

The isotopic analysis of 41 swipes taken during routine S&M radiological surveys over the last 2 years (CY16 & CY17) within all of the work zones identified above, indicated the presence of up to the following 12 radionuclides:

(Alpha) α
Americium-241
Neptunium-237
Plutonium-238
Plutonium-239/240
Thorium-230
Thorium-232
Uranium-234
Uranium-235
Uranium-238
(Beta-Gamma) βγ
Cesium-137
Strontium-90
Technetium-99

It is assumed that an average of the isotopic swipe analysis can be used to calculate an activity ratio for each isotope and that the isotopes exist in those ratios in gross alpha and gross beta-gamma surveys taken throughout the facility. The average activities for each isotope calculated are listed below:

Average Activity									
(Alpha) α	pCi/sample								
Americium-241	1.864								
Neptunium-237	8.523								
Plutonium-238	0.187								
Plutonium-239/240	8.700								
Thorium-230	45.600								
Thorium-232	0.500								
Uranium-234	186.231								
Uranium-235	11.651								
Uranium-238	275.885								
(Beta-Gamma) βγ									
Cesium-137	0.505								
Strontium-90	0.178								
Technetium-99	1181.707								

Average Activity per Isotope in C-400

The averages were summed to get a total average activity for alpha and for beta-gamma-emitting isotopes. The activity ratio was calculated by dividing the isotope's average activity by the sum of activities for isotopes of like radiation. The resulting data can be seen below:

Average Activity and Activity Ratio per Isotope

Isotope <i>i</i>	Average Activity	Activity Ratio		
(Alpha) α	Ai (pCi/sample)	α %		
Americium-241	1.864	0.35%		
Neptunium-237	8.523	1.58%		
Plutonium-238	0.187	0.03%		

Plutonium-239/240	8.700	1.61%
Thorium-230	45.600	8.46%
Thorium-232	0.500	0.09%
Uranium-234	186.231	34.54%
Uranium-235	11.651	2.16%
Uranium-238	275.885	51.17%
Sum Alpha	539.142	100%
(Beta-Gamma) βγ		βγ %
Cesium-137	0.505	0.04%
Strontium-90	0.178	0.02%
Technetium-99	1181.707	99.94%
Sum Beta-Gamma	1182.390	100%

Notes:

The activity ratios calculated from averaging the activity of each isotope are applicable for the entire facility of C-400.

No accountable nuclear material, such as uranium, uranium bearing material, thorium, or neptunium that requires accountability by DOE, remains in the C-400 facility.

Equipment that may contain radiological holdup material beyond contamination levels in the C-400 facility has been removed.

The gross alpha and gross beta-gamma surveys used may include items that have since been removed from the facility.

The maximum gross alpha swipe was obtained in work zone 9 (floor surface), while the maximum betagamma swipe was obtained in work zone 5 (piping exterior).

17-400-ISO-001		from: C-400 on 10/21/2016 Media: SW SmpMet				Aethod: GR				
Comments:										
Analysis	Results	Units	Re sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
RADS										
Americium-241	3.14	pCi/sam	p		0.251	0.421	0.702	RL-7128	PGDP	/ X
Ce sium -137	6.29	pCi/sam	IP.		2.41	2.36	2.69	RL-7124	PGDP	/ X
Neptunium-237	11.1	pCi/sam	p		0.502	0.703	2.47	RL-7128	PGDP	/x
Plutonium-238	0.762	pCi/sam	p		0.104	0.184	0.247	RL-7128	PGDP	/ x /
Plutonium-239/240	9.38	pCi/samp		0.21	0.637	2.09	RL-7128	PGDP	/ X	
Strontium-90	0.977	pCi/sam	pBU		11.1	0.175	0.278	RL-7140	PGDP	/ X
Technetium -99	10900	pCi/sam	p		4.5	45.8	562	RL-7100	PGDP	/x
Thorium-230	34.2	pCi/sam	p		1.13	1.31	6.15	RL-7128	PGDP	/x
Thorium-232	0.372	pCi/sam	p		0.294	0.154	0.199	RL-7128	PGDP	/x
Uranium-234	543	pCi/sam	рТ		1.28	10.5	120	RL-7128	PGDP	/x/
Uranium -235	29.2	pCi/samp T		0.529	2.72	6.99	RL-7128	PGDP	/x/	
Uranium-238	549	pCi/sam	pT		1.03	10.6	122	RL-7128	PGDP	/x/
Comments:										
Analysis	Results	Units	Re sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
RADS										
Americium-241	2.55	pCi/sam	p		0.258	0.428	0.637	RL-7128	PGDP	/ X
Ce sium -137	-0.27	pCi/sam	D U		2.15	0.539	1.23	RL-7124	PGDP	/ X
Neptunium-237	0.55	pCi/sam	p		0.475	0.158	0.268	RL-7128	PGDP	/x
Plutonium-238	0.136	pCi/sam	p		0.0983	0.0754	0.0858	RL-7128	PGDP	/ X
Plutonium -239/240	8.42	pCi/sam	p		0.203	0.585	1.85	RL-7128	PGDP	/ X
Strontium-90	-0.918	pCi/sam	pBU		11.8	0.174	0.267	RL-7140	PGDP	/ X
Technetium-99	2370	pCi/sam	p		4.5	21.5	124	RL-7100	PGDP	/ x
Thorium-230	172	pCi/sam							BCDB	18
Thorium-232			p		1.14	3.22	31	RL-7128	FODF	10
	1.92	pCi/sam	ip ip		1.14 0.31	3.22 0.345	31 0.499	RL-7128 RL-7128	PGDP	/x
Uranium-234	1.92 103	pCi/sam pCi/sam	ip ip		1.14 0.31 0.965	3.22 0.345 2.15	31 0.499 17.5	RL-7128 RL-7128 RL-7128	PGDP PGDP	/x /x
Uranium -234 Uranium -235	1.92 103 4.9	pCi/sam pCi/sam pCi/sam	ip ip		1.14 0.31 0.965 0.168	3.22 0.345 2.15 0.521	31 0.499 17.5 0.979	RL-7128 RL-7128 RL-7128 RL-7128	PGDP PGDP PGDP PGDP	/x /x /x /x

17-400-ISO-0	18 from: C-400	on 4/5/2017	Media: SW	SmpMe
· · · ·	Smear inside receiving booth in C-400 TRU Area near Col. A	A-2 1/2 Zone 4Floor area 4 pan	area, Col. B-4. SC 4-5-17	

lethod: GR

Comments:

Analysis	Results	Units	Re sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
RADS										
Americium-241	11.2	pCi/samp			0.513	1.23	2.34	RL-7128	PGDP	/x/
Cesium-137	0.167	pCi/samp	U		2.94	0.335	1.6	RL-7124	PGDP	/x/
Neptunium-237	2.99	pCi/samp			0.664	0.598	0.915	RL-7128	PGDP	/x/
Plutonium-238	1.04	pCi/samp			0.263	0.338	0.414	RL-7128	PGDP	/x/
Plu tonium -239/240	57.5	pCi/samp			0.436	2.51	12.8	RL-7128	PGDP	/x/
Strontium-90	-1.99	pCi/samp	BU		12.9	0.371	0.544	RL-7140	PGDP	/x/
Technetium -99	137	pCi/samp			4.37	5.98	9.24	RL-7100	PGDP	/x/
Thorium-230	213	pCi/samp			3.3	5.83	35.9	RL-7128	PGDP	/x/
Thorium-232	2.31	pCi/samp			0.948	0.632	0.819	RL-7128	PGDP	/x/
Uranium-234	804	pCi/samp	т		3.47	19.1	172	RL-7128	PGDP	/x/
Uranium-235	45.6	pCi/samp	т		1.51	5.08	10.9	RL-7128	PGDP	/x/
Uranium -238	927	pCi/samp	т		3.01	20.5	198	RL-7128	PGDP	/x/

*Verification/Validation/Assessment

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17-400-ISO-019

from: C-400 on 4/5/2017 Media: SW Smear inside receiving booth in C-400 TRU Area near Col. AB-3 Zone 4Area 4 North floor under pan. SC 4-5-17 Comments:

SmpMethod: GR

V/V/A*

/X/ /X/

Analysis	Results	Units	Re sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode
RADS									
Americium-241	2.46	pCi/samp	0		0.521	0.566	0.734	RL-7128	PGDP
Ce sium -137	1.17	pCi/samp	U		2.77	2.33	2.33	RL-7124	PGDP
Neptunium-237	3.01	pCi/samp	0		0.679	0.586	0.906	RL-7128	PGDP
Plutonium-238	0.184	pCi/samp	υU		0.248	0.142	0.165	RL-7128	PGDP
Plu tonium -239/240	7.53	pCi/samp)		0.412	0.9	1.87	RL-7128	PGDP
Strontium-90	3.03	pCi/samp	BU		13.3	0.514	0.795	RL-7140	PGDP
Technetium -99	25.2	pCi/samp	,		4.37	3.99	4.19	RL-7100	PGDP
Thorium-230	42.5	pCi/samp)		3.3	2.5	7.54	RL-7128	PGDP
Thorium-232	0.357	pCi/samp	U		0.932	0.262	0.441	RL-7128	PGDP
Uranium-234	578	pCi/samp	0		2.77	13.4	113	RL-7128	PGDP
Uranium -235	37.5	pCi/samp	0		0.907	3.79	8.2	RL-7128	PGDP
Uranium -238	640	pCi/samp	0		2.39	14.1	125	RL-7128	PGDP

17-400-ISO-020

on 4/5/2017 Media: SW SmpMethod:

GR

from: C-400 Smear south of receiving booth in C-400 TRU Area near Col. AB-1 1/2 Zone 4Area 7 floor Col. C-4. SC 4-5-17 Comments:

Analysis	Results	Units	Re sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
RADS										
Americium-241	1.22	pCi/samp			0.503	0.405	0.492	RL-7128	PGDP	/x/
Ce sium -137	0.668	pCi/samp	U		2.52	1.34	1.34	RL-7124	PGDP	/x/
Neptunium-237	1.4	pCi/samp	pCi/samp		0.689	0.396	0.547	RL-7128	PGDP	/x/
Plutonium-238	0.147	pCi/samp	U		0.241	0.123	0.147	RL-7128	PGDP	/X/
Plu tonium -239/240	4.39	pCi/samp			0.383	0.664	1.17	RL-7128	PGDP	/x/
Strontium-90	-2.82	pCi/samp	BU		14.2	0.533	0.777	RL-7140	PGDP	/x/
Technetium -99	86.2	pCi/samp			4.37	5.17	6.81	RL-7100	PGDP	/x/
Thorium-230	37.2	pCi/samp			3.26	2.16	6.56	RL-7128	PGDP	/x/
Thorium-232	0.322	pCi/samp	U		0.916	0.267	0.443	RL-7128	PGDP	/x/
Uranium-234	277	pCi/samp			2.57	7.03	50.1	RL-7128	PGDP	/x/
Uranium-235	15.9	pCi/samp			0.495	1.87	3.41	RL-7128	PGDP	/x/
Uranium -238	315	pCi/samp			2.24	7.47	56.8	RL-7128	PGDP	/x/

17-400-ISO-024		from: C-	400	on	6/7/2017	Media: SW	SmpN		
Comments:									
Analysis	Results	Result Units Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
RADS									
Americium-241	0.459	pCi/samp		0.224	0.16	0.194	RL-7128	PGDP	/ X .
Ce sium -137	2.79	pCi/samp		2	1.86	1.91	RL-7124	PGDP	/x.
Neptunium-237	0.487	pCi/samp	pCi/samp		0.166	0.217	RL-7128	PGDP	/x.
Plutonium-238	0.0379	pCi/samp U		0.0979	0.0405	0.051	RL-7128	PGDP	/ X .
Plutonium-239/240	1.59	pCi/samp		0.155	0.254	0.434	RL-7128	PGDP	/x
Strontium-90	0.136	pCi/samp U		4.97	0.0237	0.0368	RL-7140	PGDP	/x,
Technetium-99	41.1	pCi/samp		3.95	4.41	4.89	RL-7100	PGDP	/x/
Thorium-230	8.78	pCi/samp		1.35	0.715	1.71	RL-7128	PGDP	/x.
Thorium-232	0.0386	pCi/samp U		0.402	0.0819	0.163	RL-7128	PGDP	/x,
Uranium-234	25.6	pCi/samp		1.01	1.31	4.65	RL-7128	PGDP	/x,
Uranium-235	1.57	pCi/samp		0.238	0.371	0.465	RL-7128	PGDP	/x,
Uranium-238	37.9	pCi/samp		0.902	1.58	6.76	RL-7128	PGDP	/x,

*Verification/Validation/Assessment

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17-400-ISO-025		from: C-400			on	on 6/7/2017 Media: SW		SmpN	SmpMethod: GR		
Comments:											
Analysis	Results	Units	Re sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*	
RADS											
Americium-241	0.402	pCi/sam	IP .		0.228	0.164	0.194	RL-7128	PGDP	/x/	
Ce sium -137	2.21	pCi/sam	υp		2.24	1.41	1.45	RL-7124	PGDP	/x/	
Neptunium-237	0.777	pCi/sam	p		0.312	0.196	0.277	RL-7128	PGDP	/x/	
Plutonium-238	0.0204	pCi/sam	ip U		0.106	0.0458	0.0585	RL-7128	PGDP	/x/	
Plutonium-239/240	2.21	pCi/sam	p		0.161	0.312	0.589	RL-7128	PGDP	/x/	
Strontium-90	0.33	pCi/sam	D U		5.7	0.0571	0.089	RL-7140	PGDP	/x/	
Technetium-99	44.7	pCi/sam	p		3.95	5.12	5.61	RL-7100	PGDP	/x/	
Thorium-230	10.3	pCi/sam	p		1.35	0.815	2.11	RL-7128	PGDP	/x/	
Thorium-232	0.136	pCi/sam	ip U		0.387	0.111	0.181	RL-7128	PGDP	/x/	
Uranium-234	26.4	pCi/sam	p		1.01	1.35	4.82	RL-7128	PGDP	/x/	
Uranium -235	1.41	pCi/sam	p		0.236	0.35	0.432	RL-7128	PGDP	/x/	
Uranium -238	36.9	pCi/sam	p		0.892	1.59	6.63	RL-7128	PGDP	/x/	
17-400-ISO-026			from: C-	400	07	6/7/2017	Media: SW	Smot	Aethod: GR		
Comments:				100	0.1	0,7,2017	incola: 51	Jinpi	interior. On		
Analysis	Results	Units	Re sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*	
RADS											
Americium-241	0.733	pCi/sam	p		0.234	0.209	0.255	RL-7128	PGDP	/x/	
Ce sium -137	2.21	pCi/sam	p		2.12	1.34	1.38	RL-7124	PGDP	/x/	
Neptunium-237	0.421	pCi/sam	p		0.273	0.131	0.182	RL-7128	PGDP	/x/	
Plutonium-238	0.079	pCi/sam	p U		0.109	0.0544	0.0644	RL-7128	PGDP	/x/	
Plutonium-239/240	2.15	pCi/sam	p		0.153	0.279	0.534	RL-7128	PGDP	/x/	
Strontium-90	-0.609	pCi/sam	p U		5.54	0.11	0.167	RL-7140	PGDP	/x/	
Technetium-99	12.1	pCi/sam	p		3.95	4.33	4.37	RL-7100	PGDP	/x/	
Thorium-230	16.2	pCi/sam	p		1.38	1.01	3.12	RL-7128	PGDP	/x/	
Thorium-232	0.148	pCi/sam	рU		0.38	0.119	0.186	RL-7128	PGDP	/x/	
Uranium-234	22.4	pCi/sam	p		1.01	1.25	4.14	RL-7128	PGDP	/x/	
	1.42	ntilean			0.231	0 349	0.433	RI-7128	PGDP	/ ¥ /	

