	1	8.6600	0.4600	0.953	A	A
CO	1	8.9000	0.3000	0.979	A	A
CR	1	7.7000	0.4000	0.847	W	A
CS	1	4.3900	0.1400	0.483	N	N
DC	1	9.2800	0.7000	1.021	A	A
DH	1	8.6500	0.1920	0.952		A
EG	1	8.9800	0.4700	0.988	A	A
EL	1	18.5000	0.9000	2.035		N
EP	1	8.8300	0.6520	0.971	A	A
FG	1	8.0200	3.8000	0.882	A	A
FJ	1	10.4300	0.0800	1.147		W
FL	1	8.9600	0.0700	0.986	A	A
FM	1	9.1600	0.0500	1.008	A	A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

Matrix: AI Air Filter Bq / filter  
Radionuclide: CO60

EML Value: 9.0900  
EML Error: 0.7319

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
FN	1	7.9900	0.6100	0.879	N	A
FR	1	8.1100	1.5000	0.892	N	A
GA	1	8.7300	0.3700	0.960	A	A
GE	1	9.0058	0.9213	0.991	A	A
GP	1	10.0000	1.0000	1.100	N	A
GT	1	7.8000	0.8000	0.858	W	A
HU	1	7.7500	0.1500	0.853	A	A
IA	1	6.9300	0.0900	0.762		W
IA	2	7.1800	0.0900	0.790		W
IA	3	7.2200	0.0900	0.794		W
ID	1	11.5200	0.6000	1.267	A	W
IE	1	9.3600	0.6200	1.030	A	A
IL	1	9.6000	0.2000	1.056		A
IN	1	8.5000	0.3000	0.935	A	A
IS	1	8.6800	1.0800	0.955	N	A
IT	1	8.5000	0.2000	0.935	A	A
JL	1	8.2000	0.6000	0.902	A	A
KO	1	9.0310	0.1450	0.994	A	A
LA	1	8.5000	0.6900	0.935	A	A
LA	2	8.4400	0.6900	0.928	A	A
LA	3	8.5800	0.7000	0.944	A	A
LL	1	9.1000	0.2300	1.001	A	A
LM	1	14.5000	0.8900	1.595		N
LN	1	8.7000	0.5000	0.957		A
LV	1	8.5400	0.0900	0.939		A
ME	1	10.2000	0.3200	1.122	W	W
MH	1	10.1300	0.2200	1.114		W
ML	1	10.0400	1.0000	1.105	A	W
MS	1	9.1100	0.9100	1.002	A	A
NA	1	8.4600	0.1490	0.931	W	A
NL	1	8.3500	0.5860	0.919		A
NP	1	8.8000	0.2000	0.968		A
NS	1	10.5400	0.3300	1.160		W
OD	1	8.9300	0.2400	0.982		A
OL	1	9.5200	0.2300	1.047		A
OT	1	9.5000	0.2000	1.045		A
OU	1	8.5400	2.4500	0.939		A
PO	1	9.6000	0.3000	1.056		A
RA	1	9.1700	0.2500	1.009		A
RC	1	9.0000	0.9000	0.990		A
RE	1	8.3100	0.9200	0.914		A
RI	1	8.5900	0.9910	0.945		A
RL	1	8.5100	0.6200	0.936		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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**Matrix:** AI Air Filter Bq / filter  
**Radionuclide:** CO60

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**EML Value:** 9.0900  
**EML Error:** 0.7319

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
SA	1	8.7000	0.8000	0.957		A
SK	1	8.9000	0.4000	0.979		A
SR	1	8.9000	1.0000	0.979		A
SW	1	8.8400	0.1100	0.972		A
TE	1	9.2430	0.1604	1.017		A
TI	1	9.0600	0.9100	0.997		A
TM	1	10.0000	0.4860	1.100		A
TN	1	8.6820	0.8985	0.955		A
TO	1	12.0000	1.5000	1.320		N
TP	1	9.3140	0.1070	1.025		A
TW	1	8.9000	0.2000	0.979		A
TX	1	9.1800	0.0800	1.010		A
UC	1	9.0900	0.2700	1.000		A
UP	1	11.1000	0.4720	1.221		W
UY	1	8.8000	0.9000	0.968		A
WA	1	9.3000	0.2000	1.023		A
WC	1	8.8100	0.6900	0.969		A
WI	1	8.7800	0.7600	0.966		A
WP	1	8.7100	0.3300	0.958		A
YA	1	8.7431	0.0870	0.962		A
YU	1	10.8000	0.3000	1.188		W

**Total Number Reported: 105**

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: AI Air Filter Bq / filter  
Radionuclide: CS134

EML Value: 19.7400  
EML Error: 1.3800

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AC	1	20.8000	0.4000	1.054		A
AF	1	16.5000	2.2000	0.836	N	A
AG	1	19.0000	1.2000	0.963	A	A
AI	1	20.2000	0.1080	1.023		A
AL	1	1.1504	0.0357	0.058		N
AM	1	13.2000	0.1100	0.669	N	N
AN	1	19.5000	0.4700	0.988	A	A
AR	1	20.0300	1.2200	1.015	A	A
AR	2	20.9600	1.2500	1.062	A	A
AR	3	19.7000	1.2000	0.998	A	A
AU	1	26.4000	1.9000	1.337	A	N
BA	1	16.7000	0.3600	0.846	A	A
BC	1	29.1000	1.7000	1.474	A	N
BE	1	12.5000	0.6000	0.633	W	N
BL	1	18.0000	0.9000	0.912	A	A
BM	1	21.8000	0.3000	1.104	A	A
BN	1	17.5300	0.7300	0.888	A	A
BN	2	18.0400	0.7300	0.914	A	A
BN	3	19.2800	0.7300	0.977	A	A
BP	1	19.5700	0.4100	0.991	A	A
BQ	1	17.8000	0.3000	0.902	A	A
BS	1	21.2200	0.1600	1.075	A	A
BU	1	19.0000	1.3000	0.963	A	A
BX	1	28.9000	1.7000	1.464	A	N
CA	1	19.7000	0.3000	0.998	A	A
CD	1	15.5000	0.2000	0.785		W
CH	1	18.6000	0.5890	0.942	A	A
CL	1	17.3000	0.5900	0.876	N	A
CN	1	18.1200	0.9400	0.918	A	A
CO	1	18.8000	0.6000	0.952	A	A
CR	1	15.3000	0.6000	0.775	W	W
CS	1	9.3700	0.2600	0.475	W	N
DC	1	19.3000	2.8200	0.978	A	A
DH	1	18.9500	0.2270	0.960		A
EG	1	20.1000	1.0000	1.018	A	A
EL	1	36.5000	1.8000	1.849		N
EP	1	18.2800	1.2990	0.926	A	A
FG	1	16.9500	6.3000	0.859	A	A
FJ	1	23.9200	0.7300	1.212		W
FL	1	17.1000	0.1000	0.866	W	A
FM	1	18.7500	0.1100	0.950	N	A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

Matrix: AI Air Filter Bq / filter  
Radionuclide: CS134

EML Value: 19.7400  
EML Error: 1.3800

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
FN	1	19.8000	1.2000	1.003	N	A
FR	1	14.8500	2.0000	0.752	N	W
GA	1	17.9000	2.1000	0.907	A	A
GE	1	18.2706	1.7742	0.926	A	A
GP	1	18.0000	2.0000	0.912	N	A
GT	1	17.0000	1.1000	0.861	N	A
HU	1	14.2000	0.3000	0.719	A	N
IA	1	14.2900	0.1200	0.724		N
IA	2	13.2300	0.1300	0.670		N
IA	3	13.8700	0.1200	0.703		N
ID	1	23.0800	1.1600	1.169	A	W
IE	1	20.0000	1.5000	1.013	A	A
IL	1	19.8000	0.2000	1.003		A
IN	1	18.8000	0.4000	0.952	A	A
IS	1	18.6000	2.1000	0.942	W	A
IT	1	17.5000	0.6000	0.887	A	A
JL	1	16.2000	0.7000	0.821	A	A
KO	1	19.3500	0.2320	0.980	A	A
LL	1	20.8000	0.3330	1.054	A	A
LM	1	27.5000	1.2000	1.393		N
LN	1	16.3000	1.0000	0.826		A
LV	1	18.4000	0.1000	0.932	A	A
ME	1	18.2000	0.5600	0.922	A	A
MH	1	20.9100	0.4600	1.059		A
ML	1	22.3100	2.2000	1.130	W	W
MS	1	19.0000	1.9000	0.963	A	A
NA	1	18.3000	0.1850	0.927		A
NL	1	17.7000	1.2400	0.897		A
NP	1	17.6000	0.4000	0.892		A
NS	1	16.1900	0.6000	0.820		A
OD	1	19.5100	0.8200	0.988		A
OL	1	17.9700	0.6600	0.910		A
OT	1	19.0000	1.0000	0.963		A
OU	1	18.5400	2.3500	0.939		A
PK	1	346.8000	37.4000	17.568		N
PO	1	1.4000	0.3000	0.071		N
RA	1	21.1000	0.5000	1.069		A
RC	1	20.9000	1.7000	1.059		A
RE	1	16.9000	1.6000	0.856		A
RI	1	19.3000	1.0200	0.978		A
RL	1	16.2000	1.1000	0.821		A
SA	1	19.1000	2.9000	0.968		A
SK	1	19.6000	1.1000	0.993		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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**Matrix:** AI Air Filter Bq / filter  
**Radionuclide:** CS134

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**EML Value:** 19.7400  
**EML Error:** 1.3800

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
SR	1	19.3000	1.4000	0.978		A
SW	1	15.9000	1.4000	0.805		W
TE	1	18.9759	0.2042	0.961		A
TI	1	19.8000	2.0000	1.003		A
TM	1	20.5000	0.6880	1.039		A
TN	1	22.2900	1.7500	1.129		W
TO	1	21.9000	1.6000	1.109		A
TP	1	21.2180	0.5820	1.075		A
TW	1	18.5000	0.2000	0.937		A
TX	1	18.2400	0.0900	0.924		A
UP	1	25.0000	1.6400	1.266		N
UY	1	19.1000	0.9000	0.968		A
WA	1	17.6000	0.3000	0.892		A
WC	1	16.6000	1.1000	0.841		A
WI	1	18.9000	1.1000	0.957		A
YA	1	20.6627	0.1536	1.047		A
YU	1	22.8000	0.5000	1.155		W

**Total Number Reported: 101**

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: AI Air Filter Bq / filter  
Radionuclide: CS137

EML Value: 11.8600  
EML Error: 0.9571

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AC	1	12.0000	0.4000	1.012		A
AF	1	10.9000	1.6000	0.919	A	A
AG	1	12.0100	0.8000	1.013	A	A
AI	1	14.3000	0.1320	1.206		W
AL	1	9.4465	0.4820	0.797		W
AM	1	10.3100	0.1600	0.869	W	A
AN	1	13.2200	1.0700	1.115	A	A
AR	1	12.8100	0.8000	1.080	A	A
AR	2	13.4100	0.8600	1.131	A	W
AR	3	12.4800	0.7900	1.052	A	A
AU	1	7.9900	0.7000	0.674	A	N
BA	1	13.1000	0.5000	1.105	A	A
BC	1	19.2000	1.3000	1.619	A	N
BE	1	11.2000	1.1000	0.944	A	A
BL	1	12.1000	0.6000	1.020	A	A
BM	1	13.2000	0.2800	1.113	A	A
BN	1	15.0400	0.5800	1.268	N	W
BN	2	16.3300	0.5800	1.377	N	N
BN	3	16.1900	0.5800	1.365	N	N
BP	1	11.0100	0.4000	0.928	A	A
BQ	1	12.1000	0.2000	1.020	A	A
BS	1	12.4800	0.1100	1.052	A	A
BU	1	12.0000	1.0000	1.012	A	A
BX	1	18.9000	1.3000	1.594	A	N
CA	1	11.5000	0.4000	0.970	A	A
CD	1	9.7000	0.2000	0.818		W
CH	1	10.8000	0.3010	0.911	A	A
CL	1	11.3000	0.4400	0.953	A	A
CN	1	11.4400	0.5900	0.965	A	A
CO	1	11.6000	0.3000	0.978	A	A
CR	1	9.1000	0.4000	0.767	W	W
CS	1	5.3530	0.2400	0.451	W	N
DC	1	13.6000	1.4700	1.147	A	W
DH	1	11.2300	0.1840	0.947		A
EG	1	11.8000	0.6000	0.995	A	A
EL	1	24.0000	1.2000	2.024		N
EP	1	11.4200	0.8280	0.963	A	A
FG	1	12.4500	4.3000	1.050	A	A
FJ	1	12.4700	0.4200	1.051		A
FL	1	12.7000	0.1000	1.071	A	A
FM	1	12.5300	0.0900	1.056	A	A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

### QAP 48 Results by Nuclide

Matrix: AI Air Filter Bq / filter  
Radionuclide: CS137

EML Value: 11.8600  
EML Error: 0.9571

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
FN	1	11.5000	1.2000	0.970	W	A
FR	1	10.3600	1.0000	0.874	N	A
GA	1	11.3000	0.7000	0.953	A	A
GE	1	11.5792	1.0897	0.976	A	A
GP	1	27.0000	3.0000	2.277	W	N
GT	1	9.9000	1.5000	0.835	W	A
HU	1	10.3000	0.3000	0.868	W	A
IA	1	10.5700	0.1000	0.891		A
IA	2	10.1800	0.1000	0.858		A
IA	3	10.3400	0.1000	0.872		A
ID	1	15.2500	0.7700	1.286	A	W
IE	1	12.1000	0.7000	1.020	A	A
IL	1	12.3000	0.3000	1.037		A
IN	1	10.7000	0.3000	0.902	W	A
IS	1	11.0000	1.2500	0.927	W	A
IT	1	11.0000	0.1000	0.927	A	A
JL	1	16.2000	0.7000	1.366	A	N
KO	1	11.5400	0.1390	0.973	A	A
LA	1	11.9000	0.9000	1.003	A	A
LA	2	12.1000	0.9000	1.020	A	A
LA	3	11.6000	0.9000	0.978	A	A
LL	1	1.2000	0.0310	0.101	A	N
LM	1	19.6000	0.9900	1.653		N
LN	1	11.7000	0.6000	0.987		A
LV	1	12.0000	0.1000	1.012	A	A
ME	1	13.7000	0.5900	1.155	W	W
MH	1	14.3500	0.4500	1.210		W
ML	1	12.9700	1.3000	1.094	W	A
MS	1	11.4500	1.1500	0.965	A	A
NA	1	11.9000	0.2130	1.003		A
NL	1	11.3000	1.1200	0.953		A
NM	1	10.5000	0.9000	0.885		A
NP	1	11.6000	0.3000	0.978		A
NS	1	11.7000	0.4300	0.987		A
OD	1	12.0700	0.7600	1.018		A
OL	1	12.5300	0.7000	1.056		A
OT	1	13.0000	1.0000	1.096		A
OU	1	13.4600	1.0000	1.135		W
PK	1	218.9000	9.5000	18.457		N
PO	1	12.4000	0.8000	1.046		A
RA	1	12.3000	0.4500	1.037		A
RC	1	12.1000	1.1000	1.020		A
RE	1	11.1000	1.1000	0.936		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.



## QAP 48 Results by Nuclide

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**Matrix:** AI Air Filter Bq / filter  
**Radionuclide:** CS137

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**EML Value:** 11.8600  
**EML Error:** 0.9571

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
RI	1	11.2000	1.5200	0.944		A
RL	1	11.9000	0.4000	1.003		A
SA	1	11.7000	1.6000	0.987		A
SK	1	11.2000	0.1000	0.944		A
SR	1	11.5000	1.5000	0.970		A
SW	1	11.5000	0.2000	0.970		A
TE	1	12.8759	0.2042	1.086		A
TI	1	13.0000	1.3000	1.096		A
TM	1	13.4000	0.5250	1.130		W
TN	1	11.6000	0.9750	0.978		A
TO	1	15.3000	2.5000	1.290		W
TP	1	12.1210	0.5140	1.022		A
TW	1	11.2000	0.2000	0.944		A
TX	1	11.8700	0.1100	1.001		A
UC	1	15.5600	1.9500	1.312		W
UP	1	15.4000	1.1000	1.298		W
UY	1	11.7000	1.0000	0.987		A
WA	1	12.4000	0.3000	1.046		A
WC	1	11.7000	1.6000	0.987		A
WI	1	11.4000	1.2000	0.961		A
WP	1	12.2000	0.3300	1.029		A
YA	1	11.2813	0.1184	0.951		A
YU	1	14.3000	0.5000	1.206		W

**Total Number Reported: 107**

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

**Matrix:** AI Air Filter Bq / filter  
**Radionuclide:** GROSS ALPHA

**EML Value:** 1.4000  
**EML Error:** 0.1000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AF	1	1.2900	0.1000	0.921	W	A
AL	1	1.5230	0.0600	1.088		A
AM	1	1.9400	0.0500	1.386	A	W
AR	1	1.9100	0.2000	1.364	N	W
AU	1	1.7400	0.0700	1.243	A	A
BC	1	1.3900	0.0300	0.993	A	A
BE	1	1.3000	0.0800	0.929	A	A
BL	1	1.5840	0.0530	1.131	W	A
BN	1	1.0700	0.0200	0.764	A	W
BN	2	1.0600	0.0200	0.757	A	W
BN	3	1.0400	0.0200	0.743	A	W
BP	1	1.2400	0.0500	0.886	A	A
BS	1	1.5500	0.0100	1.107	W	A
BU	1	1.3100	0.1300	0.936	A	A
BX	1	1.4400	0.0300	1.029	A	A
CA	1	1.3800	0.0200	0.986	W	A
CD	1	1.1000	0.1000	0.786		W
CH	1	1.4200	0.1160	1.014	A	A
CS	1	1.4500	0.0700	1.036	A	A
DC	1	1.2400	0.2420	0.886	A	A
DH	1	1.3280	0.1390	0.949	A	A
DP	1	1.3000	0.0500	0.929	A	A
DP	2	1.4000	0.0500	1.000	A	A
DP	3	1.4000	0.0500	1.000	A	A
EI	1	2.0100	0.1800	1.436	A	W
FG	1	1.1950	0.0800	0.854	A	A
FL	1	1.1400	0.0300	0.814	A	W
FR	1	1.0200	0.2000	0.729	A	W
GC	1	1.1000	0.0500	0.786		W
GE	1	1.3764	0.0074	0.983	N	A
GP	1	1.3000	0.1000	0.929	W	A
GT	1	1.4000	0.1000	1.000	A	A
HC	1	0.9890	0.0990	0.706	A	W
ID	1	0.7230	0.0380	0.516	A	W
IS	1	1.5500	0.1600	1.107	A	A
IT	1	1.5600	0.0500	1.114	W	A
JE	1	1.4700	0.1800	1.050		A
KA	1	1.5200	0.0600	1.086	A	A
KO	1	1.2500	0.0600	0.893	A	A
KR	1	1.3000	0.0300	0.929		A
LL	1	1.3100	0.0162	0.936	A	A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

Matrix: AI Air Filter Bq / filter  
Radionuclide: GROSS ALPHA

EML Value: 1.4000  
EML Error: 0.1000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
LM	1	1.3000	0.2000	0.929		A
LN	1	1.5300	0.0600	1.093		A
LV	1	0.8000	0.0220	0.571	W	W
ME	1	1.9800	0.0500	1.414	W	W
NS	1	1.1700	0.0900	0.836		W
OB	1	1.3700	0.1400	0.979		A
OD	1	1.2300	0.0400	0.879		A
OK	1	1.0990	0.0530	0.785		W
OT	1	1.3000	0.1000	0.929		A
OU	1	3.1500	0.1400	2.250		N
PA	1	1.2800	0.0800	0.914		A
RC	1	1.3300	0.0700	0.950		A
RD	1	1.0500	0.0300	0.750		W
RE	1	1.2600	0.1900	0.900		A
RK	1	0.7300	0.0700	0.521		W
RK	2	0.7900	0.0700	0.564		W
RL	1	1.3600	0.1200	0.971		A
SA	1	1.4700	0.1900	1.050		A
SR	1	2.1700	0.2000	1.550		W
SW	1	1.1600	0.0400	0.829		W
TI	1	1.5000	0.1000	1.071		A
TM	1	0.6400	0.1030	0.457		N
TN	1	1.8050	0.0926	1.289		A
TO	1	1.9000	1.2000	1.357		W
TP	1	1.1080	0.0260	0.791		W
TW	1	1.4000	0.0300	1.000		A
TX	1	1.4100	0.0500	1.007		A
UC	1	1.3300	0.0600	0.950		A
UP	1	1.3700	0.0700	0.979		A
UY	1	1.7800	0.1000	1.271		A
WA	1	1.5000	0.1000	1.071		A
WC	1	1.3800	0.0300	0.986		A
WS	1	1.4000	0.0270	1.000		A
WV	1	1.1500	0.0270	0.821		W
YA	1	1.2147	0.0149	0.868		A

