Appendix D: **Radiological Environmental Monitoring Program Supplemental Information**

Negative values are reported in tables in this appendix. Background counts are subtracted from the sample counts. Negative values occur when the background count is greater than the sample count. Background counts reflect naturally occurring radionuclides and cosmic radiation that is detected by laboratory instrumentation.

Appendix Table D-1 Summary of Radioactive Atmospheric Releases by Source

All values under the "Calculated" column through "Totals" column are reported in curies.[a]

In the Calculated column, blanks indicate the radionuclide is not present. In the facility (Reactors, Separations, SRNL) columns, a blank indicates the radionuclide was not analyzed. A 0.00E+00 in the facility columns indicates the result was not significant.

Radionuclide	Half-Life [b]		Calculated [c]	Reactors	Separations [d]	SRNL	Total
Gases and Vapors							
H-3 (oxide)	12.3	y	1.42E+04	9.79E+02	2.27E+04		**3.78E+04**
H-3 (elemental)	12.3	y			1.49E+03		**1.49E+03**
H-3 Total	12.3	y	1.42E+04	9.79E+02	2.41E+04		**3.93E+04**
C-14	5700	y	5.34E-08		5.00E-02		**5.00E-02**
Hg-203	46.6	d	5.48E-10				**5.48E-10**
Kr-85	10.8	y			1.03E+04		**1.03E+04**
I-129	1.57E+07	y	7.66E-05		3.68E-03	1.42E-06	**3.76E-03**
I-131	8.02	d	1.13E-09				**1.13E-09**
Particles							
Ag-110m	250	d	1.48E-11				**1.48E-11**
Am-241	432	y	1.13E-05	2.44E-11	8.72E-06		**2.00E-05**
Am-243	7370	y	4.11E-09				**4.11E-09**
Ba-133	10.5	y	8.03E-07				**8.03E-07**
Cd-109	461	d	1.18E-08				**1.18E-08**
Ce-139	138	d	5.20E-10				**5.20E-10**
Ce-141	32.5	d	4.94E-11				**4.94E-11**
Ce-144	285	d	2.00E-08				**2.00E-08**
Cm-243	29.1	y	2.77E-09				**2.77E-09**
Cm-244	18.1	y	2.75E-07	0.00E+00	1.63E-07		**4.38E-07**
Co-57	272	d	4.76E-10				**4.76E-10**
Co-58	70.9	d			0.00E+00		**0.00E+00**
Co-60	5.27	y	6.40E-07	0.00E+00	2.31E-07	0.00E+00	**8.71E-07**
Cr-51	27.7	d			0.00E+00		**0.00E+00**
Cs-134	2.06	y	4.31E-07				**4.31E-07**
Cs-137	30.2	y	4.26E-03	0.00E+00	8.86E-03	0.00E+00	**1.31E-02**
Eu-152	13.5	y	1. 39E-09				**1.39E-09**
Eu-154	8.59	y	3.56E-07				**3.56E-07**
Eu-155	4.76	y	1.18E-07				**1.18E-07**
F-18	110	m	2.00E-02				**2.00E-02**
Fe-55	2.74	y	5.69E-09				**5.69E-09**
Mn-54	312	d	4.46E-10				**4.46E-10**
Nb-94	2.03E+04	y	2.42E-07				**2.42E-07**

Appendix Table D-1 Summary of Radioactive Atmospheric Releases by Source (continued)

Radionuclide	Half-Life [b]		Calculated [c]	Reactors	Separations [d]	SRNL	Total
Particles							
Nb-95	35.0	d	3.63E-07				**3.63E-07**
Ni-59	1.01E+05	y	5.76E-11				**5.76E-11**
Ni-63	100	y	5.05E-09				**5.05E-09**
Np-237	2.14E+06	y	1.54E-06	0.00E+00	1.81E-07		**1.72E-06**
Pa-233	27.0	d	1.42E-06				**1.42E-06**
Pb-212	10.6	h	8.43E-07				**8.43E-07**
Pm-147	2.62	y	2.89E-06				**2.89E-06**
Pm-148m	41.3	d	1.90E-12				**1.90E-12**
Pr-144	17.3	m	2.00E-08				**2.00E-08**
Pu-236	2.86	y	5.28E-10				**5.28E-10**
Pu-238	87.7	y	3.14E-05	9.50E-11	9.11E-06		**4.05E-05**
Pu-239	2.41E+04	y	6.67E-05	6.75E-10	1.18E-04		**1.85E-04**
Pu-240	6560	y	7.68E-06				**7.68E-06**
Pu-241	14.4	y	2.07E-04				**2.07E-04**
Pu-242	3.75E+05	y	3.11E-06				**3.11E-06**
Ra-226	1600	y	1.21E-06				**1.21E-06**
Ra-228	5.75	y	1.19E-06	0.00E+00	0.00E+00		**1.19E-06**
Rh-106 [e]	29.8	s	3.04E-06				**3.04E-06**
Ru-103	39.3	d	5.11E-10				**5.11E-10**
Ru-106	374	d	3.04E-06		0.00E+00		**3.04E-06**
Sb-125	2.76	y	1.18E-06				**1.18E-06**
Sb-126 [e]	12.4	d	1.70E-07				**1.70E-07**
Se-75	120	d			0.00E+00		**0.00E+00**
Se-79	2.95E+05	y	4.90E-09				**4.90E-09**
Sm-151	90	y	2.89E-06				**2.89E-06**
Sn-113	115	d	6.47E-10				**6.47E-10**
Sn-123	129	d	6.66E-12				**6.66E-12**
Sn-126	2.30E+05	y	1.70E-07				**1.70E-07**
Sr-85	64.8	d	6.24E-10				**6.24E-10**
Sr-89	50.5	d	5.10E-10				**5.10E-10**
Sr-90	28.8	y	3.28E-03	0.00E+00	6.73E-05		**3.35E-03**
Tc-99	2.11E+05	y	5.08E-05				**5.08E-05**
Te-127	9.35	h	1.04E-11				**1.04E-11**
Te-129	69.6	m	1.05E-12				**1.05E-12**
Th-228	1.91	y	1.36E-08	1.71E-09			**1.53E-08**
Th-229	7340	y	1.31E-09				**1.31E-09**
Th-230	7.54E+04	y	9.94E-11	5.14E-09			**5.24E-09**
Th-231	25.5	h	2.12E-04				**2.12E-04**
Th-232	1.41E+10	y	3.97E-12	2.38E-09			**2.38E-09**

Appendix Table D-1 Summary of Radioactive Atmospheric Releases by Source (continued)