0.898

1.31

4.51

RL-7128

*Verification/Validation/Assessment

Uranium-238

24.7

pCi/samp

/x/

PGDP

17-400-ISO-049

Smear inside exhaust duct on cleaning tank exhaust fan #81 in C-400 basement zone 131/S exhaust duct.

on 6/27/2017 Media: SW

SmpMethod: GR

Comments:

Analysis	Results	Units	Re sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
RADS										
Americium-241	0.599	pCi/samp			0.219	0.183	0.226	RL-7128	PGDP	/×/
Cesium -137	1.1	pCi/samp			2.96	2.2	2.2	RL-7124	PGDP	/x/
Neptunium-237	0.723	pCi/samp			0.353	0.206	0.276	RL-7128	PGDP	/x/
Plutonium-238	0.0627	pCi/samp	U		0.112	0.06	0.0685	RL-7128	PGDP	/x/
Plutonium-239/240	1.97	pCi/samp			0.163	0.295	0.528	RL-7128	PGDP	/x/
Strontium-90	1.49	pCi/samp	BU		4.99	0.244	0.393	RL-7140	PGDP	/x/
Technetium -99	1320	pCi/samp	DL	D	35	59	90	RL-7100	PGDP	/x/
Thorium-230	32.5	pCi/samp			1.4	1.46	5.65	RL-7128	PGDP	/x/
Thorium-232	0.173	pCi/samp	U		0.41	0.116	0.185	RL-7128	PGDP	/x/
Uranium-234	73	pCi/samp			1.12	3.1	14.7	RL-7128	PGDP	/x/
Uranium-235	5.98	pCi/samp			0.31	0.989	1.54	RL-7128	PGDP	/x/
Uranium-238	235	pCi/samp			0.951	5.54	46.6	RL-7128	PGDP	/x/

17-400-ISO-050

on 6/27/2017 Media: SW SmpMethod:

GR

from: C-400 Smear inside exhaust duct on cleaning tank exhaust fan #83 in C-400 basement zone 131/S exhaust duct. Comments:

from: C-400

Analysis	Results	Units	Re sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
RADS										
Americium-241	0.298	pCi/samp			0.23	0.144	0.173	RL-7128	PGDP	/x/
Ce sium -137	0.0886	pCi/samp	U		2.35	0.177	1.26	RL-7124	PGDP	/x/
Neptunium-237	0.144	pCi/samp	U		0.305	0.0891	0.131	RL-7128	PGDP	/x/
Plutonium-238	0.00831	pCi/samp	U		0.108	0.0218	0.037	RL-7128	PGDP	/x/
Plu tonium -239/240	0.425	pCi/samp			0.158	0.139	0.176	RL-7128	PGDP	/x/
Strontium-90	1.8	pCi/samp	BU		4.79	0.29	0.471	RL-7140	PGDP	/x/
Technetium-99	280	pCi/samp	DL	D	35	36	38.7	RL-7100	PGDP	/x/
Thorium-230	6.35	pCi/samp			1.37	0.644	1.36	RL-7128	PGDP	/x/
Thorium-232	0.0261	pCi/samp	U		0.382	0.0668	0.158	RL-7128	PGDP	/x/
Uranium-234	10.5	pCi/samp			0.996	0.653	1.89	RL-7128	PGDP	/x/
Uranium-235	0.513	pCi/samp			0.2	0.175	0.204	RL-7128	PGDP	/x/
Uranium-238	19.6	pCi/samp			0.878	0.881	3.33	RL-7128	PGDP	/x/

*Verification/Validation/Assessment

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17-400-ISO-051

from: C-400 Smear inside exhaust duct on cleaning tank exhaust fan #85 in C-400 basement zone 131/S exhaust duct.

on 6/27/2017 Media: SW SmpMethod: GR

Comments:

Analysis	Results	Units	Re sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
RADS										
Americium-241	0.114	pCi/samp	U		0.241	0.108	0.135	RL-7128	PGDP	/×/
Cesium-137	1.59	pCi/samp	U		1.73	1.54	1.56	RL-7124	PGDP	/x/
Neptunium-237	0.527	pCi/samp	0		0.271	0.157	0.215	RL-7128	PGDP	/x/
Plutonium-238	0.0282	pCi/samp	υU		0.0988	0.0355	0.0468	RL-7128	PGDP	/x/
Plutonium-239/240	0.32	pCi/samp	0		0.156	0.124	0.151	RL-7128	PGDP	/x/
Strontium-90	0.968	pCi/samp	BU		5.25	0.163	0.258	RL-7140	PGDP	/x/
Technetium -99	178	pCi/samp	DL	D	35	32.8	34.1	RL-7100	PGDP	/x/
Thorium-230	2.49	pCi/samp	,		1.36	0.42	0.817	RL-7128	PGDP	/x/
Thorium-232	-0.073	pCi/samp	U		0.383	0.0839	0.164	RL-7128	PGDP	/x/
Uranium-234	31.6	pCi/samp)		1	1.26	5.45	RL-7128	PGDP	/x/
Uranium-235	1.73	pCi/samp	0		0.203	0.326	0.44	RL-7128	PGDP	/x/
Uranium-238	52.4	pCi/samp	^b		0.879	1.61	8.89	RL-7128	PGDP	/x/

17-400-ISO-052

on 6/27/2017 Media: SW SmpMethod:

GR

from: C-400 Smear inside exhaust duct on cleaning tank exhaust fan #87 in C-400 basement zone 131/S exhaust fan duct. Comments:

Applyric	Posulte	Unite	Re sult	Foot	Reporting	Counting	TPU	Mathad	LabCada.	V////*
Analysis	Results	Units	Qual	Note	Limit	Error	110	Methou	Labcoue	V/V/A
RADS										
Americium-241	0.204	pCi/samp	U		0.22	0.113	0.142	RL-7128	PGDP	/x/
Ce sium -137	2.39	pCi/samp	U		2.95	4.78	4.78	RL-7124	PGDP	/x/
Neptunium-237	0.219	pCi/samp	U		0.289	0.109	0.149	RL-7128	PGDP	/x/
Plu tonium -238	0.0364	pCi/samp	U		0.0981	0.0389	0.0497	RL-7128	PGDP	/x/
Plu tonium -239/240	0.527	pCi/samp)		0.154	0.148	0.193	RL-7128	PGDP	/x/
Strontium-90	0.849	pCi/samp	BU		5.07	0.143	0.226	RL-7140	PGDP	/x/
Technetium-99	249	pCi/samp	DL	D	35	35	37.3	RL-7100	PGDP	/x/
Thorium-230	3.57	pCi/samp)		1.36	0.481	0.952	RL-7128	PGDP	/x/
Thorium-232	0.0288	pCi/samp	υU		0.385	0.0722	0.169	RL-7128	PGDP	/x/
Uranium-234	14	pCi/samp)		0.995	0.771	2.46	RL-7128	PGDP	/x/
Uranium-235	0.633	pCi/samp	0		0.215	0.189	0.225	RL-7128	PGDP	/x/
Uranium-238	22	pCi/samp	0		0.879	0.961	3.74	RL-7128	PGDP	/x/

17-400-ISO-053

from: C-400 on 6/27/2017 Smear inside exhaust duct on cleaning tank exhaust fan#89 in C-400 basement zone 13I/S exhaust duct. SmpMethod: GR

> /X/ /X/

Comments:	Smear inside exhaust	rear inside exhaust duct on cleaning tank exhaust fan#89 in C-400 basement zone 134/S exhaust duct.											
Analysis	Resul	ts U	nits (e sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*		
RADS													
Americium-241	0.13	83 p0	Ci/samp U			0.235	0.123	0.149	RL-7128	PGDP	/ X		
Ce sium -137	1.8	3 р(Ci/samp U			2.95	3.66	3.66	RL-7124	PGDP	/ x		
Neptunium-237	0.13	89 p(Ci/samp U			0.278	0.12	0.156	RL-7128	PGDP	/ ×		
Plutonium-238	-0.0	00162 pt	Ci/samp U			0.106	0.0019	0.0415	RL-7128	PGDP	/ X		
Plu tonium -239/240	0.3	54 pt	Ci/samp			0.158	0.129	0.16	RL-7128	PGDP	/ x		
Strontium-90	-0.4	183 p	Ci/samp B	U		5.03	0.0867	0.132	RL-7140	PGDP	/ x		
Technetium -99	139	p p	Ci/samp D	LI)	35	31.6	32.4	RL-7100	PGDP	/ x		
Thorium-230	3.09	9 p(Ci/samp			1.34	0.449	0.885	RL-7128	PGDP	/ ×		
Thorium-232	0.0	0884 pt	Ci/samp U			0.379	0.0323	0.149	RL-7128	PGDP	/×		
Uranium-234	8.7	7 p(Ci/samp			0.998	0.587	1.6	RL-7128	PGDP	/ X		
Uranium -235	0.4	95 pt	Ci/samp			0.205	0.157	0.188	RL-7128	PGDP	/ x		
Uranium -238	13.	5 pt	Ci/samp			0.882	0.722	2.34	RL-7128	PGDP	/ X		

17-400-ISO-054

on 6/27/2017 Media: SW

Media: SW

SmpMethod:

GR

from: C-400 Smear inside exhaust duct on cleaning tank exhaust fan #91 in C-400 basement zone 131/S exhaust duct. Comments:

Analysis	Results	Units	Re sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
RADS										
Americium-241	0.312	pCi/samp			0.219	0.138	0.168	RL-7128	PGDP	/x/
Ce sium -137	1.74	pCi/samp	U		2.92	3.47	3.47	RL-7124	PGDP	/x/
Neptunium-237	0.386	pCi/samp			0.27	0.128	0.178	RL-7128	PGDP	/x/
Plu tonium -238	0.0489	pCi/samp	U		0.0984	0.0528	0.0617	RL-7128	PGDP	/X/
Plu tonium -239/240	1.81	pCi/samp			0.155	0.273	0.486	RL-7128	PGDP	/x/
Strontium-90	0.132	pCi/samp	BU		4.87	0.023	0.0357	RL-7140	PGDP	/x/
Technetium -99	340	pCi/samp	DL	D	4.87	37.7	357	RL-7100	PGDP	/x/
Thorium-230	5.34	pCi/samp			1.35	0.551	1.18	RL-7128	PGDP	/x/
Thorium-232	0.0738	pCi/samp	U		0.386	0.0662	0.156	RL-7128	PGDP	/x/
Uranium -234	45.4	pCi/samp			0.998	1.48	7.7	RL-7128	PGDP	/x/
Uranium-235	2.68	pCi/samp			0.22	0.401	0.603	RL-7128	PGDP	/x/
Uranium-238	61.8	pCi/samp			0.882	1.72	10.4	RL-7128	PGDP	/x/

