APPENDIX C

SENSITIVITY ANALYSIS RESULTS

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SENSITIVITY ANALYSIS RESULTS

This appendix contains the detailed sensitivity analysis results for both residential and building occupancy scenarios. Tables C.1 through C.3 list the sensitive parameters and most important pathways based on partial rank correlation coefficients for the three source configurations in the residential scenario.

Tables C.4 through C.9 list sensitive parameters for three source areas and most important pathways based on standardized rank regression coefficients in the building occupancy scenario for volume and area sources.

Table C.1 Four Most Sensitive Parameters Based on PRCC for a Source of 100-m^2 Area and 15-cm Thickness in the Residential Scenario									
	Dominant	Rank 1		Rank 2		Rank 3		Rank 4	
Radionuclide	Pathway[a]	Parameter	PRCC	Parameter	PRCC	Parameter	PRCC	Parameter	PRCC
Ac-227	ext	SHF1	0.94	DCACTC(1)	0.41	BRTF(89,1)	0.4	DM	-0.28
Ag-108	ext	SHF1	0.98	DCACTC(1)	0.42				
Ag-110	ext	SHF1	0.98	DCACTC(1)	0.4				
Al-26	ext	SHF1	0.96	DCACTC(1)	0.45				
Am-241	plant + ext	SHF1	0.82	BRTF(95,1)	0.79	DROOT	-0.69	DM	-0.62
Am-243	ext	SHF1	0.98	DROOT	-0.29				
Au-195	ext	SHF1	0.93	DCACTC(1)	0.6				
Ba-133	ext	SHF1	0.96	DCACTC(1)	0.47				
BI-207	ext	SHF1	0.9	DCACTC(1)	0.62				
C-14	plant	DROOT	-0.73	DMC	0.38	DCACTS(1)	-0.35	DCACTU1(1)	-0.33
Ca-41	plant	BRTF(20,1)	0.91	DROOT	-0.78	HCSZ	0.32		
Ca-45	plant	BRTF(20,1)	0.97	DROOT	-0.91				
Cd-109	plant	BRTF(48,1)	0.9	DROOT	-0.73	DCACTC(1)	0.55	SHF1	0.5
Ce-141	ext	SHF1	1						
Ce-144	ext	SHF1	0.99						
Cf-252	plant	BRTF(98,1)	0.87	DM	-0.78	DROOT	-0.74	MLINH	0.39
Cl-36	plant	BRTF(17,1)	0.95	DROOT	-0.82	DCACTC(1)	0.74	RUNOFF	0.28
Cm-243	ext	SHF1	0.99	BRTF(96,1)	0.45	DROOT	-0.39	DM	-0.27
Cm-244	plant	BRTF(96,1)	0.87	DM	-0.8	DROOT	-0.78	SHF3	0.4
Cm-246	plant	BRTF(96,1)	0.88	DROOT	-0.79	DM	-0.78	WIND	-0.36
Cm-247	ext	SHF1	0.99	BRTF(96,1)	0.32	VCZ	-0.31		
Cm-248	plant	BRTF(96,1)	0.89	DROOT	-0.82	DM	-0.81	MLINH	0.35
Co-57	ext	SHF1	0.98	DCACTC(1)	0.47				
Co-60	ext	SHF1	0.97	DCACTC(1)	0.46				
Cs-134	ext	SHF1	0.98	DCACTC(1)	0.37				