Radionuclide	Half-Life[b]		Calculated[c]	Reactors	Separations[d]	SRNL	Total
Particles							
Tl-208	3.05	m	1.41E-06				**1.41E-06**
U-232	68.9	y	5.65E-09				**5.65E-09**
U-233	1.59E+05	y	3.36E-09				**3.36E-09**
U-234	2.46E+05	y	4.21E-07	2.27E-09	4.02E-05		**4.06E-05**
U-235	7.04E+08	y	1.37E-08	1.72E-10	2.53E-06		**2.54E-06**
U-236	2.34E+07	y	3.01E-08				**3.01E-08**
U-238	4.47E+09	y	2.75E-07	1.92E-09	6.18E-05		**6.20E-05**
Y-88	107	d	4.34E-10				**4.34E-10**
Y-90[e]	64.1	h	3.28E-03	0.00E+00	6.73E-05		**3.35E-03**
Y-91	58.5	d	7.98E-10				**7.98E-10**
Zn-65	244	d	9.02E-10				**9.02E-10**
Zr-95	64.0	d	1.22E-07				**1.22E-07**
Unidentified alpha	N/A		1.41E-04	5.17E-06	1.35E-07	0.00E+00	**1.46E-04**
Unidentified beta	N/A		1.47E-03	7.56E-05	2.80E-04	1.39E-06	**1.83E-03**
TOTAL	N/A		1.42E+04	9.79E+02	3.45E+04	2.81E-06	**4.96E+04**

[a] One curie equals 3.7E+10 becquerels

[b] ICRP 107, *Nuclear Decay Data for Dosimetric Calculations* (2008)

[c] Estimated releases from unmonitored sources. Beginning in 2016, individual isotope annual releases below 1E-12 Ci (1 pCi) are no longer reported in this table and, therefore, not used in the dose calculations.

[d] Includes separations, waste management, and tritium facilities

[e] Daughter products (Sb-126, Rh-106, & Y-90) in secular equilibrium with source terms (Sn-126, Ru-106, & Sr-90, respectively). In MAXDOSE/POPDOSE, they are included in the source term and their ingrowth is included in their parents' source term.

Appendix Table D-2 Summary of Air Effluent DOE DCS Sum of Fractions

Facility (Sampling Location)	Radionuclides Included in the DCS Sum of Fractions	DCS Sum of Fractions	DCS Sum of Fractions Excluding Tritium
A Area (791-A Sandfilter Discharge)	I-129	1.42E-04	1.42E-04
C Area (C-Area Main Stack [148'])	H-3 (oxide)	1.76E+00	0.00E+00
F Area (235-F Sandfilter Discharge)	Sr-89/90, U-234, U-238, Pu-238, Pu-239, Am-241	3.66E-03	3.66E-03
F Area (291-F Stack Isokinetic)	Sr-89/90, I-129, Cs-137, U-234, U-235, Np-237, U-238, Pu-238, Pu-239, Am-241, Cm-244	3.19E+00	3.19E+00
F Area (772-4F Stack)	U-234, U-238, Pu-238, Pu-239, Am-241	1.46E-03	1.46E-03
H Area (291-H Stack Isokinetic)	H-3 (oxide), C-14, Kr-85, Sr-89/90, I-129, Cs-137, U-234, U-235, Np-237, U-238, Pu-238, Pu-239, Am-241, Cm-244	9.49E-01	8.33E-01
K Area (K-Area Main Stack)	H-3 (oxide)	1.72E+00	0.00E+00
L Area (L-Area Disassembly)	H-3 (oxide)	1.75E+00	0.00E+00
L Area (L-Area Main Stack)	H-3 (oxide)	1.90E+00	0.00E+00
Tritium (232-H)	H-3 (elemental), H-3 (oxide)	1.80E+01	0.00E+00
Tritium (233-H)	H-3 (elemental), H-3 (oxide)	7.21E+01	0.00E+00
Tritium (234-H)	H-3 (elemental), H-3 (oxide)	4.83E+00	0.00E+00
Tritium (238-H)	H-3 (oxide)	1.53E+00	0.00E+00
Tritium (264-H)	H-3 (elemental), H-3 (oxide), Co-60	1.00E+01	1.13E-05

Note:
DOE-STD-1196-2011, Derived Concentration Technical Standard

Appendix Table D-3 Summary of Tritium in Environmental Air

Bolded minimum and maximum concentration results were reported as detected. Minimum and maximum concentrations not bolded indicate the result was less than the analytical method detection limit or the uncertainty is large.

Location	Number of Detected Results	Mean Conc. (pCi/m^3)	Minimum Conc. (pCi/m^3)	Maximum Conc. (pCi/m^3)
Onsite				
Burial Ground North	27 of 27	2.61E+02	**5.32E+01**	**2.14E+03**
Site Perimeter				
Allendale Gate	3 of 27	1.11E+01	-2.70E+00	**1.81E+02**
Barnwell Gate	5 of 27	1.27E+01	-2.56E+00	**1.99E+02**
D Area	5 of 27	1.33E+01	-3.86E+00	**2.16E+02**
Darkhorse @ Williston Gate	11 of 27	1.31E+01	-2.97E+00	**8.97E+01**
East Talatha	6 of 27	1.77E+01	-5.00E+00	**1.88E+02**
Green Pond	6 of 27	3.71E+01	-2.08E+00	**7.54E+02**
Highway 21/167	4 of 27	1.69E+01	-2.89E+00	**2.97E+02**
Jackson	5 of 27	3.16E+01	-1.46E+00	**5.03E+02**
Patterson Mill Road	3 of 26	5.04E+00	-3.73E+00	**1.68E+01**
Talatha Gate	10 of 27	4.35E+01	-2.26E+00	**7.19E+02**
25-Mile Radius				
Aiken Airport	6 of 28	1.78E+01	-3.14E+00	**2.16E+02**
Augusta Lock and Dam 614	2 of 26	7.52E+00	-4.49E+00	**8.73E+01**
Highway 301 at State Line (control location)	3 of 27	1.32E+01	-3.27E+00	**2.47E+02**

Appendix Table D-4 Summary of Tritium in Rainwater

Samples were collected approximately every 4 weeks at each of 14 locations. Typically, 13 samples are collected from each location. This was the case in 2018, except for the Barnwell Gate and Darkhorse at Williston Gate sample locations where 12 samples were collected at each. Bolded minimum and maximum concentration results were reported as detected. Minimum and maximum concentrations not bolded indicate the result was less than the analytical method detection limit or the uncertainty is large. The results at the following locations were all not detected: Site Perimeter (Allendale Gate, Barnwell Gate, and Highway 21/167) and 25-Mile Radius (Augusta Lock and Dam 614 and Highway 301 @ State Line). The Highway 301 @ State Line location is the control location.