*Verification/Validation/Assessment

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17-400-ISO-057		f	rom: C-	400	on	3/23/2017	Media: SW	SmpM	Method: GR	
Comments:										
Analysis	Results	Units	Re sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
RADS										
Americium-241	1.02	pCi/sam	р		0.217	0.224	0.29	RL-7128	PGDP	/×/
Cesium-137	1.44	pCi/sam	pB,U		2.15	1.38	1.39	RL-7124	PGDP	/x/
Neptunium-237	2.81	pCi/sam	р		0.264	0.369	0.763	RL-7128	PGDP	/x/
Plutonium-238	0.17	pCi/sam	р		0.106	0.0887	0.102	RL-7128	PGDP	/x/
Plutonium-239/240	5.8	pCi/sam	p		0.159	0.516	1.46	RL-7128	PGDP	/ X /
Strontium-90	-0.711	pCi/sam	pBU		6.59	0.129	0.196	RL-7140	PGDP	/x,
Technetium -99	83.2	pCi/sam	p DL	D	7.43	8.24	9.28	RL-7100	PGDP	/x/
Thorium-230	22.5	pCi/sam	p		1.12	1.22	3.98	RL-7128	PGDP	/x/
Thorium-232	0.117	pCi/sam	рU		0.388	0.139	0.2	RL-7128	PGDP	/x/
Uranium-234	51	pCi/sam	p		0.967	1.56	8.91	RL-7128	PGDP	/x/
Uranium-235	3.16	pCi/sam	p		0.237	0.438	0.703	RL-7128	PGDP	/x/
Uranium -238	63.2	pCi/sam	p		0.886	1.74	11	RL-7128	PGDP	/x/
17-400-ISO-058		f	rom: C-	400	on	3/23/2017	Media: SW	Smp	Method: GR	
17-400-ISO-058 Comments:		f	rom: C-	400	on	3/23/2017	Media: SW	SmpN	Method: GR	
17-400-ISO-058 Comments: Analysis	Results	f Units	rom: C Result Qual	400 Foot Note	ON Reporting Limit	3/23/2017 Counting Error	Media: SW TPU	Smpt	Method: GR LabCode	V/V/A*
17-400-ISO-058 Comments: Analysis RADS	Results	f Units	rom: C Result Qual	400 Foot Note	on Reporting Limit	3/23/2017 Counting Error	Media: SW TPU	SmpN Method	Method: GR LabCode	V/V/A*
17-400-ISO-058 Comments: Analysis RADS Americium-241	Results	f Units pCi/sam	rom: C- Result Qual	400 Foot Note	ON Reporting Limit 0.216	3/23/2017 Counting Error 0.246	Media: SW TPU 0.323	SmpM Method RL-7128	Method: GR LabCode PGDP	V/V/A* / X /
17-400-ISO-058 Comments: Analysis RADS Americium-241 Cesium-137	Results 1.18 0.227	f Units pCi/samp pCi/samp	rom: C- Result Qual p p B,U	400 Foot Note	On Reporting Limit 0.216 2.47	3/23/2017 Counting Error 0.246 0.455	Media: SW TPU 0.323 1.42	SmpM Method RL-7128 RL-7124	Method: GR LabCode PGDP PGDP	V/V/A* /X/ /X/
17-400-ISO-058 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237	Results 1.18 0.227 3.83	f Units pCi/sam pCi/sam pCi/sam	Result Qual p p B,U p	400 Foot Note	On Reporting Limit 0.216 2.47 0.262	3/23/2017 Counting Error 0.246 0.455 0.417	Media: SW TPU 0.323 1.42 0.994	Smpt Method RL-7128 RL-7124 RL-7128	Method: GR LabCode PGDP PGDP PGDP	V/V/A* /x/ /x/ /x/
17-400-ISO-058 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plutonium-238	Results 1.18 0.227 3.83 0.221	f Units pCi/sam pCi/sam pCi/sam pCi/sam	Result Qual p p B,U p	400 Foot Note	On Reporting Limit 0.216 2.47 0.262 0.114	3/23/2017 Counting Error 0.246 0.455 0.417 0.0994	Media: SW TPU 0.323 1.42 0.994 0.117	Smpt Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP	V/V/A* /x/ /x/ /x/ /x/
17-400-ISO-058 Comments: Analysis RADS Americium-241 Ce sium-137 Nep tunium-237 Plu tonium-238 Plu tonium-239/240	Results 1.18 0.227 3.83 0.221 7.67	f Units pCi/sam pCi/sam pCi/sam pCi/sam	Result Qual p p B,U p p	400 Foot Note	On Reporting Limit 0.216 2.47 0.262 0.114 0.16	3/23/2017 Counting Error 0.246 0.455 0.417 0.0994 0.585	Media: SW TPU 0.323 1.42 0.994 0.117 1.89	Smpt Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128 RL-7128	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP	V/V/A* /x/ /x/ /x/ /x/ /x/ /x/
17-400-ISO-058 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plu tonium-238 Plu tonium-239/240 Strontium-90	Results 1.18 0.227 3.83 0.221 7.67 1.87	f Units pCi/samp pCi/samp pCi/samp pCi/samp pCi/samp	Result Qual p p B,U p p p p p	400 Foot Note	01 Reporting Limit 0.216 2.47 0.262 0.114 0.16 5.75	3/23/2017 Counting Error 0.246 0.455 0.417 0.0994 0.585 0.308	Media: SW TPU 0.323 1.42 0.994 0.117 1.89 0.495	SmpM Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128 RL-7128 RL-7140	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP	V/V/A* /X/ /X/ /X/ /X/ /X/ /X/ /X/
17-400-ISO-058 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plutonium-238 Plutonium-239/240 Strontium-90 Technetium-99	Results 1.18 0.227 3.83 0.221 7.67 1.87 87.8	f Units pCi/samp pCi/samp pCi/samp pCi/samp pCi/samp pCi/samp	Result Qual p p B,U p p p p p p p D U p D L	400 Foot Note	01 Reporting Limit 0.216 2.47 0.262 0.114 0.16 5.75 7.43	3/23/2017 Counting Error 0.246 0.455 0.417 0.0994 0.585 0.308 8.35	Media: SW TPU 0.323 1.42 0.994 0.117 1.89 0.495 9.49	SmpM Method RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7140 RL-7100	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	V/V/A* /X/ /X/ /X/ /X/ /X/ /X/ /X/
17-400-ISO-058 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plu tonium-238 Plu tonium-239/240 Strontium-90 Technetium-99 Thorium-230	Results 1.18 0.227 3.83 0.221 7.67 1.87 87.8 41.3	f Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	Result Qual p p B,U p p p p p p p p D L p D L p	400 Foot Note	01 Reporting Limit 0.216 2.47 0.262 0.114 0.16 5.75 7.43 1.1	3/23/2017 Counting Error 0.246 0.455 0.417 0.0994 0.585 0.308 8.35 1.62	Media: SW TPU 0.323 1.42 0.994 0.117 1.89 0.495 9.49 7.06	SmpM Method RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7140 RL-7100 RL-7128	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	V/V/A* /X/ /X/ /X/ /X/ /X/ /X/ /X/ /X/ /X/
17-400-ISO-058 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plutonium-238 Plutonium-239/240 Strontium-90 Technetium-90 Technetium-99 Thorium-230 Thorium-232	Results 1.18 0.227 3.83 0.221 7.67 1.87 87.8 41.3 0.473	f Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	Result Qual p p B,U p p p p p BU p BU p DL p p	400 Foot Note	On Reporting Limit 0.216 2.47 0.262 0.114 0.16 5.75 7.43 1.1 0.385	3/23/2017 Counting Error 0.246 0.455 0.417 0.0994 0.585 0.308 8.35 1.62 0.197	Media: SW TPU 0.323 1.42 0.994 0.117 1.89 0.495 9.49 7.06 0.256	SmpN Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7140 RL-7100 RL-7128 RL-7128 RL-7128	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	V/V/A* /X/ /X/ /X/ /X/ /X/ /X/ /X/ /X/ /X/ /X
17-400-ISO-058 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plutonium-239/240 Strontium-90 Technetium-90 Technetium-99 Thorium-230 Thorium-232 Uranium-234	Results 1.18 0.227 3.83 0.221 7.67 1.87 87.8 41.3 0.473 64.3	f Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	Result Qual p p B,U p p B,U p D L p p p p p p p p p p p p p p p p p p	400 Foot Note	On Reporting Limit 0.216 2.47 0.262 0.114 0.16 5.75 7.43 1.1 0.385 0.988	3/23/2017 Counting Error 0.246 0.455 0.417 0.0994 0.585 0.308 8.35 1.62 0.197 1.89	Media: SW TPU 0.323 1.42 0.994 0.117 1.89 0.495 9.49 7.06 0.256 11.9	Smpt Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128 RL-7140 RL-7140 RL-7100 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	V/V/A* /X, /X, /X, /X, /X, /X, /X, /X, /X, /X,
17-400-ISO-058 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plutonium-238 Plutonium-239/240 Strontium-90 Technetium-99 Thorium-230 Thorium-232 Uranium-234 Uranium-235	Results 1.18 0.227 3.83 0.221 7.67 1.87 87.8 41.3 0.473 64.3 3.75	f Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	Result Qual p p B,U p p B,U p D L p p p p p p p p p p p	400 Foot Note	On Reporting Limit 0.216 2.47 0.262 0.114 0.16 5.75 7.43 1.1 0.385 0.988 0.247	3/23/2017 Counting Error 0.246 0.455 0.417 0.0994 0.585 0.308 8.35 1.62 0.197 1.89 0.512	Media: SW TPU 0.323 1.42 0.994 0.117 1.89 0.495 9.49 7.06 0.256 11.9 0.859	Smpt Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128 RL-7128 RL-7100 RL-7100 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	V/V/A* /x, /x, /x, /x, /x, /x, /x, /x, /x, /x,

17-400-150-059		from: C-400				4/1/2017	Media: SW	Smpl	Method: GR	
Comments:										
Analysis	Results	Units	Re sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
RADS										
Americium-241	3.33	pCi/sam	р		0.222	0.413	0.686	RL-7128	PGDP	/x/
Ce sium -137	-0.0772	pCi/sam	pB,U		2.41	0.154	1.28	RL-7124	PGDP	/x/
Neptunium-237	6.17	pCi/sam	р		0.291	0.546	1.57	RL-7128	PGDP	/x/
Plutonium -238	0.293	pCi/sam	р		0.107	0.118	0.141	RL-7128	PGDP	/x/
Plutonium-239/240	19	pCi/sam	p		0.16	0.948	4.65	RL-7128	PGDP	/x/
Strontium-90	0.395	pCi/sam	pBU		5.75	0.0688	0.107	RL-7140	PGDP	/x/
Technetium-99	173	pCi/sam	p DL	D	7.43	10.3	13.6	RL-7100	PGDP	/x/
Thorium-230	82.8	pCi/sam	P		1.12	2.42	14.2	RL-7128	PGDP	/x/
Thorium-232	0.716	pCi/sam	р		0.622	0.28	0.337	RL-7128	PGDP	/x/
Uranium-234	137	pCi/sam	p		1.1	3.4	26.5	RL-7128	PGDP	/x/
Uranium-235	7.92	pCi/sam	p		0.33	0.913	1.78	RL-7128	PGDP	/x/
Uranium-238	162	pCi/sam	D		0.921	3.69	31.3	RL-7128	PGDP	/x/
17-400-ISO-060		f	rom: C-	400	on	4/1/2017	Media: SW	Smpl	Method: GR	
17-400-ISO-060 Comments:		4	rom: C-4	400	on	4/1/2017	Media: SW	Smpl	Method: GR	
17-400-ISO-060 Comments: Analysis	Results	f Units	rom: C-4 Result Qual	400 Foot Note	on Reporting Limit	4/1/2017 Counting Error	Media: SW TPU	Smpl	Method: GR LabCode	V/V/A*
17-400-ISO-060 Comments: Analysis RADS	Results	f Units	from: C-4 Result Qual	400 Foot Note	on Reporting Limit	4/1/2017 Counting Error	Media: SW TPU	Smpl	Method: GR LabCode	V/V/A*
17-400-ISO-060 Comments: Analysis RADS Americium-241	Results	f Units pCi/sam	Result Qual	400 Foot Note	On Reporting Limit 0.223	4/1/2017 Counting Error 0.264	Media: SW TPU 0.35	Smpl Method RL-7128	Method: GR LabCode PGDP	V/V/A* /X/
17-400-ISO-060 Comments: Analysis RADS Americium-241 Cesium-137	Results 1.32 -0.084	f Units pCi/sam pCi/sam	rom: C-4 Result Qual p p B,U	400 Foot Note	On Reporting Limit 0.223 2.21	4/1/2017 Counting Error 0.264 0.168	Media: SW TPU 0.35 1.15	Smpl Method RL-7128 RL-7124	Method: GR LabCode PGDP PGDP	V/V/A* /x/ /x/
17-400-ISO-060 Comments: Analysis RADS Americium-241 Ce sium-137 Neptunium-237	Results 1.32 -0.084 2.15	f Units pCi/sam pCi/sam pCi/sam	rom: C-4 Result Qual p p B,U p	400 Foot Note	On Reporting Limit 0.223 2.21 0.301	4/1/2017 Counting Error 0.264 0.168 0.3	Media: SW TPU 0.35 1.15 0.563	Smpl Method RL-7128 RL-7124 RL-7128	Method: GR LabCode PGDP PGDP PGDP	V/V/A* /x/ /x/ /x/
17-400-ISO-060 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plutonium-238	Results 1.32 -0.084 2.15 0.139	f Units pCi/sam pCi/sam pCi/sam pCi/sam	rom: C Result Qual p B,U p	400 Foot Note	01 Reporting Limit 0.223 2.21 0.301 0.105	4/1/2017 Counting Error 0.264 0.168 0.3 0.0751	Media: SW TPU 0.35 1.15 0.563 0.0868	Smpl Method RL-7128 RL-7124 RL-7128 RL-7128	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP	V/V/A* /x/ /x/ /x/ /x/ /x/
17-400-ISO-060 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plu tonium-238 Plu tonium -239/240	Results 1.32 -0.084 2.15 0.139 6.21	f Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	Result Qual p p B,U p p	400 Foot Note	01 Reporting Limit 0.223 2.21 0.301 0.105 0.153	4/1/2017 Counting Error 0.264 0.168 0.3 0.0751 0.501	Media: SW TPU 0.35 1.15 0.563 0.0868 1.45	Smpl Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128 RL-7128	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP	V/V/A* /x/ /x/ /x/ /x/ /x/ /x/
17-400-ISO-060 Comments: Analysis RADS Americium-241 Ce sium-137 Neptunium-237 Plutonium-238 Plutonium-239/240 Strontium-90	Results 1.32 -0.084 2.15 0.139 6.21 2.18	f Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	Result Qual p p B,U p p p p p BU	400 Foot Note	0.223 2.21 0.301 0.105 0.153 5.92	4/1/2017 Counting Error 0.264 0.168 0.3 0.0751 0.501 0.354	Media: SW TPU 0.35 1.15 0.563 0.0868 1.45 0.573	Smpl Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7140	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP	V/V/A* /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x/
17-400-ISO-060 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plutonium-238 Plutonium-239/240 Strontium-90 Technetium-99	Results 1.32 -0.084 2.15 0.139 6.21 2.18 76	f Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	Result Qual p p B,U p p p p p p D U p D L	400 Foot Note	OT Reporting Limit 0.223 2.21 0.301 0.105 0.153 5.92 7.43	4/1/2017 Counting Error 0.264 0.168 0.3 0.0751 0.501 0.354 8.04	Media: SW TPU 0.35 1.15 0.563 0.0868 1.45 0.573 8.94	Smpl Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7100	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	V/V/A* /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x/
17-400-ISO-060 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plutonium-238 Plutonium-239/240 Strontium-90 Technetium-99 Thorium-230	Results 1.32 -0.084 2.15 0.139 6.21 2.18 76 38	f Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	Result Qual p p B,U p p p p p p D U p D L p	400 Foot Note	On Reporting Limit 0.223 2.21 0.301 0.105 0.153 5.92 7.43 1.09	4/1/2017 Counting Error 0.264 0.168 0.3 0.0751 0.501 0.354 8.04 1.57	Media: SW TPU 0.35 1.15 0.563 0.0868 1.45 0.573 8.94 6.7	Smpl Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7100 RL-7128	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	V/V/A* /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x
17-400-ISO-060 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plutonium-238 Plutonium-239/240 Strontium-90 Technetium-99 Thorium-230 Thorium-232	Results 1.32 -0.084 2.15 0.139 6.21 2.18 76 38 0.361	f Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	Result Qual p p B,U p p p p p p p D L p D L p D U	400 Foot Note	On Reporting Limit 0.223 2.21 0.301 0.105 0.153 5.92 7.43 1.09 0.446	4/1/2017 Counting Error 0.264 0.168 0.3 0.0751 0.501 0.354 8.04 1.57 0.2	Media: SW TPU 0.35 1.15 0.563 0.0868 1.45 0.573 8.94 6.7 0.253	Smpl Method RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7140 RL-7100 RL-7128 RL-7128	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	V/V/A* /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x
17-400-ISO-060 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plutonium-238 Plutonium-238 Plutonium-238 Strontium-90 Technetium-90 Technetium-99 Thorium-230 Thorium-232 Uranium-234	Results 1.32 -0.084 2.15 0.139 6.21 2.18 76 38 0.361 63.9	f Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	Result Qual p p B,U p p B,U p B U p B U p D L p p U p	400 Foot Note	On Reporting Limit 0.223 2.21 0.301 0.105 0.153 5.92 7.43 1.09 0.446 0.978	4/1/2017 Counting Error 0.264 0.168 0.3 0.0751 0.501 0.354 8.04 1.57 0.2 1.9	Media: SW TPU 0.35 1.15 0.563 0.0868 1.45 0.573 8.94 6.7 0.253 11.8	Smpl Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128 RL-7128 RL-7100 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	V/V/A* /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x
17-400-ISO-060 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plutonium-238 Plutonium-239/240 Strontium-90 Technetium-90 Technetium-99 Thorium-230 Thorium-232 Uranium-234 Uranium-235	Results 1.32 -0.084 2.15 0.139 6.21 2.18 76 38 0.361 63.9 3.84	f Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	rom: C Result Qual p p B,U p p B,U p D L p p U p p	400 Foot Note	0.223 2.21 0.301 0.105 0.153 5.92 7.43 1.09 0.446 0.978 0.246	4/1/2017 Counting Error 0.264 0.168 0.3 0.0751 0.501 0.354 8.04 1.57 0.2 1.9 0.517	Media: SW TPU 0.35 1.15 0.563 0.0868 1.45 0.573 8.94 6.7 0.253 11.8 0.876	Smpl Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128 RL-7128 RL-7140 RL-7100 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	V/V/A* /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x