Table C.1 Four Most Sensitive Parameters Based on PRCC for a Source of 100-m^2 Area and 15-cm Thickness in the Residential Scenario (Continued)									
	Dominant	Rank 1		Rank 2		Rank 3		Rank 4	
Radionuclide	Pathway[a]	Parameter	PRCC	Parameter	PRCC	Parameter	PRCC	Parameter	PRCC
Cs-135	plant	BRTF(55,1)	0.96	DROOT	-0.88	BRTF(55,2)	0.4	DM	-0.36
Cs-137	ext	SHF1	0.98	DCACTC(1)	0.38				
Eu-152	ext	SHF1	0.95	DCACTC(2)	0.31				
Eu-154	ext	SHF1	0.96	DCACTC(1)	0.44				
Eu-155	ext	SHF1	0.97	DCACTC(1)	0.45				
Fe-55	meat + plant	DM	-0.85	BRTF(26,2)	0.78	BRTF(26,1)	0.75	DROOT	-0.53
Fe-59	ext	SHF1	0.99	DCACTC(1)	0.4				
Gd-152	plant + inh	BRTF(64,1)	0.7	DM	-0.67	MLINH	0.59	DROOT	-0.49
Gd-153	ext	SHF1	0.97	DCACTC(1)	0.43				
Ge-68	ext	SHF1	0.9	DCACTC(1)	0.68				
H-3	water + plant	DROOT	-0.73	HCSZ	0.46	HGWT	0.43	H(1)	-0.42
I-125	ext	SHF1	0.85	BRTF(53,1)	0.69	DCACTC(1)	0.67	DROOT	-0.55
I-129	water + plant	BRTF(53,1)	0.6	DROOT	-0.45	DCACTC(1)	0.41	HCSZ	0.36
Ir-192	ext	SHF1	0.96	DCACTC(1)	0.5				
K-40	ext	SHF1	0.97	DCACTC(1)	0.6	BRTF(19,1)	0.5	RUNOFF	0.46
Mn-54	ext	SHF1	0.97	DCACTC(1)	0.47				
Na-22	ext	SHF1	0.92	DCACTC(1)	0.57				
Nb-93	ext + plant	SHF1	0.86	BRTF(41,1)	0.69	DROOT	-0.54	DCACTC(1)	0.4
Nb-94	ext	SHF1	0.94	DCACTC(1)	0.49				
Nb-95	ext	SHF1	0.99	DCACTC(1)	0.39				
Ni-59	plant	BRTF(28,1)	0.96	DROOT	-0.9	BRTF(28,3)	0.39		
Ni-63	plant	BRTF(28,1)	0.96	DROOT	-0.9	BRTF(28,3)	0.39		
Np-237	plant + ext	BRTF(93,1)	0.72	SHF1	0.68	DROOT	-0.55	DCACTC(1)	0.51
Pa-231	plant	BRTF(91,1)	0.58	DCACTC(2)	0.57	VCZ	-0.52	DROOT	-0.49
Pb-210	plant	DROOT	-0.88	BRTF(82,1)	0.82	BRTF(84,1)	0.76	DM	-0.27
Pm-147	ext + plant	SHF1	0.86	BRTF(61,1)	0.68	DROOT	-0.61	BCZ	-0.27
Po-210	plant	BRTF(84,1)	0.96	DROOT	-0.9	DM	-0.36	BRTF(84,2)	0.3
Pu-238	plant	BRTF(94,1)	0.88	DM	-0.78	DROOT	-0.77	MLINH	0.47

Table C.1 Four Most Sensitive Parameters Based on PRCC for a Source of 100-m^2 Area and 15-cm Thickness in the Residential Scenario (Continued)									
	Dominant	Rank 1		Rank 2		Rank 3		Rank 4	
Radionuclide	Pathway[a]	Parameter	PRCC	Parameter	PRCC	Parameter	PRCC	Parameter	PRCC
Pu-239	plant	BRTF(94,1)	0.88	DM	-0.79	DROOT	-0.77	MLINH	0.37
Pu-240	plant	BRTF(94,1)	0.87	DM	-0.79	DROOT	-0.79	MLINH	0.41
Pu-241	plant	VCZ	-0.6	SHF1	0.59	DCACTC(1)	0.51	DROOT	-0.5
Pu-242	plant	BRTF(94,1)	0.88	DM	-0.82	DROOT	-0.77	MLINH	0.38
Pu-244	ext	SHF1	0.99	VCZ	-0.28				
Ra-226	ext	SHF1	0.98	BRTF(88,1)	0.43	DROOT	-0.42	VCZ	-0.3
Ra-228	ext	SHF1	0.96	VCZ	-0.47	DROOT	-0.31	BRTF(88,1)	0.25
Ru-106	ext	SHF1	0.98	DCACTC(1)	0.36				
S-35	plant + meat	BRTF(16,1)	0.96	DROOT	-0.85	BRTF(16,2)	0.75	DCACTC(1)	0.31
Sb-124	ext	SHF1	0.97	DCACTC(1)	0.44				
Sb-125	ext	SHF1	0.95	DCACTC(2)	0.39				
Sc-46	ext	SHF1	0.98	DCACTC(1)	0.38				
Se-75	ext	SHF1	1						
Se-79	plant	BRTF(34,1)	0.96	DROOT	-0.85	BRTF(34,2)	0.7		
Sm-147	plant	BRTF(62,1)	0.83	DROOT	-0.64	DM	-0.61	MLINH	0.41
Sm-151	plant	BRTF(62,1)	0.89	DROOT	-0.71	DM	-0.55	BRTF(62,2)	0.33
Sn-113	ext	SHF1	0.98	DCACTC(1)	0.42				
Sr-85	ext	SHF1	0.97	DCACTC(1)	0.58				
Sr-89	plant	BRTF(38,1)	0.93	DROOT	-0.83	SHF1	0.68	DCACTC(1)	0.25
Sr-90	plant	BRTF(38,1)	0.95	DROOT	-0.87	DCACTC(1)	0.35	SHF1	0.25
Ta-182	ext	SHF1	0.95	DCACTC(1)	0.5				
Tc-99	plant	BRTF(43,1)	0.9	DROOT	-0.8	DCACTC(1)	0.77	RUNOFF	0.38
Te-125	ext	SHF1	0.89	BRTF(52,1)	0.58	DCACTC(1)	0.57	DROOT	-0.4
Th-228	ext	SHF1	0.98	DCACTC(1)	0.31				
Th-229	ext	SHF1	0.98	DCACTC(1)	0.33				
Th-230	ext	VCZ	-0.9	DCACTC(4)	0.57	SHF1	0.56		
Th-232	ext	SHF1	0.83	VCZ	-0.72	DCACTC(3)	0.5		
Tl-204	plant	BRTF(81,1)	0.85	SHF1	0.67	DROOT	-0.67	DCACTC(1)	0.46