Total Number Reported: 76

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

Matrix: AI Air Filter Bq / filter  
Radionuclide: GROSS BETA

EML Value: 1.9600  
EML Error: 0.3000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AF	1	2.2000	0.1000	1.122	N	A
AL	1	1.5800	0.0400	0.806		W
AM	1	2.9900	0.0500	1.526	A	W
AR	1	2.4000	0.3100	1.224	A	A
AU	1	2.5400	0.1400	1.296	A	A
BC	1	1.8100	0.0300	0.923	A	A
BE	1	1.8900	0.0700	0.964	A	A
BL	1	1.8370	0.0560	0.937	A	A
BN	1	1.7900	0.0200	0.913	A	A
BN	2	1.7800	0.0200	0.908	A	A
BN	3	1.7400	0.0200	0.888	A	A
BP	1	2.0500	0.0500	1.046	A	A
BS	1	2.2600	0.0100	1.153	A	A
BU	1	2.3000	0.2000	1.173	A	A
BX	1	1.8800	0.0300	0.959	A	A
CA	1	2.0300	0.1000	1.036	A	A
CD	1	1.0000	0.1000	0.510		N
CH	1	2.0800	0.0160	1.061	A	A
CS	1	3.0000	0.2300	1.531	W	W
DC	1	1.7700	0.3490	0.903	A	A
DH	1	2.1100	0.1560	1.077	A	A
DP	1	1.6000	0.0400	0.816	A	W
DP	2	1.5000	0.0400	0.765	A	W
DP	3	1.7000	0.0400	0.867	A	W
FG	1	1.9910	0.0900	1.016	A	A
FL	1	2.3000	0.0400	1.173	A	A
FR	1	2.1000	0.3000	1.071	A	A
GC	1	2.0000	0.0400	1.020		A
GE	1	1.9351	0.0037	0.987	A	A
GP	1	1.9000	0.2000	0.969	N	A
GT	1	2.3000	0.1000	1.173	A	A
HC	1	1.7100	0.1700	0.872	A	W
ID	1	2.3730	0.1190	1.211	A	A
IS	1	2.1700	0.2200	1.107	A	A
IT	1	2.3200	0.0400	1.184	A	A
JE	1	2.2500	0.2000	1.148		A
KA	1	2.1432	0.0513	1.093	A	A
KO	1	1.9600	0.0700	1.000	A	A
KR	1	2.1200	0.0300	1.082		A
LL	1	2.5000	0.0197	1.276	A	A
LM	1	2.1000	0.4000	1.071		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

Matrix: AI Air Filter Bq / filter  
Radionuclide: GROSS BETA

EML Value: 1.9600  
EML Error: 0.3000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
LN	1	2.1400	0.0800	1.092		A
LV	1	0.0990	0.0310	0.051	W	N
ME	1	2.6200	0.0500	1.337	A	A
NP	1	2.1500	0.0200	1.097		A
NS	1	2.0900	0.0900	1.066		A
OB	1	1.8400	0.1800	0.939		A
OD	1	2.4600	0.0600	1.255		A
OK	1	2.0240	0.0600	1.033		A
OT	1	2.2000	0.1000	1.122		A
OU	1	2.2700	0.0900	1.158		A
PA	1	2.2000	0.0800	1.122		A
RC	1	1.9900	0.1000	1.015		A
RD	1	1.0100	0.0500	0.515		N
RE	1	2.2500	0.3200	1.148		A
RK	1	1.8400	0.1000	0.939		A
RL	1	2.6000	0.0700	1.327		A
SA	1	2.1200	0.2400	1.082		A
SR	1	2.1400	0.1400	1.092		A
SW	1	2.1100	0.0600	1.077		A
TI	1	1.9000	0.1000	0.969		A
TM	1	1.3800	0.1390	0.704		N
TN	1	2.0520	0.0848	1.047		A
TO	1	2.7000	0.5000	1.378		A
TP	1	2.1120	0.0450	1.078		A
TW	1	2.2800	0.0300	1.163		A
TX	1	1.8900	0.0800	0.964		A
UC	1	2.7500	0.0800	1.403		A
UP	1	2.1000	0.0700	1.071		A
UY	1	2.2600	0.1000	1.153		A
WA	1	2.3000	0.1000	1.173		A
WC	1	2.6200	0.0500	1.337		A
WP	1	2.1100	0.0740	1.077		A
WV	1	2.1800	0.0350	1.112		A
YA	1	1.9560	0.0204	0.998		A

Total Number Reported: 75

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

Matrix: AI Air Filter Bq / filter  
Radionuclide: MN54

EML Value: 5.4400  
EML Error: 0.4854

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AC	1	5.9100	0.2400	1.086		A
AF	1	5.2000	1.2000	0.956	A	A
AG	1	5.6400	0.4100	1.037	A	A
AI	1	6.8300	0.1090	1.256		W
AL	1	4.5664	0.2710	0.839		W
AM	1	4.8200	0.1000	0.886	W	A
AN	1	5.9400	0.2300	1.092	A	A
AR	1	6.1240	0.5620	1.126	A	A
AR	2	5.6000	0.5100	1.029	A	A
AR	3	6.2000	0.5200	1.140	A	A
AU	1	7.3900	0.7800	1.358	W	W
BA	1	6.3400	0.3100	1.165	A	W
BC	1	9.1800	0.5200	1.688	A	N
BE	1	5.6000	1.0000	1.029	A	A
BL	1	5.9000	0.3000	1.085	A	A
BN	1	7.0400	0.2300	1.294	W	W
BN	2	7.5200	0.2300	1.382	W	N
BN	3	7.5100	0.2300	1.381	W	N
BP	1	5.2800	0.2700	0.971	A	A
BQ	1	5.2000	0.2000	0.956	A	A
BS	1	6.7800	0.1100	1.246	A	W
BU	1	5.5000	1.0000	1.011	A	A
BX	1	8.7300	0.5200	1.605	A	N
CA	1	5.2000	0.2000	0.956	A	A
CD	1	5.0000	0.2000	0.919		A
CH	1	5.0900	0.2530	0.936	A	A
CL	1	5.6500	0.4800	1.039	A	A
CN	1	5.1300	0.2800	0.943	N	A
CO	1	5.7000	0.2000	1.048	A	A
CR	1	4.7000	0.2000	0.864	W	A
CS	1	2.6660	0.1300	0.490	W	N
DC	1	6.0600	2.4100	1.114	W	A
DH	1	5.3600	0.1390	0.985		A
EG	1	5.5600	0.3100	1.022	A	A
EL	1	12.2000	0.6000	2.243		N
EP	1	5.5200	0.4360	1.015		A
FG	1	5.3300	2.2000	0.980	A	A
FJ	1	8.7300	0.5400	1.605		N
FL	1	5.9500	0.0800	1.094	A	A
FM	1	6.0200	0.0600	1.107	A	A
FN	1	5.0300	0.5600	0.925	N	A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

Matrix: AI Air Filter Bq / filter  
Radionuclide: MN54

EML Value: 5.4400  
EML Error: 0.4854

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
FR	1	4.8800	1.0000	0.897	N	A
GA	1	5.6200	0.5600	1.033	A	A
GE	1	5.3965	0.5975	0.992	A	A
GP	1	5.3000	0.6000	0.974	W	A
GT	1	5.0000	0.8000	0.919	A	A
HU	1	5.2400	0.1600	0.963	N	A
IA	1	4.3000	0.0600	0.790		W
IA	2	4.3100	0.0700	0.792		W
IA	3	4.2700	0.0600	0.785		W
ID	1	7.3430	0.3810	1.350	A	W
IE	1	5.5400	0.2600	1.018	A	A
IL	1	5.7000	0.2000	1.048		A
IN	1	5.3000	0.2000	0.974	A	A
IS	1	5.5400	0.6800	1.018	N	A
IT	1	5.7700	0.1500	1.061	A	A
JL	1	5.2600	0.7000	0.967	W	A
KO	1	5.4510	0.0870	1.002	A	A
LA	1	5.7700	0.4700	1.061	A	A
LA	2	5.8600	0.4800	1.077	A	A
LA	3	5.6600	0.4700	1.040	A	A
LL	1	5.7800	0.2300	1.063	A	A
LM	1	8.8000	0.6500	1.618		N
LN	1	5.9000	0.3000	1.085		A
LV	1	4.9800	0.4000	0.915	A	A
ME	1	6.7400	0.4000	1.239	W	W
MH	1	6.7100	0.2200	1.233		W
ML	1	6.1900	0.6000	1.138	W	A
MS	1	5.0600	0.5100	0.930	A	A
NA	1	5.6600	0.1670	1.040		A
NL	1	5.2800	0.5290	0.971		A
NP	1	6.3000	0.3000	1.158		W
NS	1	6.0400	0.0800	1.110		A
OD	1	5.6800	0.3700	1.044		A
OL	1	6.2500	0.2500	1.149		A
OT	1	6.3000	0.2000	1.158		W
OU	1	6.1400	1.0200	1.129		A
PO	1	5.5000	0.1000	1.011		A
RA	1	5.7100	0.2300	1.050		A
RC	1	5.8500	0.5800	1.075		A
RE	1	5.4400	0.6500	1.000		A
RI	1	5.8700	1.1700	1.079		A
RL	1	5.1200	1.3000	0.941		A
SA	1	5.7000	0.9000	1.048		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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**Matrix:** AI Air Filter Bq / filter  
**Radionuclide:** MN54

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**EML Value:** 5.4400  
**EML Error:** 0.4854

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
SK	1	5.1000	0.2000	0.938		A
SR	1	5.5000	0.2000	1.011		A
SW	1	5.0600	0.1000	0.930		A
TE	1	6.1773	0.2015	1.136		A
TI	1	5.9900	0.6000	1.101		A
TM	1	5.9600	0.3350	1.096		A
TN	1	5.8180	0.7765	1.069		A
TO	1	7.3000	1.3000	1.342		W
TP	1	5.7650	0.2520	1.060		A
TW	1	5.4000	0.2000	0.993		A
TX	1	6.1200	0.1000	1.125		A
UP	1	7.4200	0.6260	1.364		W
UY	1	5.6000	0.6000	1.029		A
WA	1	6.3000	0.3000	1.158		W
WC	1	5.5100	0.7700	1.013		A
WI	1	5.4700	0.5600	1.006		A
WP	1	5.8100	0.2500	1.068		A
YA	1	5.4261	0.0962	0.997		A
YU	1	6.6000	0.5000	1.213		W

**Total Number Reported: 103**

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: AI Air Filter Bq / filter  
Radionuclide: PU238

EML Value: 0.0695  
EML Error: 0.0032

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AC	1	0.0618	0.0081	0.889		A
AG	1	0.0600	0.0100	0.863	A	W
AI	1	0.0889	0.0059	1.279		W
AN	1	0.0720	0.0030	1.036	A	A
AR	1	0.0550	0.0100	0.791	A	W
AR	2	0.0550	0.0110	0.791	A	W
AU	1	0.2360	0.0160	3.396	A	N
BE	1	0.0650	0.0100	0.935	A	A
BL	1	0.0760	0.0160	1.094	W	A
BL	2	0.0650	0.0120	0.935	W	A
BM	1	0.0710	0.0110	1.022	W	A
BP	1	0.0665	0.0028	0.957	A	A
BU	1	0.0680	0.0060	0.978	N	A
BX	1	0.0818	0.0085	1.177	A	W
CH	1	0.0663	0.0024	0.954	A	A
CL	1	0.0800	0.0200	1.151	N	W
EG	1	0.0680	0.0060	0.978	A	A
EI	1	0.0600	0.0080	0.863		W
EP	1	0.0705	0.0061	1.014		A
GA	1	0.0780		1.122	W	A
GE	1	0.0657	0.0102	0.945	A	A
GP	1	0.0600	0.0060	0.863	N	W
GT	1	0.0750	0.0200	1.079	A	A
ID	1	0.3570	0.0660	5.137	A	N
IE	1	0.0580	0.0080	0.835	A	W
IT	1	0.0700	0.0100	1.007	A	A
KO	1	0.0615	0.0024	0.885		A
LA	1	0.0680	0.0080	0.978	A	A
LA	2	0.0680	0.0120	0.978	A	A
LA	3	0.0660	0.0080	0.950	A	A
LL	1	0.0690	0.0077	0.993	A	A
ML	1	0.0700	0.0050	1.007	A	A
NL	1	0.0590	0.0174	0.849		W
NM	1	0.0687	0.0023	0.988		A
OT	1	0.0680	0.0070	0.978		A
RE	1	0.0680	0.0080	0.978		A
RI	1	0.0688	0.0083	0.990		A
SR	1	0.0660	0.0080	0.950		A
SW	1	0.4200	0.0400	6.043		N
TE	1	0.0678	0.0233	0.976		A
TI	1	0.0480	0.0130	0.691		N

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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**Matrix:** AI Air Filter Bq / filter  
**Radionuclide:** PU238

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**EML Value:** 0.0695  
**EML Error:** 0.0032

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
TM	1	0.0637	0.0043	0.917		A
TN	1	0.0557	0.0061	0.801		W
TW	1	0.0720	0.0050	1.036		A
TX	1	0.0650	0.0040	0.935		A
UY	1	0.0640	0.0110	0.921		A
WA	1	0.0650	0.0200	0.935		A
WC	1	0.0833	0.0150	1.199		W
WI	1	0.0720	0.0150	1.036		A
YA	1	0.0746	0.0019	1.073		A

**Total Number Reported: 50**

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: AI Air Filter Bq / filter  
Radionuclide: PU239

EML Value: 0.0624  
EML Error: 0.0018

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AC	1	0.0673	0.0085	1.079		A
AF	1	0.0500	0.0300	0.802	W	W
AG	1	0.0630	0.0110	1.010		A
AI	1	0.0803	0.0054	1.288		W
AN	1	0.0690	0.0050	1.107		A
AR	1	0.0740	0.0120	1.187	A	W
AR	2	0.0670	0.0120	1.075	A	A
AU	1	0.1190	0.0100	1.909	A	N
BE	1	0.0630	0.0100	1.010		A
BL	1	0.0570	0.0160	0.914		A
BL	2	0.0830	0.0120	1.331		W
BM	1	0.0720	0.0110	1.155		A
BP	1	0.0677	0.0028	1.086	A	A
BU	1	0.0620	0.0060	0.994		A
BX	1	0.0596	0.0070	0.956		A
CH	1	0.0670	0.0031	1.075		A
CL	1	0.0700	0.0200	1.123		A
EG	1	0.0620	0.0060	0.994		A
EI	1	0.0700	0.0070	1.123		A
EP	1	0.0686	0.0059	1.100		A
GA	1	0.0830		1.331		W
GE	1	0.0714	0.0108	1.145		A
GP	1	0.0630	0.0060	1.010	A	A
GT	1	0.0660	0.0200	1.059		A
ID	1	0.2770	0.0380	4.443		N
IE	1	0.0710	0.0040	1.139	A	A
IT	1	0.0640	0.0100	1.026	A	A
KO	1	0.0584	0.0023	0.937		A
LA	1	0.0610	0.0070	0.978	A	A
LA	2	0.0710	0.0080	1.139	A	A
LA	3	0.0670	0.0080	1.075	A	A
LL	1	0.0654	0.0074	1.049	A	A
ML	1	0.0700	0.0050	1.123		A
NL	1	0.0624	0.0177	1.001		A
NM	1	0.0691	0.0023	1.108		A
OT	1	0.0700	0.0070	1.123		A
RE	1	0.0580	0.0070	0.930		A
RI	1	0.0744	0.0087	1.193		W
SN	1	0.0620	0.0110	0.994		A
SR	1	0.0670	0.0080	1.075	W	A
SW	1	0.0800	0.0100	1.283		W

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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**Matrix:** AI Air Filter Bq / filter  
**Radionuclide:** PU239

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**EML Value:** 0.0624  
**EML Error:** 0.0018

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
TE	1	0.0674	0.0148	1.081		A
TI	1	0.0410	0.0120	0.658		N
TM	1	0.0554	0.0039	0.889		W
TN	1	0.0521	0.0059	0.836		W
TW	1	0.0650	0.0050	1.043		A
TX	1	0.0650	0.0050	1.043		A
UY	1	0.0600	0.0100	0.962		A
WA	1	0.0750	0.0180	1.203		W
WC	1	0.0629	0.0120	1.009		A
WI	1	0.0595	0.0130	0.954		A
YA	1	0.0659	0.0018	1.057		A

**Total Number Reported: 52**

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: AI Air Filter Bq / filter  
Radionuclide: SB125

EML Value: 12.1600  
EML Error: 1.1510

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AC	1	12.5000	1.2000	1.028		A
AF	1	12.5000	3.1000	1.028	W	A
AG	1	13.2800	0.9100	1.092	A	A
AI	1	14.4000	0.1910	1.184		W
AL	1	1.7303	0.5170	0.142		N
AM	1	8.0400	0.1900	0.661	W	W
AN	1	13.7900	0.2500	1.134	W	A
AR	1	12.0700	1.4400	0.993	A	A
AR	2	13.5000	1.7400	1.110	A	A
AR	3	12.1400	1.4400	0.998	A	A
AU	1	15.5000	1.9000	1.275	A	W
BA	1	14.3000	0.3300	1.176	A	A
BC	1	17.9000	1.0000	1.472	A	N
BE	1	12.3000	0.6000	1.012	A	A
BL	1	11.3000	0.7000	0.929	A	A
BN	1	16.9400	0.3700	1.393	N	W
BN	2	17.7500	0.3700	1.460	N	N
BN	3	16.9900	0.3700	1.397	N	W
BP	1	12.5700	0.8300	1.034	W	A
BQ	1	2.7000	0.3000	0.222	A	N
BS	1	2.9100	0.1800	0.239	W	N
BU	1	12.0000	1.0000	0.987	A	A
BX	1	20.2000	1.0000	1.661	A	N
CA	1	11.5000	0.5000	0.946	A	A
CD	1	10.5000	0.3000	0.863		A
CH	1	11.6000	0.5550	0.954	A	A
CL	1	13.1000	0.6900	1.077	A	A
CN	1	12.4300	0.7900	1.022	W	A
CO	1	12.4000	0.3000	1.020	A	A
CR	1	10.0000	0.6000	0.822	W	W
CS	1	5.7930	0.1800	0.476	W	N
DC	1	13.7000	2.0800	1.127	W	A
DH	1	12.2400	0.3740	1.007		A
EG	1	13.8000	0.7000	1.135	A	A
EL	1	28.5000	1.4000	2.344		N
EP	1	13.3000	1.0770	1.094		A
FG	1	12.3900	3.9000	1.019	A	A
FJ	1	14.8500	0.1900	1.221		W
FL	1	11.1000	0.3000	0.913	A	A
FM	1	12.8000	0.1000	1.053	A	A
FN	1	13.3000	0.7000	1.094	W	A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

**Matrix:** AI Air Filter Bq / filter  
**Radionuclide:** SB125

**EML Value:** 12.1600  
**EML Error:** 1.1510

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
FR	1	10.6000	1.5000	0.872	W	A
GA	1	12.4000	2.3000	1.020	W	A
GE	1	13.2201	1.4301	1.087	A	A
GP	1	10.0000	1.1000	0.822	W	W
GT	1	9.7000	0.9000	0.798	W	W
HU	1	10.8000	0.2000	0.888	A	A
IA	1	12.6100	0.1400	1.037		A
IA	2	12.1000	0.1500	0.995		A
IA	3	12.1400	0.1400	0.998		A
ID	1	17.1100	0.9600	1.407	A	W
IE	1	12.0000	0.6000	0.987	W	A
IL	1	11.3000	0.2000	0.929		A
IN	1	13.3000	1.0000	1.094	A	A
IS	1	12.8000	1.7300	1.053	W	A
IT	1	12.8000	1.0000	1.053	N	A
JL	1	10.4000	0.8000	0.855	A	A
KO	1	13.3500	0.1800	1.098	A	A
LA	1	13.8000	1.1000	1.135	A	A
LA	2	13.2000	1.1000	1.086	A	A
LA	3	13.6000	1.1000	1.118	A	A
LL	1	14.6000	0.4380	1.201	A	W
LM	1	17.1000	1.3000	1.406		W
LN	1	10.3000	0.8000	0.847		A
LV	1	10.8000	0.1000	0.888		A
ME	1	13.8000	0.6200	1.135	W	A
MH	1	16.3400	0.4600	1.344		W
ML	1	14.5800	1.5000	1.199	W	W
MS	1	12.3000	1.2300	1.012	A	A
NA	1	12.2000	0.3450	1.003		A
NL	1	12.4000	0.9160	1.020		A
NP	1	13.4000	0.6000	1.102		A
NS	1	13.2600	0.4900	1.090		A
OD	1	13.7800	0.4600	1.133		A
OL	1	14.7200	0.4300	1.211		W
OT	1	14.0000	1.0000	1.151		A
OU	1	14.4000	5.3000	1.184		W
PO	1	12.3000	0.3000	1.012		A
RA	1	12.5000	0.3800	1.028		A
RC	1	13.3000	1.5000	1.094		A
RE	1	12.0000	1.5000	0.987		A
RI	1	10.2000	2.0900	0.839		A
RL	1	12.2000	0.1800	1.003		A
SA	1	12.9000	2.2000	1.061		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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**Matrix:** AI Air Filter Bq / filter  
**Radionuclide:** SB125

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**EML Value:** 12.1600  
**EML Error:** 1.1510

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
SK	1	12.8000	0.5000	1.053		A
SR	1	13.3000	1.8000	1.094		A
SW	1	12.1000	0.3000	0.995		A
TE	1	13.5425	0.5605	1.114		A
TI	1	13.7000	1.4000	1.127		A
TM	1	14.5000	0.8520	1.192		W
TN	1	11.7500	2.0300	0.966		A
TO	1	16.6000	1.2000	1.365		W
TP	1	12.9110	0.3580	1.062		A
TW	1	12.0000	0.2000	0.987		A
TX	1	8.4700	0.1500	0.697		W
UP	1	17.4000	1.6800	1.431		N
UY	1	12.8000	0.8000	1.053		A
WA	1	14.9000	0.5000	1.225		W
WC	1	7.0700	0.5200	0.581		N
WI	1	12.1000	0.8100	0.995		A
WP	1	12.8000	0.6300	1.053		A
YA	1	6.2715	0.1665	0.516		N
YU	1	15.5000	0.4000	1.275		W

**Total Number Reported: 103**

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: AI Air Filter Bq / filter  
Radionuclide: SR90

EML Value: 1.7583  
EML Error: 0.0422

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AF	1	2.5000	0.2000	1.422	N	W
AG	1	1.5000	0.2700	0.853	A	A
AN	1	1.5800	0.0100	0.899	A	A
AR	1	15.9700	4.5000	9.083	W	N
AR	2	19.3100	4.8400	10.982	W	N
AR	3	15.8300	4.3300	9.003	W	N
BC	1	1.4500	0.1100	0.825	A	W
BE	1	1.6900	0.1400	0.961	A	A
BL	1	1.6790	0.3440	0.955	A	A
BM	1	1.5800	0.0400	0.899	A	A
BP	1	1.4700	0.1200	0.836	A	W
BX	1	1.6200	0.1300	0.921	A	A
CH	1	1.6300	0.1120	0.927	A	A
CL	1	0.9900	0.2300	0.563	W	N
EG	1	1.6600	0.0500	0.944	A	A
GE	1	1.0255	0.0709	0.583	N	N
GP	1	2.2000	0.3000	1.251	N	A
GT	1	1.5000	0.1000	0.853	A	A
IE	1	1.6300	0.2600	0.927	A	A
IS	1	2.0500	0.0200	1.166	W	A
IT	1	1.7500	0.1500	0.995	A	A
KO	1	4.3100	0.2400	2.451		N
NA	1	1.5700	0.1380	0.893	N	A
OT	1	1.0000	0.1000	0.569		N
RE	1	1.7200	0.0900	0.978		A
RI	1	2.0200	0.1160	1.149		A
SR	1	1.2100	0.1000	0.688		W
SW	1	3.2400	0.1900	1.843		W
TE	1	1.8200	0.2100	1.035		A
TI	1	1.6000	0.3000	0.910		A
TM	1	0.9780	0.1070	0.556		N
TN	1	1.5720	0.0716	0.894		A
TP	1	1.8170	0.0710	1.033		A
TW	1	1.7300	0.0900	0.984		A
UY	1	1.2600	0.1000	0.717		W
WA	1	1.7300	0.1600	0.984		A
WC	1	1.6900	0.2500	0.961		A
WI	1	1.7100	0.1500	0.973		A
YA	1	1.5596	0.1425	0.887		A

Total Number Reported: 39

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.