17-400-ISO-061	from: C-400				on 5/6/2017 Media: SW		SmpMethod: GR				
Comments:											
Analysis	Results	Units	Re sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*	
RADS											
Americium-241	0.294	pCi/sam	p		0.213	0.125	0.155	RL-7128	PGDP	/x/	
Ce sium -137	-0.152	pCi/sam	pB,U		2.31	0.303	1.22	RL-7124	PGDP	/x/	
Neptunium-237	0.646	pCi/sam	p		0.317	0.207	0.27	RL-7128	PGDP	/x/	
Plu tonium -238	0.0123	pCi/sam	рU		0.117	0.0276	0.0528	RL-7128	PGDP	/x/	
Plu tonium -239/240	1.73	pCi/sam	p		0.176	0.301	0.505	RL-7128	PGDP	/x/	
Strontium-90	0.205	pCi/sam	pBU		5.64	0.0359	0.0555	RL-7140	PGDP	/x/	
Technetium -99	35.8	pCi/sam	p DL	D	7.43	6.89	7.13	RL-7100	PGDP	/x,	
Thorium-230	7.23	pCi/sam	p		1.1	0.674	1.5	RL-7128	PGDP	/x,	
Thorium-232	0.0287	pCi/sam	рU		0.38	0.0704	0.166	RL-7128	PGDP	/x,	
Uranium-234	22.3	pCi/sam	p		0.98	1.03	4.15	RL-7128	PGDP	/x/	
Uranium-235	1.38	pCi/sam	p		0.235	0.286	0.388	RL-7128	PGDP	/x/	
Uranium-238 17-400-ISO-062	49	pCi/sam	p from: C-4	400	0.872 on	1.51 5/13/2017	8.91 Media: SW	RL-7128 Smpt	PGDP Method: GR	/x/	
Uranium-238 17-400-ISO-062 Comments:	49	pCi/sam	p from: C-/	400	0.872 on	1.51	8.91 Media: SW	RL-7128 Smpt	Method: GR	/x,	
Uranium-238 17-400-ISO-062 Comments: Analysis	49 Results	pCi/sam f	p from: C-4 Result Qual	400 Foot Note	0.872 on Reporting Limit	1.51 5/13/2017 Counting Error	8.91 Media: SW TPU	RL-7128 Smpt	Vethod: GR	/x, 	
Tranium-238 17-400-ISO-062 Comments: Analysis RADS	49 Results	pCi/sam f	p from: C-4 Result Qual	400 Foot Note	0.872 on Reporting Limit	1.51 5/13/2017 Counting Error	8.91 Media: SW TPU	RL-7128 Smpt Method	Vethod: GR LabCode	/x, 	
Analysis Analysis Amaricium-241	49 Results 0.145	pCi/sam f Units pCi/sam	p from: C-4 Result Qual	400 Foot Note	0.872 on Reporting Limit 0.216	1.51 5/13/2017 Counting Error 0.094	8.91 Media: SW TPU 0.124	RL-7128 Smpt Method RL-7128	PGDP Method: GR LabCode PGDP	/x/ /x/ V/V/A*	
Tranium-238 17-400-ISO-062 Comments: Analysis RADS Americium-241 Cesium-137	49 Results 0.145 -0.435	pCi/sam f Units pCi/sam pCi/sam	p from: C Result Qual p U p B,U	400 Foot Note	0.872 on Reporting Limit 0.216 2.07	1.51 5/13/2017 Counting Error 0.094 0.87	8.91 Media: SW TPU 0.124 1.11	RL-7128 Smpt Method RL-7128 RL-7124	PGDP Method: GR LabCode PGDP PGDP	/x/ V/V/A* /x/ /x/	
Uranium-238 17-400-ISO-062 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237	49 Results 0.145 -0.435 0.482	pCi/sam f Units pCi/sam pCi/sam pCi/sam	p from: C-4 Result Qual p U p B,U p	400 Foot Note	0.872 on Reporting Limit 0.216 2.07 0.279	1.51 5/13/2017 Counting Error 0.094 0.87 0.144	8.91 Media: SW TPU 0.124 1.11 0.198	RL-7128 Smp1 Method RL-7128 RL-7124 RL-7128	PGDP Method: GR LabCode PGDP PGDP PGDP	/x, 	
Uranium-238 17-400-ISO-062 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plutonium-238	49 Results 0.145 -0.435 0.482 0.00845	pCi/sam f Units pCi/sam pCi/sam pCi/sam pCi/sam	P from: C Result Qual p U p B,U p p	400 Foot Note	0.872 on Reporting Limit 0.216 2.07 0.279 0.103	1.51 5/13/2017 Counting Error 0.094 0.87 0.144 0.02	8.91 Media: SW TPU 0.124 1.11 0.198 0.0369	RL-7128 Smpt Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128	PGDP Method: GR LabCode PGDP PGDP PGDP PGDP PGDP	/x, V/V/A* /x, /x, /x, /x,	
Uranium-238 17-400-ISO-062 Comments: Analysis RADS Americium-241 Ce sium-137 Nep tunium-237 Plu tonium-238 Plu tonium-239/240	49 Results 0.145 -0.435 0.482 0.00845 0.947	pCi/sam f Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	P from: C-4 Result Qual p U p B,U p p U p U p U p	400 Foot Note	0.872 on Reporting Limit 0.216 2.07 0.279 0.103 0.153	1.51 5/13/2017 Counting Error 0.094 0.87 0.144 0.02 0.196	8.91 Media: SW TPU 0.124 1.11 0.198 0.0369 0.289	RL-7128 Smpt Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128 RL-7128	PGDP Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP	/x, V/V/A* /x, /x, /x, /x, /x, /x,	
Uranium-238 17-400-ISO-062 Comments: Analysis RADS Americium-241 Ce sium-137 Neptunium-237 Plutonium-238 Plutonium-239/240 Strontium-90	49 Results 0.145 -0.435 0.482 0.00845 0.947 -0.981	pCi/sam Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	P from: C-4 Qual p U p B,U p p U p p U p p U p p U p p U	400 Foot Note	0.872 on Reporting Limit 0.216 2.07 0.279 0.103 0.153 5.43	1.51 5/13/2017 Counting Error 0.094 0.87 0.144 0.02 0.196 0.182	8.91 Media: SW TPU 0.124 1.11 0.198 0.0369 0.289 0.273	RL-7128 Smpt Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7140	PGDP Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP	/x, V/V/A* /x, /x, /x, /x, /x, /x, /x, /x,	
Uranium-238 17-400-ISO-062 Comments: Analysis RADS Americium-241 Ce sium-137 Neptunium-237 Plu tonium-238 Plu tonium-239/240 Strontium-90 Technetium-99	49 Results 0.145 -0.435 0.482 0.00845 0.947 -0.981 42.7	pCi/sam Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	P from: C-4 Qual p U p B,U p D p U p D p D p D L	400 Foot Note	0.872 on Reporting Limit 0.216 2.07 0.279 0.103 0.153 5.43 7.43	1.51 5/13/2017 Counting Error 0.094 0.87 0.144 0.02 0.196 0.182 7.1	8.91 Media: SW TPU 0.124 1.11 0.198 0.0369 0.289 0.273 7.43	RL-7128 Smp1 Method RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7120 RL-7100	PGDP Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	/x/ /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x/	
Uranium-238 17-400-ISO-062 Comments: Analysis RADS Americium-241 Ce sium-137 Neptunium-237 Plu tonium-238 Plu tonium-239/240 Strontium-90 Technetium-99 Thorium-230	49 Results 0.145 -0.435 0.482 0.00845 0.947 -0.981 42.7 6.84	pCi/sam Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	P from: C-4 Qual p U p B,U p B,U p D p D p D p D L p	400 Foot Note	0.872 on Reporting Limit 0.216 2.07 0.279 0.103 0.153 5.43 7.43 1.1	1.51 5/13/2017 Counting Error 0.094 0.87 0.144 0.02 0.196 0.182 7.1 0.661	8.91 Media: SW TPU 0.124 1.11 0.198 0.0369 0.289 0.273 7.43 1.41	RL-7128 Smpt Method RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128	PGDP Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	/x, /x, /x, /x, /x, /x, /x, /x, /x, /x,	
Uranium-238 17-400-ISO-062 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plutonium-238 Plutonium-239/240 Strontium-90 Technetium-99 Thorium-230 Thorium-232	49 Results 0.145 -0.435 0.482 0.00845 0.947 -0.981 42.7 6.84 0.0428	pCi/sam Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	P from: C-4 Qual p U p B,U p B,U p BU p BU p DL p DL p U	400 Foot Note	0.872 On Reporting Limit 0.216 2.07 0.279 0.103 0.153 5.43 7.43 1.1 0.384	1.51 5/13/2017 Counting Error 0.094 0.87 0.144 0.02 0.196 0.182 7.1 0.661 0.0802	8.91 Media: SW TPU 0.124 1.11 0.198 0.0369 0.289 0.273 7.43 1.41 0.164	RL-7128 Smpt Method RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128	PGDP Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	/x, /x, /x, /x, /x, /x, /x, /x, /x, /x,	
Uranium-238 17-400-ISO-062 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plu tonium-238 Plu tonium-239/240 Strontium-90 Technetium-99 Thorium-230 Thorium-232 Uranium-234	49 Results 0.145 -0.435 0.482 0.00845 0.947 -0.981 42.7 6.84 0.0428 21.9	pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	P from: C Qual p U p B,U p D p U p BU p D L p D L p D L p U	400 Foot Note	0.872 On Reporting Limit 0.216 2.07 0.279 0.103 0.153 5.43 7.43 1.1 0.384 0.985	1.51 5/13/2017 Counting Error 0.094 0.87 0.144 0.02 0.196 0.182 7.1 0.661 0.0802 0.939	8.91 Media: SW TPU 0.124 1.11 0.198 0.0369 0.289 0.273 7.43 1.41 0.164 4.02	RL-7128 Smpt Method RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128	PGDP Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	/x, /x, /x, /x, /x, /x, /x, /x, /x, /x,	
Uranium-238 17-400-ISO-062 Comments: Analysis RADS Americium-241 Ce sium-137 Neptunium-237 Plutonium-239/240 Strontium-90 Technetium-99 Thorium-230 Thorium-232 Uranium-234 Uranium-235	49 Results 0.145 -0.435 0.482 0.00845 0.947 -0.981 42.7 6.84 0.0428 21.9 1.53	pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	P from: C-4 Qual p U p B,U p B,U p D p D p D p D p D p D p D p D p D	400 Foot Note	0.872 On Reporting Limit 0.216 2.07 0.279 0.103 0.153 5.43 7.43 1.1 0.384 0.985 0.258	1.51 5/13/2017 Counting Error 0.094 0.87 0.144 0.02 0.196 0.182 7.1 0.661 0.0802 0.939 0.279	8.91 Media: SW TPU 0.124 1.11 0.198 0.0369 0.289 0.273 7.43 1.41 0.164 4.02 0.398	RL-7128 Smpf Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128 RL-7128 RL-7100 RL-7100 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128	PGDP Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	/x, /x, /x, /x, /x, /x, /x, /x, /x, /x,	

17-400-ISO-0	64	from: C-	400	on 7	7/27/2017	Media: SW	SmpMethod	GR	
Comments:	Smear inside scrubber of scru	ubber system at sou	th side of	C-400, Zone 31/S	scrubber vent/				
Analysis	Results	Result Units Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
RADS									
Americium-241	0.229	pCi/Filter U		0.427	0.313	0.315	HASL 300, AM-05-RC M	GEL	/x/
Ce sium -137	0.363	pCi/Filter U		3.28	1.79	1.8	HASL 300, 4.5.2.3	GEL	/x/
Neptunium-237	0.335	pCi/Filter U		0.438	0.351	0.353	Alpha Spectroscopy	GEL	/x/
Plu tonium -238	0.427	pCi/Filter		0.213	0.37	0.376	HASL 300, Pu-11-RC M	GEL	/x/
Plu tonium -239/240	0.571	pCi/Filter		0.468	0.447	0.456	HASL 300, Pu-11-RC M	GEL	/x/
Strontium-90	-0.802	pCi/Filter U		1.96	0.936	0.936	EPA-905.0-M	GEL	/x/
Technetium -99	92.2	pCi/Filter		47.4	31	32.3	HASL 300, Tc-02-RC M	GEL	/x/
Thorium-230	3.93	pCi/Filter		0.513	0.911	1.07	HASL 300, Th-01-RC M	GEL	/x/
Thorium-232	0.557	pCi/Filter		0.348	0.365	0.373	HASL 300, Th-01-RC M	GEL	/x/
Uranium-234	14.4	pCi/Filter		0.579	2.15	3.03	HASL 300, U-02-RC M	GEL	/x/
Uranium-235	2.04	pCi/Filter		0.306	0.918	0.966	HASL 300, U-02-RC M	GEL	/×/
Uranium -238	24.2	pCi/Filter		0.248	2.77	4.52	HASL 300, U-02-RC M	GEL	/x/

*Verification/Validation/Assessment

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17-400-ISO-065		C-400	on	7/27/2017	Media: SW	SmpMethod	GR			
Comments:										
Analysis	Results	Res Units Qu	ult Foot al Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*	
RADS										
Americium-241	0.118	pCi/Filter U		0.428	0.27	0.27	HASL 300, AM-05-RC M	GEL	/x.	
Cesium-137	1.68	pCi/Filter U		4.22	1.83	1.84	HASL 300, 4.5.2.3	GEL	/x,	
Neptunium-237	0.902	pCi/Filter		0.386	0.499	0.508	Alpha Spectro scopy	GEL	/x,	
Plutonium-238	0.0651	pCi/Filter U		0.413	0.223	0.223	HASL 300, Pu-11-RC M	GEL	/x,	
Plu tonium -239/240	-0.0125	pCi/Filter U		0.439	0.188	0.188	HASL 300, Pu-11-RC M	GEL	/x,	
Strontium-90	0.645	pCi/Filter U		1.96	1.13	1.14	EPA-905.0-M	GEL	/x,	
Technetium -99	28.6	pCi/Filter U		50.8	30.3	30.4	HASL 300, Tc-02-RC M	GEL	/x,	
Thorium-230	7.34	pCi/Filter		0.709	1.31	1.68	HASL 300, Th-01-RC M	GEL	/x,	
Thorium-232	0.28	pCi/Filter U		0.523	0.343	0.346	HASL 300, Th-01-RC M	GEL	/x,	
Uranium-234	54.2	pCi/Filter		0.638	4.15	9.1	HASL 300, U-02-RC M	GEL	/x,	
Uranium-235	5.14	pCi/Filter		0.563	1.44	1.63	HASL 300, U-02-RC M	GEL	/x,	
Uranium-238	67.4	pCi/Filter		0.577	4.62	11.1	HASL 300, U-02-RC M	GEL	/x.	