Location	# of Detected Results	Mean Conc. (pCi/L)	Minimum Conc. (pCi/L)	Maximum Conc. (pCi/L)
Onsite				
Burial Ground North	12 of 13	5.92E+03	2.78E+02	**2.73E+04**
Site Perimeter				
D Area	2 of 13	2.23E+01	-2.95E+02	**6.11E+02**
Darkhorse @ Williston Gate	1 of 12	1.03E+01	-1.78E+02	**3.57E+02**
East Talatha	2 of 13	6.53E+02	-2.12E+02	**6.97E+03**
Green Pond	3 of 13	7.58E+02	-2.36E+02	**7.78E+03**
Jackson	3 of 13	3.54E+02	-2.14E+02	**2.37E+03**
Patterson Mill Road	1 of 13	2.80E+00	-2.41E+02	**5.43E+02**
Talatha Gate	2 of 13	3.00E+02	-1.28E+02	**2.33E+03**
25-Mile Radius				
Aiken Airport	1 of 13	5.73E+01	-2.70E+02	**9.14E+02**

Appendix Table D-5 Summary of Gamma Surveillance

Samples were collected approximately every quarter (12 weeks) at each of 50 locations. Typically five samples are collected from each location. This was the case in 2018, except for SRS site perimeter location, PP_57D, where samples were not retrieved during the first and second quarters of the calendar year.

Station Location Type	# of Stations	Quarter 1 Average mR/day	Quarter 2 Average mR/day	Quarter 3 Average mR/day	Quarter 4 Average mR/day	Annual Total Average mR/year	Annual Minimum mR/year	Annual Maximum mR/year
Population Centers	9	0.29	0.45	0.32	0.36	129	114.4	149.3
Site Perimeter	9	0.23	0.51	0.27	0.28	116	97.5	140.8
Air Surveillance Stations	14	0.24	0.41	0.29	0.30	113	91.8	159.0
Plant Vogtle Vicinity	18	0.22	0.36	0.26	0.29	103	84.5	135.7

Appendix D-6 Summary of Radionuclides in Soil

Samples are collected annually from 22 locations. Bolded values are detected results. Values not bolded indicate the result was less than the analytical method detection limit or the uncertainty is large.

The following locations are sampled: Creek Plantation Trail 1 (1175 ft), Creek Plantation Trail 1 (1600 ft), Creek Plantation Trail 1 (1805 ft), Creek Plantation Trail 6 (2000 ft), F Area (2000 feet West), H Area (2000 ft East), Z Area (#3), Burial Ground Locations (643-26E-2 and Burial Ground North), Plant Perimeter Locations (Allendale Gate, Barnwell Gate, D Area, Darkhorse @ Williston Gate, East Talatha, Green Pond, Highway 21/167, Jackson, Patterson Mill Road, and Talatha Gate) and 25-Mile Radius Locations (Aiken Airport, Augusta Lock and Dam 614, and Highway 301 @ State Line). The Highway 301 @ State Line is the control location.

All Co-60 and Sr-89/90 results were not detected; thus, they were not reported in this table.

Radionuclide	# of Detected Results	Control – Hwy 301 Conc. (pCi/g)	Location of Minimum Conc.	Minimum Conc. (pCi/g)	Location of Maximum Conc.	Maximum Conc. (pCi/g)
Cs-137	21 of 23	**1.52E-01**	Burial Ground (643-26E-2)	-1.41E-02	Creek Plantation Trail 1 (1805 ft)	**2.73E+01**
U-234	19 of 19	**1.57E+00**	Allendale Gate	**4.08E-01**	Augusta Lock and Dam 614	**1.36E+00**
U-235	18 of 19	**8.89E-02**	Aiken Airport	1.31E-02	Augusta Lock and Dam 614	**6.68E-02**
Np-237	1 of 18	1.11E-03	H Area (2000 feet east)	-5.05E-04	East Talatha	**2.46E-03**
U-238	19 of 19	**1.62E+00**	Allendale Gate	**4.24E-01**	Augusta Lock and Dam 614	**1.23E+00**
Pu-238	5 of 18	**5.70E-03**	Barnwell Gate	-2.84E-04	F Area (2000 feet west)	**2.68E-02**
Pu-239	16 of 18	**1.10E-02**	Burial Ground (643-26E-2)	4.46E-04	F Area (2000 feet west)	**4.27E-02**
Am-241	10 of 16	**6.03E-03**	Patterson Mill Road	2.09E-04	Burial Ground (643-26E-2)	**3.54E-02**
Cm-244	3 of 16	6.86E-04	H Area (2000 feet east)	-3.05E-04	Burial Ground (643-26E-2)	**6.95E-03**
Gross Beta	16 of 19	**6.24E+00**	Highway 21/167	1.40E+00	Burial Ground North	**2.73E+01**
Gross Alpha	19 of 19	**1.05E+01**	Patterson Mill Road	**2.73E+00**	Burial Ground North	**1.14E+01**

Appendix Table D-7 Summary of Radionuclides in Grassy Vegetation

Samples are collected annually from 14 locations. In 2018, 22 samples were collected from 14 locations. Bolded values are detected results. Values not bolded indicate the result was less than the analytical method detection limit or the uncertainty is large. All results for Co-60, Np-237, Pu-238, Am-241, Cm-244, and gross alpha were not detected; thus, not reported in this table.

The following locations are sampled: Control (Highway 301 at the SC/GA State line), Onsite location (Burial Ground North), Site Perimeter locations (Allendale Gate, Barnwell Gate, D Area, Darkhorse @ Williston Gate, East Talatha, Green Pond, Highway 21/167, Jackson, Patterson Mill Road, Talatha Gate), and 25-Mile Radius Locations (Aiken Airport and the Augusta Lock and Dam 614).