Table C.1 Four Most Sensitive Parameters Based on PRCC for a Source of 100-m^2 Area and 15-cm Thickness in the Residential Scenario (Continued)									
		Rank 1		Rank 2		Rank 3		Rank 4	
Radionuclide	Dominant Pathway[a]	Parameter	PRCC	Parameter	PRCC	Parameter	PRCC	Parameter	PRCC
U-232	ext	SHF1	0.72	DCACTC(2)	0.72	VCZ	-0.37		
U-233	ext + plant	DCACTC(2)	0.48	VCZ	-0.46	BRTF(92,1)	0.4	DROOT	-0.35
U-234	plant	BRTF(92,1)	0.61	DROOT	-0.59	DM	-0.48	VCZ	-0.31
U-235	ext	SHF1	0.95	DCACTC(3)	0.57				
U-236	plant	BRTF(92,1)	0.65	DROOT	-0.49	DM	-0.44	MLINH	0.36
U-238	ext	SHF1	0.9	DCACTC(6)	0.48				
Zn-65	ext	SHF1	0.92	DCACTC(1)	0.52				
Zr-93	water	HCSZ	0.71	HGWT	0.66	H(1)	-0.61		
Zr-95	ext	SHF1	0.99						

[a] ext = external, fish = fish ingestion, inh = inhalation, meat = meat ingestion, plant = plant ingestion, water = water ingestion.

Table C.2 Four Most Sensitive Parameters Based on PRCC for a Source of 2,400-m^2 Area and 15-cm Thickness in the Residential Scenario									
	Dominant Pathway[a]	Rank 1		Rank 2		Rank 3		Rank 4	
Radionuclide		Parameter	PRCC	Parameter	PRCC	Parameter	PRCC	Parameter	PRCC
Ac-227	plant	SHF1	0.79	BRTF(89,1)	0.76	DROOT	-0.58	DM	-0.41
Ag-108	ext	SHF1	0.98	DCACTC(1)	0.43				
Ag-110	ext	SHF1	0.98	DCACTC(1)	0.4				
Al-26	ext	SHF1	0.96	DCACTC(1)	0.46				
Am-241	plant	BRTF(95,1)	0.9	DROOT	-0.79	DM	-0.76	SHF1	0.35
Am-243	ext	SHF1	0.92	BRTF(95,1)	0.66	DROOT	-0.58	DM	-0.36
Au-195	ext	SHF1	0.92	DCACTC(1)	0.6				
Ba-133	ext	SHF1	0.96	DCACTC(1)	0.48				
BI-207	ext	SHF1	0.91	DCACTC(1)	0.62				
C-14	plant	DROOT	-0.83	DMC	0.48	WIND	-0.46	DCACTU1(1)	-0.3
Ca-41	plant	BRTF(20,1)	0.96	DROOT	-0.86	DCACTC(1)	0.25		
Ca-45	plant	BRTF(20,1)	0.97	DROOT	-0.91				
Cd-109	plant	BRTF(48,1)	0.95	DROOT	-0.84	DCACTC(1)	0.48		
Ce-141	ext	SHF1	1						
Ce-144	ext	SHF1	0.99						
Cf-252	plant	BRTF(98,1)	0.92	DROOT	-0.8	DM	-0.77		
Cl-36	plant	BRTF(17,1)	0.95	DROOT	-0.83	DCACTC(1)	0.73	BRTF(17,2)	0.38
Cm-243	ext	SHF1	0.91	BRTF(96,1)	0.72	DROOT	-0.62	DM	-0.35
Cm-244	plant	BRTF(96,1)	0.9	DROOT	-0.83	DM	-0.78		
Cm-246	plant	BRTF(96,1)	0.91	DROOT	-0.84	DM	-0.78		
Cm-247	ext	SHF1	0.95	BRTF(96,1)	0.61	DROOT	-0.53	DM	-0.27
Cm-248	plant	BRTF(96,1)	0.92	DROOT	-0.87	DM	-0.81		
Co-57	ext	SHF1	0.98	DCACTC(1)	0.48				
Co-60	ext	SHF1	0.97	DCACTC(1)	0.48				
Cs-134	ext	SHF1	0.98	DCACTC(1)	0.39	BRTF(55,1)	0.36		