17-400-ISO-066

on 7/27/2017 Media: SW SmpMethod:

GR

from: C-400 Smear on the floor of the Receiving Booth near Col. AB-3 in Area 4 in C-400. Southeast corner of booth floor. Comments:

		Re sult	Foot	Reporting	Counting				
Results	Units	Qual	Note	Limit	Error	TPU	Method	LabCode	V/V/A*
0.667	pCi/Filter	0		0.439	0.472	0.481	HASL 300, AM-05-RC M	GEL	/x/
-0.219	pCi/Filter	U		3.06	1.6	1.6	HASL 300, 4.5.2.3	GEL	/x/
1.72	pCi/Filter			0.434	0.687	0.712	Alpha Spectro scopy	GEL	/x/
0.25	pCi/Filter	t.		0.188	0.276	0.278	HASL 300, Pu-11-RC M	GEL	/x/
2.41	pCi/Filter	ř.		0.346	0.776	0.857	HASL 300, Pu-11-RC M	GEL	/x/
-0.602	pCi/Filter	U		1.26	0.688	0.688	EPA-905.0-M	GEL	/x/
312	pCi/Filter			52.8	42	52.4	HASL 300, Tc-02-RC M	GEL	/x/
15.5	pCi/Filter	0		0.514	1.68	2.68	HASL 300, Th-01-RC M	GEL	/x/
0.355	pCi/Filter	t i		0.243	0.276	0.28	HASL 300, Th-01-RC M	GEL	/x/
49.6	pCi/Filter	6		0.867	4.74	9.77	HASL 300, U-02-RC M	GEL	/x/
4.6	pCi/Filter	ŕ		0.694	1.63	1.82	HASL 300, U-02-RC M	GEL	/x/
220	pCi/Filter	ř.		0.716	9.97	39.2	HASL 300, U-02-RC M	GEL	/x/
	Results 0.667 -0.219 1.72 0.25 2.41 -0.602 312 15.5 0.355 49.6 4.6 220	ResultsUnits0.667pCi/Filter-0.219pCi/Filter1.72pCi/Filter0.25pCi/Filter2.41pCi/Filter-0.602pCi/Filter312pCi/Filter15.5pCi/Filter0.355pCi/Filter49.6pCi/Filter4.6pCi/Filter220pCi/Filter	ResultsResult Qual0.667pCi/Filter-0.219pCi/Filter-0.219pCi/Filter0.25pCi/Filter0.25pCi/Filter2.41pCi/Filter-0.602pCi/Filter312pCi/Filter15.5pCi/Filter0.355pCi/Filter49.6pCi/Filter42.6pCi/Filter	ResultsUnitsResult QualFoot Note0.667pCi/Filter-0.219pCi/Filter-0.219pCi/Filter1.72pCi/Filter0.25pCi/Filter2.41pCi/Filter-0.602pCi/Filter312pCi/Filter15.5pCi/Filter49.6pCi/Filter4.6pCi/Filter220pCi/Filter	Results Result Qual Foot Note Reporting Limit 0.667 pCi/Filter 0.439 -0.219 pCi/Filter 3.06 1.72 pCi/Filter 0.434 0.25 pCi/Filter 0.434 0.25 pCi/Filter 0.346 -0.602 pCi/Filter 0.346 -0.602 pCi/Filter 1.26 312 pCi/Filter 0.514 0.355 pCi/Filter 0.514 0.355 pCi/Filter 0.243 49.6 pCi/Filter 0.867 4.6 pCi/Filter 0.694 220 pCi/Filter 0.716	Results Result Qual Foot Note Reporting Limit Counting Error 0.667 pCi/Filter 0.439 0.472 -0.219 pCi/Filter 3.06 1.6 1.72 pCi/Filter 0.434 0.687 0.25 pCi/Filter 0.436 0.276 2.41 pCi/Filter 0.346 0.776 -0.602 pCi/Filter 1.26 0.688 312 pCi/Filter 0.514 1.68 0.355 pCi/Filter 0.243 0.276 49.6 pCi/Filter 0.867 4.74 4.6 pCi/Filter 0.867 4.74 220 pCi/Filter 0.694 1.63	Results Result Qual Foot Note Reporting Limit Counting Error TPU 0.667 pCi/Filter 0.439 0.472 0.481 -0.219 pCi/Filter 0 3.06 1.6 1.6 1.72 pCi/Filter 0.434 0.687 0.712 0.25 pCi/Filter 0.188 0.276 0.278 2.41 pCi/Filter 0.346 0.776 0.857 -0.602 pCi/Filter 1.26 0.688 0.688 312 pCi/Filter 0.514 1.68 2.68 0.355 pCi/Filter 0.243 0.276 0.28 49.6 pCi/Filter 0.867 4.74 9.77 4.6 pCi/Filter 0.694 1.63 1.82 220 pCi/Filter 0.716 9.97 39.2	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	ResultsUnitsResult QualFoot NoteReporting LimitCounting ErrorTPUMethodLabCode0.6667pCi/Filter0.4390.4720.481HASL 300, AM-05-RC MGEL-0.219pCi/Filter U3.061.61.6HASL 300, 4.5.2.3GEL1.72pCi/Filter U0.4340.6870.712Alpha SpectroscopyGEL0.25pCi/Filter0.3460.2760.278HASL 300, Pu-11-RC MGEL2.41pCi/Filter U0.3460.7760.857HASL 300, Pu-11-RC MGEL3.12pCi/Filter U1.260.6880.688EPA-905.0-MGEL3.12pCi/Filter U52.84252.4HASL 300, Tr-02-RC MGEL1.55pCi/Filter0.5141.682.68HASL 300, Th-01-RC MGEL0.355pCi/Filter0.86774.749.77HASL 300, U-02-RC MGEL49.6pCi/Filter0.6941.631.82HASL 300, U-02-RC MGEL220pCi/Filter0.7169.97739.2HASL 300, U-02-RC MGEL

17-400-ISO-067

from: C-400 on 7/27/2017 Media: SW Smear on the floor of the Receiving Booth near Col. AB-3 in Area 4 in C-400. Southwest corner booth floor.

SmpMethod: GR

/X/

/X/

comments:										I
Analysis	Results	Units n	le sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
RADS										
Americium-241	2.04	pCi/Filter			0.165	0.667	0.714	HASL 300, AM-05-RC M	GEL	/x/
Ce sium -137	1.74	pCi/Filter U	I .		5.27	2.29	2.42	HASL 300, 4.5.2.3	GEL	/x/
Neptunium-237	6.67	pCi/Filter			0.402	1.31	1.5	Alpha Spectroscopy	GEL	/x/
Plutonium -238	0.595	pCi/Filter			0.392	0.421	0.431	HASL 300, Pu-11-RC M	GEL	/x/
Plu tonium -239/240	13.1	pCi/Filter			0.518	1.81	2.69	HASL 300, Pu-11-RC M	GEL	/x/
Strontium-90	1.23	pCi/Filter U	I.		1.94	1.17	1.21	EPA-905.0-M	GEL	/x/
Technetium -99	2180	pCi/Filter			47.5	78	233	HASL 300, Tc-02-RC M	GEL	/x/
Thorium-230	96.6	pCi/Filter			0.692	4.75	14.7	HASL 300, Th-01-RC M	GEL	/x/
Thorium-232	2.06	pCi/Filter			0.381	0.713	0.772	HASL 300, Th-01-RC M	GEL	/x/
Uranium -234	235	pCi/Filter			3.13	19.6	38.6	HASL 300, U-02-RC M	GEL	/x/

2.51

2.79

17-400-ISO-068

Uranium-235

Uranium-238

on 7/27/2017 Media: SW

7.9

121

7.11

36.4

SmpMethod:

HASL 300, U-02-RC M

HASL 300, U-02-RC M

GEL

GEL

GR

Smear on the floor of the Receiving Booth near Col. AB-3 in Area 4 in C-400. East wall of booth. Comments:

from: C-400

pCi/Filter

pCi/Filter

24.4

817

Analysis	Results	Units	Re sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
RADS										
Americium-241	2.77	pCi/Filter			0.552	0.976	1.06	HASL 300, AM-05-RC M	GEL	/x/
Ce sium -137	-1.06	pCi/Filter	U		2.93	1.71	1.77	HASL 300, 4.5.2.3	GEL	/x/
Neptunium-237	7.15	pCi/Filter			0.573	1.63	1.81	Alpha Spectroscopy	GEL	/x/
Plutonium-238	-0.0304	pCi/Filter	U		0.819	0.365	0.365	HASL 300, Pu-11-RC M	GEL	/x/
Plu tonium -239/240	13.3	pCi/Filter			0.93	2.12	3.11	HASL 300, Pu-11-RC M	GEL	/x/
Strontium-90	-0.138	pCi/Filter	U		1.94	1.07	1.07	EPA-905.0-M	GEL	/x/
Technetium -99	380	pCi/Filter			51.6	43.4	57.8	HASL 300, Tc-02-RC M	GEL	/x/
Thorium-230	73	pCi/Filter			0.453	3.51	10.2	HASL 300, Th-01-RC M	GEL	/x/
Thorium-232	1.53	pCi/Filter			0.279	0.522	0.559	HASL 300, Th-01-RC M	GEL	/x/
Uranium-234	313	pCi/Filter			3.44	24.3	52.9	HASL 300, U-02-RC M	GEL	/x/
Uranium-235	24.6	pCi/Filter			3.36	7.71	8.55	HASL 300, U-02-RC M	GEL	/x/
Uranium-238	851	pCi/Filter			2.35	40	134	HASL 300, U-02-RC M	GEL	/x/

*Verification/Validation/Assessment

17-400-ISO-069

from: C-400 on 7/27/2017 Media: SW Smear on the floor of the Receiving Booth near Col. AB-3 in Area 4 in C-400. North wall of booth. Comments:

SmpMethod: GR

			n 11							
Analysis	Results	Units	Qual	Note	Limit	Error	TPU	Method	LabCode	V/V/A*
RADS										
Americium-241	3.64	pCi/Filter			0.557	0.942	1.05	HASL 300, AM-05-RC M	GEL	/x
Ce sium -137	0.763	pCi/Filter	U		3.4	1.5	1.54	HASL 300, 4.5.2.3	GEL	/x
Neptunium-237	16.2	pCi/Filter			0.446	2.14	2.79	Alpha Spectro scopy	GEL	/x
Plu tonium -238	0.852	pCi/Filter			0.32	0.492	0.509	HASL 300, Pu-11-RC M	GEL	/x
Plu tonium -239/240	19.5	pCi/Filter			0.37	2.24	3.77	HASL 300, Pu-11-RC M	GEL	/x
Strontium-90	2.87	pCi/Filter			1.97	1.36	1.55	EPA-905.0-M	GEL	/x
Technetium -99	814	pCi/Filter			55.4	57.7	100	HASL 300, Tc-02-RC M	GEL	/x
Thorium-230	96.6	pCi/Filter			0.525	4.49	14.2	HASL 300, Th-01-RC M	GEL	/x
Thorium-232	2.67	pCi/Filter			0.314	0.758	0.845	HASL 300, Th-01-RC M	GEL	/x
Uranium-234	253	pCi/Filter			1.17	14.3	58.4	HASL 300, U-02-RC M	GEL	/ X
Uranium -235	19.6	pCi/Filter			0.782	4.46	6.25	HASL 300, U-02-RC M	GEL	/ X
Uranium -238	564	pCi/Filter			1.48	21.4	128	HASL 300, U-02-RC M	GEL	/ X /

17-400-ISO-070

on 7/27/2017 Media: SW SmpMethod:

GR

from: C-400 Smear on the floor of the Receiving Booth near Col. AB-3 in Area 4 in C-400. Northeast corner of booth floor. Comments:

Applyric	Populto	Unite	Re sult	Foot	Reporting	Counting	TPU	Mathad	LabCodo	V/////
Analysis	Results	Units	Qual	Note	Limit	Error		Method	Labcoue	VIVIA
RADS										
Americium-241	3.68	pCi/Filter	0		0.561	1.02	1.14	HASL 300, AM-05-RC M	GEL	/x/
Ce sium -137	1.63	pCi/Filter	r U		2.89	1.23	1.44	HASL 300, 4.5.2.3	GEL	/x/
Neptunium-237	19.4	pCi/Filter	r		0.313	2.21	3.05	Alpha Spectroscopy	GEL	/x/
Plutonium-238	0.439	pCi/Filter	Ċ.		0.373	0.377	0.383	HASL 300, Pu-11-RC M	GEL	/x/
Plutonium-239/240	22.4	pCi/Filter	r		0.472	2.42	4.24	HASL 300, Pu-11-RC M	GEL	/x/
Strontium-90	0.959	pCi/Filter	r U		1.14	0.698	0.742	EPA-905.0-M	GEL	/x/
Technetium-99	1070	pCi/Filter	r		58.5	65.9	126	HASL 300, Tc-02-RC M	GEL	/x/
Thorium-230	57.4	pCi/Filter	6		0.485	3.33	8.52	HASL 300, Th-01-RC M	GEL	/x/
Thorium-232	1.51	pCi/Filter	r		0.317	0.556	0.593	HASL 300, Th-01-RC M	GEL	/x/
Uranium -234	150	pCi/Filter	c .		1.02	8.93	29.2	HASL 300, U-02-RC M	GEL	/x/
Uranium-235	11.7	pCi/Filter	r		0.51	2.79	3.53	HASL 300, U-02-RC M	GEL	/x/
Uranium-238	337	pCi/Filter	ř.		0.965	13.4	63.8	HASL 300, U-02-RC M	GEL	/x/