## QAP 48 Results by Nuclide

Matrix: AI Air Filter Bq / filter  
Radionuclide: U234

EML Value: 0.0308  
EML Error: 0.0029

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AC	1	0.0256	0.0024	0.831		W
AF	1	0.0370	0.0100	1.201		A
AG	1	0.0447	0.0076	1.451	A	W
AI	1	0.0292	0.0015	0.948		A
AM	1	0.0640	0.0140	2.078	N	N
AN	1	0.0330	0.0030	1.071	A	A
AU	1	0.0590	0.0090	1.916	A	W
BC	1	0.0518	0.0063	1.682	W	W
BE	1	0.0320	0.0100	1.039	A	A
BL	1	0.0350	0.0007	1.136	A	A
BM	1	0.0340	0.0060	1.104	A	A
BU	1	0.0330	0.0050	1.071		A
BX	1	0.0514	0.0089	1.669	W	W
CH	1	0.0351	0.0045	1.140	A	A
CL	1	0.0400	0.0100	1.299	W	A
EG	1	0.0330	0.0050	1.071	A	A
EI	1	0.0400	0.0400	1.299		A
GA	1	0.0430		1.396	A	W
GE	1	0.0341	0.0056	1.107	A	A
GP	1	0.0320	0.0040	1.039	W	A
IE	1	0.0390	0.0060	1.266	A	A
IT	1	0.0374	0.0005	1.214	A	A
KO	1	0.0354	0.0013	1.149		A
LL	1	0.0088	0.0021	0.284		N
ML	1	0.0400	0.0030	1.299	A	A
NA	1	0.0480	0.0060	1.558		W
NL	1	0.0353	0.0110	1.146		A
RA	1	0.0340	0.0050	1.104		A
RE	1	0.0320	0.0050	1.039		A
SN	1	0.0390	0.0070	1.266		A
SR	1	0.0320	0.0050	1.039		A
TM	1	0.0305	0.0030	0.990		A
TN	1	0.0337	0.0055	1.095		A
TW	1	0.0340	0.0030	1.104		A
WA	1	0.0420	0.0180	1.364		A
WC	1	0.0387	0.0085	1.256		A
WI	1	0.0325	0.0080	1.055		A
YA	1	0.0347	0.0018	1.127		A

Total Number Reported: 38

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

Matrix: AI Air Filter Bq / filter  
Radionuclide: U238

EML Value: 0.0305  
EML Error: 0.0013

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AC	1	0.0268	0.0025	0.879		W
AF	1	0.0300	0.0100	0.984		A
AG	1	0.0352	0.0066	1.155	A	A
AI	1	0.0266	0.0014	0.873		W
AM	1	0.0950	0.0110	3.117	N	N
AN	1	0.0330	0.0030	1.083	A	A
AU	1	0.0640	0.0090	2.100	A	W
BC	1	0.0429	0.0074	1.407	W	W
BE	1	0.0300	0.0090	0.984	A	A
BL	1	0.0341	0.0007	1.119	A	A
BM	1	0.0340	0.0060	1.115	A	A
BP	1	0.0327	0.0011	1.073	W	A
BU	1	0.0320	0.0040	1.050		A
BX	1	0.0374	0.0096	1.227	W	A
CH	1	0.0323	0.0032	1.060	A	A
CL	1	0.0400	0.0100	1.312	A	A
EG	1	0.0330	0.0050	1.083	A	A
EI	1	0.0300	0.0400	0.984		A
FL	1	0.8000	0.1000	26.247		N
GA	1	0.0360		1.181	A	A
GE	1	0.0348	0.0057	1.142	A	A
GP	1	0.0330	0.0040	1.083	W	A
GT	1	0.0340	0.0100	1.115	A	A
ID	1	0.0320	0.0020	1.050		A
IE	1	0.0310	0.0030	1.017	A	A
IT	1	0.0349	0.0022	1.145	A	A
KO	1	0.0331	0.0012	1.086		A
LL	1	0.0093	0.0027	0.305	A	N
ML	1	0.0400	0.0030	1.312	A	A
NA	1	0.0360	0.0050	1.181		A
NL	1	0.0404	0.0114	1.325		W
RA	1	0.0350	0.0050	1.148		A
RE	1	0.0330	0.0050	1.083		A
SN	1	0.0400	0.0070	1.312		A
SR	1	0.0320	0.0050	1.050		A
TE	1	0.3915	0.0752	12.844		N
TM	1	0.0313	0.0029	1.027		A
TN	1	0.0339	0.0055	1.111		A
TW	1	0.0360	0.0030	1.181		A
WA	1	0.0330	0.0160	1.083		A
WC	1	0.0320	0.0077	1.050		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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**Matrix:** AI Air Filter Bq / filter  
**Radionuclide:** U238

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**EML Value:** 0.0305  
**EML Error:** 0.0013

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
WI	1	0.0340	0.0080	1.115		A
YA	1	0.0356	0.0018	1.168		A

**Total Number Reported:** 43

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: AI Air Filter Bq / filter  
Radionuclide: ug U

EML Value: 2.4718  
EML Error: 0.1008

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AG	1	2.9900	0.4100	1.210	A	A
AR	1	3.1050		1.256	A	W
AR	2	2.9200		1.181	A	A
AR	3	3.0180		1.221	A	A
BE	1	2.7000	0.0000	1.092	A	A
BQ	1	2.6000	0.1000	1.052	A	A
BU	1	2.7000	0.5000	1.092		A
CH	1	2.7000	0.0515	1.092	A	A
GE	1	2.9330	0.0630	1.187	A	A
IE	1	2.4800	0.2400	1.003	A	A
IS	1	3.2200	0.5600	1.303	W	W
IT	1	2.6900	0.0100	1.088	A	A
KO	1	2.6800	0.0985	1.084		A
LA	1	4.7800	0.4800	1.934		N
LA	2	5.5500	0.5600	2.245		N
LA	3	3.7800	0.3800	1.529		W
RA	1	2.9500	0.2000	1.193		A
RI	1	2.8500	0.0815	1.153		A
SA	1	3.0300	0.0800	1.226		A
SW	1	2.6500		1.072		A
TI	1	2.3000	0.3000	0.930		A
TM	1	3.0400	0.1560	1.230		A
TN	1	2.7050	0.3475	1.094		A
UP	1	2.6000	0.3000	1.052		A
YP	1	2.4000	0.1150	0.971		A

Total Number Reported: 25

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

Matrix: SO Soil Bq / kg  
Radionuclide: AM241

EML Value: 2.6775  
EML Error: 0.2117

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AC	1	30.3000	0.3000	11.317		N
AF	1	38.9000	16.7000	14.528	A	N
AG	1	2.6200	0.3900	0.979	A	A
AI	1	6.2700	1.0100	2.342	N	N
AI	2	4.7700	0.5100	1.782	N	W
AM	1	4.2600	0.9800	1.591	A	W
AN	1	3.0300	0.3900	1.132	A	A
AR	1	0.5900	2.1100	0.220	A	N
AR	2	0.9600	2.2900	0.359	A	N
AT	1	4.0500	1.2200	1.513		W
AU	1	2.4800	0.5000	0.926	A	A
BE	1	2.8800	0.3400	1.076	A	A
BM	1	3.3800	1.7100	1.262	A	A
BP	1	2.9600	0.4200	1.106	A	A
BU	1	2.7000	0.4000	1.008	A	A
BX	1	2.3100	1.1000	0.863	W	A
CL	1	3.0300	0.7300	1.132	A	A
CS	1	3.2200	0.3000	1.203	A	A
EG	1	2.6500	0.3900	0.990	A	A
EL	1	3.3000	0.2000	1.232		A
EP	1	2.7200	0.2450	1.016		A
FG	1	2.0000	0.5000	0.747	W	W
FJ	1	3.0000	0.5000	1.120		A
FL	1	2.3000	0.4000	0.859	A	A
FR	1	2.9200	0.9000	1.091	A	A
FS	1	3.0000	0.6000	1.120	A	A
GA	1	3.1400		1.173	A	A
GT	1	3.1000	2.4000	1.158	W	A
ID	1	2.3000	0.3010	0.859	A	A
IE	1	3.2100	0.4800	1.199	A	A
IN	1	2.8200	0.6000	1.053	A	A
IS	1	2.4700	2.0600	0.923	A	A
IT	1	2.6700	0.2500	0.997	A	A
KO	1	2.9100	0.1700	1.087		A
LA	1	2.7000	0.3000	1.008	A	A
LA	2	3.0300	0.3200	1.132	A	A
LA	3	3.0500	0.3800	1.139	A	A
LL	1	3.8700	1.3000	1.445	W	A
LV	1	4.2000	0.4800	1.569	W	W
MA	1	3.6000	1.9000	1.345	A	A
ME	1	3.5000	0.4400	1.307	A	A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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Matrix: SO Soil Bq / kg  
Radionuclide: AM241

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EML Value: 2.6775  
EML Error: 0.2117

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
ML	1	2.7100	0.3000	1.012	A	A
NM	1	2.9400	0.3300	1.098		A
OT	1	2.8000	0.7000	1.046		A
RE	1	2.3400	0.4400	0.874		A
SK	1	3.8500	0.2300	1.438		A
SN	1	2.6490	2.0040	0.989		A
SW	1	4.6900	1.8200	1.752		W
TE	1	1.6700	1.1100	0.624		W
TI	1	3.4000	1.5000	1.270		A
TM	1	3.5500	0.5360	1.326		A
TN	1	2.2650	0.6993	0.846		A
TO	1	7.8000	3.5000	2.913		N
TW	1	2.8000	0.1000	1.046		A
TX	1	2.6750	0.2180	0.999		A
UP	1	3.3300	0.9750	1.244		A
UY	1	2.6000	1.1000	0.971		A
WA	1	2.4200	0.2000	0.904		A
WC	1	4.1800	1.6700	1.561		W
WS	1	3.5000	0.7400	1.307		A
YA	1	2.2163	0.1196	0.828		A

**Total Number Reported: 61**

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

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Matrix: SO Soil Bq / kg  
Radionuclide: Bq U

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EML Value: 64.6000  
EML Error: 2.8583

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AG	1	59.4000	5.1000	0.920	A	A
AI	1	67.0000	3.3500	1.037		A
AM	1	78.4300	15.5400	1.214	A	W
BL	1	67.6000		1.046	A	A
BL	2	66.4000	1.5000	1.028	A	A
BU	1	52.2000	5.4000	0.808		A
CL	1	60.5000	12.1000	0.937	W	A
FR	1	36.0400	1.5000	0.558	A	A
ID	1	55.4000	2.8700	0.858	N	A
IE	1	58.0000	2.1000	0.898		A
KO	1	60.5000	1.1600	0.937		A
NF	1	79.9250	2.7190	1.237		W
OT	1	45.0000	9.0000	0.697		A
TX	1	68.1360	2.0610	1.055		A
UY	1	48.7000	8.5000	0.754		A
WA	1	67.0000	4.4000	1.037		A

Total Number Reported: 16

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: SO Soil Bq / kg  
Radionuclide: CS137

EML Value: 329.5000  
EML Error: 9.2600

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AC	1	350.0000	2.0000	1.062		A
AF	1	270.1000	25.9000	0.820	A	W
AG	1	385.0000	25.0000	1.168	A	A
AI	1	507.0000	8.5400	1.539	A	N
AL	1	570.1700	11.3000	1.730		N
AM	1	349.5900	2.3900	1.061	A	A
AN	1	371.0000	11.0000	1.126	A	A
AR	1	382.2000	24.2000	1.160	W	A
AR	2	379.6000	24.0000	1.152	W	A
AR	3	385.2000	24.3000	1.169	W	A
AT	1	431.4000	43.1000	1.309		W
AU	1	366.0000	18.0000	1.111	A	A
BA	1	351.0000	16.0000	1.065	A	A
BC	1	385.0000	26.0000	1.168	A	A
BE	1	386.0000	30.0000	1.171	A	A
BL	1	351.0000	13.0000	1.065	A	A
BM	1	359.0000	3.9000	1.090	A	A
BN	1	325.3400	1.5300	0.987	A	A
BN	2	328.8200	1.5300	0.998	A	A
BN	3	325.9000	1.5300	0.989	A	A
BP	1	329.0000	4.0000	0.998	A	A
BQ	1	230.0000	9.0000	0.698	A	N
BS	1	347.4100	1.9800	1.054	A	A
BU	1	290.0000	30.0000	0.880	A	W
BX	1	389.0000	26.0000	1.181	A	A
CD	1	388.0000	6.0000	1.178		A
CL	1	323.0000	11.1000	0.980	A	A
CN	1	366.8000	18.0000	1.113	A	A
CO	1	371.0000	17.0000	1.126	A	A
CR	1	428.8000	17.6000	1.301	A	W
CS	1	354.3000	15.3100	1.075	A	A
DC	1	466.0000	149.0000	1.414	W	N
DH	1	333.2000	3.3300	1.011	A	A
EG	1	391.0000	21.0000	1.187	A	A
EL	1	402.0000	20.0000	1.220		W
FG	1	381.3000	18.3900	1.157	A	A
FJ	1	340.0000	27.0000	1.032		A
FL	1	325.0000	1.0000	0.986	A	A
FN	1	367.0000	37.0000	1.114	A	A
FR	1	332.5000	35.0000	1.009	A	A
FS	1	316.0000	4.0000	0.959	A	A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.



## QAP 48 Results by Nuclide

Matrix: SO Soil Bq / kg  
Radionuclide: CS137

EML Value: 329.5000  
EML Error: 9.2600

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
GA	1	359.0000	87.0000	1.090	A	A
GC	1	334.9000	16.9000	1.016	A	A
GE	1	353.1835	34.0215	1.072	A	A
GP	1	370.0000	40.0000	1.123	A	A
GT	1	340.0000	70.0000	1.032	A	A
HU	1	296.3000	8.6000	0.899	A	W
IA	1	243.0000	2.0000	0.737		N
IA	2	238.0000	2.0000	0.722		N
IA	3	244.0000	2.0000	0.741		N
ID	1	357.6700	18.1400	1.085	A	A
IE	1	338.0000	10.0000	1.026	A	A
IL	1	496.3400	9.8100	1.506		N
IN	1	345.0000	10.2000	1.047	A	A
IS	1	368.0000	43.6000	1.117	A	A
IT	1	372.0000	6.0000	1.129	A	A
JE	1	384.6600	9.2500	1.167		A
KA	1	356.0000	40.0000	1.080	A	A
KO	1	343.9000	2.3270	1.044	A	A
KR	1	360.5000	24.5000	1.094		A
LA	1	296.0000	22.0000	0.898	A	W
LA	2	300.0000	22.0000	0.910	A	A
LA	3	294.0000	22.0000	0.892	A	W
LL	1	374.0000	8.2000	1.135	A	A
LM	1	352.0000	15.0000	1.068		A
LV	1	406.0000	2.0000	1.232	A	W
MA	1	407.0000	33.0000	1.235	A	W
ME	1	361.0000	15.3000	1.096	A	A
MH	1	346.7000	16.8000	1.052		A
ML	1	330.2600	33.0000	1.002	N	A
NA	1	341.0000	2.5000	1.035	A	A
NL	1	327.0000	62.1000	0.992		A
NM	1	298.0000	27.0000	0.904		A
NP	1	427.0000	4.0000	1.296		W
NR	1	356.0000	71.0000	1.080		A
OL	1	354.9000	3.8000	1.077		A
OT	1	310.0000	10.0000	0.941		A
OU	1	278.0000	13.1000	0.844		W
PK	1	380.2000	8.8000	1.154		A
PO	1	353.0000	10.0000	1.071		A
RA	1	282.0000	12.0000	0.856		W
RC	1	342.0000	34.0000	1.038		A
RE	1	322.0000	25.0000	0.977		A
RI	1	383.0000	19.8000	1.162		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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Matrix: SO Soil Bq / kg  
Radionuclide: CS137

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EML Value: 329.5000  
EML Error: 9.2600

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
RL	1	401.0000	84.0000	1.217		W
SA	1	349.0000	11.0000	1.059		A
SH	1	351.8000	8.2000	1.068		A
SK	1	399.0000	18.0000	1.211		W
SN	1	390.6800	40.9500	1.186		A
SR	1	368.0000	41.0000	1.117		A
SW	1	437.1000	4.5000	1.327		N
TE	1	322.5900	4.5700	0.979		A
TI	1	369.0000	37.0000	1.120		A
TM	1	355.0000	11.5000	1.077		A
TO	1	340.8000	49.3000	1.034		A
TP	1	357.3510	20.0930	1.085		A
TT	1	261.0000	9.2500	0.792		N
TW	1	325.0000	3.0000	0.986		A
TX	1	355.0000	2.0000	1.077		A
UC	1	400.6200	41.2100	1.216		W
UP	1	364.0000	44.3000	1.105		A
UY	1	360.0000	40.0000	1.093		A
WA	1	356.0000	18.0000	1.080		A
WC	1	351.0000	53.0000	1.065		A
WP	1	392.0000	3.4000	1.190		A
WS	1	365.6000	12.1000	1.110		A
YA	1	359.2145	2.1645	1.090		A
YU	1	345.0000	20.0000	1.047		A

Total Number Reported: **108**

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: SO Soil Bq/kg  
Radionuclide: K40

EML Value: 313.5000  
EML Error: 10.1500

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AC	1	325.0000	13.0000	1.037		A
AF	1	299.7000	40.7000	0.956	A	A
AG	1	352.0000	36.0000	1.123	A	A
AI	1	424.0000	54.7000	1.352	A	W
AL	1	532.6600	44.7000	1.699		N
AM	1	369.3800	13.1200	1.178	A	A
AN	1	327.0000	14.0000	1.043	A	A
AR	1	331.7000	33.0000	1.058	A	A
AR	2	350.8000	34.2900	1.119	A	A
AR	3	330.9600	32.8900	1.056	A	A
AT	1	410.2500	45.1200	1.309		W
AU	1	336.0000	27.0000	1.072	A	A
BC	1	392.0000	22.0000	1.250	A	W
BE	1	390.0000	30.0000	1.244	A	A
BL	1	348.0000	17.0000	1.110	A	A
BM	1	340.0000	19.0000	1.085	A	A
BN	1	284.7200	8.7900	0.908	W	A
BN	2	264.4000	8.7900	0.843	W	W
BN	3	280.7200	8.7900	0.895	W	W
BP	1	329.0000	5.0000	1.049	A	A
BQ	1	328.0000	5.0000	1.046	A	A
BS	1	359.6300	9.1400	1.147	A	A
BU	1	280.0000	40.0000	0.893	A	W
BX	1	418.0000	2.0000	1.333	A	W
CD	1	400.0000	20.0000	1.276		W
CL	1	375.0000	43.5000	1.196	A	A
CN	1	325.8000	18.4000	1.039	A	A
CR	1	453.8000	63.5000	1.448	A	W
CS	1	351.0000	16.2900	1.120	A	A
DC	1	329.0000	94.4000	1.049	A	A
DH	1	322.1000	21.1000	1.027	A	A
EG	1	339.0000	51.0000	1.081	A	A
EL	1	451.0000	21.0000	1.439		W
FG	1	368.5000	38.2000	1.175	A	A
FJ	1	354.0000	26.0000	1.129		A
FL	1	313.0000	6.0000	0.998	A	A
FN	1	340.0000	35.0000	1.085	A	A
FR	1	323.7000	50.0000	1.033	A	A
FS	1	315.0000	6.0000	1.005	A	A
GA	1	363.0000	20.0000	1.158	A	A
GC	1	350.3000	37.0000	1.117	A	A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