Table C.2 Four Most Sensitive Parameters Based on PRCC for a Source of 2,400-m^2 Area and 15-cm Thickness in the Residential Scenario (Continued)									
Radionuclide	Dominant Pathway[a]	Rank 1		Rank 2		Rank 3		Rank 4	
		Parameter	PRCC	Parameter	PRCC	Parameter	PRCC	Parameter	PRCC
Cs-135	plant	BRTF(55,1)	0.95	DROOT	-0.85	BRTF(55,2)	0.57	DM	-0.5
Cs-137	ext	SHF1	0.97	BRTF(55,1)	0.49	DCACTC(1)	0.36	DROOT	-0.35
Eu-152	ext	SHF1	0.96	DCACTC(2)	0.32				
Eu-154	ext	SHF1	0.96	DCACTC(1)	0.44				
Eu-155	ext	SHF1	0.97	DCACTC(1)	0.45				
Fe-55	meat	DM	-0.89	BRTF(26,2)	0.86	BRTF(26,1)	0.66	DROOT	-0.39
Fe-59	ext	SHF1	0.99	DCACTC(1)	0.39				
Gd-152	plant	BRTF(64,1)	0.85	DROOT	-0.64	DM	-0.61	BRTF(64,2)	0.52
Gd-153	ext	SHF1	0.98	DCACTC(1)	0.44				
Ge-68	ext	SHF1	0.89	DCACTC(1)	0.67				
H-3	plant	DROOT	-0.88	RUNOFF	0.6	HCSZ	0.35	H(1)	-0.29
I-125	plant	BRTF(53,1)	0.88	DROOT	-0.74	DCACTC(1)	0.54	DM	-0.53
I-129	water + plant	BRTF(53,1)	0.7	DROOT	-0.51	DCACTC(1)	0.47	HCSZ	0.31
Ir-192	ext	SHF1	0.96	DCACTC(1)	0.51				
K-40	ext + plant	SHF1	0.86	BRTF(19,1)	0.82	DROOT	-0.67	DCACTC(1)	0.37
Mn-54	ext	SHF1	0.97	DCACTC(1)	0.48				
Na-22	ext	SHF1	0.92	DCACTC(1)	0.58				
Nb-93	plant	BRTF(41,1)	0.91	DROOT	-0.78	SHF1	0.56	DCACTC(1)	0.29
Nb-94	ext	SHF1	0.94	DCACTC(1)	0.5				
Nb-95	ext	SHF1	0.99	DCACTC(1)	0.39				
Ni-59	plant	BRTF(28,1)	0.95	DROOT	-0.87	BRTF(28,3)	0.6	DM	-0.36
Ni-63	plant	BRTF(28,1)	0.95	DROOT	-0.87	BRTF(28,3)	0.6	DM	-0.36
Np-237	plant	BRTF(93,1)	0.86	DROOT	-0.74	DCACTC(1)	0.39	SHF1	0.31
Pa-231	plant	BRTF(91,1)	0.89	DROOT	-0.79	VCZ	-0.39	DCACTC(2)	0.34
Pb-210	plant	DROOT	-0.88	BRTF(82,1)	0.8	BRTF(84,1)	0.75	DM	-0.33
Pm-147	plant	BRTF(61,1)	0.85	DROOT	-0.72	DM	-0.55	BRTF(61,2)	0.53
Po-210	plant	BRTF(84,1)	0.95	DROOT	-0.87	BRTF(84,2)	0.49	DM	-0.43
Pu-238	plant	BRTF(94,1)	0.91	DROOT	-0.82	DM	-0.76		