Radionuclide	# of Detected Results	Control (Highway 301) Conc. (pCi/g)	Location of Minimum Conc.	Minimum Conc. (pCi/g)	Location of Maximum Conc.	Maximum Conc. (pCi/g)
H-3	11 of 22	-8.59E-03	Patterson Mill Road	-1.04E-02	Burial Ground North	**9.49E+00**
Cs-137	4 of 15	1.55E-03	Burial Ground North	-2.45E-02	Highway 21/167	**3.70E-01**
Sr-89/90	15 of 15	**9.81E-02**	Talatha Gate	**9.05E-02**	East Talatha	**5.35E-01**
U-234	15 of 15	**2.32E-03**	Highway 21/167	**6.78E-04**	Burial Ground North	**4.14E-02**
U-235	3 of 15	1.42E-04	Allendale Gate	-3.86E-05	Burial Ground North	**2.19E-03**
U-238	14 of 15	**9.97E-04**	Highway 21/167	3.16E-05	Burial Ground North	**4.00E-02**
Pu-239	1 of 15	3.46E-05	Aiken Airport	-1.49E-04	Burial Ground North	**1.03E-03**
Tc-99	13 of 15	**3.32E-01**	Allendale Gate	7.81E-02	Burial Ground North	**9.46E-01**
Gross Beta	15 of 15	**7.22E+00**	Allendale Gate	**5.86E+00**	Green Pond	**1.54E+01**

Appendix Table D-8 Summary of Radionuclides in Foodstuffs

Samples of five foodstuffs are collected annually from five regions surrounding SRS. Beef, greens, and fruit are collected each year. There are six foodstuffs that are collected on a rotating three-year cycle. Corn and pecans were the rotational crop samples collected in 2018.

Bolded minimum and maximum concentration results were reported as detected. Minimum and maximum concentrations not bolded indicate the result was less than the analytical method detection limit or the uncertainty is large.

Food Type	Nuclide	Number of Samples	Number of Results > Detection Limit	Mean Sample Conc. (pCi/g)	Minimum Sample Conc. (pCi/g)	Maximum Sample Conc. (pCi/g)
Beef	H-3	5	1	5.65E-02	2.87E-02	**1.06E-01**
	U-234	5	4	6.63E-05	**4.54E-05**	**1.14E-04**
	U-238	5	5	1.02E-04	**5.19E-05**	**1.35E-04**
	Gross Beta	5	5	1.90E+00	**1.35E+00**	**2.16E+00**
	Cs-137, Co-60, Tc-99, Np-237, Pu-238, Pu-239, Am-241, Cm-244, Sr-89,90, U-235, and gross alpha were not detected in beef.					
Greens	Cs-137	5	3	1.88E-02	6.16E-03	**3.19E-02**
	Sr-89,90	5	5	1.77E-01	**2.81E-02**	**3.38E-01**
	U-234	5	5	4.98E-03	**1.88E-03**	**6.51E-03**
	U-235	5	1	5.00E-04	-6.62E-06	**1.51E-03**
	U-238	5	5	5.00E-03	**2.61E-03**	**7.76E-03**
	Tc-99	5	5	5.04E-01	**3.05E-01**	**1.13E+00**
	Cm-244	5	1	3.39E-05	-1.16E-04	**3.43E-04**
	Gross Beta	5	5	2.14E+01	**1.61E+01**	**2.70E+01**
	Gross Alpha	5	1	5.94E-01	-4.08E-02	**1.70E+00**
	H-3, Co-60, Np-237, Pu-238, Pu-239, and Am-241 were not detected in greens					
Fruit (watermelon)	H-3	5	4	5.71E-02	-1.61E-03	**1.29E-01**
	Sr-89,90	5	1	2.82E-03	2.00E-03	**5.62E-03**
	Tc-99	5	4	3.45E-02	2.28E-02	**3.92E-02**
	Gross Beta	5	5	2.91E-01	**1.45E-01**	**4.46E-01**
	Cs-137, Co-60, Np-237, Pu-238, Pu-239, Am-241, Cm-244, U-234, U-235, U-238, and gross alpha were not detected in fruit.					
Corn	H-3	5	4	7.39E-02	-2.28E-02	**2.20E-01**
	Cs-137	5	1	3.47E-03	-2.56E-04	**1.13E-02**
	Sr-89,90	5	1	1.99E-02	-6.92E-03	**4.51E-02**
	Gross Beta	5	5	7.49E+00	**5.43E+00**	**1.04E+01**
	Co-60, U-234, U-235, U-238, Pu-238, Pu-239, Am-241, Cm-244, Np-237, Sr-89,90, Tc-99, and gross alpha were not detected in corn.					
Pecans	Gross Beta	5	5	3.94E+00	**2.64E+00**	**4.41E+00**
	Gross Alpha	5	2	1.53E-01	3.05E-03	**2.72E-01**
	H-3, Cs-137, Co-60, U-234, U-235, U-238, Am-241, Cm-244, Np-237, Pu-238, Pu-239, Sr-89,90, and Tc-99 were not detected in pecans.					

Appendix Table D-9 Summary of Radionuclides in Dairy

SRS collects cow's and goat's milk samples from dairies located in communities surrounding the Site. The number listed in parentheses after the state in which the dairies are located, indicates the number of dairies that provide samples to SRS from that state.

Bolded minimum and maximum concentration results were reported as detected. Minimum and maximum concentrations not bolded indicate the result was less than the analytical method detection limit or the uncertainty is large. All Co-60 results were not detected, thus, not reported in this table.

Location	Nuclide	Number of Samples	Number of Results > Detection Limit	Mean Sample Conc. (pCi/L)	Minimum Sample Conc. (pCi/L)	Maximum Sample Conc. (pCi/L)
SC-Dairies (5) – cow milk	H-3	16	2	6.95E+01	-1.32E+02	**7.85E+02**
SC-Dairies (2) – goat milk	H-3	4	2	8.01E+02	4.30E+01	**1.80E+03**
GA-Dairies (4)	H-3	15	0			
SC-Dairies (4) – cow milk	Cs-137	14	2	1.46E+00	-5.11E-01	**3.81E+00**
SC-Dairies (1) – goat milk	Cs-137	2	1	4.27E+00	1.32E+00	**7.22E+00**
GA-Dairies (4)	Cs-137	15	0			
SC-Dairies (4) – cow milk	Sr-90	14	2	5.48E-01	-5.51E-01	3.35E+00*
SC-Dairies (1) – goat milk	Sr-90	2	1	1.74E+00	4.70E-01	**3.00E+00**
GA-Dairies (4)	Sr-90	15	0			

Note:
* Due to large uncertainties this value is considered not significant although the value is greater than the analytical method detection limit.

Appendix Table D-10 Radiation in Liquid Release Sources

All values under the three Areas columns and the "Totals" column are reported in curies.

Tritium is the main contributing radionuclide in Liquid Sources releases. Although the remaining radionuclides are contributors, their contributions in liquid source releases are minimal.