Matrix: SO Soil Bq / kg  
Radionuclide: K40

EML Value: 313.5000  
EML Error: 10.1500

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
GE	1	354.0900	42.0320	1.129	A	A
GP	1	380.0000	40.0000	1.212	A	A
GT	1	340.0000	40.0000	1.085	A	A
HU	1	335.0000	28.0000	1.069		A
IA	1	212.0000	6.0000	0.676		N
IA	2	224.0000	6.0000	0.715		N
IA	3	220.0000	6.0000	0.702		N
ID	1	361.6700	19.4200	1.154	A	A
IE	1	317.0000	15.0000	1.011	A	A
IL	1	506.1700	31.1100	1.615		N
IN	1	339.2000	38.8000	1.082	A	A
IS	1	434.0000	81.0000	1.384	A	W
IT	1	350.0000	20.0000	1.116	A	A
JE	1	321.2500	29.2900	1.025		A
KA	1	323.0000	50.0000	1.030	A	A
KO	1	348.1000	7.1750	1.110	A	A
KR	1	350.5000	24.4000	1.118		A
LA	1	332.0000	33.0000	1.059		A
LA	2	320.0000	32.0000	1.021		A
LA	3	321.0000	32.0000	1.024		A
LL	1	327.0000	24.9000	1.043	A	A
LM	1	325.0000	40.0000	1.037		A
LV	1	390.0000	7.0000	1.244	A	A
MA	1	359.0000	81.0000	1.145	A	A
ME	1	363.0000	18.0000	1.158	A	A
MH	1	337.5000	18.5000	1.077		A
ML	1	334.2500	33.4000	1.066	A	A
NA	1	321.0000	11.2000	1.024	A	A
NL	1	328.0000	47.5000	1.046		A
NR	1	335.0000	67.0000	1.069		A
OL	1	343.4000	11.1000	1.095		A
OT	1	300.0000	30.0000	0.957		A
OU	1	248.0000	46.6000	0.791		W
PK	1	362.4000	28.3000	1.156		A
PO	1	325.0000	12.0000	1.037		A
RA	1	280.0000	40.0000	0.893		W
RC	1	333.0000	33.0000	1.062		A
RE	1	297.0000	33.0000	0.947		A
RI	1	490.0000	133.0000	1.563		N
RL	1	415.0000	88.0000	1.324		W
SA	1	341.0000	30.0000	1.088		A
SK	1	355.0000	19.0000	1.132		A
SN	1	406.7100	45.9600	1.297		W

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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Matrix: SO Soil Bq / kg  
Radionuclide: K40

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EML Value: 313.5000  
EML Error: 10.1500

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
SR	1	371.0000	40.0000	1.183		A
SW	1	424.9000	22.3000	1.355		W
TE	1	322.1000	24.3200	1.027		A
TI	1	334.0000	33.0000	1.065		A
TM	1	358.0000	37.0000	1.142		A
TN	1	301.3000	14.3000	0.961		A
TO	1	317.4000	57.6000	1.012		A
TP	1	334.2300	16.4930	1.066		A
TT	1	257.0000	6.0300	0.820		W
TW	1	310.0000	10.0000	0.989		A
TX	1	345.0000	9.0000	1.100		A
UC	1	363.9200	16.0600	1.161		A
UY	1	370.0000	100.0000	1.180		A
WA	1	367.0000	26.0000	1.171		A
WC	1	396.0000	49.0000	1.263		W
WP	1	389.0000	14.0000	1.241		A
WS	1	335.6000	13.4000	1.070		A
YA	1	357.0500	9.9900	1.139		A
YU	1	355.0000	20.0000	1.132		A

**Total Number Reported: 103**

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: SO Soil Bq/kg  
Radionuclide: PU239

EML Value: 5.3047  
EML Error: 0.2528

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AC	1	5.7000	0.7400	1.075		A
AF	1	5.5000	3.5000	1.037	N	A
AG	1	5.4000	0.8800	1.018	A	A
AI	1	5.2800	0.3420	0.995	W	A
AI	2	5.0300	0.4130	0.948	W	A
AI	3	4.8800	0.3600	0.920	W	A
AI	4	6.0000	0.5500	1.131	W	A
AN	1	5.8600	0.4600	1.105	A	A
AR	1	5.4000	1.1100	1.018	W	A
AR	2	5.3300	1.1800	1.005	W	A
AR	3	5.6200	1.0700	1.059	W	A
AU	1	5.5000	1.0000	1.037	A	A
BE	1	5.6800	0.8000	1.071	A	A
BL	1	5.3300	0.3900	1.005	A	A
BM	1	6.8000	2.0400	1.282	A	W
BP	1	5.1100	0.1900	0.963	A	A
BU	1	5.8000	0.7000	1.093	A	A
BX	1	5.1400	0.4400	0.969	W	A
CL	1	5.9400	1.4000	1.120	A	A
EG	1	5.2200	0.5200	0.984	A	A
EP	1	5.5100	0.4600	1.039		A
FR	1	5.7200	0.8600	1.078	A	A
GA	1	6.0000		1.131	A	A
GE	1	5.4205	0.7085	1.022	A	A
GT	1	5.9000	1.3000	1.112	A	A
ID	1	6.7570	0.8870	1.274	A	W
IE	1	5.3900	0.5200	1.016	A	A
IN	1	5.7500	1.1000	1.084	A	A
IT	1	5.3600	0.5000	1.010	A	A
KA	1	6.2580	0.1010	1.180	A	A
KO	1	5.2300	0.2600	0.986		A
LA	1	5.5800	0.2200	1.052	A	A
LA	2	5.5800	0.2200	1.052	A	A
LA	3	5.3200	0.2000	1.003	A	A
LL	1	5.4200	0.5800	1.022	A	A
LV	1	3.0800	0.9200	0.581		N
ML	1	5.2300	0.3500	0.986	A	A
NA	1	5.4000	1.0400	1.018	A	A
NF	1	3.6560	0.9500	0.689		N
NL	1	6.5300	1.7800	1.231		W
NM	1	5.6600	0.4000	1.067		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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Matrix: SO Soil Bq / kg  
Radionuclide: PU239

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EML Value: 5.3047  
EML Error: 0.2528

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
OT	1	6.0000	0.8000	1.131		A
RA	1	6.9000	0.8000	1.301		W
RE	1	5.1200	0.7000	0.965		A
SN	1	4.9360	2.3950	0.930		A
SR	1	2.8800	0.5400	0.543		N
SW	1	1.3900	0.2600	0.262		N
TE	1	4.6500	1.6600	0.877		W
TI	1	5.3000	1.1000	0.999		A
TM	1	4.7500	0.6200	0.895		A
TN	1	3.7730	0.8172	0.711		W
TO	1	3.6000	1.4000	0.679		N
TW	1	5.6000	0.4000	1.056		A
TX	1	5.4870	0.2700	1.034		A
UP	1	5.0600	1.4900	0.954		A
UY	1	4.9300	1.0000	0.929		A
WA	1	5.4000	0.4700	1.018		A
WC	1	5.5900	0.9600	1.054		A
YA	1	5.3613	0.1591	1.011		A

**Total Number Reported: 59**

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: SO Soil Bq / kg  
Radionuclide: SR90

EML Value: 13.0908  
EML Error: 0.2790

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AF	1	51.1000	18.5000	3.904		N
AG	1	11.1000	2.4000	0.848	A	A
AN	1	13.2200	0.5100	1.010	A	A
AR	1	17.0200	15.6100	1.300	A	A
AR	2	15.6800	9.4700	1.198	A	A
AR	3	19.5400	16.0900	1.493	A	A
AU	1	16.7000	4.7000	1.276	A	A
BE	1	14.3000	3.0000	1.092	A	A
BL	1	12.5100	2.8700	0.956	A	A
BM	1	12.7000	1.1500	0.970	A	A
BP	1	27.5000	4.6000	2.101	A	W
CL	1	22.1000	7.8800	1.688	W	W
EG	1	14.4000	1.4000	1.100	N	A
EI	1	15.3000	1.2300	1.169		A
GE	1	11.2850	1.4800	0.862		A
ID	1	18.1300	1.3100	1.385	A	A
IE	1	11.1000	1.3000	0.848	A	A
IN	1	13.9000	3.1000	1.062	W	A
IS	1	18.6000	0.3000	1.421	A	A
IT	1	13.6000	0.9000	1.039	A	A
KA	1	12.8700	0.1000	0.983	A	A
KO	1	13.0300	1.1300	0.995		A
KR	1	12.0800	0.5000	0.923		A
LA	1	39.6000	28.9000	3.025		N
LA	2	51.4000	31.8000	3.926		N
LA	3	60.7000	30.0000	4.637		N
OT	1	14.0000	4.0000	1.069		A
RA	1	14.0000	4.0000	1.069		A
RE	1	12.4000	1.5000	0.947		A
RI	1	91.4000	2.6500	6.982		N
SH	1	14.4730	0.5660	1.106		A
SH	2	13.9480	0.5670	1.065		A
SH	3	14.3350	0.5740	1.095		A
SW	1	44.8000	11.5000	3.422		N
TE	1	9.8900	3.8300	0.755		A
TI	1	13.0000	5.0000	0.993		A
TM	1	22.2000	5.4800	1.696		W
TN	1	57.7650	5.0750	4.413		N
TO	1	16.0000	2.3000	1.222		A
TP	1	14.1520	1.4110	1.081		A
TW	1	16.0000	2.0000	1.222		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.



## QAP 48 Results by Nuclide

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**Matrix:** SO Soil Bq / kg  
**Radionuclide:** SR90

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**EML Value:** 13.0908  
**EML Error:** 0.2790

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
TX	1	18.0000	5.0000	1.375		A
UY	1	13.0000	6.0000	0.993		A
WA	1	12.2000	2.1000	0.932		A
WC	1	6.7000	8.7000	0.512		N
WP	1	13.0000	2.2000	0.993		A
YA	1	9.2007	0.6660	0.703		W

**Total Number Reported:** 47

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: SO Soil Bq / kg  
Radionuclide: U234

EML Value: 31.1333  
EML Error: 0.8021

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AF	1	32.9000	20.0000	1.057		A
AG	1	28.4000	3.6000	0.912	A	A
AI	1	31.1000	1.1800	0.999		A
AM	1	36.5100	8.2800	1.173	A	W
AN	1	30.2600	0.3000	0.972	A	A
AU	1	31.6000	4.2000	1.015	A	A
BC	1	31.1000	1.9000	0.999	W	A
BE	1	30.9100	3.7600	0.993	A	A
BL	1	33.5000		1.076	A	A
BL	2	32.9000	0.7000	1.057	A	A
BM	1	29.7800	4.9200	0.957	A	A
BU	1	25.4000	2.8000	0.816		A
BX	1	28.9000	1.9000	0.928	N	A
CL	1	27.0000	6.2300	0.867	W	A
EG	1	33.1000	3.8000	1.063	A	A
EI	1	21.2100	1.2400	0.681		W
FR	1	17.9100	1.2300	0.575	A	W
GA	1	37.5600		1.206	A	W
GE	1	26.9989	3.1265	0.867	A	A
IE	1	28.3000	1.2000	0.909	A	A
IN	1	38.6000	6.2000	1.240		W
IT	1	29.1000	3.3000	0.935	A	A
KO	1	30.4000	0.8400	0.976		A
LL	1	25.1000	2.0400	0.806	A	A
ML	1	30.0100	2.0200	0.964	A	A
NA	1	30.4000	2.4500	0.976	A	A
NL	1	24.9000	7.7000	0.800		A
RA	1	28.4000	4.3000	0.912		A
RE	1	25.5000	2.4000	0.819		A
SN	1	28.2900	5.7200	0.909		A
SR	1	9.0000	1.4000	0.289		N
TM	1	28.8000	2.0600	0.925		A
TN	1	27.3900	2.5940	0.880		A
TO	1	32.7000	3.2000	1.050		A
TW	1	27.0000	0.9000	0.867		A
TX	1	32.8560	0.8660	1.055		A
UP	1	31.6300	6.7400	1.016		A
WA	1	32.7000	3.3000	1.050		A
WC	1	23.2000	2.2000	0.745		A
YA	1	31.0923	1.1223	0.999		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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Matrix: SO Soil Bq / kg  
Radionuclide: U234

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EML Value: 31.1333  
EML Error: 0.8021

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Labcode	Test #	Reported Value	Reported Error	<u>Reported EML</u>	QAP 47 Evaluation	Evaluation
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Total Number Reported: 40

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Values for elemental uranium are reported in  $\mu\text{g}/\text{filter}$ , g or mL.  $\text{pCi}/\text{g or mL} = \text{Bq} \times 0.027$

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: SO Soil Bq / kg  
Radionuclide: U238

EML Value: 31.9000  
EML Error: 2.5515

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AF	1	20.0000	15.5000	0.627		W
AG	1	27.9000	3.5000	0.875	A	A
AI	1	33.1000	1.2300	1.038		A
AM	1	42.1800	7.1800	1.322	A	W
AN	1	31.3500	1.2400	0.983	W	A
AU	1	31.3000	4.3000	0.981	A	A
BC	1	30.3000	2.2000	0.950	A	A
BE	1	31.5400	3.8000	0.989	A	A
BL	1	32.6000		1.022	A	A
BL	2	32.0000	0.7000	1.003	A	A
BM	1	27.4400	4.5800	0.860	A	A
BU	1	25.8000	2.6000	0.809		A
BX	1	30.3000	2.2000	0.950	A	A
CL	1	28.6000	6.5700	0.897	W	A
CS	1	45.2900	13.8300	1.420		N
EG	1	32.6000	4.4000	1.022	W	A
EI	1	21.1500	1.2400	0.663		W
FL	1	27.0000	4.0000	0.846	A	A
FN	1	26.6000	1.4000	0.834	A	A
FR	1	17.3400	0.8600	0.544	A	W
GA	1	36.7100		1.151	A	W
GE	1	27.5169	3.1746	0.863	A	A
GT	1	28.0000	6.0000	0.878	A	A
IA	1	19.8000	2.4800	0.621		W
IA	2	23.5200	2.4800	0.737		A
IA	3	19.8000	2.4800	0.621		W
IE	1	28.4000	0.9000	0.890	A	A
IN	1	38.9000	6.2000	1.219		W
IT	1	30.5000	0.5000	0.956	A	A
KO	1	28.8000	0.8000	0.903		A
LL	1	2.5200	2.0400	0.079	A	N
LV	1	59.0000	3.9000	1.850	N	N
MA	1	44.0000	18.0000	1.379	A	W
ML	1	31.1300	2.0900	0.976	A	A
NA	1	27.2000	2.2900	0.853	A	A
NL	1	28.0000	7.9000	0.878		A
RA	1	28.8000	4.3000	0.903		A
RE	1	27.3000	2.5000	0.856		A
SN	1	34.6700	6.4600	1.087		A
SR	1	9.4000	1.4000	0.295		N
TE	1	13.4400	2.4900	0.421		N

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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Matrix: SO Soil Bq / kg  
Radionuclide: U238

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EML Value: 31.9000  
EML Error: 2.5515

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
TM	1	28.0000	1.9800	0.878		A
TN	1	26.2100	2.5300	0.822		A
TO	1	33.2000	3.4000	1.041		A
TW	1	27.9000	0.9000	0.875		A
TX	1	32.8890	0.9070	1.031		A
UP	1	26.9700	4.8100	0.845		A
WA	1	31.8000	3.2000	0.997		A
WC	1	19.2000	1.7000	0.602		W
WS	1	30.0000	4.6000	0.940		A
YA	1	31.1787	1.1347	0.977		A

Total Number Reported: 51

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: SO Soil Bq/kg  
Radionuclide: ug U

EML Value: 2.5832  
EML Error: 0.2000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AG	1	1.7500	0.2500	0.677	A	A
AR	1	1.8120		0.701		A
AR	2	1.7450		0.676		A
AR	3	1.6550		0.641		W
BE	1	2.6000	0.0000	1.007	A	A
BQ	1	2.6000	0.5000	1.007	N	A
BU	1	2.1000	0.4000	0.813		A
CA	1	2.0640	0.0380	0.799	W	A
GA	1	2.1000		0.813	A	A
GE	1	0.9500	0.0600	0.368	A	N
IE	1	2.3000	0.0700	0.890	A	A
IS	1	1.0800	0.1900	0.418	A	N
IT	1	2.2800	0.0400	0.883	A	A
KO	1	2.3300	0.0640	0.902		A
LA	1	2.4100	0.2400	0.933	A	A
LA	2	3.5800	0.3600	1.386	A	N
LA	3	2.3900	0.2400	0.925	A	A
OU	1	2.0000	0.2000	0.774		A
RA	1	2.2500	0.2000	0.871		A
SA	1	2.5200	0.0260	0.976		A
SW	1	2.2600		0.875		A
TI	1	1.9000	0.3000	0.736		A
TM	1	2.2800	0.1400	0.883		A
TN	1	1.2500	0.1620	0.484		W
UP	1	2.2700	0.2000	0.879		A
YP	1	2.6000	0.6500	1.007		A

Total Number Reported: 26

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

Matrix: VE Vegetation Bq / kg  
Radionuclide: AM241

EML Value: 1.1052  
EML Error: 0.0506

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AF	1	0.8000	0.2000	0.724		W
AG	1	1.1500	0.1600	1.041	A	A
AI	1	1.2100	0.0991	1.095	W	A
AI	2	1.3800	0.1070	1.249	W	A
AI	3	1.1400	0.0947	1.031	W	A
AM	1	1.6600	1.2500	1.502	A	A
AR	1	1.7900	1.4200	1.620	A	W
AR	2	1.1700	0.6200	1.059	A	A
AU	1	1.1900	0.2100	1.077	A	A
BE	1	1.1600	0.2800	1.050	A	A
BL	1	0.1530	0.6680	0.138	W	N
BM	1	1.1500	0.3800	1.041	A	A
BP	1	1.0500	0.0500	0.950	A	A
BS	1	51.5900	1.2200	46.679	W	N
BU	1	1.1000	0.1400	0.995	A	A
BX	1	2.6800	0.5500	2.425	W	W
CH	1	1.4000	0.2190	1.267	A	A
CL	1	0.6500	0.1500	0.588	A	N
CS	1	0.7215	0.2200	0.653	A	N
EG	1	1.3200	0.1500	1.194	A	A
EP	1	1.1400	0.1110	1.031		A
FL	1	2.0000	0.5000	1.810	A	W
FR	1	1.3200	0.4000	1.194	A	A
GA	1	1.3700		1.240	A	A
GE	1	1.4319	0.2557	1.296	A	A
GT	1	1.1000	0.6000	0.995	A	A
ID	1	1.0390	0.2180	0.940		A
IE	1	2.2400	0.2800	2.027	A	W
IS	1	3.0200	2.0600	2.733	A	N
IT	1	1.2900	0.2500	1.167	A	A
KO	1	1.1000	0.0600	0.995		A
LA	1	1.1876	0.0814	1.075	A	A
LA	2	1.0285	0.0518	0.931	A	A
LL	1	1.2900	0.1670	1.167	A	A
MA	1	2.9000	1.5000	2.624	W	W
ML	1	1.0900	0.1000	0.986	A	A
NA	1	1.2000	0.2580	1.086		A
OT	1	1.6000	0.5000	1.448		A
RE	1	1.2500	0.1800	1.131		A
RI	1	1.0800	0.1700	0.977		A
SN	1	0.9030	0.6750	0.817		W

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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**Matrix:** VE Vegetation Bq / kg  
**Radionuclide:** AM241

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**EML Value:** 1.1052  
**EML Error:** 0.0506

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
SR	1	1.1900	0.2300	1.077		A
SW	1	2.2000	0.2000	1.991		W
TE	1	0.6667	0.3704	0.603		N
TI	1	1.3000	0.3000	1.176		A
TM	1	1.1100	0.2500	1.004		A
TN	1	1.1190	0.5251	1.012		A
TO	1	1.3000	1.2000	1.176		A
TW	1	1.0300	0.0600	0.932		A
TX	1	1.0700	0.1100	0.968		A
UY	1	1.2400	0.2800	1.122		A
WA	1	0.9400	0.2200	0.851		W
WC	1	1.4400	0.1900	1.303		A
YA	1	1.0878	0.0506	0.984		A

**Total Number Reported: 54**

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: VE Vegetation Bq / kg  
Radionuclide: CM244

EML Value: 2.1736  
EML Error: 0.0658

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AG	1	1.9900	0.2600	0.916	W	A
AI	1	2.4900	0.2400	1.146		A
AI	2	2.6900	0.2470	1.238		A
AI	3	2.6100	0.2530	1.201		A
BE	1	2.3100	0.3900	1.063	A	A
BL	1	0.3950	0.4330	0.182	N	N
BL	2	0.5900	0.4400	0.271	N	N
BP	1	1.9100	0.1600	0.879	W	A
BU	1	1.9000	0.1500	0.874		A
BX	1	1.5700	0.4400	0.722	W	W
CH	1	1.9900	0.1350	0.916	A	A
CL	1	0.9300	0.0400	0.428	W	N
EG	1	2.2100	0.2100	1.017	W	A
EP	1	1.9800	0.1780	0.911		A
GA	1	2.2300		1.026	A	A
GE	1	2.6640	0.4033	1.226	A	A
IE	1	2.2000	0.4900	1.012	A	A
IT	1	1.5900	0.1600	0.732	W	W
KO	1	2.0300	0.0900	0.934		A
LL	1	2.1700	0.2420	0.998	N	A
OT	1	1.7000	0.5000	0.782		W
RI	1	2.3000	0.2990	1.058		A
SN	1	2.0940	0.9280	0.963		A
SR	1	2.0400	0.3100	0.939		A
TE	1	1.7778	0.3333	0.818		A
TI	1	2.3000	0.4000	1.058		A
TM	1	2.3700	0.3610	1.090		A
TN	1	2.5110	0.7961	1.155		A
TW	1	2.0400	0.0900	0.939		A
UY	1	1.4100	0.3400	0.649		W
WC	1	2.0900	0.2300	0.962		A
YA	1	1.9980	0.0728	0.919		A