Table C.2 Four Most Sensitive Parameters Based on PRCC for a Source of 2,400-m^2 Area and 15-cm Thickness in the Residential Scenario (Continued)									
Radionuclide	Dominant Pathway[a]	Rank 1		Rank 2		Rank 3		Rank 4	
		Parameter	PRCC	Parameter	PRCC	Parameter	PRCC	Parameter	PRCC
Pu-239	plant	BRTF(94,1)	0.9	DROOT	-0.8	DM	-0.78		
Pu-240	plant	BRTF(94,1)	0.9	DROOT	-0.83	DM	-0.77		
Pu-241	plant	DROOT	-0.77	DM	-0.66	BRTF(94,1)	0.63	BRTF(95,1)	0.62
Pu-242	plant	BRTF(94,1)	0.92	DROOT	-0.83	DM	-0.82		
Pu-244	ext	SHF1	0.98	BRTF(94,1)	0.36	DROOT	-0.34		
Ra-226	ext + plant	SHF1	0.86	BRTF(88,1)	0.73	DROOT	-0.67	VCZ	-0.33
Ra-228	ext + plant	SHF1	0.89	BRTF(88,1)	0.71	DROOT	-0.68	VCZ	-0.32
Ru-106	ext	SHF1	0.97	BRTF(44,1)	0.4	DCACTC(1)	0.36	DROOT	-0.3
S-35	meat	BRTF(16,1)	0.95	BRTF(16,2)	0.84	DROOT	-0.84	DCACTC(1)	0.28
Sb-124	ext	SHF1	0.98	DCACTC(1)	0.44				
Sb-125	ext	SHF1	0.96	DCACTC(2)	0.41				
Sc-46	ext	SHF1	0.98	DCACTC(1)	0.38				
Se-75	ext	SHF1	0.98	BRTF(34,1)	0.62	DROOT	-0.46	BRTF(34,2)	0.31
Se-79	meat	BRTF(34,1)	0.94	DROOT	-0.81	BRTF(34,2)	0.81	DM	-0.29
Sm-147	plant	BRTF(62,1)	0.88	DROOT	-0.67	DM	-0.58	BRTF(62,2)	0.58
Sm-151	plant	BRTF(62,1)	0.88	DROOT	-0.68	BRTF(62,2)	0.59	DM	-0.56
Sn-113	ext	SHF1	0.96	BRTF(50,1)	0.47	DCACTC(1)	0.38	DROOT	-0.31
Sr-85	ext	SHF1	0.97	DCACTC(1)	0.58	RUNOFF	0.26		
Sr-89	plant	BRTF(38,1)	0.97	DROOT	-0.91				
Sr-90	plant	BRTF(38,1)	0.96	DROOT	-0.89	DCACTC(1)	0.33		
Ta-182	ext	SHF1	0.95	DCACTC(1)	0.5				
Tc-99	plant	BRTF(43,1)	0.94	DCACTC(1)	0.87	DROOT	-0.86	RUNOFF	0.44
Te-125	plant	BRTF(52,1)	0.88	DROOT	-0.73	SHF1	0.69	DCACTC(1)	0.44
Th-228	ext	SHF1	0.98	DCACTC(1)	0.32				
Th-229	ext	SHF1	0.94	BRTF(90,1)	0.63	DROOT	-0.53	DM	-0.36
Th-230	ext	VCZ	-0.89	DCACTC(4)	0.51	SHF1	0.44	DROOT	-0.33
Th-232	ext	SHF1	0.77	VCZ	-0.64	DCACTC(3)	0.47	BRTF(88,1)	0.44
Tl-204	plant	BRTF(81,1)	0.94	DROOT	-0.81	DCACTC(1)	0.45	BRTF(81,2)	0.39