In the facility (Reactor, Separations, SRNL) columns, a blank indicates the radionuclide was not analyzed. A 0.00E+00 in the facility columns indicates the result was not significant.

All Co-60 results were not detected; thus, they were not reported in this table.

Radionuclide	Half-Life		Reactors (Ci)	Separations [a] (Ci)	SRNL (Ci)	Totals (Ci)
H-3 [b]	12.3	y	1.75E+02	3.56E+02	5.27E-02	5.31E+02
C-14	5700	y		6.22E-04	0.00E+00	6.22E-04
Sr-90	28.8	y	0.00E+00	3.18E-02		3.18E-02
Tc-99	2.11E+05	y		2.79E-02	5.07E-04	2.84E-02
I-129	1.57E+07	y		1.66E-02	0.00E+00	1.66E-02
Cs-137 [c]	30.2	y	0.00E+00	8.06E-03	0.00E+00	8.06E-03
Ra-226	1600	y		1.03E-03		1.03E-03
U-234	2.46E+05	y		2.95E-02	5.33E-05	2.95E-02
U-235	7.04E+08	y		5.71E-04	3.07E-06	5.74E-04
U-238	4.47E-09	y		3.22E-02	4.48E-05	3.22E-02
Np-237	2.14E+06	y		1.82E-06		1.82E-06
Pu-238	87.7	y		4.91E-05	4.40E-06	5.35E-05
Pu-239	2.41E+04	y		5.45E-06	0.00E+00	5.45E-06
Am-241	432	y		1.36E-04		1.36E-04
Cm-244	18.1	y		6.81E-05		6.81E-05
Alpha [d]	N/A		1.79E-03	1.00E-03	4.17E-04	3.21E-03
Beta-Gamma [e]	N/A		4.18E-02	2.47E-03	8.00E-04	4.51E-02
					Sum	**5.31E+02**

[a] Includes separations, waste management, and tritium processing facilities.

[b] The tritium release total, which includes direct + migration releases, is used in the dose calculations for SRS impacts.

[c] Depending on which value is higher, the Cs-137 release total is based on concentrations measured in Steel Creek mouth fish near RM 141.5 or on the actual measured effluent release total from the Site. Refer to chapter 6 (Dose) for more information.

[d,e] For dose calculations, unidentified alpha and beta/gamma releases are assumed to be Pu-239 and Sr-90, respectively.

Appendix Table D-11 Summary of Liquid Effluent DOE DCS Sum of Fractions by Facility

Facility (sampling location)	Radionuclides Included in the Sum of Fractions	DCS Sum of Fractions	DCS Sum of Fractions Excluding Tritium
A Area (TB-2 Outfall at Road 1A)	H-3, U-234, U-235, U-238, Pu-238, Tc-99	1.58E-03	1.47E-03
F Area (F-013 200-F Cooling Basin)	H-3, Cs-137, U-234, U-238, Pu-238, Pu-239, Tc-99	3.51E-03	2.09E-03
F Area (F-05)	H-3, Sr-89/90, U-234, U-235, U-238, Pu-238, Pu-239, Am-241, Cm-244, Tc-99	1.33E-02	1.22E-02
F Area (FM-3 F-Area Effluent)	H-3, I-129, U-234, U-235, U-238, Pu-238, Pu-239, Am-241, Cm-244, Tc-99	2.95E-03	2.02E-03
F-Tank Farm (F-012 281-8F Retention Basin)	H-3, Sr-89/90, Cs-137, U-234, U-238, Pu-238, Tc-99	6.83E-03	5.35E-03
H Area (FM-1C H-Area Effluent)	H-3, Sr-89/90, U-234, U-235, Np-237, U-238, Pu-238, Pu-239, Am-241, Cm-244	6.44E-03	2.97E-03
H Area (H-004)	H-3, U-234, U-235, U-238, Pu-238	6.59E-03	1.84E-03
H-ETP (U3R-2A ETP Outfall at Road C)	H-3, C-14, Sr-89/90, U-234, U-238	9.96E-01	1.17E-03
H-Tank Farm (H-017 281-8H Retention Basin)	H-3, Sr-89/90, I-129, Cs-137, U-234, U-238, Pu-238, Pu-239, Am-241, Tc-99	1.77E-02	1.45E-02
H-Tank Farm (HP-52 H-Area Tank Farm)	H-3, Cs-137, U-234, U-235, U-238, Pu-238, Pu-239, Am-241	3.92E-03	2.08E-03
K Area (K Canal)	H-3	5.98E-04	4.75E-04
L Area (L-07)	H-3	7.12E-04	6.31E-04
S Area (S-004)	H-3, Sr-89/90, Cs-137, U-234, U-238, Pu-238	1.15E-02	3.22E-03
Tritium (HP-15 Tritium Facility Outfall)	H-3	6.98E-02	4.72E-05

Appendix Table D-12 Summary of Radionuclides in Sediments

SRS collected annual sediment samples at 40 locations in 2018—11 Savannah River, 21 stream, and 8 stormwater basins, totaling 478 analytes. Locations sampled are as follows: Savannah River locations (mouths of Beaver Dam Creek [BDC] and Steel Creek [SC], River Miles [RM] 118.7, 129, 134.0, 150.2, 150.4, 151, 157.2, 160.0, and 160.5), SRS Stream locations (downstream of R-1, FM-2, FM-3A, FM-A7, FM-A7A, FMC @ Rd A, FMC Swamp, L3R-1A , L3R-2, L3R-3, McQB below Z-Basin, Meyers Branch, PB Swamp, SC-2A, SC-4, TB-5, TC-1, U3R @USFS Rd 2-1, U3R off Rd 4, U3R-0, and U3R-4), and SRS Stormwater Basin locations (E-001, E-002, E-003, E-004, E-05, E-06, Pond 400, and Z-Area Basin).

Bolded concentration results were reported as detected. Concentrations not bolded indicate the result was less than the analytical method detection limit or the uncertainty is large.

The streams and stormwater basins have the same control location, U3R-0. The river control location is RM 160.5.

The field duplicate samples are included in the data evaluations performed when generating the tables.

For the river and basin sediment analyses, all results for Co-60, Np-237, and Sr-90 were below the detection limit. For the stream sediment, all results for Co-60 were below the detection limit. Therefore, these results are not presented in the sediment tables below.