17-400-ISO-071		1	from: C-	400	on	7/27/2017	Media: SW	SmpMethod: GR		
Comments:										
Analysis	Results	Units	Re sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
RADS										
Americium-241	1.37	pCi/Filte	91		0.354	0.602	0.629	HASL 300, AM-05-RC M	GEL	/×
Ce sium -137	1.4	pCi/Filte	er U		2.79	1.11	1.28	HASL 300, 4.5.2.3	GEL	/x
Neptunium-237	54.1	pCi/Filte	er		0.398	3.68	6.95	Alpha Spectroscopy	GEL	/x
Plutonium-238	0.441	pCi/Filte	er.		0.375	0.379	0.385	HASL 300, Pu-11-RC M	GEL	/x
Plu tonium-239/240	6.43	pCi/Filte	er		0.446	1.31	1.65	HASL 300, Pu-11-RC M	GEL	/x
Strontium-90	1.22	pCi/Filte	er U		1.95	1.17	1.22	EPA-905.0-M	GEL	/x
Technetium -99	4520	pCi/Filte	er		52.5	115	470	HASL 300, Tc-02-RC M	GEL	/x
Thorium-230	10.6	pCi/Filte	er		0.525	1.48	2.09	HASL 300, Th-01-RC M	GEL	/>
Thorium-232	0.515	pCi/Filte	er		0.22	0.34	0.348	HASL 300, Th-01-RC M	GEL	/x
Uranium-234	318	pCi/Filte	er		3.24	22.7	50.6	HASL 300, U-02-RC M	GEL	/x
Uranium-235	27.8	pCi/Filte	er.		3.62	7.6	8.56	HASL 300, U-02-RC M	GEL	/×
Uranium -238	653	pCi/Filte	er.		2.31	32.4	98.3	HASL 300, U-02-RC M	GEL	/x
Comments:										
Analysis	Results	Units	Re sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
RADS										
Americium-241	0.31	pCi/Filte	er U		0.406	0.326	0.328	HASL 300, AM-05-RC M	GEL	/x
Ce sium -137	-1.49	pCi/Filte	er U		6.13	3.5	3.57	HASL 300, 4.5.2.3	GEL	/x
Neptunium-237	91.6	pCi/Filte	er		0.387	4.3	10.9	Alpha Spectroscopy	GEL	/ ×
Plutonium-238	0.349	pCi/Filte	er U		0.427	0.376	0.38	HASL 300, Pu-11-RC M	GEL	/>
Plu tonium -239/240	1.38	pCi/Filte	er		0.73	0.722	0.758	HASL 300, Pu-11-RC M	GEL	/>
Strontium-90	4.41	pCi/Filte	er		1.97	1.39	1.8	EPA-905.0-M	GEL	/x
Technetium-99	663	pCi/Filte	er.		63.6	59.1	89.2	HASL 300, Tc-02-RC M	GEL	/>
Thorium-230	8.41	pCi/Filte	er.		0.544	1.31	1.76	HASL 300, Th-01-RC M	GEL	/x
Thorium-232	0.347	pCi/Filte	er		0.214	0.281	0.285	HASL 300, Th-01-RC M	GEL	1>
Uranium-234	234	pCi/Filte			1.11	11.0	47.6	HASL 300, U-02-RC M	GEL	15
Uranium 225			5 B			11.9				
oranium-255	20.1	pCi/Filte	er.		0.585	3.9	5.55	HASL 300, U-02-RC M	GEL	/ X

17-400-ISO-073		1	from: C-	400	on	7/26/2017	Media: SW	Smp	Method: GR	
Comments:										
Analysis	Results	Units	Re sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
RADS										
Americium-241	0.666	pCi/sam	р		0.365	0.19	0.264	RL-7128	PGDP	/x/
Ce sium -137	-0.375	pCi/sam	рU		2.24	0.75	1.21	RL-7124	PGDP	/x/
Neptunium-237	2.64	pCi/sam	p		0.363	0.357	0.722	RL-7128	PGDP	/x/
Plutonium-238	0.0692	pCi/sam	рU		0.111	0.0637	0.0728	RL-7128	PGDP	/x/
Plutonium-239/240	4.14	pCi/sam	p		0.171	0.435	1.07	RL-7128	PGDP	/x/
Strontium-90	1.6	pCi/sam	pBU		5.82	0.267	0.426	RL-7140	PGDP	/x/
Technetium-99	195	pCi/sam	p		6.18	9.81	14	RL-7100	PGDP	/x/
Thorium-230	24.5	pCi/sam	p		1.13	1.15	4.18	RL-7128	PGDP	/x/
Thorium-232	0.151	pCi/sam	рU		0.46	0.114	0.168	RL-7128	PGDP	/x/
Uranium-234	26	pCi/sam	p		1.02	1.36	4.77	RL-7128	PGDP	/x/
Uranium -235	1.72	pCi/sam	p		0.279	0.391	0.502	RL-7128	PGDP	/x/
Uranium-238	56.6	pCi/sam	p		0.919	1.99	10.1	RL-7128	PGDP	/x/
17-400-ISO-074		-	from: C-4	400	on	7/26/2017	Media: SW	Smp	Method: GR	
17-400-ISO-074 Comments:		4	from: C-4	400	on	7/26/2017	Media: SW	Smp	Method: GR	
17-400-ISO-074 Comments: Analysis	Results	Units	from: C-4 Result Qual	400 Foot Note	on Reporting Limit	7/26/2017 Counting Error	Media: SW TPU	Smp Method	Method: GR LabCode	V/V/A*
17-400-ISO-074 Comments: Analysis RADS	Results	f Units	from: C-4 Result Qual	400 Foot Note	on Reporting Limit	7/26/2017 Counting Error	Media: SW TPU	Smp Method	Method: GR LabCode	V/V/A*
17-400-ISO-074 Comments: Analysis RADS Americium-241	Results	Units pCi/som	From: C-4 Result Qual	400 Foot Note	on Reporting Limit 0.366	7/26/2017 Counting Error 0.262	Media: SW ТРU 0.376	Smp Method RL-7128	Method: GR LabCode PGDP	V/V/A* /x/
17-400-ISO-074 Comments: Analysis RADS Americium-241 Cesium-137	Results 1.29 1.02	Units pCi/sam pCi/sam	from: C-4 Result Qual p p U	400 Foot Note	ON Reporting Limit 0.366 2.85	7/26/2017 Counting Error 0.262 2.04	Media: SW TPU 0.376 2.04	Smp Method RL-7128 RL-7124	Method: GR LabCode PGDP PGDP	V/V/A* /x/ /x/
17-400-ISO-074 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237	Results 1.29 1.02 7.36	Units pCi/sam pCi/sam pCi/sam	From: C-4 Result Qual p p U p	400 Foot Note	ON Reporting Limit 0.366 2.85 0.269	7/26/2017 Counting Error 0.262 2.04 0.553	Media: SW TPU 0.376 2.04 1.7	Smp Method RL-7128 RL-7124 RL-7128	Method: GR LabCode PGDP PGDP PGDP PGDP	V/V/A* /x/ /x/ /x/ /x/
17-400-ISO-074 Comments: Analysis RADS Americium-241 Ce sium-137 Neptunium-237 Plutonium-238	Results 1.29 1.02 7.36 0.0619	Units pCi/sam pCi/sam pCi/sam pCi/sam	From: C-4 Result Qual P P U P P U	400 Foot Note	on Reporting Limit 0.366 2.85 0.269 0.105	7/26/2017 Counting Error 0.262 2.04 0.553 0.057	Media: SW TPU 0.376 2.04 1.7 0.0664	Smp Method RL-7128 RL-7124 RL-7128 RL-7128	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP	V/V/A* /x/ /x/ /x/ /x/ /x/
17-400-ISO-074 Comments: Analysis RADS Americium-241 Ce sium-137 Neptunium-237 Plutonium-238 Plutonium-239/240	Results 1.29 1.02 7.36 0.0619 6.33	Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	from: C-4 Result Qual p U p U p U p	400 Foot Note	01 Reporting Limit 0.366 2.85 0.269 0.105 0.165	7/26/2017 Counting Error 0.262 2.04 0.553 0.057 0.509	Media: SW TPU 0.376 2.04 1.7 0.0664 1.48	Smp Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128 RL-7128	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP	V/V/A* /x/ /x/ /x/ /x/ /x/ /x/
17-400-ISO-074 Comments: Analysis RADS Americium-241 Ce sium-137 Nep tunium-237 Plu tonium-238 Plu tonium-239/240 Strontium-90	Results 1.29 1.02 7.36 0.0619 6.33 2.56	Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	from: C-4 Result Qual p p U p p U p p U p p U	400 Foot Note	01 Reporting Limit 0.366 2.85 0.269 0.105 0.165 7.96	7/26/2017 Counting Error 0.262 2.04 0.553 0.057 0.509 0.42	Media: SW TPU 0.376 2.04 1.7 0.0664 1.48 0.675	Smp Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128 RL-7128 RL-7140	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	V/V/A* /x/ /x/ /x/ /x/ /x/ /x/ /x/
17-400-ISO-074 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plutonium-238 Plutonium-239/240 Strontium-90 Technetium-99	Results 1.29 1.02 7.36 0.0619 6.33 2.56 1100	Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	from: C-4 Result Qual p p U p p U p p B U p p B U p	400 Foot Note	01 Reporting Limit 0.366 2.85 0.269 0.105 0.165 7.96 6.18	7/26/2017 Counting Error 0.262 2.04 0.553 0.057 0.509 0.42 20.9	Media: SW TPU 0.376 2.04 1.7 0.0664 1.48 0.675 60.4	Smp Method RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7100	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	V/V/A* /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x/
17-400-ISO-074 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plutonium-238 Plutonium-238 Plutonium-239/240 Strontium-90 Technetium-99 Thorium-230	Results 1.29 1.02 7.36 0.0619 6.33 2.56 1100 50.4	Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	rom: C-4 Result Qual p p U p p U p p B U p p B U p p B U p	400 Foot Note	00 Reporting Limit 0.366 2.85 0.269 0.105 0.165 7.96 6.18 1.03	7/26/2017 Counting Error 0.262 2.04 0.553 0.057 0.509 0.42 20.9 1.77	Media: SW TPU 0.376 2.04 1.7 0.0664 1.48 0.675 60.4 8.54	Smp Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	V/V/A* /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x
17-400-ISO-074 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plutonium-238 Plutonium-238 Plutonium-239/240 Strontium-90 Technetium-99 Thorium-230 Thorium-232	Results 1.29 1.02 7.36 0.0619 6.33 2.56 1100 50.4 0.343	Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	rom: C-4 Result Qual p p U p p U p p U p p BU p p BU p p	Foot Note	On Reporting Limit 0.366 2.85 0.269 0.105 0.165 7.96 6.18 1.03 0.34	7/26/2017 Counting Error 0.262 2.04 0.553 0.057 0.509 0.42 20.9 1.77 0.151	Media: SW TPU 0.376 2.04 1.7 0.0664 1.48 0.675 60.4 8.54 0.202	Smp Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7100 RL-7128 RL-7128 RL-7128	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	V/V/A* /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x
17-400-ISO-074 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plutonium-238 Plutonium-239/240 Strontium-90 Technetium-99 Thorium-230 Thorium-232 Uranium-234	Results 1.29 1.02 7.36 0.0619 6.33 2.56 1100 50.4 0.343 203	Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	From: C-4 Result Qual P P P P P P P P P P P P P P P P P P P	400 Foot Note	On Reporting Limit 0.366 2.85 0.269 0.105 0.165 7.96 6.18 1.03 0.34 1.5	7/26/2017 Counting Error 0.262 2.04 0.553 0.057 0.509 0.42 20.9 1.77 0.151 7.2	Media: SW TPU 0.376 2.04 1.7 0.0664 1.48 0.675 60.4 8.54 0.202 48.6	Smp Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128 RL-7128 RL-7100 RL-7128 RL-7128 RL-7128 RL-7128	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	V/V/A* /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x
17-400-ISO-074 Comments: Analysis RADS Americium-241 Ce sium-137 Neptunium-237 Plu tonium-238 Plu tonium-239/240 Strontium-90 Technetium-99 Thorium-230 Thorium-232 Uranium-234 Uranium-235	Results 1.29 1.02 7.36 0.0619 6.33 2.56 1100 50.4 0.343 203 15.1	Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	From: C-4 Result Qual P P P P P P P P P P P P P P T P T	400 Foot Note	011 Reporting Limit 0.366 2.85 0.269 0.105 0.165 7.96 6.18 1.03 0.34 1.5 0.675	7/26/2017 Counting Error 0.262 2.04 0.553 0.057 0.509 0.42 20.9 1.77 0.151 7.2 2.18	Media: SW TPU 0.376 2.04 1.7 0.0664 1.48 0.675 60.4 8.54 0.202 48.6 4.19	Smp Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128 RL-7140 RL-7100 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	V/V/A* /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x/ /x