Total Number Reported: 32

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

Matrix: VE Vegetation Bq / kg  
Radionuclide: CO60

EML Value: 10.5750  
EML Error: 0.2062

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AF	1	9.3000	1.5000	0.879		A
AG	1	10.8000	1.3000	1.021	A	A
AI	1	12.3000	1.3200	1.163	W	A
AL	1	29.4270	8.8600	2.783		N
AM	1	10.5400	1.0000	0.997	A	A
AR	1	12.2200	2.7000	1.156	A	A
AR	2	12.5200	3.4400	1.184	A	A
AU	1	12.6000	1.8000	1.191	A	A
BC	1	11.7000	0.9000	1.106	A	A
BE	1	12.7000	2.0000	1.201	A	A
BL	1	12.7000	1.2000	1.201	A	A
BM	1	12.2000	1.4000	1.154	A	A
BN	1	10.0700	0.1800	0.952	W	A
BN	2	10.2500	0.1800	0.969	W	A
BN	3	9.8200	0.1800	0.929	W	A
BP	1	10.0000	0.5000	0.946	A	A
BS	1	8.2200	0.6900	0.777	W	W
BU	1	11.0000	1.3000	1.040	A	A
BX	1	11.8000	0.8000	1.116	A	A
CD	1	12.0000	2.0000	1.135		A
CH	1	11.8000	0.4070	1.116	A	A
CL	1	13.4000	3.2000	1.267	A	W
CN	1	9.7600	0.7200	0.923	A	A
CO	1	11.0000	2.0000	1.040	A	A
CR	1	13.2000	4.7000	1.248	A	W
CS	1	11.7400	0.4400	1.110	A	A
DC	1	10.3000	2.1100	0.974	N	A
EG	1	11.1000	2.3000	1.050	A	A
EL	1	19.3000	0.9000	1.825		N
FL	1	11.1000	0.5000	1.050	A	A
FN	1	8.7200	0.8600	0.825	A	W
FR	1	10.9500	1.6500	1.035	A	A
GA	1	11.4000	3.3000	1.078	A	A
GC	1	10.5000	0.4700	0.993	A	A
GE	1	11.1407	1.9288	1.053	A	A
GP	1	11.0000	2.0000	1.040	N	A
GT	1	9.9000	1.6000	0.936	A	A
HU	1	11.8000	0.8000	1.116	A	A
IA	1	7.6000	0.6000	0.719		W
IA	2	7.8000	0.6000	0.738		W
IA	3	7.8000	0.6000	0.738		W

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

Matrix: VE Vegetation Bq / kg  
Radionuclide: CO60

EML Value: 10.5750  
EML Error: 0.2062

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
ID	1	11.2000	0.8200	1.059	A	A
IE	1	12.0000	0.8000	1.135	A	A
IL	1	14.4100	0.8900	1.363		W
IN	1	12.2000	2.7000	1.154	A	A
IS	1	13.3000	3.5000	1.258	W	W
IT	1	13.5000	0.5000	1.277	A	W
KO	1	11.5300	0.5350	1.090	A	A
KR	1	12.4000	1.5000	1.173		A
LA	1	10.0000	1.5000	0.946		A
LA	2	10.9000	1.2000	1.031		A
LA	3	9.4000	1.1000	0.889		A
LL	1	12.2000	2.1000	1.154	A	A
LV	1	10.5000	0.6000	0.993	A	A
MA	1	13.7000	4.1000	1.296	A	W
ME	1	14.9000	0.7000	1.409	A	W
MH	1	11.2000	0.5000	1.059		A
ML	1	11.6500	1.2000	1.102	A	A
NA	1	13.1000	6.7200	1.239	N	W
NP	1	9.1000	0.6000	0.861		A
NR	1	11.5000	2.3000	1.087		A
OL	1	11.4000	1.0400	1.078		A
OT	1	9.7000	1.5000	0.917		A
OU	1	7.3700	2.4600	0.697		W
PO	1	12.0000	1.0000	1.135		A
RA	1	9.4600	0.4800	0.895		A
RE	1	12.4000	2.5000	1.173		A
RI	1	16.7000	4.9600	1.579		N
SK	1	11.9000	0.5000	1.125		A
SN	1	12.8800	1.9400	1.218		A
SR	1	11.5000	1.3000	1.087		A
SW	1	15.6000	1.1000	1.475		N
TE	1	10.1728	1.5395	0.962		A
TI	1	12.2000	1.3000	1.154		A
TM	1	17.4000	5.7600	1.645		N
TN	1	8.6210	2.7970	0.815		W
TO	1	10.1000	2.7000	0.955		A
TP	1	11.7280	1.2840	1.109		A
TW	1	11.1000	0.6000	1.050		A
TX	1	11.1600	0.0700	1.055		A
UC	1	11.3600	0.5500	1.074		A
UY	1	14.8000	5.1000	1.400		W
WA	1	11.8000	1.0000	1.116		A
WC	1	11.2000	1.3000	1.059		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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**Matrix:** VE Vegetation Bq / kg  
**Radionuclide:** CO60

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**EML Value:** 10.5750  
**EML Error:** 0.2062

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
WP	1	13.3000	1.2000	1.258		W
YA	1	10.1565	0.4255	0.960		A
YU	1	13.5000	0.9000	1.277		W

**Total Number Reported:** 87

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: VE Vegetation Bq / kg  
Radionuclide: CS137

EML Value: 181.5000  
EML Error: 7.1414

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AF	1	155.4000	18.5000	0.856	N	W
AG	1	211.0000	14.0000	1.163	A	A
AI	1	20.9000	4.1400	0.115	A	N
AL	1	313.2900	12.1000	1.726		N
AM	1	183.0400	2.6700	1.008	A	A
AR	1	185.8000	10.9000	1.024	A	A
AR	2	185.9900	11.2200	1.025	A	A
AU	1	195.0000	10.0000	1.074	A	A
BA	1	190.0000	10.0000	1.047	A	A
BC	1	175.0000	14.0000	0.964	A	A
BE	1	209.0000	20.0000	1.152	A	A
BL	1	224.0000	9.0000	1.234	W	A
BM	1	206.0000	3.4000	1.135	W	A
BN	1	201.2100	2.3200	1.109	W	A
BN	2	200.6500	2.3200	1.106	W	A
BN	3	196.0300	2.3200	1.080	W	A
BP	1	166.0000	8.0000	0.915	A	A
BQ	1	175.0000	12.0000	0.964	A	A
BR	1	206.0000	33.0200	1.135	A	A
BS	1	151.3700	1.4100	0.834	N	W
BU	1	160.0000	15.0000	0.882	A	W
BX	1	208.0000	16.0000	1.146	A	A
CD	1	188.0000	6.0000	1.036		A
CH	1	188.0000	5.5200	1.036	A	A
CL	1	154.0000	6.0800	0.848	A	W
CN	1	198.6000	10.0000	1.094	A	A
CO	1	193.0000	9.0000	1.063	A	A
CR	1	224.5000	9.9000	1.237	A	A
CS	1	173.5000	7.5500	0.956	A	A
DC	1	212.0000	56.6000	1.168	N	A
EG	1	174.0000	14.0000	0.959	A	A
EL	1	224.0000	11.0000	1.234		A
FJ	1	189.0000	3.6000	1.041		A
FL	1	186.0000	1.0000	1.025	A	A
FN	1	155.0000	16.0000	0.854	A	W
FR	1	180.8000	20.0000	0.996	A	A
GA	1	189.0000	11.0000	1.041	A	A
GC	1	178.2300	2.5700	0.982	A	A
GE	1	189.4030	17.3937	1.044	W	A
GP	1	195.0000	20.0000	1.074	N	A
GT	1	170.0000	40.0000	0.937	A	A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

Matrix: VE Vegetation Bq / kg  
Radionuclide: CS137

EML Value: 181.5000  
EML Error: 7.1414

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
HU	1	189.2000	5.4000	1.042	N	A
IA	1	145.0000	2.0000	0.799		N
IA	2	144.0000	2.0000	0.793		N
IA	3	144.0000	2.0000	0.793		N
ID	1	201.6700	12.5700	1.111	A	A
IE	1	195.0000	8.0000	1.074	A	A
IL	1	246.9600	5.2100	1.361		W
IN	1	202.4000	3.6000	1.115	A	A
IS	1	189.0000	22.6000	1.041	A	A
IT	1	202.0000	4.0000	1.113	A	A
KO	1	187.3600	1.6260	1.032	A	A
KR	1	202.2000	14.2000	1.114		A
LA	1	175.0000	13.0000	0.964	A	A
LA	2	178.0000	14.0000	0.981	A	A
LA	3	170.0000	13.0000	0.937	A	A
LL	1	203.0000	5.3000	1.118	A	A
LV	1	177.0000	2.0000	0.975	A	A
MA	1	233.0000	20.0000	1.284	A	W
ME	1	264.0000	11.3000	1.455	A	N
MH	1	191.0000	9.3000	1.052		A
ML	1	197.0000	19.7000	1.085	A	A
NA	1	224.0000	2.6900	1.234	N	A
NP	1	152.0000	2.1000	0.837		W
NR	1	186.0000	37.0000	1.025		A
OL	1	182.1000	4.8000	1.003		A
OT	1	160.0000	10.0000	0.882		W
OU	1	139.0000	6.3300	0.766		N
PK	1	189.6000	8.6000	1.045		A
PO	1	200.0000	6.0000	1.102		A
RA	1	171.0000	7.0000	0.942		A
RE	1	173.0000	16.0000	0.953		A
RI	1	216.0000	15.3000	1.190		A
RL	1	214.0000	16.0000	1.179		A
SH	1	206.5000	8.7000	1.138		A
SK	1	199.0000	10.0000	1.096		A
SN	1	217.2800	21.9100	1.197		A
SR	1	193.0000	18.0000	1.063		A
SW	1	254.0000	3.0000	1.399		N
TE	1	166.0247	3.4556	0.915		A
TI	1	203.0000	20.0000	1.118		A
TM	1	212.0000	8.6700	1.168		A
TN	1	156.9000	4.0000	0.864		W
TP	1	176.4260	13.3760	0.972		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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**Matrix:** VE Vegetation Bq / kg  
**Radionuclide:** CS137

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**EML Value:** 181.5000  
**EML Error:** 7.1414

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
TW	1	183.0000	2.0000	1.008		A
TX	1	185.0000	2.0000	1.019		A
UC	1	194.2800	23.2100	1.070		A
UY	1	204.0000	23.0000	1.124		A
WA	1	192.0000	21.0000	1.058		A
WC	1	202.0000	30.0000	1.113		A
WP	1	223.0000	3.0000	1.229		A
YA	1	187.7195	1.4800	1.034		A
YU	1	230.0000	20.0000	1.267		W

**Total Number Reported: 93**

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: VE Vegetation Bq / kg  
Radionuclide: K40

EML Value: 707.5000  
EML Error: 24.9867

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AF	1	625.3000	62.9000	0.884	N	W
AG	1	814.0000	64.0000	1.151	A	A
AI	1	758.0000	38.9000	1.071	A	A
AL	1	1204.8000	94.9000	1.703		N
AM	1	770.9600	24.0800	1.090	A	A
AR	1	684.5000	62.5300	0.967	A	A
AR	2	705.6000	63.8600	0.997	A	A
AU	1	735.0000	45.0000	1.039	A	A
BC	1	747.0000	41.0000	1.056	A	A
BE	1	893.0000	50.0000	1.262	A	W
BL	1	871.0000	41.0000	1.231	A	A
BM	1	795.0000	28.0000	1.124	N	A
BN	1	648.9800	28.3100	0.917	N	A
BN	2	712.9900	28.3100	1.008	N	A
BN	3	657.8600	28.3100	0.930	N	A
BP	1	694.0000	35.0000	0.981	W	A
BQ	1	625.0000	13.0000	0.883	A	W
BR	1	940.0000	183.3500	1.329	A	N
BS	1	620.0000	12.4600	0.876	N	W
BU	1	660.0000	80.0000	0.933	W	A
BX	1	903.0000	48.0000	1.276	A	W
CD	1	800.0000	40.0000	1.131		A
CH	1	851.0000	51.3000	1.203	A	A
CL	1	618.0000	46.7000	0.873	A	W
CN	1	677.5000	34.9000	0.958	A	A
CR	1	919.6000	83.0000	1.300	A	W
CS	1	736.4000	35.0500	1.041	A	A
DC	1	662.0000	184.0000	0.936	A	A
EG	1	694.0000	92.0000	0.981	A	A
EL	1	964.0000	48.0000	1.363		N
FJ	1	745.0000	55.0000	1.053		A
FL	1	757.0000	10.0000	1.070	A	A
FN	1	661.0000	67.0000	0.934	A	A
FR	1	713.8000	110.0000	1.009	A	A
GA	1	782.0000	91.0000	1.105	A	A
GC	1	730.6400	33.0600	1.033	A	A
GE	1	812.5200	98.0130	1.148	W	A
GP	1	785.0000	80.0000	1.110	W	A
GT	1	690.0000	70.0000	0.975	A	A
HU	1	850.0000	60.0000	1.201	N	A
IA	1	561.0000	12.0000	0.793		W

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.



## QAP 48 Results by Nuclide

Matrix: VE Vegetation Bq / kg  
Radionuclide: K40

EML Value: 707.5000  
EML Error: 24.9867

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
IA	2	588.0000	12.0000	0.831		W
IA	3	537.0000	12.0000	0.759		N
ID	1	769.0000	46.5500	1.087	A	A
IE	1	802.0000	70.0000	1.134	A	A
IL	1	975.8500	48.5900	1.379		N
IN	1	723.2000	46.3000	1.022	A	A
IS	1	886.0000	154.0000	1.252	A	W
IT	1	811.0000	5.0000	1.146	A	A
KO	1	764.9800	12.5700	1.081	A	A
KR	1	785.1000	60.1000	1.110		A
LA	1	625.0000	57.0000	0.883		W
LA	2	679.0000	60.0000	0.960		A
LA	3	671.0000	60.0000	0.948		A
LL	1	718.0000	47.4000	1.015	A	A
LV	1	7250.0000	100.0000	10.247	A	N
MA	1	740.0000	118.0000	1.046	A	A
ME	1	1003.0000	46.9000	1.418	A	N
MH	1	735.9000	35.6000	1.040		A
ML	1	816.0000	81.6000	1.153	A	A
NA	1	866.0000	22.3000	1.224	N	A
NR	1	739.0000	148.0000	1.045		A
OL	1	750.0000	22.9000	1.060		A
OT	1	670.0000	40.0000	0.947		A
OU	1	529.0000	43.3000	0.748		N
PK	1	783.3000	9.4000	1.107		A
PO	1	747.0000	19.0000	1.056		A
RA	1	780.0000	70.0000	1.102		A
RE	1	715.0000	84.0000	1.011		A
RI	1	852.0000	149.0000	1.204		A
RL	1	873.0000	79.0000	1.234		A
SK	1	742.0000	43.0000	1.049		A
SN	1	947.2200	89.5400	1.339		N
SR	1	805.0000	84.0000	1.138		A
SW	1	998.0000	25.0000	1.411		N
TE	1	677.1605	31.4691	0.957		A
TI	1	751.0000	75.0000	1.061		A
TM	1	796.0000	77.2000	1.125		A
TN	1	627.9000	37.4000	0.887		W
TO	1	636.6000	101.0000	0.900		A
TP	1	764.6800	35.7050	1.081		A
TW	1	700.0000	20.0000	0.989		A
TX	1	795.0000	17.0000	1.124		A
UC	1	761.7400	28.2700	1.077		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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**Matrix:** VE Vegetation Bq / kg  
**Radionuclide:** K40

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**EML Value:** 707.5000  
**EML Error:** 24.9867

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
UY	1	770.0000	140.0000	1.088		A
WA	1	773.0000	44.0000	1.093		A
WC	1	873.0000	103.0000	1.234		A
WP	1	838.0000	22.0000	1.184		A
YA	1	775.7050	12.2100	1.096		A
YU	1	890.0000	20.0000	1.258		W

**Total Number Reported: 90**

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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### QAP 48 Results by Nuclide

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**Matrix:** VE Vegetation Bq / kg  
**Radionuclide:** PU238

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**EML Value:** 0.1157  
**EML Error:** 0.0350

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
BU	1	0.1100	0.0300	0.951	A	A
EG	1	0.1290	0.0320	1.115		A
RA	1	0.1700	0.0600	1.469		A
TW	1	0.1300	0.0300	1.124		A
WA	1	0.2000	0.1200	1.729		A

**Total Number Reported:** 5

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: VE Vegetation Bq / kg  
Radionuclide: PU239

EML Value: 1.7702  
EML Error: 0.1536

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AF	1	0.1000	0.0600	0.056		N
AG	1	1.5400	0.2600	0.870	W	A
AI	1	1.9100	0.1350	1.079	A	A
AI	2	1.2300	0.0758	0.695	A	W
AI	3	1.6500	0.1080	0.932	A	A
AR	1	1.4400	0.2600	0.813	A	W
AR	2	1.4800	0.2600	0.836	A	W
AR	3	1.4100	0.2600	0.797	A	W
AU	1	1.8600	0.3000	1.051	A	A
BE	1	1.7900	0.2500	1.011	A	A
BL	1	2.0600	0.2600	1.164	A	A
BM	1	1.9300	0.4200	1.090	A	A
BP	1	1.5800	0.0400	0.893	A	A
BU	1	1.6000	0.3000	0.904	A	A
BX	1	1.0500	0.3700	0.593	A	W
CH	1	1.8600	0.2710	1.051	A	A
CL	1	1.2400	0.3000	0.700	A	W
EG	1	1.9000	0.2200	1.073	A	A
EP	1	1.5800	0.1390	0.893		A
FR	1	2.0100	0.3000	1.135	A	A
GA	1	1.9200		1.085	A	A
GE	1	2.2773	0.3337	1.286	A	W
GT	1	1.8000	0.5000	1.017	A	A
ID	1	1.5400	0.4140	0.870	A	A
IE	1	2.2100	0.3000	1.248	A	W
IS	1	2.5100	2.1800	1.418	A	W
IT	1	1.6700	0.2400	0.943	A	A
KO	1	1.7900	0.0800	1.011		A
LA	1	1.5575	0.1221	0.880	A	A
LA	2	1.7573	0.1221	0.993	A	A
LA	3	1.8905	0.1036	1.068	A	A
LL	1	1.8700	0.2410	1.056	A	A
ML	1	1.8800	0.1300	1.062	A	A
NA	1	1.6200	0.2660	0.915	N	A
NF	1	1.1850	0.1610	0.669		W
OT	1	1.8000	0.3000	1.017		A
RA	1	2.2000	0.3000	1.243		W
RE	1	1.7100	0.2300	0.966		A
RI	1	1.7000	0.2320	0.960		A
SN	1	1.8650	0.8510	1.054		A
SR	1	1.7000	0.2900	0.960		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

### QAP 48 Results by Nuclide

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**Matrix:** VE Vegetation Bq / kg  
**Radionuclide:** PU239

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**EML Value:** 1.7702  
**EML Error:** 0.1536

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
SW	1	0.9600	0.2000	0.542		N
TI	1	7.1000	1.3000	4.011		N
TM	1	2.0900	0.1760	1.181		A
TN	1	1.8640	0.5334	1.053		A
TO	1	1.8000	1.3000	1.017		A
TW	1	1.7000	0.1000	0.960		A
TX	1	1.7690	0.1300	0.999		A
UY	1	2.0800	0.2700	1.175		A
WA	1	1.6400	0.2400	0.926		A
WC	1	1.7500	0.3100	0.989		A
YA	1	1.6736	0.0604	0.945		A

**Total Number Reported: 52**

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: VE Vegetation Bq / kg  
Radionuclide: SR90

EML Value: 359.0052  
EML Error: 6.0213

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AF	1	66.2000	4.6000	0.184	N	N
AG	1	306.0000	58.0000	0.852	A	A
AR	1	315.4000	47.1000	0.879	A	A
AR	2	332.4000	41.4000	0.926	A	A
AR	3	297.0000	38.8000	0.827	A	A
AU	1	335.0000	9.0000	0.933	A	A
BC	1	219.0000	17.0000	0.610	A	W
BE	1	350.0000	17.0000	0.975	A	A
BL	1	300.4000	5.2000	0.837	A	A
BM	1	350.0000	5.1000	0.975	A	A
BP	1	347.0000	15.0000	0.967	A	A
BU	1	340.0000	34.0000	0.947	A	A
BX	1	209.0000	16.0000	0.582	A	W
CH	1	362.0000	11.0000	1.008	A	A
CL	1	565.0000	23.7000	1.574	N	N
EG	1	362.0000	11.0000	1.008	A	A
EI	1	289.7000	14.0000	0.807		A
GE	1	339.9560	4.8932	0.947		A
GP	1	300.0000	30.0000	0.836	N	A
GT	1	310.0000	20.0000	0.863	A	A
IA	1	217.8000	5.5000	0.607		W
IA	2	204.5000	2.3000	0.570		W
IA	3	214.7000	5.5000	0.598		W
IA	4	194.4000	8.9000	0.541		W
ID	1	350.5700	17.7400	0.977	A	A
IE	1	308.0000	98.0000	0.858	A	A
IS	1	213.0000	2.0000	0.593	A	W
IT	1	380.0000	17.0000	1.058	A	A
KO	1	351.9300	11.4200	0.980		A
KR	1	386.6700	2.8600	1.077		A
NA	1	333.0000	14.1000	0.928	N	A
OT	1	360.0000	20.0000	1.003		A
RA	1	400.0000	100.0000	1.114		A
RE	1	325.0000	17.0000	0.905		A
RI	1	351.0000	8.4200	0.978		A
SH	1	340.4850	4.9330	0.948		A
SR	1	494.0000	52.0000	1.376		N
SW	1	554.0000	32.0000	1.543		N
TE	1	315.3086	15.0617	0.878		A
TI	1	570.0000	20.0000	1.588		N
TM	1	298.0000	21.6000	0.830		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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**Matrix:** VE Vegetation Bq / kg  
**Radionuclide:** SR90

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**EML Value:** 359.0052  
**EML Error:** 6.0213

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
TN	1	364.6000	13.0000	1.016		A
TO	1	138.7000	6.3000	0.386		N
TP	1	370.4950	32.0200	1.032		A
TW	1	312.0000	8.0000	0.869		A
TX	1	327.8200	21.8300	0.913		A
UY	1	300.0000	10.0000	0.836		A
WA	1	369.0000	19.0000	1.028		A
WC	1	278.0000	39.0000	0.774		A
YA	1	358.6533	18.8700	0.999		A

**Total Number Reported: 50**

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: WA Water Bq / L  
Radionuclide: AM241

EML Value: 1.2257  
EML Error: 0.0501

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AC	1	1.1800	0.1000	0.963		A
AF	1	1.3000	0.4000	1.061		A
AG	1	1.1500	0.1500	0.938	A	A
AM	1	1.2900	0.4500	1.052	A	A
AN	1	1.2000	0.0500	0.979	A	A
AR	1	0.9900	0.0970	0.808	A	W
AR	2	1.0720	0.1090	0.875	A	W
AR	3	0.9450	0.1040	0.771	A	W
AT	1	1.3900	0.2100	1.134		A
AU	1	1.8230	0.1160	1.487	N	W
BE	1	1.2700	0.1300	1.036	A	A
BL	1	1.2600	0.2000	1.028	A	A
BL	2	1.2100	1.0400	0.987	A	A
BM	1	1.1800	0.1800	0.963	A	A
BP	1	1.5000	0.1600	1.224	A	A
BR	1	1.6800	0.5500	1.371	W	W
BS	1	1.2500	0.2000	1.020	W	A
BU	1	1.2900	0.1000	1.052	A	A
BX	1	1.2900	0.0590	1.052	A	A
CL	1	1.5600	0.3600	1.273	A	W
CS	1	1.3800	0.1000	1.126	W	A
DH	1	1.8200	0.8400	1.485		W
EG	1	1.2600	0.0900	1.028	A	A
EL	1	1.7000	0.1000	1.387		W
EP	1	1.1900	0.0911	0.971		A
FG	1	0.7600	0.2000	0.620	A	N
FL	1	1.6000	0.5000	1.305		W
FR	1	1.7000	0.5100	1.387	W	W
GA	1	1.4000		1.142	A	A
GE	1	1.3579	0.1695	1.108	A	A
GP	1	1.4000	0.1000	1.142	A	A
GT	1	1.4000	0.7000	1.142	A	A
IE	1	1.2600	0.0700	1.028	A	A
IN	1	1.3400	0.1200	1.093	A	A
IS	1	1.5600	0.6500	1.273	A	W
IT	1	1.1200	0.0600	0.914	A	A
JL	1	0.9300	0.5000	0.759	N	W
LA	1	1.1700	0.0600	0.955	A	A
LA	2	1.2500	0.0600	1.020	A	A
LA	3	1.2600	0.0600	1.028	A	A
LL	1	1.2700	0.0856	1.036	A	A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.