River Sediment Results

11 River Locations (including control) + 1 Field Duplicate @ RM 157.2

Analyte	# > MDA	Control RM 160.5 (pCi/g)	Location of Maximum Result	Maximum Conc (pCi/g)
Americium-241	6 of 10	**1.06E-03**	RM 157.2	**2.07E-02**
Cesium -137	9 of 12	4.67E-02	SC RM	**9.63E-01**
Curium-243/244	2 of 10	3.66E-04	RM 118.7	**8.10E-03**
Gross Alpha	12 of 12	**1.21E+01**	RM 157.2	**3.13E+01**
Nonvolatile Beta	12 of 12	**2.32E+01**	RM 157.2	**2.88E+01**
Plutonium-238	3 of 10	4.76E-04	RM 118.7	**3.55E-03**
Plutonium-239/240	2 of 10	5.28E-04	RM 157.2	**5.84E-03**
Uranium-233/234	10 of 10	**9.67E-01**	RM 160.0	**1.71E+00**
Uranium-235	10 of 10	**3.95E-02**	RM 160.0	**8.16E-02**
Uranium-238	10 of 10	**9.81E-01**	RM 160.0	**1.71E+00**

Stream Sediment Results

21 Stream Locations (including control) and 2 Field Duplicates (L3R-3 and U3R@USFS Rd 2-1)

Analyte	# >MDA	Control U3R-0 (pCi/g)	Location of Maximum Result	Maximum Result (pCi/g)
Americium-241	12 of 16	**4.39E-03**	FM-A7	**1.34E-01**
Cesium-137	18 of 23	7.75E-02	Downstream of R-1	**1.51E+01**
Curium-243/244	6 of 16	4.20E-04	FM-A7	**1.02E-01**
Gross Alpha	22 of 23	**3.36E+01**	SC-2A	**3.58E+01**
Neptunium-237	4 of 16	5.12E-04	FMC Swamp	**1.16E-02**
Nonvolatile Beta	23 of 23	**2.57E+01**	U3R @ USFS Rd 2-1	**3.90E+01**
Plutonium-238	10 of 16	1.20E-03	FM-2	**4.20E-01**
Plutonium-239/240	13 of 16	**4.65E-03**	FM-A7	**1.27E-01**
Strontium-90	4 of 16	1.15E-01	FM-A7	**5.95E-01**
Uranium-233/234	16 of 16	**1.70E+00**	TB-5	**4.30E+00**
Uranium-235	15 of 16	**6.49E-02**	TB-5	**2.48E-01**
Uranium-238	16 of 16	**1.84E+00**	TB-5	**4.51E+00**

Stormwater Basin Sediment Results

9 Locations (8 basins and the control)

Analyte	#>MDA	Control U3R-0 (pCi/g)	Location of Maximum Result	Maximum Result (pCi/g)
Americium-241	6 of 9	**4.39E-03**	E-002	**1.05E-01**
Cesium-137	4 of 9	7.75E-02	Z-Area Basin	**2.64E+03**
Curium-243/244	2 of 9	4.20E-04	Pond 400	**6.47E-03**
Gross Alpha	9 of 9	**3.36E+01**	Pond-400	**2.33E+01**
Nonvolatile Beta	9 of 9	**2.57E+01**	Z-Area Basin	**2.36E+03**
Plutonium-238	4 of 9	1.28E-03	Pond-400	**6.01E-02**
Plutonium-239/240	6 of 9	**4.65E-03**	Pond-400	**1.62E-01**
Uranium-233/234	9 of 9	**1.70E+00**	E-004	**1.78E+00**
Uranium-235	9 of 9	**6.49E-02**	E-004 & Pond 400	**1.12E-01**
Uranium-238	9 of 9	**1.84E+00**	E-004	**1.74E+00**

Appendix Table D-13 Summary of Radionuclides in Drinking Water

Bolded minimum and maximum concentration results were reported as detected. Minimum and maximum concentrations not bolded indicate the result was less than the analytical method detection limit or the uncertainty is large.

Samples at the Treatment Plants are collected monthly. These samples are analyzed for tritium, Co-60, Cs-137, gross alpha and gross beta. For the Treatment Plants samples, all results for Co-60, Cs-137, and gross alpha were below detection limits; and thus, not presented in the table below. Samples are collected at one onsite location quarterly for tritium, Co-60, Cs-137, gross beta and gross alpha analyses and collected annually for Sr-90 and actinides analyses. All other onsite locations are collected annually. For the quarterly onsite samples, all results for tritium, Co-60, and Cs-137 were below detection limits; and thus, not presented in the table below. For the onsite annual samples, all results for tritium, Co-60, Cs-137, Sr-90, U-235, Pu-238, Pu-239, and Cm-244 were below detection limits; and thus, not presented in the table below.

Treatment Plants—Finished Water Summary

Tritium					
Locations	**Number of Samples**	**Number of Detects**	**Mean Conc. (pCi/L)**	**Minimum Conc. (pCi/L)**	**Maximum Conc. (pCi/L)**
BJWSA Purrysburg WTP	12	12	3.91E+02	**1.89E+02**	**7.92E+02**
North Augusta Public Water Works	12	8	1.54E+02	4.32E+01	**2.44E+02**

Gross Beta					
Locations	**Number of Samples**	**Number of Detects**	**Mean Conc. (pCi/L)**	**Minimum Conc. (pCi/L)**	**Maximum Conc. (pCi/L)**
BJWSA Purrysburg WTP	12	12	1.87E+00	**1.49E+00**	**2.53E+00**
North Augusta Public Water Works	12	12	1.80E+00	**1.38E+00**	**2.28E+00**

Onsite Location Summary—Quarterly Samples

Gross Beta					
Location	**Number of Samples**	**Number of Detects**	**Mean Conc. (pCi/L)**	**Minimum Conc. (pCi/L)**	**Maximum Conc. (pCi/L)**
782-3A quarterly	4	4	1.35E+00	**9.24E-01**	**2.14E+00**

Gross Alpha					
Location	**Number of Samples**	**Number of Detects**	**Mean Conc. (pCi/L)**	**Minimum Conc. (pCi/L)**	**Maximum Conc. (pCi/L)**
782-3A quarterly	4	3	7.81E-01	2.66E-01	**1.49E+00**