17-400-ISO-075		f	from: C-	400	on	7/26/2017	Media: SW	SmpN	SmpMethod: GR		
Comments:											
Analysis	Results	Units	Re sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*	
RADS											
Americium-241	0.139	pCi/sam	рU		0.371	0.0944	0.172	RL-7128	PGDP	/x,	
Ce sium -137	1.42	pCi/sam	рU		1.55	1.65	1.67	RL-7124	PGDP	/x,	
Neptunium-237	0.797	pCi/sam	р		0.29	0.195	0.277	RL-7128	PGDP	/x	
Plutonium-238	0.0124	pCi/sam	рU		0.11	0.0252	0.0557	RL-7128	PGDP	/x,	
Plutonium-239/240	0.766	pCi/sam	р		0.169	0.181	0.255	RL-7128	PGDP	/ X /	
Strontium-90	2.11	pCi/sam	pBU		7.76	0.35	0.559	RL-7140	PGDP	/x/	
Technetium -99	129	pCi/sam	p		6.18	8.46	10.8	RL-7100	PGDP	/x/	
Thorium-230	4.75	pCi/sam	р		1.04	0.557	1.05	RL-7128	PGDP	/x,	
Thorium-232	0.00412	pCi/sam	рU		0.366	0.00823	0.141	RL-7128	PGDP	/x/	
Uranium-234	20.7	pCi/sam	p		1.02	1.03	3.69	RL-7128	PGDP	/x/	
Uranium -235	1.32	pCi/sam	p		0.251	0.29	0.377	RL-7128	PGDP	/x/	
										0.0	
Uranium-238 17-400-ISO-076	40.6	pCi/sam	p from: C	400	0.903 on	1.44	7.07 Media: SW	RL-7128 SmpN	PGDP 1ethod: GR	/x,	
Uranium-238 17-400-ISO-076 Comments:	40.6	pCi/sam	p from: C-	400	0.903 on	1.44	7.07 Media: SW	RL-7128 Smplv	PGDP Nethod: GR	/x/	
Uranium-238 17-400-ISO-076 Comments: Analysis	40.6 Results	pCi/sam f Units	p from: C- Result Qual	400 Foot Note	0.903 On Reporting Limit	1.44 7/26/2017 Counting Error	7.07 Media: SW TPU	RL-7128 SmpM Method	PGDP Nethod: GR LabCode	/ x , V/V/A*	
Uranium-238 17-400-ISO-076 Comments: Analysis RADS	40.6 Results	pCi/sam f Units	p from: C Result Qual	400 Foot Note	0.903 On Reporting Limit	1.44 7/26/2017 Counting Error	7.07 Media: SW TPU	RL-7128 SmpN Method	PGDP Nethod: GR LabCode	/x,	
Uranium-238 17-400-ISO-076 Comments: Analysis RADS Americium-241	40.6 Results 1.08	pCi/sam f Units pCi/sam	p from: C Result Qual	400 Foot Note	0.903 On Reporting Limit 0.364	1.44 7/26/2017 Counting Error 0.236	7.07 Media: SW TPU 0.336	RL-7128 SmpM Method RL-7128	PGDP Nethod: GR LabCode PGDP	/x, /x, 	
Uranium-238 17-400-ISO-076 Comments: Analysis RADS Americium-241 Cesium-137	40.6 Results 1.08 -0.503	pCi/sam f Units pCi/sam pCi/sam	p from: C Result Qual p p U	400 Foot Note	0.903 on Reporting Limit 0.364 2.29	1.44 7/26/2017 Counting Error 0.236 1.01	7.07 Media: SW TPU 0.336 1.26	RL-7128 SmpM Method RL-7128 RL-7124	PGDP Nethod: GR LabCode PGDP PGDP	/x, 	
Uranium-238 17-400-ISO-076 Comments: Analysis RADS Americium-241 Ce sium-137 Neptunium-237	40.6 Results 1.08 -0.503 14.5	pCi/sam f Units pCi/sam pCi/sam pCi/sam	p from: C Result Qual p p U p	400 Foot Note	0.903 on Reporting Limit 0.364 2.29 0.458	1.44 7/26/2017 Counting Error 0.236 1.01 1.01	7.07 Media: SW TPU 0.336 1.26 3.9	RL-7128 SmpM Method RL-7128 RL-7124 RL-7128	PGDP Nethod: GR LabCode PGDP PGDP PGDP PGDP	/x, V/V/A* /x, /x, /x,	
Uranium-238 17-400-ISO-076 Comments: Analysis RADS Americium-241 Ce sium-137 Neptunium-237 Plutonium-238	40.6 Results 1.08 -0.503 14.5 0.121	pCi/sam f Units pCi/sam pCi/sam pCi/sam pCi/sam	p from: C Result Qual p p U p p U p	400 Foot Note	0.903 On Reporting Limit 0.364 2.29 0.458 0.138	1.44 7/26/2017 Counting Error 0.236 1.01 1.01 0.0914	7.07 Media: SW TPU 0.336 1.26 3.9 0.102	RL-7128 SmpM Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128	PGDP Nethod: GR LabCode PGDP PGDP PGDP PGDP	/x, V/V/A* /x, /x, /x, /x, /x,	
Uranium-238 17-400-ISO-076 Comments: Analysis RADS Americium-241 Ce sium-137 Neptunium-237 Plutonium-238 Plutonium-239/240	40.6 Results 1.08 -0.503 14.5 0.121 7.13	pCi/sam f Units pCi/sam pCi/sam pCi/sam pCi/sam	p from: C Qual p p U p U p U p	400 Foot Note	0.903 On Reporting Limit 0.364 2.29 0.458 0.138 0.199	1.44 7/26/2017 Counting Error 0.236 1.01 1.01 0.0914 0.704	7.07 Media: SW TPU 0.336 1.26 3.9 0.102 1.99	RL-7128 SmpM Method RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128	PGDP Nethod: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP	/x, V/V/A* /x, /x, /x, /x, /x, /x,	
Uranium-238 17-400-ISO-076 Comments: Analysis RADS Americium-241 Ce sium-137 Neptunium-237 Plu tonium-238 Plu tonium-239/240 Strontium-90	40.6 Results 1.08 -0.503 14.5 0.121 7.13 3.71	pCi/sam f Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	p from: C Result Qual p p U p p U p p U p p U	400 Foot Note	0.903 On Reporting Limit 0.364 2.29 0.458 0.138 0.199 6.57	1.44 7/26/2017 Counting Error 0.236 1.01 1.01 0.0914 0.704 0.58	7.07 Media: SW TPU 0.336 1.26 3.9 0.102 1.99 0.963	RL-7128 SmpM Method RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7140	PGDP Nethod: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	/x, /x, /x, /x, /x, /x, /x, /x, /x, /x,	
Uranium-238 17-400-ISO-076 Comments: Analysis RADS Americium-241 Ce sium-137 Neptunium-237 Plutonium-238 Plutonium-239/240 Strontium-90 Technetium-99	40.6 Results 1.08 -0.503 14.5 0.121 7.13 3.71 1150	pCi/sam f Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	p from: C Result Qual p p U p p U p p U p p U p p BU p	400 Foot Note	0.903 On Reporting Limit 0.364 2.29 0.458 0.138 0.199 6.57 6.18	1.44 7/26/2017 Counting Error 0.236 1.01 1.01 0.0914 0.704 0.58 21.4	7.07 Media: SW TPU 0.336 1.26 3.9 0.102 1.99 0.963 63	RL-7128 SmpM Method RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7120 RL-7100	PGDP Nethod: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	/x, /x, /x, /x, /x, /x, /x, /x, /x, /x,	
Uranium-238 17-400-ISO-076 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plutonium-238 Plutonium-239/240 Strontium-90 Technetium-99 Thorium-230	40.6 Results 1.08 -0.503 14.5 0.121 7.13 3.71 1150 35	pCi/sam f Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	p from: C- Result Qual p p U p p U p p U p p BU p p	400 Foot Note	0.903 On Reporting Limit 0.364 2.29 0.458 0.138 0.199 6.57 6.18 1.02	1.44 7/26/2017 Counting Error 0.236 1.01 1.01 0.0914 0.704 0.58 21.4 1.47	7.07 Media: SW TPU 0.336 1.26 3.9 0.102 1.99 0.963 63 63 6.13	RL-7128 SmpN Method RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128	PGDP Nethod: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	/x, /x, /x, /x, /x, /x, /x, /x, /x, /x,	
Uranium-238 17-400-ISO-076 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plutonium-238 Plutonium-238 Plutonium-239/240 Strontium-90 Technetium-99 Thorium-230 Thorium-232	40.6 Results 1.08 -0.503 14.5 0.121 7.13 3.71 1150 35 0.0924	pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	p from: C- Result Qual p p U p p U p p U p p U p p U p p U p p U p p U p D U p p U p D U p p U p D U p D U D D U D D U D D D D	400 Foot Note	0.903 On Reporting Limit 0.364 2.29 0.458 0.138 0.199 6.57 6.18 1.02 0.399	1.44 7/26/2017 Counting Error 0.236 1.01 1.01 0.0914 0.704 0.58 21.4 1.47 0.155	7.07 Media: SW TPU 0.336 1.26 3.9 0.102 1.99 0.963 63 6.13 0.197	RL-7128 SmpN Method RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7140 RL-7140 RL-7100 RL-7128 RL-7128 RL-7128	PGDP Nethod: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	/x, /x, /x, /x, /x, /x, /x, /x, /x, /x,	
Uranium-238 17-400-ISO-076 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plutonium-238 Plutonium-238 Plutonium-239/240 Strontium-90 Technetium-99 Thorium-230 Thorium-232 Uranium-234	40.6 Results 1.08 -0.503 14.5 0.121 7.13 3.71 1150 35 0.0924 89.4	pCi/sam f Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	p from: C- Result Qual p p U p p U p p U p p U p p U p p U p p	400 Foot Note	0.903 On Reporting Limit 0.364 2.29 0.458 0.138 0.199 6.57 6.18 1.02 0.399 1.08	1.44 7/26/2017 Counting Error 0.236 1.01 1.01 0.0914 0.704 0.58 21.4 1.47 0.155 3.02	7.07 Media: SW TPU 0.336 1.26 3.9 0.102 1.99 0.963 63 6.13 0.197 18	RL-7128 SmpM Method RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7140 RL-7100 RL-7100 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128	PGDP Nethod: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	/x, /x, /x, /x, /x, /x, /x, /x, /x, /x,	
Uranium-238 17-400-ISO-076 Comments: Analysis RADS Americium-241 Ce sium-137 Neptunium-237 Plu tonium-238 Plu tonium-239/240 Strontium-90 Technetium-99 Thorium-230 Thorium-232 Uranium-234 Uranium-235	40.6 Results 1.08 -0.503 14.5 0.121 7.13 3.71 1150 35 0.0924 89.4 6.38	pCi/sam f Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	P from: C- Result Qual P P P V P P P P P P P P P P P P P P P	400 Foot Note	0.903 On Reporting Limit 0.364 2.29 0.458 0.138 0.199 6.57 6.18 1.02 0.399 1.08 0.301	1.44 7/26/2017 Counting Error 0.236 1.01 1.01 0.0914 0.704 0.58 21.4 1.47 0.155 3.02 0.895	7.07 Media: SW TPU 0.336 1.26 3.9 0.102 1.99 0.963 63 6.13 0.197 18 1.55	RL-7128 SmpM Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128	PGDP Nethod: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGDP	/x /x /x /x /x /x /x /x /x /x	

17-400-ISO-077		4	from: C-	400	on	7/26/2017	Media: SW	SmpN	Nethod: GR	
Comments:										
Analysis	Results	Units	Re sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
RADS										
Americium-241	1.87	pCi/sam	p		0.371	0.335	0.496	RL-7128	PGDP	/ X
Ce sium -137	1.43	pCi/sam	υp		2.69	2.86	2.86	RL-7124	PGDP	/ X
Neptunium-237	23.9	pCi/sam	p		0.313	1.17	5.88	RL-7128	PGDP	/ X
Plu tonium -238	0.185	pCi/sam	p		0.114	0.103	0.116	RL-7128	PGDP	/ X
Plu tonium -239/240	7.85	pCi/sam	p		0.183	0.672	2.01	RL-7128	PGDP	/ x
Strontium-90	0.464	pCi/sam	pBU		6.95	0.0807	0.125	RL-7140	PGDP	/ X
Technetium -99	893	pCi/sam	p		6.18	18.9	49.7	RL-7100	PGDP	/ X
Thorium-230	61.3	pCi/sam	p		1.06	2.02	10.9	RL-7128	PGDP	/ X
Thorium-232	0.442	pCi/sam	p		0.35	0.211	0.255	RL-7128	PGDP	/x
Uranium-234	70.9	pCi/sam	p		1.02	2.31	13.6	RL-7128	PGDP	/ X
Uranium-235	3.41	pCi/sam	p		0.306	0.575	0.87	RL-7128	PGDP	/x
Uranium-238	97	pCi/sam	D		0.928	2.69	18.5	RL-7128	PGDP	/x
Comments:										
Analysis	Results	Units	Re sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
RADS										
Americium-241	1.99	pCi/sam	p		0.372	0.343	0.515	RL-7128	PGDP	/ X
Ce sium -137	1.88	pCi/sam	p		1.86	1.74	1.77	RL-7124	PGDP	/ X
Neptunium-237	19.6	pCi/sam	p		0.359	1.13	5.05	RL-7128	PGDP	/ X
Plu tonium - 238	0.0799	pCi/sam	ip U		0.126	0.0716	0.0807	RL-7128	PGDP	/ X
Plu tonium -239/240	6.23	pCi/sam	p		0.181	0.633	1.69	RL-7128	PGDP	/ X
Strontium-90	2.7	pCi/sam	pBU		6.24	0.433	0.708	RL-7140	PGDP	/ X
Technetium-99	870	pCi/sam	p		6.18	18.7	48.5	RL-7100	PGDP	/ X
Thorium-230	32	pCi/sam	p		1.08	1.43	5.52	RL-7128	PGDP	/x
Thorium-232	0.209	pCi/sam					0.195	RL-7128	PGDP	/x
Uranium-234			ip U		0.43	0.135	0.185	1 1 M 1 1 M 1 M 1 M 1		-
	62.8	pCi/sam	ip U ip		0.43 1.05	0.135	12.3	RL-7128	PGDP	/ x
Uranium-235	62.8 2.92	pCi/sam pCi/sam	ip U ip ip		0.43 1.05 0.306	0.135 2.27 0.552	12.3 0.792	RL-7128 RL-7128	PGDP PGDP	/x /x

17-400-ISO-083			from: C-	400	on	7/26/2017	Media: SW	SmpN	lethod: GR	
Comments:										
Analysis	Results	Units	Re sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
RADS										
Americium-241	11.6	pCi/sam	ip.		0.363	0.726	2.15	RL-7128	PGDP	/x.
Ce sium -137	0.603	pCi/sam	ip U		2.61	1.21	1.35	RL-7124	PGDP	/x,
Neptunium-237	13.8	pCi/sam	p		0.296	0.846	3.34	RL-7128	PGDP	/x,
Plutonium-238	0.631	pCi/sam	p		0.124	0.189	0.242	RL-7128	PGDP	/x,
Plu tonium -239/240	34.8	pCi/sam	ip		0.173	1.34	8.23	RL-7128	PGDP	/x/
Strontium-90	2.18	pCi/sam	pBU		6.44	0.356	0.576	RL-7140	PGDP	/x/
Technetium -99	7810	pCi/sam	ip.		6.18	54.7	405	RL-7100	PGDP	/x,
Thorium-230	39.2	pCi/sam	I P		1.05	1.58	6.71	RL-7128	PGDP	/x,
Thorium-232	0.319	pCi/sam	ip U		0.337	0.154	0.203	RL-7128	PGDP	/x,
Uranium-234	452	pCi/sam	рТ		1.44	10.9	112	RL-7128	PGDP	/x,
Uranium-235	27.2	pCi/sam	p T		0.508	2.99	7.36	RL-7128	PGDP	/x/
Uranium -238	508	pCi/sam	p T		1.15	11.6	126	RL-7128	PGDP	/x,
Comments:										
Analysis	Results	Units	Re sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
RADS										
Americium-241	4.39	pCi/sam	I P		0.365	0.472	0.917	RL-7128	PGDP	/ X /
Ce sium -137	2.2	pCi/sam	I P		2.18	1.76	1.79	RL-7124	PGDP	/x,
Neptunium-237	8.3	pCi/sam	p		0.304	0.648	2.03	RL-7128	PGDP	/x,
Plutonium-238	0.349	pCi/sam	ip		0.12	0.139	0.164	RL-7128	PGDP	/ X /
Plutonium-239/240	20	pCi/sam	p		0.176	0.997	4.76	RL-7128	PGDP	/x/
Strontium-90	1.5	pCi/sam	pBU		6.11	0.251	0.4	RL-7140	PGDP	/x,
Technetium-99	1600	pCi/sam	I p		6.18	25.1	85.9	RL-7100	PGDP	/x/
Thorium-230	109	pCi/sam	p		1.03	2.51	18	RL-7128	PGDP	/x,
Thorium-232	1.11	pCi/sam	ip.		0.333	0.262	0.342	RL-7128	PGDP	/x
Uranium -234	616	pCi/sam	рT		1.14	10.9	140	RL-7128	PGDP	/x
Uranium -235										
	32.3	pCi/sam	рТ		0.527	2.77	7.84	RL-7128	PGDP	/x/