## QAP 48 Results by Nuclide

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Matrix: WA Water Bq / L  
Radionuclide: AM241

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EML Value: 1.2257  
EML Error: 0.0501

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
LV	1	1.5500	0.2700	1.265	W	W
ME	1	1.3700	0.2500	1.118	W	A
ML	1	1.4000	0.1000	1.142	W	A
MS	1	1.3000	0.1300	1.061	W	A
NM	1	1.2100	0.0400	0.987		A
OD	1	1.4100	0.1500	1.150		A
OT	1	1.1000	0.1000	0.897		W
RE	1	1.2300	0.1000	1.004		A
RI	1	1.2200	0.1260	0.995		A
SK	1	1.2300	0.0400	1.004		A
SN	1	1.3540	0.2090	1.105		A
SW	1	1.3100	0.1600	1.069		A
TI	1	1.2000	0.2000	0.979		A
TM	1	1.4200	0.1100	1.159		A
TN	1	1.2080	0.1862	0.986		A
TO	1	1.5000	0.3000	1.224		A
TW	1	1.2400	0.0600	1.012		A
TX	1	1.0080	0.0340	0.822		W
UP	1	0.6940	0.2290	0.566		N
UY	1	1.2100	0.1500	0.987		A
WA	1	1.1100	0.0900	0.906		A
WC	1	1.3300	0.2200	1.085		A
WI	1	1.1800	0.1800	0.963		A
YA	1	1.1567	0.0228	0.944		A

Total Number Reported: 65

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: WA Water Bq / L  
Radionuclide: Bq U

EML Value: 0.8014  
EML Error: 0.0670

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AG	1	0.8840	0.0840	1.103	A	A
AI	1	0.8600	0.0602	1.073	A	A
AM	1	0.7400	0.0700	0.923	N	A
BL	1	0.9800		1.223	A	A
BL	2	0.7800	0.0300	0.973	A	A
BU	1	0.8800	0.0400	1.098	W	A
CL	1	1.0500	0.0900	1.310	W	W
FG	1	1.1200	0.0400	1.398		W
FR	1	0.9010	0.0560	1.124	A	A
GA	1	0.9200		1.148		A
GP	1	0.9400		1.173	N	A
ID	1	0.8830	0.0460	1.102	A	A
IE	1	0.9000	0.0560	1.123		A
IS	1	0.8700	0.1500	1.086		A
KO	1	0.8920	0.0195	1.113		A
NF	1	0.8400	0.0360	1.048		A
OT	1	0.7500	0.0600	0.936		A
SW	1	0.0346		0.043		N
TX	1	0.9610	0.0620	1.199		A
UY	1	0.9100	0.1300	1.136		A
WA	1	0.8800	0.0900	1.098		A

Total Number Reported: 21

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

Matrix: WA Water Bq / L  
Radionuclide: CO60

EML Value: 13.6000  
EML Error: 1.2000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AC	1	14.6000	0.7000	1.074		A
AF	1	18.1000	3.0000	1.331	N	N
AG	1	14.0000	1.1000	1.029	A	A
AI	1	14.0000	0.3960	1.029	A	A
AL	1	15.9000	0.8280	1.169		W
AM	1	15.4100	0.4200	1.133	W	W
AN	1	14.8900	1.3700	1.095	A	A
AR	1	0.0160	0.0400	0.001	A	N
AR	2	0.0170	0.0040	0.001	A	N
AR	3	0.0150	0.0040	0.001	A	N
AT	1	16.1700	1.5300	1.189		W
AU	1	15.4000	0.8000	1.132	A	W
BA	1	15.1000	1.2000	1.110	A	A
BC	1	15.0000	0.7000	1.103	A	A
BE	1	16.7000	1.5000	1.228	N	N
BL	1	13.9000	0.6000	1.022	A	A
BM	1	14.3000	2.6000	1.051	A	A
BN	1	14.4300	0.2000	1.061	A	A
BN	2	14.8900	0.2000	1.095	A	A
BN	3	14.5300	0.2000	1.068	A	A
BP	1	15.1000	0.4000	1.110	A	A
BQ	1	14.9000	0.8000	1.096	A	A
BR	1	16.1000	1.0000	1.184	W	W
BS	1	15.0700	0.3700	1.108	A	A
BU	1	15.0000	1.2000	1.103	A	A
BX	1	15.7000	0.9000	1.154	A	W
CA	1	13.1000	0.1000	0.963	A	A
CD	1	15.3000	0.8000	1.125		A
CL	1	14.7000	0.7800	1.081	A	A
CR	1	14.7000	0.8000	1.081		A
CS	1	14.4800	0.4700	1.065	A	A
DC	1	21.8000	3.2900	1.603	A	N
DH	1	151.7000	4.0500	11.154	A	N
DP	1	16.9000	0.9000	1.243	A	N
DP	2	15.1000	1.3000	1.110	A	A
DP	3	14.6000	1.0000	1.074	A	A
EG	1	14.7000	1.0000	1.081	A	A
EL	1	21.0000	1.0000	1.544		N
EP	1	15.4000	1.2300	1.132	A	W
FG	1	15.0300	3.2700	1.105	A	A
FL	1	15.0000	0.3000	1.103	A	A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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**Matrix:** WA Water Bq / L  
**Radionuclide:** CO60

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**EML Value:** 13.6000  
**EML Error:** 1.2000

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
FM	1	13.7000	0.1000	1.007	A	A
FN	1	15.0000	1.2000	1.103	A	A
FR	1	15.4100	2.0000	1.133	A	W
GA	1	15.6000	2.5000	1.147	A	W
GC	1	14.8500	0.7400	1.092	A	A
GE	1	14.7278	1.5447	1.083	A	A
GP	1	17.0000	2.0000	1.250	N	N
GT	1	15.0000	1.7000	1.103	A	A
ID	1	15.0000	0.8300	1.103	A	A
IE	1	14.4000	0.5000	1.059	A	A
IL	1	14.7000	0.3000	1.081		A
IN	1	15.9000	1.0000	1.169	A	W
IS	1	15.9000	1.6700	1.169	A	W
IT	1	16.0000	3.0000	1.176	A	W
JE	1	16.3700	0.7800	1.204		N
JL	1	16.8800	1.4000	1.241	A	N
KA	1	14.6000	1.7000	1.074	A	A
KO	1	14.6300	0.4350	1.076		A
LA	1	15.5000	1.7000	1.140		W
LA	2	15.1000	1.7000	1.110		A
LA	3	17.4000	1.9000	1.279		N
LL	1	13.0000	1.8000	0.956	A	A
LM	1	19.9000	2.3000	1.463		N
LN	1	17.0000	1.2000	1.250		N
LV	1	15.6000	0.5000	1.147	A	W
ME	1	13.1000	0.3600	0.963	A	A
MH	1	15.4000	0.5000	1.132		W
ML	1	14.8000	1.5000	1.088	A	A
MS	1	14.4000	1.4000	1.059	A	A
NA	1	14.4000	0.3690	1.059	A	A
NL	1	15.6000	1.9100	1.147		W
NP	1	16.3000	0.8000	1.199		W
NS	1	15.7000	0.2900	1.154		W
OD	1	13.7400	1.5700	1.010		A
OL	1	15.0700	0.4000	1.108		A
OT	1	15.0000	1.0000	1.103		A
OU	1	16.4000	2.6000	1.206		N
RC	1	14.5000	1.4000	1.066		A
RE	1	15.1000	2.2000	1.110		A
RI	1	17.0000	2.7900	1.250		N
RL	1	15.5000	1.8000	1.140		W
SA	1	15.0000	0.5000	1.103		A
SK	1	15.3000	0.8000	1.125		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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Matrix: WA Water Bq / L  
Radionuclide: CO60

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EML Value: 13.6000  
EML Error: 1.2000

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
SL	1	14.7000	1.0000	1.081		A
SN	1	14.6000	1.4200	1.074		A
SR	1	15.0000	1.0000	1.103		A
SW	1	15.3000	0.2000	1.125		A
TE	1	14.8000	0.6000	1.088		A
TI	1	14.5000	1.4000	1.066		A
TM	1	15.6000	0.6310	1.147		W
TN	1	13.7200	0.4400	1.009		A
TO	1	14.3000	1.2000	1.051		A
TP	1	14.1660	0.7230	1.042		A
TT	1	15.5000	3.5800	1.140		W
TW	1	14.0000	0.4000	1.029		A
TX	1	15.0900	0.2000	1.110		A
UC	1	15.0700	0.3600	1.108		A
UP	1	15.3000	0.8520	1.125		A
UY	1	14.1000	1.2000	1.037		A
WA	1	14.7000	1.0000	1.081		A
WC	1	14.7000	1.3000	1.081		A
WI	1	15.5100	1.4000	1.140		W
WP	1	13.6000	0.8000	1.000		A
WV	1	14.9000	0.4000	1.096		A
YA	1	14.0403	0.3675	1.032		A
YU	1	13.8000	0.5000	1.015		A

Total Number Reported: **107**

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: WA Water Bq/L  
Radionuclide: CS137

EML Value: 46.0000  
EML Error: 1.7000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AC	1	47.6000	0.9000	1.035		A
AF	1	51.8000	7.4000	1.126	N	A
AG	1	51.1000	3.4000	1.111	A	A
AI	1	49.4000	0.8810	1.074	A	A
AL	1	56.4320	1.9700	1.227		W
AM	1	55.3100	0.7400	1.202	A	W
AN	1	50.5900	1.9900	1.100	A	A
AR	1	0.0590	0.0060	0.001	A	N
AR	2	0.0587	0.0056	0.001	A	N
AR	3	0.0570	0.0053	0.001	A	N
AT	1	53.8500	5.2700	1.171		A
AU	1	50.8000	2.1000	1.104	A	A
BA	1	51.2000	2.9000	1.113	A	A
BC	1	51.1000	1.5000	1.111	A	A
BE	1	51.4000	5.0000	1.117	N	A
BL	1	47.3000	1.8000	1.028	A	A
BM	1	47.6000	3.5000	1.035	A	A
BN	1	58.1600	0.9100	1.264	W	N
BN	2	56.8700	0.9100	1.236	W	W
BN	3	59.0900	0.9100	1.285	W	N
BP	1	50.2000	0.8000	1.091	A	A
BQ	1	44.0000	1.0000	0.957	A	A
BR	1	56.6100	2.0900	1.231	A	W
BS	1	48.5200	0.5100	1.055	A	A
BU	1	45.0000	4.0000	0.978	A	A
BX	1	53.3000	3.3000	1.159	A	A
CA	1	49.9000	2.4000	1.085	A	A
CD	1	51.0000	1.0000	1.109		A
CL	1	50.0000	1.7500	1.087	W	A
CR	1	49.3000	2.0000	1.072		A
CS	1	49.5900	2.1500	1.078	A	A
DC	1	74.3000	17.7000	1.615	A	N
DH	1	49.6000	0.6000	1.078	A	A
DP	1	50.5000	1.3000	1.098	A	A
DP	2	46.8000	1.6000	1.017	A	A
DP	3	52.3000	1.4000	1.137	A	A
EG	1	48.1000	2.8000	1.046	A	A
EL	1	74.0000	4.0000	1.609		N
EP	1	49.3000	3.5200	1.072	A	A
FG	1	50.9600	9.4000	1.108	A	A
FL	1	51.5000	0.6000	1.120	A	A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

Matrix: WA Water Bq / L  
Radionuclide: CS137

EML Value: 46.0000  
EML Error: 1.7000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
FM	1	47.9000	0.3000	1.041	A	A
FN	1	47.0000	4.8000	1.022	A	A
FR	1	51.6200	5.0000	1.122	A	A
GA	1	49.6000	3.9000	1.078	A	A
GC	1	52.0000	2.4000	1.130	A	A
GE	1	51.5965	6.4935	1.122	A	A
GP	1	53.0000	5.0000	1.152	N	A
GT	1	50.0000	10.0000	1.087	A	A
ID	1	50.6300	2.6400	1.101	A	A
IE	1	49.1000	3.3000	1.067	A	A
IL	1	52.0000	1.0000	1.130		A
IN	1	51.9000	2.2000	1.128	A	A
IS	1	55.2000	5.6100	1.200	A	W
IT	1	52.1000	0.7000	1.133	A	A
JE	1	53.8800	1.4900	1.171		A
JL	1	48.3900	3.7000	1.052	A	A
KA	1	51.0000	3.5000	1.109	A	A
KO	1	50.0200	0.6250	1.087		A
LA	1	56.9000	5.8000	1.237	W	W
LA	2	57.0000	5.8000	1.239	W	W
LA	3	56.6000	5.9000	1.230	W	W
LL	1	49.7000	2.3000	1.080	A	A
LN	1	58.0000	6.0000	1.261		N
LV	1	51.6000	0.7000	1.122	A	A
ME	1	46.3000	2.0900	1.007	A	A
MH	1	52.1000	2.2000	1.133		A
ML	1	48.5600	4.9000	1.056	A	A
MS	1	51.3000	5.1000	1.115	A	A
NA	1	50.7000	0.8200	1.102	A	A
NL	1	54.4000	10.7000	1.183		W
NM	1	55.1000	4.7000	1.198		W
NP	1	52.9000	1.8000	1.150		A
NS	1	51.4800	0.3700	1.119		A
OD	1	49.0200	3.3300	1.066		A
OL	1	50.6800	0.8000	1.102		A
OT	1	52.0000	1.0000	1.130		A
OU	1	51.2000	3.8000	1.113		A
RC	1	48.0000	4.0000	1.043		A
RE	1	50.5000	5.3000	1.098		A
RI	1	53.2000	6.6900	1.157		A
RL	1	56.0000	9.5000	1.217		W
SA	1	51.0000	2.1000	1.109		A
SH	1	51.2000	1.0200	1.113		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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Matrix: WA Water Bq / L  
Radionuclide: CS137

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EML Value: 46.0000  
EML Error: 1.7000

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
SK	1	50.4000	2.1000	1.096		A
SL	1	50.8000	3.0000	1.104		A
SN	1	46.7500	4.1700	1.016		A
SR	1	50.5000	4.8000	1.098		A
SW	1	51.1000	0.5000	1.111		A
TE	1	51.2000	1.2000	1.113		A
TI	1	49.9000	5.0000	1.085		A
TM	1	54.8000	1.7100	1.191		W
TN	1	47.1100	0.6900	1.024		A
TO	1	50.6000	6.0000	1.100		A
TP	1	46.9450	0.6830	1.021		A
TT	1	53.6000	6.8300	1.165		A
TW	1	51.0000	1.0000	1.109		A
TX	1	50.2800	0.4400	1.093		A
UC	1	52.8100	5.1600	1.148		A
UP	1	51.2000	3.1600	1.113		A
UY	1	50.9000	7.4000	1.107		A
WA	1	51.4000	3.0000	1.117		A
WC	1	53.5000	7.3000	1.163		A
WI	1	51.5000	5.3000	1.120		A
WP	1	47.2000	1.2000	1.026		A
WV	1	48.6000	0.5200	1.057		A
YA	1	49.0743	0.7523	1.067		A
YU	1	45.8000	1.5000	0.996		A

Total Number Reported: **108**

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: WA Water Bq / L  
Radionuclide: FE55

EML Value: 202.8000  
EML Error: 2.9206

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
BL	1	283.0000	31.0000	1.395	A	W
BP	1	246.0000	11.0000	1.213	A	A
BX	1	209.0000	17.0000	1.031	A	A
CL	1	189.0000	13.9000	0.932	A	A
DP	1	324.9000	3.2000	1.602	W	N
DP	2	311.2000	3.1000	1.535	W	N
DP	3	342.3000	3.6000	1.688	W	N
EG	1	225.0000	100.0000	1.109		A
GC	1	249.0000		1.228		A
GE	1	260.3690	61.1610	1.284		A
GP	1	310.0000	30.0000	1.529	N	N
KA	1	271.0000	7.0000	1.336	A	W
TE	1	243.0000	29.4000	1.198		A
TI	1	280.0000	30.0000	1.381		W
TM	1	111.0000	7.4800	0.547		W
TN	1	274.6000	6.4640	1.354		W
TO	1	268.0000	56.0000	1.321		W
YA	1	281.0767	23.0633	1.386		W

Total Number Reported: 18

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

**Matrix:** WA Water Bq / L  
**Radionuclide:** GROSS ALPHA

**EML Value:** 1421.0000  
**EML Error:** 100.0000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AF	1	1346.8000	44.1000	0.948	N	A
AM	1	931.7500	31.3200	0.656	W	W
AR	1	1435.0000	262.0000	1.010	A	A
AR	2	1524.0000	289.0000	1.072	A	A
AR	3	1566.0000	296.0000	1.102	A	A
AU	1	1470.0000	473.0000	1.034	W	A
BC	1	1710.0000	100.0000	1.203	A	W
BE	1	1541.0000	88.0000	1.084	A	A
BL	1	1788.6300	41.9200	1.259	A	W
BL	2	1581.6100	38.6100	1.113	A	A
BN	1	1397.1700	43.3100	0.983	A	A
BN	2	1487.5800	43.3100	1.047	A	A
BN	3	1490.4301	43.3100	1.049	A	A
BP	1	1559.0000	78.0000	1.097	A	A
BU	1	1690.0000	250.0000	1.189	A	W
BX	1	1740.0000	100.0000	1.224	A	W
CD	1	910.0000	90.0000	0.640		W
DC	1	1620.0000	319.0000	1.140	W	A
DH	1	2.8080	0.2930	0.002		N
DP	1	603.4000	15.6000	0.425	N	N
DP	2	586.2000	15.4000	0.413	N	N
DP	3	703.1000	16.8000	0.495	N	N
EG	1	1723.0000	93.0000	1.213	A	W
EI	1	1881.6801	189.5600	1.324	W	N
FG	1	1777.0000	85.0000	1.251	A	W
FL	1	2059.8999	70.5000	1.450	N	N
FR	1	840.0000	200.0000	0.591	W	W
GC	1	1440.6000	59.2200	1.014	W	A
GE	1	1650.8590	29.0709	1.162	W	W
GP	1	1500.0000	100.0000	1.056	N	A
GS	1	1948.0000	146.0000	1.371	A	N
GT	1	1400.0000	100.0000	0.985	A	A
HC	1	1515.0000	80.0000	1.066	A	A
IE	1	1599.0000	80.0000	1.125	A	A
IS	1	1590.0000	160.0000	1.119	A	A
IT	1	1262.0000	32.0000	0.888	A	A
JE	1	1359.0000	6.4600	0.956		A
KA	1	1527.0000	96.0000	1.075	W	A
KO	1	1523.0000	60.4000	1.072		A
LA	1	1305.0000	160.0000	0.918	A	A
LA	2	1444.0000	176.0000	1.016	A	A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

Matrix: WA Water Bq / L  
Radionuclide: GROSS ALPHA

EML Value: 1421.0000  
EML Error: 100.0000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
LA	3	1468.0000	179.0000	1.033	A	A
LL	1	1560.0000	18.6000	1.098	A	A
LV	1	2470.0000	270.0000	1.738	W	N
MH	1	1664.3000	4.0000	1.171		W
OB	1	1020.0000	101.0000	0.718		W
OT	1	1300.0000	100.0000	0.915		A
OU	1	1260.0000	76.5000	0.887		A
RE	1	1450.0000	101.0000	1.020		A
RG	1	1531.0000	65.6000	1.077		A
RL	1	1204.0000	24.0000	0.847		A
SA	1	976.0000	98.0000	0.687		W
SN	1	1185.7200	56.0800	0.834		A
SR	1	1399.0000	236.0000	0.985		A
SW	1	1529.0000	23.0000	1.076		A
TE	1	1592.9000	63.8000	1.121		A
TI	1	1500.0000	100.0000	1.056		A
TM	1	1630.0000	189.0000	1.147		A
TN	1	948.2000	57.2000	0.667		W
TO	1	1001.0000	30.6000	0.704		W
TW	1	670.0000	50.0000	0.471		N
TX	1	1778.0000	47.0000	1.251		W
UC	1	1364.7500	47.0000	0.960		A
UP	1	1560.0000	90.2000	1.098		A
UY	1	1493.0000	60.0000	1.051		A
WA	1	1450.0000	60.0000	1.020		A
WC	1	1460.0000	146.0000	1.027		A
WP	1	1400.0000	110.0000	0.985		A
WV	1	1228.0000	73.0000	0.864		A
YA	1	1382.8134	10.9800	0.973		A