Onsite Location Summary—Annual Samples

		U-234	**U-238**	**Am-241**	**Gross Beta**	**Gross Alpha**
Location	**Number of Samples**	**Conc. (pCi/L)**	**Conc. (pCi/L)**	**Conc. (pCi/L)**	**Conc. (pCi/L)**	**Conc. (pCi/L)**
617-G	1	**2.61E-02**	**1.91E-02**	**1.07E-02**	**9.14E-01**	2.08E-01
681-3G Dom. Water Faucet	1	3.68E-03	**1.42E-02**	3.24E-03	**3.00E+00**	**5.68E-01**
704-16G	1	9.93E-03	**1.56E-02**	**8.49E-03**	**9.41E-01**	**6.57E-01**
709-1G	1	**3.00E-02**	**1.02E-02**	**1.05E-02**	**5.57E-01**	4.32E-02
737-G	1	**1.36E-02**	**1.11E-02**	8.03E-03	**1.37E+00**	-4.30E-03
782-3A (annual)	1	**2.86E-02**	**4.38E-02**	**7.30E-03**		
905-112G Well	1	**1.82E-02**	**1.96E-02**	6.22E-03	**5.24E-01**	**6.22E-01**
905-113G Well	1	**4.41E-02**	**5.22E-02**	3.97E-03	**2.00E+00**	**1.95E+00**
905-125B	1	**6.84E-02**	**8.38E-02**	6.73E-03	**2.02E+00**	**2.35E+00**
905-67B	1	**1.68E-02**	**1.57E-02**	6.86E-03	**1.52E+00**	**1.28E+00**

Appendix Table D-14 Summary of Radionuclides in Freshwater Fish

Bolded minimum and maximum concentration results were reported as detected. Minimum and maximum concentrations not bolded indicate the result was less than the analytical method detection limit or the uncertainty is large. Sr-89/90 is the only analysis performed in both flesh (edible) and bone (nonedible) samples. Beginning in 2017, tritium (H-3) is no longer analyzed in fish. All Co-60, I-129, and gross alpha results were nonsignificant and thus, not reported in this table.

The analyte mean is set to zero if all composite values per fish species at a single location are less than the MDL or the uncertainty is large. Three composite samples were analyzed for each fish type from each location.

Cs-137 (Edible)									
	Bass			Catfish			Panfish		
Location	**Mean (pCi/g)**	**Min. (pCi/g)**	**Max. (pCi/g)**	**Mean (pCi/g)**	**Min. (pCi/g)**	**Max. (pCi/g)**	**Mean (pCi/g)**	**Min. (pCi/g)**	**Max. (pCi/g)**
Augusta L&D	1.96E-02	1.00E-02	**2.66E-02**	3.20E-02	**2.76E-02**	**3.84E-02**	3.63E-02	1.19E-02	**8.32E-02**
Upper Three Runs Creek River Mouth	2.85E-01	1.76E-02	**7.92E-01**	3.74E-02	**2.10E-02**	**4.81E-02**	0.00E+00	5.46E-03	1.73E-02
Four Mile Creek River Mouth	6.24E-02	**4.27E-02**	**9.32E-02**	3.90E-02	**1.72E-02**	**7.46E-02**	5.43E-02	**3.30E-02**	**6.92E-02**
Steel Creek River Mouth	1.24E-01	**8.00E-02**	**2.11E-01**	4.04E-02	**3.62E-02**	**4.62E-02**	2.56E-02	**1.92E-02**	**3.30E-02**
Lower Three Runs Creek River Mouth	3.37E-01	**4.30E-02**	**7.76E-01**	4.16E-02	**3.32E-02**	**5.05E-02**	6.61E-02	**2.20E-02**	**1.43E-01**
Hwy 301 Bridge Area	3.05E-02	**2.60E-02**	**3.68E-02**	3.74E-02	**1.50E-02**	**6.43E-02**	1.90E-02	**1.41E-02**	**2.47E-02**

Sr-89/90 (Edible)

Location	Bass			Catfish			Panfish		
	Mean (pCi/g)	Min. (pCi/g)	Max. (pCi/g)	Mean (pCi/g)	Min. (pCi/g)	Max. (pCi/g)	Mean (pCi/g)	Min. (pCi/g)	Max. (pCi/g)
Augusta L&D	2.59E-03	1.39E-03	**4.14E-03**	2.00E-03	1.26E-03	**3.27E-03**	0.00E+00	1.77E-03	2.38E-03
Upper Three Runs Creek River Mouth	1.95E-03	-3.53E-04	**5.65E-03**	0.00E+00	3.51E-04	8.65E-04	0.00E+00	7.81E-04	5.97E-03
Four Mile Creek River Mouth	2.51E-03	1.60E-03	**3.03E-03**	0.00E+00	6.46E-04	2.06E-03	4.77E-03	4.30E-03	**5.41E-03**
Steel Creek River Mouth	1.82E-03	9.11E-04	**2.86E-03**	2.93E-03	1.68E-03	**4.54E-03**	3.09E-03	-1.03E-03	**7.11E-03**
Lower Three Runs Creek River Mouth	0.00E+00	1.21E-03	4.27E-03	0.00E+00	1.88E-03	3.27E-03	0.00E+00	1.15E-03	2.78E-03
Hwy 301 Bridge Area	0.00E+00	1.58E-03	2.73E-03	2.04E-03	3.35E-04	**3.84E-03**	0.00E+00	1.13E-03	3.46E-03

Sr-89/90 (Nonedible)

Location	Bass			Catfish			Panfish		
	Mean (pCi/g)	Min. (pCi/g)	Max. (pCi/g)	Mean (pCi/g)	Min. (pCi/g)	Max. (pCi/g)	Mean (pCi/g)	Min. (pCi/g)	Max. (pCi/g)
Augusta L&D	7.34E-01	**6.51E-01**	**7.78E-01**	8.27E-01	**6.32E-01**	**9.27E-01**	9.42E-01	**8.05E-01**	**1.08E+00**
Upper Three Runs Creek River Mouth	7.33E-01	**5.62E-01**	**9.97E-01**	7.52E-01	**6.84E-01**	**8.68E-01**	8.53E-01	**5.81E-01**	**9.97E-01**
Four Mile Creek River Mouth	9.92E-01	**6.89E-01**	**1.26E+00**	7.26E-01	**6.59E-01**	**7.86E-01**	1.28E+00	**1.01E+00**	**1.55E+00**
Steel Creek River Mouth	7.73E-01	**6.22E-01**	**9.03E-01**	5.97E-01	**4.76E-01**	**8.08E-01**	9.51E-01	**9.08E-01**	**9.76E-01**
Lower Three Runs Creek River Mouth	3.62E-01	**3.30E-01**	**4.11E-01**	4.79E-01	**4.46E-01**	**5.00E-01**	4.95E-01	**4.16E-01**	**5.68E-01**
Hwy 301 Bridge Area	5.59E-01	**5.03E-01**	**6.03E-01**	5.46E-01	**4.43E-01**	**6.49E-01**	6.22E-01	**6.08E-01**	**6.35E-01**

Tc-99 (Edible)