17-400-ISO-085		1	rom: C-	400	on	7/26/2017	Media: SW	SmpN	lethod: GR	
Comments:										
Analysis	Results	Units	Re sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
RADS										
Americium-241	2.09	pCi/sam	р		0.364	0.326	0.512	RL-7128	PGDP	/x.
Ce sium -137	4.23	pCi/sam	р		2.39	3.18	3.24	RL-7124	PGDP	/x.
Neptunium-237	7.11	pCi/sam	р		0.253	0.549	1.66	RL-7128	PGDP	/x,
Plutonium-238	0.188	pCi/sam	р		0.107	0.0888	0.103	RL-7128	PGDP	/x,
Plutonium-239/240	11.6	pCi/sam	P		0.163	0.696	2.64	RL-7128	PGDP	/x.
Strontium-90	2.92	pCi/sam	pBU		6.44	0.465	0.763	RL-7140	PGDP	/x.
Technetium -99	762	pCi/sam	P		6.18	17.7	43	RL-7100	PGDP	/x.
Thorium-230	107	pCi/sam	P		1.06	2.67	18.1	RL-7128	PGDP	/ X.
Thorium-232	0.839	pCi/sam	р		0.357	0.249	0.311	RL-7128	PGDP	/x.
Uranium-234	470	pCi/sam	рТ		1.29	10.6	114	RL-7128	PGDP	/x
Uranium -235	23.4	pCi/sam	pT		0.612	2.63	6.24	RL-7128	PGDP	/x
Uranium -238	513	pCi/sam	рT		1.1	11.1	124	RL-7128	PGDP	/x
Comments:										
Analysis	Results	Units	Re sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
RADS										
Americium-241	2.84	pCi/sam	р		0.365	0.375	0.612	RL-7128	PGDP	/x.
Ce sium -137	0.17	pCi/sam	рU		2.61	0.339	1.38	RL-7124	PGDP	/x.
Neptunium-237	4.87	pCi/sam	р		0.252	0.436	1.14	RL-7128	PGDP	/x.
Plutonium-238	0.165	pCi/sam	p		0.104	0.0803	0.0932	RL-7128	PGDP	/ X .
Plu tonium -239/240		nCi/cam						DI 7139	PGDP	/x.
Strontium-90	13./	per sam	p		0.164	0.731	3.05	RL-/128	1001	
	13.7	pCi/sam	p p B U		0.164 6.65	0.731 0.238	3.05 0.377	RL-7128	PGDP	/x.
Technetium-99	13.7 1.42 2320	pCi/sam pCi/sam	p p B U p		0.164 6.65 6.18	0.731 0.238 30.1	3.05 0.377 123	RL-7140 RL-7100	PGDP	/x, /x,
Technetium-99 Thorium-230	13.7 1.42 2320 108	pCi/sam pCi/sam pCi/sam	р р В U р		0.164 6.65 6.18 1.03	0.731 0.238 30.1 2.6	3.05 0.377 123 18.5	RL-7128 RL-7140 RL-7100 RL-7128	PGDP PGDP PGDP	/x, /x, /x,
Technetium -99 Thorium -230 Thorium -232	13.7 1.42 2320 108 1.15	pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	p pBU p p p		0.164 6.65 6.18 1.03 0.336	0.731 0.238 30.1 2.6 0.285	3.05 0.377 123 18.5 0.366	RL-7128 RL-7140 RL-7100 RL-7128 RL-7128	PGDP PGDP PGDP PGDP PGDP	/x, /x, /x, /x,
Technetium -99 Thorium -230 Thorium -232 Uranium -234	13.7 1.42 2320 108 1.15 324	pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	р рВU р р р		0.164 6.65 6.18 1.03 0.336 1.64	0.731 0.238 30.1 2.6 0.285 10.1	3.05 0.377 123 18.5 0.366 86.4	RL-7128 RL-7140 RL-7100 RL-7128 RL-7128 RL-7128	PGDP PGDP PGDP PGDP PGDP	/x, /x, /x, /x, /x,
Technetium -99 Thorium -230 Thorium -232 Uranium -234 Uranium -235	13.7 1.42 2320 108 1.15 324 18.1	pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	р рВU р р рТ рТ		0.164 6.65 6.18 1.03 0.336 1.64 0.827	0.731 0.238 30.1 2.6 0.285 10.1 2.66	3.05 0.377 123 18.5 0.366 86.4 5.48	RL-7128 RL-7140 RL-7100 RL-7128 RL-7128 RL-7128 RL-7128	PGDP PGDP PGDP PGDP PGDP PGDP	/x, /x, /x, /x, /x, /x, /x,

17-400-ISO-087		f	rom: C-	400	on	7/26/2017	Media: SW	SmpM	Method: GR	
Comments:										
Analysis	Results	Units	Re sult Qual	Foot Note	Reporting Limit	Counting Error	TPU	Method	LabCode	V/V/A*
RADS										
Americium-241	3.43	pCi/sam	р		0.367	0.432	0.723	RL-7128	PGDP	/x.
Ce sium-137	-0.203	pCi/sam	рU		3.1	0.406	1.96	RL-7124	PGDP	/x.
Neptunium-237	9	pCi/sam	р		0.248	0.611	2.08	RL-7128	PGDP	/x
Plutonium-238	0.376	pCi/sam	р		0.104	0.124	0.153	RL-7128	PGDP	/x
Plutonium-239/240	21.8	pCi/sam	p		0.163	0.943	4.92	RL-7128	PGDP	/ X
Strontium-90	1.62	pCi/sam	pBU		7.66	0.272	0.432	RL-7140	PGDP	/ X .
Technetium -99	4560	pCi/sam	p		6.18	41.9	238	RL-7100	PGDP	/x.
Thorium-230	126	pCi/sam	p		1.03	2.8	21.6	RL-7128	PGDP	/x.
Thorium-232	1.29	pCi/sam	р		0.34	0.289	0.382	RL-7128	PGDP	/x.
Uranium-234	691	pCi/sam	рТ		1.29	10.4	142	RL-7128	PGDP	/x
Uranium -235	30.9	pCi/sam	рТ		0.596	2.45	6.77	RL-7128	PGDP	/x.
Uranium -238	736	pCi/sam	pT		1.04	10.7	151	RL-7128	PGDP	/x
17-400-ISO-088		f	rom: C-	400	on	7/26/2017	Media: SW	SmpN	Method: GR	
17-400-ISO-088 Comments:		f	rom: C-4	400	on	7/26/2017	Media: SW	SmpN	Method: GR	
17-400-ISO-088 Comments: Analysis	Results	f Units	rom: C-4 Result Qual	400 Foot Note	on Reporting Limit	7/26/2017 Counting Error	Media: SW TPU	SmpM	Method: GR LabCode	V/V/A*
Analysis RADS	Results	f Units	rom: C-4 Result Qual	400 Foot Note	on Reporting Limit	7/26/2017 Counting Error	Media: SW TPU	SmpM Method	Method: GR LabCode	V/V/A*
17-400-ISO-088 Comments: Analysis RADS Americium-241	Results 0.501	f Units pCi/sam	rom: C-4 Result Qual	400 Foot Note	on Reporting Limit 0.364	7/26/2017 Counting Error 0.168	Media: SW ТРU 0.236	SmpM Method RL-7128	Method: GR LabCode PGDP	<u>V/V/A*</u> /X
Analysis RADS Americium-241 Cesium-137	Results 0.501 -0.243	f Units pCi/sam pCi/sam	Result Qual P D U	400 Foot Note	ON Reporting Limit 0.364 2.29	7/26/2017 Counting Error 0.168 0.487	Media: SW TPU 0.236 1.22	SmpM Method RL-7128 RL-7124	Method: GR LabCode PGDP PGDP	V/V/A* /x /x
17-400-ISO-088 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237	Results 0.501 -0.243 1.38	Units pCi/sam pCi/sam pCi/sam	Result Qual P P U P	400 Foot Note	ON Reporting Limit 0.364 2.29 0.319	7/26/2017 Counting Error 0.168 0.487 0.284	Media: SW TPU 0.236 1.22 0.436	SmpM Method RL-7128 RL-7124 RL-7128	Method: GR LabCode PGDP PGDP PGDP	V/V/A* /x /x /x
17-400-ISO-088 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plutonium-238	Results 0.501 -0.243 1.38 0.0381	f Units pCi/sam pCi/sam pCi/sam pCi/sam	Result Qual P P D P D U	400 Foot Note	on Reporting Limit 0.364 2.29 0.319 0.112	7/26/2017 Counting Error 0.168 0.487 0.284 0.0545	Media: SW TPU 0.236 1.22 0.436 0.0634	SmpM Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP	V/V/A* /X /X /X /X
17-400-ISO-088 Comments: Analysis RADS Americium-241 Ce sium-137 Neptunium-237 Plutonium-238 Plutonium-239/240	Results 0.501 -0.243 1.38 0.0381 3.34	f Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	Result Qual P P U P P U P P U P	400 Foot Note	On Reporting Limit 0.364 2.29 0.319 0.112 0.175	7/26/2017 Counting Error 0.168 0.487 0.284 0.0545 0.407	Media: SW TPU 0.236 1.22 0.436 0.0634 0.879	SmpM Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128 RL-7128	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP	V/V/A* /X /X /X /X /X
17-400-ISO-088 Comments: Analysis RADS Americium-241 Ce sium-137 Nep tunium-237 Plu tonium-238 Plu tonium-239/240 Strontium-90	Results 0.501 -0.243 1.38 0.0381 3.34 1.68	f Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	Result Qual p p U p U p U p D p U p BU	400 Foot Note	On Reporting Limit 0.364 2.29 0.319 0.112 0.175 6.24	7/26/2017 Counting Error 0.168 0.487 0.284 0.0545 0.407 0.277	Media: SW TPU 0.236 1.22 0.436 0.0634 0.879 0.444	SmpM Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128 RL-7128 RL-7140	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	V/V/A* /x /x /x /x /x /x /x /x /x
17-400-ISO-088 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plutonium-238 Plutonium-239/240 Strontium-90 Technetium-99	Results 0.501 -0.243 1.38 0.0381 3.34 1.68 409	f Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	Result Qual P P U P P U P P U P P U P P U P P U P P	400 Foot Note	0.364 2.29 0.319 0.112 0.175 6.24 6.18	7/26/2017 Counting Error 0.168 0.487 0.284 0.0545 0.407 0.277 13.3	Media: SW TPU 0.236 1.22 0.436 0.0634 0.879 0.444 24.9	SmpM Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128 RL-7128 RL-7140 RL-7100	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	V/V/A* /x /x /x /x /x /x /x /x /x /x
17-400-ISO-088 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plutonium-238 Plutonium-239/240 Strontium-90 Technetium-99 Thorium-230	Results 0.501 -0.243 1.38 0.0381 3.34 1.68 409 16.9	Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	Result Qual P P P U P P U P P B U P P B U P P P B U P P	400 Foot Note	On Reporting Limit 0.364 2.29 0.319 0.112 0.175 6.24 6.18 1.03	7/26/2017 Counting Error 0.168 0.487 0.284 0.0545 0.407 0.277 13.3 1.03	Media: SW TPU 0.236 1.22 0.436 0.0634 0.879 0.444 24.9 3.15	SmpM Method RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	V/V/A* /X /X /X /X /X /X /X /X /X
17-400-ISO-088 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plutonium-238 Plutonium-239/240 Strontium-90 Technetium-99 Thorium-230 Thorium-232	Results 0.501 -0.243 1.38 0.0381 3.34 1.68 409 16.9 0.159	Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	Result Qual p p U p U p U p BU p p BU p p BU p	400 Foot Note	On Reporting Limit 0.364 2.29 0.319 0.112 0.175 6.24 6.18 1.03 0.343	7/26/2017 Counting Error 0.168 0.487 0.284 0.0545 0.407 0.277 13.3 1.03 0.115	Media: SW TPU 0.236 1.22 0.436 0.0634 0.879 0.444 24.9 3.15 0.17	SmpM Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	V/V/A* /X /X /X /X /X /X /X /X /X /X /X
17-400-ISO-088 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plutonium-238 Plutonium-238 Plutonium-238 Plutonium-239/240 Strontium-90 Technetium-99 Thorium-230 Thorium-232 Uranium-234	Results 0.501 -0.243 1.38 0.0381 3.34 1.68 409 16.9 0.159 65.4	Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	Result Qual p p U p U p U p B U p B U p p B U p p U p p U p	400 Foot Note	On Reporting Limit 0.364 2.29 0.319 0.112 0.175 6.24 6.18 1.03 0.343 1.03	7/26/2017 Counting Error 0.168 0.487 0.284 0.0545 0.407 0.277 13.3 1.03 0.115 2.14	Media: SW TPU 0.236 1.22 0.436 0.0634 0.879 0.444 24.9 3.15 0.17 11.6	SmpM Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128 RL-7140 RL-7140 RL-7140 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	V/V/A* /X /X /X /X /X /X /X /X /X /X /X /X
17-400-ISO-088 Comments: Analysis RADS Americium-241 Cesium-137 Neptunium-237 Plutonium-238 Plutonium-238 Plutonium-239/240 Strontium-90 Technetium-99 Thorium-99 Thorium-230 Thorium-232 Uranium-234 Uranium-235	Results 0.501 -0.243 1.38 0.0381 3.34 1.68 409 16.9 0.159 65.4 3.83	Units pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam pCi/sam	rom: C Result Qual p p U p U p p U p p U p p U p p P p U p p U p p U p p	400 Foot Note	On Reporting Limit 0.364 2.29 0.319 0.112 0.175 6.24 6.18 1.03 0.343 1.03 0.271	7/26/2017 Counting Error 0.168 0.487 0.284 0.0545 0.407 0.277 13.3 1.03 0.115 2.14 0.584	Media: SW TPU 0.236 1.22 0.436 0.0634 0.879 0.444 24.9 3.15 0.17 11.6 0.892	SmpM Method RL-7128 RL-7124 RL-7128 RL-7128 RL-7128 RL-7128 RL-7100 RL-7100 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128 RL-7128	Method: GR LabCode PGDP PGDP PGDP PGDP PGDP PGDP PGDP PGD	V/V/A* /X /X /X /X /X /X /X /X /X /X /X /X