Total Number Reported: 70

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

Matrix: WA Water Bq / L  
Radionuclide: GROSS BETA

EML Value: 2200.0000  
EML Error: 100.0000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AF	1	1798.2000	37.0000	0.817	N	A
AM	1	1757.3500	72.1300	0.799	A	A
AR	1	2146.0000	376.0000	0.975	A	A
AR	2	2115.0000	433.0000	0.961	A	A
AR	3	2126.0000	435.0000	0.966	A	A
AU	1	2329.0000	715.0000	1.059	A	A
BC	1	2210.0000	110.0000	1.005	A	A
BE	1	1995.0000	73.0000	0.907	A	A
BL	1	1828.9800	33.9500	0.831	A	A
BL	2	1725.9100	32.4500	0.785	A	A
BN	1	2295.8701	24.6800	1.044	A	A
BN	2	2275.8899	24.6800	1.034	A	A
BN	3	2236.4800	24.6800	1.017	A	A
BP	1	2534.0000	80.0000	1.152	W	A
BX	1	2270.0000	110.0000	1.032	A	A
CD	1	2100.0000	200.0000	0.955		A
DC	1	2330.0000	456.0000	1.059	W	A
DH	1	3.8700	0.2860	0.002		N
DP	1	1392.0000	16.4000	0.633	N	W
DP	2	1366.0000	16.2000	0.621	N	W
DP	3	1438.0000	16.6000	0.654	N	W
FG	1	2201.0000	110.0000	1.000	A	A
FL	1	2543.6001	51.3500	1.156	W	A
FR	1	1720.0000	350.0000	0.782	A	A
GC	1	1205.0000	55.4000	0.548	A	W
GE	1	2156.4041	25.7113	0.980	A	A
GP	1	2200.0000	200.0000	1.000	A	A
GS	1	2436.0000	125.0000	1.107	A	A
GT	1	1800.0000	100.0000	0.818	W	A
HC	1	2422.0000	120.0000	1.101	A	A
IE	1	2068.0000	88.0000	0.940	A	A
IS	1	2260.0000	230.0000	1.027	A	A
IT	1	2007.0000	245.0000	0.912	A	A
JE	1	2396.0000	6.1600	1.089		A
KA	1	2190.0000	72.0000	0.995	A	A
LA	1	2405.0000	296.0000	1.093	A	A
LA	2	2475.0000	304.0000	1.125	A	A
LA	3	2602.0000	319.0000	1.183	A	A
LL	1	2680.0000	20.2000	1.218	W	A
LV	1	4490.0000	580.0000	2.041	W	N
MH	1	2359.8000	9.6000	1.073		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

Matrix: WA Water Bq / L  
Radionuclide: GROSS BETA

EML Value: 2200.0000  
EML Error: 100.0000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
NP	1	2150.0000	18.0000	0.977		A
OB	1	1680.0000	165.0000	0.764		A
OT	1	2200.0000	100.0000	1.000		A
OU	1	1640.0000	67.8000	0.745		A
RE	1	2080.0000	146.0000	0.945		A
RG	1	2277.3999	64.1000	1.035		A
RL	1	1901.0000	210.0000	0.864		A
SA	1	1608.0000	161.0000	0.731		A
SN	1	1777.5200	62.8800	0.808		A
SR	1	2460.0000	604.0000	1.118		A
SW	1	2089.0000	23.0000	0.950		A
TE	1	2509.0000	67.1000	1.140		A
TI	1	2200.0000	100.0000	1.000		A
TM	1	1970.0000	155.0000	0.895		A
TN	1	2071.0000	61.1500	0.941		A
TO	1	1662.0000	28.5000	0.755		A
TP	1	1949.5690	46.5550	0.886		A
TW	1	2000.0000	60.0000	0.909		A
TX	1	2036.0000	70.0000	0.925		A
UP	1	2960.0000	93.6000	1.345		A
UY	1	2425.0000	70.0000	1.102		A
WA	1	2340.0000	60.0000	1.064		A
WC	1	2150.0000	215.0000	0.977		A
WP	1	53.0000	2.0000	0.024		N
WV	1	2391.0000	87.0000	1.087		A
YA	1	2123.1833	23.1867	0.965		A

Total Number Reported: 67

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

Matrix: WA Water Bq / L  
Radionuclide: H3

EML Value: 218.3000  
EML Error: 6.5046

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AF	1	1579.9000	3.7000	7.237		N
AG	1	209.0000	35.0000	0.957	A	A
AI	1	3810.0000	175.0000	17.453	N	N
AN	1	221.5000	1.4000	1.015	A	A
AU	1	221.0000	27.0000	1.012	A	A
BE	1	230.0000	14.0000	1.054	A	A
BL	1	288.3300	12.5400	1.321	A	W
BN	1	179.7100	0.3200	0.823	A	A
BN	2	180.3600	0.3200	0.826	A	A
BP	1	246.0000	8.0000	1.127	A	A
BQ	1	316.0000	11.0000	1.448		W
BU	1	213.7700	10.6900	0.979	A	A
BX	1	246.0000	23.0000	1.127	A	A
CA	1	268.0000	22.0000	1.228	A	W
CD	1	220.0000	20.0000	1.008		A
CL	1	220.0000	15.0000	1.008	A	A
DC	1	302.0000	57.9000	1.383	W	W
DH	1	229.8000	53.0000	1.053		A
DP	1	275.0000	4.1000	1.260	A	W
DP	2	283.0000	4.1000	1.296	A	W
DP	3	283.0000	4.1000	1.296	A	W
EI	1	229.8400	14.8500	1.053	N	A
EP	1	234.5000	8.4100	1.074	A	A
FG	1	199.0000	20.4000	0.912		A
FL	1	240.1000	4.8000	1.100	A	A
FN	1	239.0000	11.0000	1.095	A	A
FR	1	235.0000	20.0000	1.077	N	A
GC	1	242.7200	4.7000	1.112	A	A
GE	1	212.0444	18.8071	0.971	A	A
GP	1	240.0000	30.0000	1.099	N	A
GT	1	220.0000	10.0000	1.008	A	A
HC	1	223.0000	19.0000	1.022	A	A
ID	1	249.5000	14.1200	1.143	N	A
IE	1	220.0000	8.0000	1.008	A	A
IS	1	207.0000	1.0000	0.948	A	A
IT	1	238.0000	1.5000	1.090	A	A
KA	1	236.0000	12.0000	1.081	A	A
KO	1	249.0500	1.9510	1.141		A
LA	1	233.0000	37.0000	1.067	W	A
LA	2	237.0000	37.0000	1.086	W	A
LA	3	229.0000	37.0000	1.049	W	A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

Matrix: WA Water Bq / L  
Radionuclide: H3

EML Value: 218.3000  
EML Error: 6.5046

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
LL	1	231.0000	5.0700	1.058	A	A
LM	1	96.6000	10.0000	0.443		N
LN	1	316.0000	31.0000	1.448		W
LV	1	237.0000	4.0000	1.086	W	A
LW	1	214.0000	16.7000	0.980	A	A
ME	1	266.0000	6.1700	1.219		W
MH	1	211.8000	7.1000	0.970		A
ML	1	248.6800	13.9200	1.139	A	A
MS	1	674.0000	67.0000	3.087		N
NA	1	157.0000	3.7100	0.719	A	W
NP	1	289.0000	33.0000	1.324		W
NS	1	189.6000	13.9000	0.869		A
OD	1	246.0000	62.6700	1.127		A
OK	1	262.7000	17.5000	1.203		A
OT	1	300.0000	20.0000	1.374		W
OU	1	267.0000	21.9000	1.223		W
PR	1	223.0300	4.2800	1.022		A
RC	1	226.0000	15.0000	1.035		A
RE	1	236.0000	22.0000	1.081		A
RI	1	501.0000	44.3000	2.295		N
SK	1	227.0000	4.0000	1.040		A
SR	1	208.0000	15.0000	0.953		A
ST	1	226.4600	8.7600	1.037		A
SW	1	1212.0000	24.0000	5.552		N
TE	1	399.7000	32.5000	1.831		N
TI	1	260.0000	50.0000	1.191		A
TM	1	227.0000	10.2000	1.040		A
TN	1	171.2200	15.5210	0.784		W
TO	1	344.0000	104.0000	1.576		W
TP	1	223.3150	13.7360	1.023		A
TT	1	213.0000	3.6300	0.976		A
TW	1	236.0000	2.0000	1.081		A
TX	1	233.0000	12.0000	1.067		A
UP	1	258.5000	33.0000	1.184		A
UY	1	250.0000	50.0000	1.145		A
WA	1	233.0000	50.0000	1.067		A
WC	1	192.0000	40.0000	0.880		A
WP	1	340.0000	48.0000	1.557		W
WV	1	234.0000	8.8000	1.072		A
YA	1	246.7900	6.2900	1.131		A

Total Number Reported: 81

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

Matrix: WA Water Bq / L  
Radionuclide: MN54

EML Value: 57.0000  
EML Error: 1.9000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AC	1	71.9000	1.0000	1.261		N
AF	1	59.2000	7.4000	1.039	N	A
AG	1	62.3000	4.1000	1.093	A	A
AI	1	60.5000	0.9530	1.061	A	A
AL	1	58.7260	1.8200	1.030		A
AM	1	66.5000	0.8700	1.167	W	A
AN	1	65.4800	6.9500	1.149	A	A
AR	1	0.0680	0.0060	0.001	W	N
AR	2	0.0710	0.0058	0.001	W	N
AR	3	0.0677	0.0055	0.001	W	N
AT	1	65.8900	6.8100	1.156		A
AU	1	60.6000	3.4000	1.063	A	A
BA	1	65.8000	4.0000	1.154	A	A
BC	1	62.5000	2.2000	1.096	A	A
BE	1	69.8000	7.0000	1.225	N	W
BL	1	57.9000	1.9000	1.016	A	A
BN	1	65.8600	0.7900	1.155	W	A
BN	2	66.3000	0.7900	1.163	W	A
BN	3	67.7100	0.7900	1.188	W	W
BP	1	63.7000	0.9000	1.118	A	A
BQ	1	54.0000	1.0000	0.947	A	A
BR	1	70.3000	2.5700	1.233	W	W
BS	1	61.1100	0.6100	1.072	A	A
BX	1	65.9000	3.3000	1.156	W	A
CA	1	58.1000	4.3000	1.019	A	A
CD	1	64.0000	1.0000	1.123		A
CL	1	61.1000	2.0200	1.072	W	A
CR	1	61.1000	2.1000	1.072		A
CS	1	60.6500	2.7200	1.064	A	A
DC	1	92.2000	45.5000	1.618	A	N
DH	1	61.4000	0.7000	1.077	A	A
DP	1	68.8000	1.6000	1.207	W	W
DP	2	61.5000	2.0000	1.079	W	A
DP	3	69.6000	1.7000	1.221	W	W
EG	1	60.2000	3.5000	1.056	A	A
EL	1	89.0000	5.0000	1.561		N
EP	1	60.9300	4.3800	1.069		A
FG	1	88.9600	14.9500	1.561	W	N
FL	1	63.5000	0.6000	1.114	W	A
FM	1	58.1000	0.4000	1.019	A	A
FN	1	56.6000	5.8000	0.993	A	A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.



## QAP 48 Results by Nuclide

Matrix: WA Water Bq / L  
Radionuclide: MN54

EML Value: 57.0000  
EML Error: 1.9000

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
FR	1	62.6100	10.0000	1.098	A	A
GA	1	60.5000	8.8000	1.061	A	A
GC	1	63.0600	3.0400	1.106	A	A
GE	1	63.2330	6.9930	1.109	A	A
GP	1	63.0000	6.0000	1.105	N	A
GT	1	62.0000	14.0000	1.088	A	A
ID	1	61.2000	3.1100	1.074	A	A
IE	1	59.8000	3.4000	1.049	A	A
IL	1	62.9000	1.4000	1.104		A
IN	1	67.2000	1.6000	1.179	A	W
IS	1	67.6000	6.6000	1.186	A	W
IT	1	65.4000	4.3000	1.147	A	A
JE	1	68.3400	1.8900	1.199		W
JL	1	63.8800	4.4000	1.121	A	A
KA	1	58.0000	3.5000	1.018	A	A
KO	1	61.3500	0.7280	1.076		A
LA	1	70.5000	7.1000	1.237	W	W
LA	2	71.1000	7.1000	1.247	W	N
LA	3	68.9000	7.0000	1.209	W	W
LL	1	62.1000	2.6000	1.089	A	A
LM	1	51.9000	5.0000	0.911		A
LN	1	64.0000	6.0000	1.123		A
LV	1	67.0000	1.2000	1.175	A	W
ME	1	56.3000	2.0400	0.988	N	A
MH	1	64.4000	2.3000	1.130		A
ML	1	54.6000	5.5000	0.958	A	A
MS	1	60.2500	6.0300	1.057	A	A
NA	1	61.5000	0.9220	1.079	A	A
NL	1	69.9000	11.2000	1.226		W
NP	1	66.3000	2.1000	1.163		A
NS	1	65.8500	0.4800	1.155		A
OD	1	64.2900	3.9700	1.128		A
OL	1	62.5800	0.6700	1.098		A
OT	1	63.0000	1.0000	1.105		A
OU	1	61.3000	4.5000	1.075		A
RC	1	59.0000	5.0000	1.035		A
RE	1	61.7000	6.3000	1.082		A
RI	1	59.9000	5.8500	1.051		A
RL	1	68.0000	8.7000	1.193		W
SA	1	65.0000	4.0000	1.140		A
SH	1	78.9500	1.5000	1.385		N
SK	1	60.2000	3.0000	1.056		A
SL	1	60.0000	3.0000	1.053		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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**Matrix:** WA Water Bq / L  
**Radionuclide:** MN54

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**EML Value:** 57.0000  
**EML Error:** 1.9000

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
SN	1	60.8300	6.3600	1.067		A
SR	1	62.5000	6.3000	1.096		A
SW	1	58.0000	0.5000	1.018		A
TE	1	61.7000	1.3000	1.082		A
TI	1	60.3000	6.0000	1.058		A
TM	1	68.0000	2.1000	1.193		W
TN	1	57.8700	0.7400	1.015		A
TO	1	61.7000	11.1000	1.082		A
TP	1	56.7270	1.5190	0.995		A
TT	1	66.2000	7.0200	1.161		A
TW	1	62.0000	1.0000	1.088		A
TX	1	63.6800	0.4800	1.117		A
UP	1	62.6000	4.5300	1.098		A
UY	1	62.4000	7.4000	1.095		A
WA	1	61.4000	4.4000	1.077		A
WC	1	64.9000	9.0000	1.139		A
WI	1	64.7000	5.9000	1.135		A
WP	1	56.1000	1.3000	0.984		A
WV	1	61.9000	0.6700	1.086		A
YA	1	60.5937	0.8140	1.063		A
YU	1	54.0000	1.4000	0.947		A

**Total Number Reported: 105**

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: WA Water Bq / L  
Radionuclide: PU238

EML Value: 2.5257  
EML Error: 0.0595

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AC	1	2.4900	0.1300	0.986		A
AF	1	2.0000	0.5000	0.792		W
AG	1	2.1600	0.2600	0.855	A	W
AI	1	1.6600	0.0519	0.657	A	N
AN	1	2.4800	0.0300	0.982	A	A
AR	1	2.1100	0.2000	0.835	A	W
AR	2	2.1300	0.2000	0.843	A	W
AR	3	2.0980	0.1800	0.831	A	W
AU	1	2.3400	0.1400	0.926	N	A
BA	1	2.5200	0.4500	0.998	A	A
BE	1	2.4600	0.2300	0.974	A	A
BL	1	2.8500	0.1100	1.128	W	W
BL	2	2.4800	0.1300	0.982	W	A
BM	1	2.6800	0.3800	1.061	W	A
BP	1	2.4900	0.0600	0.986	A	A
BU	1	2.4300	0.2000	0.962		A
BX	1	2.4700	0.0810	0.978	A	A
CL	1	1.2300	0.3100	0.487	W	N
EG	1	2.3800	0.1900	0.942	A	A
EI	1	2.1700	0.1200	0.859		W
EP	1	2.5100	0.1820	0.994		A
FG	1	2.5700	0.1000	1.018		A
FR	1	2.3900	0.3600	0.946	A	A
GA	1	2.8100		1.113	W	W
GE	1	2.3217	0.2967	0.919	A	A
GP	1	2.5000	0.3000	0.990	N	A
GT	1	2.1000	0.4000	0.831	N	W
ID	1	2.6530	0.2890	1.050	N	A
IE	1	2.4800	0.2600	0.982	A	A
IN	1	2.4900	0.2100	0.986	A	A
IS	1	2.4000	0.7700	0.950	W	A
IT	1	2.4200	0.1700	0.958	A	A
KO	1	2.2900	0.0812	0.907		A
LA	1	2.4600	0.1000	0.974	A	A
LA	2	2.4200	0.1000	0.958	A	A
LA	3	2.4100	0.1000	0.954	A	A
LL	1	2.5900	0.2380	1.025	A	A
LV	1	1.8600	0.1000	0.736		N
ML	1	2.4500	0.0200	0.970	A	A
NA	1	2.2500	0.1020	0.891		W
NF	1	2.4570	0.1190	0.973		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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Matrix: WA Water Bq / L  
Radionuclide: PU238

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EML Value: 2.5257  
EML Error: 0.0595

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
NL	1	2.2400	0.5100	0.887		W
NM	1	2.3100	0.0700	0.915		A
OD	1	2.4200	0.2500	0.958		A
OT	1	2.2000	0.1000	0.871		W
RE	1	1.7700	0.3200	0.701		N
RI	1	2.4000	0.2250	0.950		A
RL	1	1.8000	0.6000	0.713		N
SK	1	2.6200	0.0900	1.037		A
SN	1	2.5500	0.3640	1.010		A
SR	1	2.2800	0.2700	0.903		A
SW	1	2.3100	0.1900	0.915		A
TE	1	2.6100	0.2700	1.033		A
TI	1	2.8000	0.3000	1.109		A
TM	1	2.5300	0.1030	1.002		A
TN	1	1.6620	0.0905	0.658		N
TO	1	2.3000	0.4000	0.911		A
TW	1	2.4000	0.1000	0.950		A
TX	1	2.3570	0.0630	0.933		A
UC	1	2.3430	0.2980	0.928		A
UP	1	2.2300	0.4120	0.883		W
UY	1	2.4000	0.2500	0.950		A
WA	1	2.5900	0.1600	1.025		A
WC	1	2.5200	0.4300	0.998		A
WI	1	1.8280	0.2900	0.724		N
YA	1	2.4642	0.0432	0.976		A

Total Number Reported: 66

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: WA Water Bq / L  
Radionuclide: PU239

EML Value: 1.6502  
EML Error: 0.0607

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AC	1	1.7300	0.0900	1.048		A
AF	1	1.6000	0.4000	0.970	N	A
AG	1	1.5300	0.1900	0.927	A	A
AI	1	1.2000	0.0392	0.727	A	N
AN	1	1.6900	0.0600	1.024	A	A
AR	1	1.5300	0.1400	0.927	A	A
AR	2	1.5000	0.1500	0.909	A	A
AR	3	1.5340	0.1490	0.930	A	A
AU	1	2.0800	0.1300	1.260	N	W
BA	1	1.6300	0.3000	0.988	A	A
BE	1	1.6700	0.1700	1.012	A	A
BL	1	1.8000	0.0900	1.091	A	A
BL	2	1.6000	0.1000	0.970	A	A
BM	1	1.7800	0.2600	1.079	A	A
BP	1	1.6900	0.0400	1.024	A	A
BU	1	1.5500	0.1000	0.939	A	A
BX	1	1.7100	0.0630	1.036	A	A
CL	1	1.0900	0.2600	0.661	A	N
EG	1	1.5800	0.1300	0.957	A	A
EI	1	1.4000	0.0800	0.848		W
EP	1	1.6800	0.1230	1.018		A
FG	1	1.7200	0.1000	1.042		A
FR	1	1.6300	0.2500	0.988	A	A
GA	1	1.8800		1.139	A	A
GE	1	1.5947	0.2063	0.966	A	A
GP	1	1.7000	0.2000	1.030	A	A
GT	1	1.4000	0.3000	0.848	N	W
ID	1	1.7400	0.2030	1.054	A	A
IE	1	1.6800	0.1200	1.018	A	A
IN	1	1.5800	0.1100	0.957	A	A
IS	1	1.4700	0.5100	0.891	W	W
IT	1	1.6600	0.1700	1.006	A	A
KA	1	1.7380	0.0120	1.053	A	A
KO	1	1.5200	0.0547	0.921		A
LA	1	1.7100	0.0700	1.036	A	A
LA	2	1.6100	0.0700	0.976	A	A
LA	3	1.6200	0.0700	0.982	A	A
LL	1	1.8000	0.1710	1.091	A	A
LV	1	1.0500	0.0600	0.636		N
ML	1	1.7000	0.1100	1.030	A	A
NA	1	1.5900	0.0750	0.964		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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**Matrix:** WA Water Bq / L  
**Radionuclide:** PU239

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**EML Value:** 1.6502  
**EML Error:** 0.0607