Location	Bass			Catfish			Panfish		
	Mean (pCi/g)	Min. (pCi/g)	Max. (pCi/g)	Mean (pCi/g)	Min. (pCi/g)	Max. (pCi/g)	Mean (pCi/g)	Min. (pCi/g)	Max. (pCi/g)
Augusta L&D	0.00E+00	3.97E-02	4.92E-02	5.89E-02	**8.51E-02**	**8.46E-02**	6.64E-02	4.24E-02	**8.35E-02**
Upper Three Runs Creek River Mouth	0.00E+00	3.54E-02	4.35E-02	0.00E+00	1.14E-02	1.56E-02	0.00E+00	8.03E-03	3.89E-02
Four Mile Creek River Mouth	0.00E+00	4.76E-02	5.81E-02	0.00E+00	5.89E-02	7.27E-02	0.00E+00	4.14E-02	6.57E-02
Steel Creek River Mouth	7.85E-02	5.57E-02	**9.92E-02**	7.76E-02	6.03E-02	**1.04E-01**	5.68E-02	3.41E-02	**7.11E-02**
Lower Three Runs Creek River Mouth	0.00E+00	2.13E-02	5.38E-02	0.00E+00	1.52E-02	4.89E-02	0.00E+00	-5.27E-03	2.95E-02
Hwy 301 Bridge Area	5.58E-02	4.81E-02	**6.97E-02**	7.67E-02	**7.19E-02**	**8.51E-02**	6.06E-02	4.65E-02	**7.59E-02**

Gross Beta (Edible)

Location	Bass			Catfish			Panfish		
	Mean (pCi/g)	Min. (pCi/g)	Max. (pCi/g)	Mean (pCi/g)	Min. (pCi/g)	Max. (pCi/g)	Mean (pCi/g)	Min. (pCi/g)	Max. (pCi/g)
Augusta L&D	1.73E+00	**1.39E+00**	**2.41E+00**	2.20E+00	**1.85E+00**	**2.41E+00**	1.64E+00	**1.53E+00**	**1.80E+00**
Upper Three Runs Creek River Mouth	2.34E+00	**1.95E+00**	**2.62E+00**	2.39E+00	**1.90E+00**	**2.81E+00**	2.06E+00	**2.00E+00**	**2.13E+00**
Four Mile Creek River Mouth	2.08E+00	**1.98E+00**	**2.24E+00**	2.32E+00	**1.94E+00**	**2.59E+00**	1.73E+00	**1.44E+00**	**2.03E+00**
Steel Creek River Mouth	1.43E+00	**1.11E+00**	**1.75E+00**	1.88E+00	**1.73E+00**	**2.02E+00**	1.51E+00	**1.32E+00**	**1.73E+00**
Lower Three Runs Creek River Mouth	2.75E+00	**2.17E+00**	**3.65E+00**	2.49E+00	**1.87E+00**	**3.00E+00**	2.06E+00	**1.87E+00**	**2.39E+00**
Hwy 301 Bridge Area	2.64E+00	**2.30E+00**	**2.86E+00**	2.70E+00	**2.55E+00**	**2.89E+00**	2.20E+00	**1.95E+00**	**2.45E+00**

Appendix Table D-15 Summary of Radionuclides in Saltwater Fish

Bolded minimum and maximum concentration results were reported as detected. Minimum and maximum concentrations not bolded indicate the result was less than the analytical method detection limit or the uncertainty is large. Sr-89/90 is the only analysis performed in both flesh (edible) and bone (nonedible) samples. Beginning in 2018, red drum and sea trout are no longer collected. Beginning in 2017, tritium (H-3) is no longer analyzed in fish. Results of all samples for Co-60, Cs-137, I-129, Sr-89/90 (in flesh), and gross alpha were below method detection limits.

All saltwater fish are collected at the location designated as River Miles 0–8 (mouth of Savannah River).

	Marine Mullet			
Analyte	**Number of Samples**	**Mean (pCi/g)**	**Minimum (pCi/g)**	**Maximum (pCi/g)**
Tc-99	3	4.99E-02	6.11E-03	**8.41E-02**
Sr-89/90 Nonedible	3	1.67E-01	**1.29E-01**	**2.08E-01**
Gross Beta	3	1.53E+00	**1.46E+00**	**1.65E+00**

Appendix Table D-16 Summary of Radionuclides in Shellfish

Bolded minimum and maximum concentration results were reported as detected. Minimum and maximum concentrations not bolded indicate the result was less than the analytical method detection limit or the uncertainty is large. All Co-60, Cs-137, I-129, and Tc-99 results were not detected; thus, not reported in this table.

All shellfish are collected at the location designated as River Miles 0-8 (at the mouth of Savannah River).

The species of shellfish collected in 2018 were shrimp and crab.

Nuclide	Number of Samples	Number of Results > Detection Limit	Mean Concentration (pCi/g)	Minimum Concentration (pCi/g)	Maximum Concentration (pCi/g)
Sr-89/90	2	1	2.96E-03	5.49E-04	**5.38E-03**
Gross B	2	2	1.15E+00	**5.43E-01**	**1.76E+00**
Gross A	2	1	1.46E-01	3.38E-02	**2.57E-01***

Note:

* The gross alpha maximum value is less than the trigger value of 0.951 pCi/g that SRS uses as the basis for performing analysis of alpha-emitting radionuclides. When results are less than the trigger value, no actinide analyses are performed.

Appendix Table D-17 Summary of Radionuclides in Wildlife

Bolded concentration results were reported as detected. Minimum and maximum concentrations not bolded indicate the result was less than the analytical method detection limit or the uncertainty is large. All Co-60 results were below detection limits, and thus are not reported in this table.

Sample Type	Nuclide	Number of Samples	Number of Results > Detection Limit	Mean Sample Conc. (pCi/g)	Minimum Sample Conc. (pCi/g)	Maximum Sample Conc. (pCi/g)
Deer Flesh	Cs-137	45	44	2.21E+00	3.68E-02	**7.27E+00**
Hog Flesh	Cs-137	4	4	2.35E+00	**5.03E-01**	**6.35E+00**
Deer Flesh	Sr-89/90	45	3	2.04E-03	-2.22E-03	**1.37E-02**
Hog Flesh	Sr-89/90	4	0	2.16E-03	-4.00E-04	5.41E-03
Deer Bone	Sr-89/90	45	45	3.35E+00	**7.86E-01**	**8.86E+00**
Hog Bone	Sr-89/90	4	4	2.53E+00	**1.85E+00**	**3.05E+00**