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
NF	1	1.6030	0.0850	0.971		A
NL	1	1.5900	0.3600	0.964		A
NM	1	1.5900	0.0500	0.964		A
OD	1	1.6200	0.1700	0.982		A
OT	1	1.6000	0.1000	0.970		A
RE	1	1.2400	0.2300	0.751		N
RI	1	1.5500	0.1550	0.939		A
SK	1	1.7700	0.0600	1.073		A
SN	1	1.6820	0.2530	1.019		A
SR	1	1.5700	0.1900	0.951		A
SW	1	1.0900	0.1000	0.661		N
TE	1	1.7900	0.2100	1.085		A
TI	1	1.9000	0.3000	1.151		W
TM	1	1.8300	0.0786	1.109		A
TN	1	2.4360	0.1267	1.476		N
TO	1	1.6000	0.3000	0.970		A
TW	1	1.6600	0.0800	1.006		A
TX	1	1.6020	0.0430	0.971		A
UC	1	1.6630	0.1680	1.008		A
UP	1	1.3800	0.2920	0.836		W
UY	1	1.6500	0.1800	1.000		A
WA	1	1.7000	0.1900	1.030		A
WC	1	1.7000	0.2900	1.030		A
WI	1	1.3130	0.2100	0.796		N
YA	1	1.6432	0.0303	0.996		A

**Total Number Reported: 66**

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: WA Water Bq / L  
Radionuclide: SR90

EML Value: 4.3574  
EML Error: 0.1924

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AF	1	4.5000	0.4000	1.033	N	A
AG	1	3.8900	0.7000	0.893	A	A
AN	1	4.1700	0.1400	0.957	A	A
AR	1	4.9000	1.0600	1.125	N	A
AR	2	4.9230	1.1240	1.130	N	A
AU	1	4.1300	0.5300	0.948	A	A
BA	1	4.0700	0.2600	0.934		A
BC	1	3.4700	0.3300	0.796	A	W
BE	1	4.4600	0.4500	1.024	A	A
BL	1	4.6040	0.3860	1.057	A	A
BM	1	4.5600	0.3000	1.046	A	A
BN	1	4.9600	0.1300	1.138	A	A
BN	2	5.0900	0.1300	1.168	A	A
BN	3	4.7800	0.1300	1.097	A	A
BP	1	4.1000	0.1000	0.941	A	A
BX	1	3.3900	0.3400	0.778	A	W
CB	1	4.7800	0.4600	1.097		A
CB	2	4.5200	0.4600	1.037		A
CL	1	3.9000	0.4300	0.895	A	A
DP	1	4.7000	0.4000	1.079	A	A
DP	2	4.1000	0.4000	0.941	A	A
DP	3	4.1000	0.4000	0.941	A	A
EG	1	4.7300	0.1700	1.086	A	A
EI	1	5.3200	0.3400	1.221	A	A
EP	1	4.4800	0.3960	1.028	A	A
GC	1	4.3000		0.987	A	A
GE	1	4.5177	0.1683	1.037	A	A
GP	1	5.3000	0.9000	1.216	N	A
GT	1	3.9000	0.1000	0.895	W	A
ID	1	3.8670	0.2250	0.887	A	W
IE	1	4.6400	0.1300	1.065	A	A
IN	1	4.4200	0.4400	1.014	A	A
IS	1	4.0100	0.0300	0.920	N	A
IT	1	4.9900	0.1600	1.145	A	A
KA	1	4.4900	0.3300	1.030	A	A
KO	1	1.5163	0.0600	0.348		N
MH	1	3.7500	0.2900	0.861		W
NA	1	4.6300	0.7400	1.063	W	A
NS	1	3.9800	0.8600	0.913		A
OD	1	4.2400	0.5200	0.973		A
OT	1	4.3000	0.5000	0.987		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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**Matrix:** WA Water Bq / L  
**Radionuclide:** SR90

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**EML Value:** 4.3574  
**EML Error:** 0.1924

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
RE	1	4.3000	0.2500	0.987		A
RI	1	5.4100	0.3250	1.242		A
SH	1	6.5170	0.1730	1.496		W
SH	2	6.5280	0.1770	1.498		W
SH	3	6.0780	0.1690	1.395		W
SR	1	5.1000	1.9000	1.170		A
SW	1	7.5500	0.6500	1.733		N
TE	1	1.7000	0.4000	0.390		N
TI	1	4.3000	0.5000	0.987		A
TM	1	3.4500	0.2940	0.792		W
TN	1	4.3280	0.1655	0.993		A
TO	1	3.7000	0.1000	0.849		W
TP	1	5.0290	0.1020	1.154		A
TW	1	4.4000	0.2000	1.010		A
TX	1	4.2600	0.6500	0.978		A
UP	1	4.0100	1.0700	0.920		A
UY	1	4.5100	0.4500	1.035		A
WA	1	4.5900	0.6300	1.053		A
WC	1	4.4200	0.6100	1.014		A
WI	1	3.8630	0.5000	0.887		W
WV	1	4.5200	0.3000	1.037		A
YA	1	4.1206	0.1986	0.946		A

**Total Number Reported: 63**

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

**Matrix:** WA Water Bq / L  
**Radionuclide:** U234

**EML Value:** 0.3962  
**EML Error:** 0.0265

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AC	1	0.3200	0.0400	0.808		W
AF	1	0.4000	0.1000	1.010		A
AG	1	0.4290	0.0590	1.083	A	A
AI	1	0.4080	0.0253	1.030		A
AM	1	0.3300	0.0500	0.833	N	W
AN	1	0.4300	0.0200	1.085	W	A
AU	1	0.5030	0.0650	1.270	A	W
BC	1	0.5250	0.0410	1.325	N	W
BE	1	0.4320	0.0620	1.090	A	A
BL	1	0.4800		1.212	A	A
BL	2	0.3800	0.0100	0.959	A	A
BM	1	0.4400	0.0700	1.111	A	A
BU	1	0.4300	0.0200	1.085		A
BX	1	0.4110	0.0330	1.037	N	A
CL	1	0.4900	0.1200	1.237	W	W
EG	1	0.4090	0.0560	1.032	A	A
EI	1	0.4100	0.0200	1.035		A
FR	1	0.4350	0.0520	1.098	A	A
GA	1	0.4800		1.212	W	A
GE	1	0.3848	0.0474	0.971	A	A
GP	1	0.4600	0.0600	1.161	N	A
IE	1	0.4400	0.0280	1.111	A	A
IN	1	0.4240	0.0600	1.070		A
IT	1	0.4500	0.0400	1.136	A	A
KO	1	0.4400	0.0138	1.111		A
LL	1	0.4280	0.0582	1.080	A	A
MH	1	0.3800	0.0400	0.959		A
ML	1	0.3900	0.0300	0.984	A	A
NL	1	0.4340	0.1040	1.095		A
OD	1	0.3840	0.0430	0.969		A
OK	1	0.4330	0.0360	1.093		A
OU	1	0.4090	0.1000	1.032		A
RE	1	0.3960	0.0440	0.999		A
SK	1	0.5170	0.0260	1.305		W
SN	1	0.4350	0.0730	1.098		A
SR	1	0.3800	0.0700	0.959		A
TM	1	0.4380	0.0324	1.106		A
TN	1	0.4304	0.0393	1.086		A
TO	1	0.4000	0.1500	1.010		A
TW	1	0.4300	0.0300	1.085		A
TX	1	0.4550	0.0270	1.148		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

### QAP 48 Results by Nuclide

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**Matrix:** WA Water Bq / L  
**Radionuclide:** U234

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**EML Value:** 0.3962  
**EML Error:** 0.0265

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
WA	1	0.4100	0.0600	1.035		A
WC	1	0.4510	0.0470	1.138		A
WI	1	0.4040	0.0700	1.020		A
YA	1	0.4343	0.0199	1.096		A

**Total Number Reported:** 45

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: WA Water Bq / L  
Radionuclide: U238

EML Value: 0.3963  
EML Error: 0.0366

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AC	1	0.3200	0.0260	0.807		W
AF	1	0.4000	0.1000	1.009		A
AG	1	0.4290	0.0590	1.083	A	A
AI	1	0.4310	0.0263	1.088		A
AM	1	0.4100	0.0500	1.035	N	A
AN	1	0.4300	0.0200	1.085	A	A
AU	1	0.5140	0.0660	1.297	A	N
BC	1	0.4770	0.0480	1.204	A	W
BE	1	0.4110	0.0600	1.037	A	A
BL	1	0.4700		1.186	A	W
BL	2	0.3700	0.0100	0.934	A	A
BM	1	0.4600	0.0700	1.161	A	A
BP	1	0.4440	0.0077	1.120	N	A
BU	1	0.4200	0.0200	1.060		A
BX	1	0.4620	0.0480	1.166	A	A
CL	1	0.4400	0.0900	1.110	W	A
EG	1	0.4150	0.0640	1.047	A	A
EI	1	0.3500	0.0200	0.883		W
FR	1	0.4450	0.0200	1.123	A	A
GA	1	0.4400		1.110	W	A
GE	1	0.3922	0.0481	0.990	A	A
GP	1	0.4600	0.0600	1.161	N	A
GT	1	0.4000	0.1000	1.009	N	A
ID	1	0.4570	0.0240	1.153		A
IE	1	0.4400	0.0280	1.110	A	A
IN	1	0.4260	0.0600	1.075		A
IT	1	0.4300	0.0100	1.085	A	A
KO	1	0.4350	0.0137	1.098		A
LL	1	0.3960	0.0551	0.999	A	A
MH	1	0.4100	0.0400	1.035		A
ML	1	0.3900	0.0300	0.984	A	A
NL	1	0.4310	0.1020	1.088		A
OD	1	0.4410	0.0480	1.113		A
OK	1	0.3740	0.0330	0.944		A
OU	1	0.4110	0.1000	1.037		A
RE	1	0.4240	0.0470	1.070		A
SK	1	0.5010	0.0250	1.264		W
SN	1	0.4470	0.0740	1.128		A
SR	1	0.3700	0.0600	0.934		A
TE	1	0.5000	0.2000	1.262		W
TM	1	0.4490	0.0328	1.133		A

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## QAP 48 Results by Nuclide

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**Matrix:** WA Water Bq / L  
**Radionuclide:** U238

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**EML Value:** 0.3963  
**EML Error:** 0.0366

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Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
TN	1	0.4065	0.0375	1.026		A
TO	1	0.4600	0.1700	1.161		A
TW	1	0.4200	0.0300	1.060		A
TX	1	0.4740	0.0260	1.196		W
WA	1	0.4400	0.0600	1.110		A
WC	1	0.4330	0.0460	1.093		A
WI	1	0.4010	0.0700	1.012		A
YA	1	0.4304	0.0197	1.086		A

**Total Number Reported: 49**

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Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

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## QAP 48 Results by Nuclide

Matrix: WA Water Bq / L  
Radionuclide: ug U

EML Value: 0.0320  
EML Error: 0.0029

Labcode	Test #	Reported Value	Reported Error	Reported EML	QAP 47 Evaluation	Evaluation
AG	1	0.0370	0.0052	1.156	N	A
AR	1	0.0328		1.025	A	A
AR	2	0.0317		0.991	A	A
AR	3	0.0328		1.024	A	A
BE	1	0.0350	0.0000	1.094	A	A
BQ	1	0.0330	0.0010	1.031	N	A
BU	1	0.0340	0.0040	1.063		A
CA	1	0.0405	0.0021	1.266	N	W
GE	1	0.0347	0.0007	1.085	A	A
GS	1	0.0320	0.0020	1.000	A	A
IE	1	0.0360	0.0020	1.125	A	A
IT	1	0.0333	0.0002	1.041	A	A
KA	1	0.0337	0.0002	1.053	A	A
KO	1	0.0352	0.0011	1.100		A
LA	1	0.0400	0.0100	1.250	N	W
LA	2	0.0400	0.0100	1.250	N	W
LA	3	0.0400	0.0100	1.250	N	W
OU	1	0.0335	0.0005	1.047		A
RI	1	0.7250	0.0220	22.656		N
SA	1	0.0340	0.0039	1.063		A
TI	1	0.0320	0.0050	1.000		A
TM	1	0.0394	0.0020	1.231		W
TN	1	0.0316	0.0040	0.987		A
UC	1	0.0350		1.094		A
UP	1	0.0350	0.0040	1.094		A
YA	1	0.0387	0.0044	1.209		W
YP	1	0.0339	0.0012	1.059		A

Total Number Reported: 27

Values for elemental uranium are reported in µg/filter, g or mL. pCi/g or mL = Bq x 0.027

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

If the evaluation system is not appropriate for the types of analyses performed in your lab, apply site specific evaluation.

## Participating Laboratories in EML QAP48

### Laboratories Reporting Data

Code	Laboratory Name
AC	Analytical Chemistry Laboratory, Argonne National Lab
AF	Air Force Analytical Lab, Brooks AFB
AG	Paragon Analytics, Inc, Fort Collins, CO
AI	Nuclear Technology Services, Inc., Roswell, GA
AL	Ames Laboratory, Ames, IA
AM	American Radiation Services, Inc., Baton Rouge
AN	Argonne National Laboratory
AR	Accu-Labs Research Inc., Golden, CO
AT	ATL International inc., Germantown, MD
AU	ORISE EESD/ESSAP, Oak Ridge
BA	Bettis Atomic Power Lab, West Mifflin, PA
BC	Babcock & Wilcox MC #42, Lynchburg, VA
BE	RUST Geotech, Grand Junction, CO
BL	Barringer Laboratories Inc., Golden, CO
BM	Battelle Memorial Institute, Columbus, OH
BN	Brookhaven National Laboratory, Upton, NY
BP	Battelle Pacific Northwest National Laboratory
BQ	Becquerel Laboratories Inc., Mississauga, Ontario, Canada
BR	US Army Research Laboratory, Aberdeen Proving Ground
BS	B&W Nuclear Envir. Services, Leechburg, PA
BU	Autoridad Regulatoria, Buenos Aires, Argentina
BX	B&W Nuclear Envir. Services, Lynchburg, VA
CA	Atomic Energy Control Board, Ottawa, Canada
CB	Radiation Protection Bureau, Ontario, Canada
CD	Gentilly-2 Nuclear Power Plant, Quebec Canada
CH	California State Dept. Health Serv., Sanitation & Radiation Laboratory
CL	Core Laboratories, Casper, WY
CN	China Institute for Radiation Protection
CO	Bedford Institute of Oceanography, Dartmouth. Nova Scotia, Canada
CR	Laboratorio de Fisica Nuclear Aplicada, Costa Rica
CS	Boeing North American, Canoga Park, CA
DC	Datachem Laboratories, Salt Lake City
DH	Duke Engineering Services Hanford
DP	Duke Power Company, Huntersville, NC
EG	LMITCO/INEL, Scoville
EI	Eichrom Industries, Inc., Argonne
EL	Energy Laboratories, Inc., Casper, WY
EP	US EPA, Las Vegas
FG	FGL Environmental, Santa Paula, CA
FJ	The University of the South Pacific, Fiji Islands
FL	Florida Dept of Health & Rehab. Serv., Orlando
FM	Florida Mobile Emergency Radiological Laboratory, Orlando
FN	Fermi Lab, Batavia, IL
FR	CEA/DAM - SPR/B3
FS	Florida State University, Tallahassee
GA	Lockheed Martin, Pikton, OH
GC	Georgia Power Company Environmental Lab
GE	Environmental Physics, Inc., Charleston, SC
GP	GPU Nuclear, Inc., Harrisburg, PA
GS	USGS/NWQL, Arvada, CO
GT	Georgia Institute of Technology

## Participating Laboratories in EML QAP48

### Laboratories Reporting Data

Code	Laboratory Name
HC	Lawrence Livermore Laboratory, California
HU	Water Resources Research Centre (VITUKI), Hungary
IA	Bhabha Atomic Research Centre, India
ID	DPRA - IRD/CNEN, Rio de Janeiro, Brazil
IE	IEA, Inc., Morrisville, NC
IL	ISU Environmental Monitoring Program, Pocatello, ID
IN	Lockheed Martin Idaho Technical Corp., Analytical Laboratory
IS	Quanterra- St. Louis
IT	Quanterra- Richland Laboratory
JE	Jacobs Engineering, Oak Ridge, TN
JL	Jefferson Lab, Newport News, VA
KA	Knolls Atomic Power Lab, Schenectady
KO	Korea Institute of Nuclear Safety]
KR	Korea Atomic Energy Research Institute
LA	Los Alamos National Laboratory, NM
LL	LLNL Chemistry and Material Science/Environmental
LM	Los Alamos National Lab, Mercury, NV
LN	Los Alamos National Lab, ES&H
LV	UNLV, Dept of Health Physics
LW	Lawrence Livermore National Lab, Waste
MA	ORNL Health Sciences Research Div.
ME	Radiation Control Program, Jamaica Plain, MA
MH	Maine Health & Environmental Testing Laboratory
ML	EG&G Mound Applied Technologies, Miamisburg, OH
MS	Manufacturing Sciences Corporation, Oak Ridge
NA	US EPA NAREL, Montgomery, AL
NF	Nuclear Fuel Services, Erwin, TN
NL	Fluor Daniel Fernald, Inc., Ohio
NM	Environmental Evaluation Group, Carlsbad, NM
NP	JAF Environmental Laboratory, New York Power Authority
NR	Naval Reactors Facility Chemistry, Scoville, ID
NS	State Lab of Public Health, North Carolina
OB	OBG Laboratories, East Syracuse, NY
OD	ORNL, Radiobioassay Lab
OK	Southwest Laboratory of Oklahoma
OL	ORNL Environmental Sciences Div.
OT	ORNL Radioactive Material Analysis Lab
OU	Outreach Laboratory, Broken Arrow, OK
PA	Mason & Hanger-Silas Mason Co., Inc., Battelle Pantex, Amarillo, TX
PK	Pakistan Institute of Nuclear Science & Technology
PO	Institute of Oceanology PAN, Poland
PR	Princeton Plasma Physics Lab
RA	V. G. Khlopin Radium Institute, St. Petersburg, Russia
RC	US NRC Region I Laboratory, PA
RD	Radiation Detection Company, CA
RE	Bechtel Nevada, Mercury, NV
RG	Thermo Nutech Rocky Flats Plant, Golden
RI	Rust Federal Services of Hanford, Inc., 222S Lab
RK	Rock Island Arsenal, Illinois
RL	Thermo Hanford
SA	Sandia Labs Radioactive Sample Diag. Prog., NM

## Participating Laboratories in EML QAP48

### Laboratories Reporting Data

<b>Code</b>	<b>Laboratory Name</b>
<b>SH</b>	Savannah River Ecology Lab
<b>SK</b>	Savannah River Plant
<b>SL</b>	Stanford Linear Accelerator Center
<b>SN</b>	Sanford Cohen Associates, Inc., Montgomery, AL
<b>SR</b>	Savannah River Environmental Laboratory
<b>ST</b>	SC DHEC, Aiken, South Carolina
<b>SW</b>	Southwest Research Institute, San Antonio, TX
<b>TE</b>	Teledyne Isotopes Midwest Lab, Northbrook, IL
<b>TI</b>	Teledyne Brown Engineering Environmental Services, Westwood, NJ
<b>TM</b>	Thermo Nutech Albuquerque Lab, NM
<b>TN</b>	Thermo NuTech, Richmond, CA
<b>TO</b>	Thermo NUtech Oak Ridge Laboratory
<b>TP</b>	Taiwan Power Company, Taipei, Taiwan
<b>TT</b>	Tracer Technologies International, Inc., Cleveland
<b>TW</b>	Taiwan Radiation Monitoring Center
<b>TX</b>	Texas Dept. of Health/Laboratories, Austin
<b>UC</b>	Lockheed Martin, Paducah, KY
<b>UP</b>	Lockheed Martin Energy Systems, Y-12 Plant, Oak Ridge
<b>UY</b>	Lockheed Martin Energy Systems, Y-12 Plant, Oak Ridge
<b>WA</b>	Environmental Radiation Lab, Off. of Public Health Labs. Seattle
<b>WC</b>	Westinghouse Hanford Co.
<b>WI</b>	WIPP Site, Westinghouse Electric Corp.
<b>WP</b>	Washington Public Power Supply System, Richland
<b>WS</b>	Weldon Springs Site, St Charles, MO
<b>WV</b>	West Valley Nuclear Services Co, Inc, NY
<b>YA</b>	Duke Engineering Environmental Lab, Westboro, MA
<b>YP</b>	US Army Proving Ground, Yuma, AZ
<b>YU</b>	Institute of Occupational and Radiological Health, Yugoslavia

**Total Reporting Labs: 130**



## Participating Laboratories in EML QAP48

### Laboratories NOT Reporting Data

<b>Code</b>	<b>Laboratory Name</b>
<b>AP</b>	Aberdeen Proving Ground, Aberdeen, MD
<b>AW</b>	Argonne National Laboratory, Idaho Falls
<b>AY</b>	Analytics, Inc. Atlanta, GA
<b>CW</b>	Carlsbad Environmental Monitoring Research Center, NM
<b>CZ</b>	ACZ Laboratories, Inc., Steamboat Springs, CO
<b>ES</b>	QST Environmental, Gainesville, FL
<b>EM</b>	3M, Empore Disks, St. Paul, MN
<b>FC</b>	Marine Nationale Lab del Surveillance de l'Environnement, France
<b>FT</b>	USACECOM-DSRM, Fort Monmouth, NJ
<b>HS</b>	RESL - US DOE, Idaho Falls
<b>IR</b>	Idaho National Engineering Laboratory
<b>LB</b>	Lawrence Berkeley Lab UCB
<b>LE</b>	Lyle Environmental Management, Columbus, Ohio
<b>MI</b>	Massachusetts Institute of Technology
<b>ND</b>	Dept. of Environmental Health and Safety, NC State University
<b>NZ</b>	National Radiation Laboratory, New Zealand
<b>OS</b>	Oregon Health Division Radiation Controls Section, Portland
<b>RB</b>	US NRC Region III Laboratory, IL
<b>SB</b>	SC Dept. of Health and Environment Control Radiological Lab
<b>SE</b>	Shealy Environmental Services Inc., Cayce, SC
<b>TR</b>	University of Istanbul, Turkey
<b>TU</b>	Texas A&M University, Dept of Nuclear Engineering
<b>TY</b>	Scientific Production Association, Russia
<b>UK</b>	Lockheed Martin Energy Systems, Oak Ridge
<b>WE</b>	Westinghouse Electric Corp., Madison, PA

**Total Non-Reporting Labs: 25**