Table C.2 Four Most Sensitive Parameters Based on PRCC for a Source of 2,400-m^2 Area and 15-cm Thickness in the Residential Scenario (Continued)									
	Dominant Pathway[a]	Rank 1		Rank 2		Rank 3		Rank 4	
Radionuclide		Parameter	PRCC	Parameter	PRCC	Parameter	PRCC	Parameter	PRCC
U-232	ext	DCACTC(2)	0.72	SHF1	0.72	VCZ	-0.33		
U-233	plant	BRTF(92,1)	0.67	DROOT	-0.58	DM	-0.45	DCACTC(2)	0.29
U-234	plant	BRTF(92,1)	0.79	DROOT	-0.73	DM	-0.53		
U-235	ext	SHF1	0.94	DCACTC(3)	0.59	BRTF(92,1)	0.31		
U-236	plant	BRTF(92,1)	0.76	DROOT	-0.63	DM	-0.45	DCACTC(4)	0.28
U-238	ext + plant	SHF1	0.81	BRTF(92,1)	0.52	DROOT	-0.4	DCACTC(6)	0.38
Zn-65	ext	SHF1	0.87	BRTF(30,1)	0.52	DCACTC(1)	0.48	DROOT	-0.42
Zr-93	water	HCSZ	0.71	HGWT	0.64	H(1)	-0.64	VCZ	-0.25
Zr-95	ext	SHF1	0.99						

[a] ext = external, fish = fish ingestion, inh = inhalation, meat = meat ingestion, plant = plant ingestion, water = water ingestion.

Table C.3 Four Most Sensitive Parameters Based on PRCC for a Source of 10,000-m^2 Area and 2-m Thickness in the Residential Scenario									
	Dominant Pathway[a]	Rank 1		Rank 2		Rank 3		Rank 4	
Radionuclide		Parameter	PRCC	Parameter	PRCC	Parameter	PRCC	Parameter	PRCC
Ac-227	plant	BRTF(89,1)	0.99	SHF1	0.77	DROOT	-0.75		
Ag-108	ext	SHF1	1	DCACTC(1)	0.25				
Ag-110	ext	SHF1	1						
Al-26	ext	SHF1	1	DCACTC(1)	0.3				
Am-241	plant	BRTF(95,1)	0.99	DROOT	-0.88				
Am-243	plant	BRTF(95,1)	0.96	SHF1	0.79	DROOT	-0.61		
Au-195	ext + plant	SHF1	0.92	BRTF(79,1)	0.85	DROOT	-0.28		
Ba-133	ext	SHF1	1	BRTF(56,1)	0.38	DCACTC(1)	0.32		
BI-207	ext	SHF1	0.99	BRTF(83,1)	0.57	DCACTC(1)	0.38		
C-14	plant	WIND	-0.71	DROOT	-0.69	DMC	0.35	DCACTS(1)	-0.25
Ca-41	plant	BRTF(20,1)	0.97	DROOT	-0.61	BBIO(20,1)	0.29	HCSZ	0.28
Ca-45	plant	BRTF(20,1)	0.99	DROOT	-0.86	BRTF(20,3)	0.29		
Cd-109	plant	BRTF(48,1)	0.99	DROOT	-0.83	BRTF(48,3)	0.4		
Ce-141	ext	SHF1	1	BRTF(58,1)	0.6				
Ce-144	ext	SHF1	0.99	BRTF(58,1)	0.75				
Cf-252	plant	BRTF(98,1)	0.99	DROOT	-0.9				
Cl-36	meat	BRTF(17,1)	0.99	BRTF(17,2)	0.78	DROOT	-0.71	BRTF(17,3)	0.42
Cm-243	plant	BRTF(96,1)	0.97	SHF1	0.8	DROOT	-0.71	BRTF(95,3)	-0.18
Cm-244	plant	BRTF(96,1)	0.99	DROOT	-0.88				
Cm-246	plant	BRTF(96,1)	0.99	DROOT	-0.89				
Cm-247	plant	BRTF(96,1)	0.93	SHF1	0.87	DROOT	-0.58		
Cm-248	plant	BRTF(96,1)	0.99	DROOT	-0.89				
Co-57	ext	SHF1	0.96	BRTF(27,1)	0.77	BRTF(27,2)	0.5	DROOT	-0.25
Co-60	ext	SHF1	0.97	BRTF(27,1)	0.74	BRTF(27,2)	0.47		

Table C.3 Four Most Sensitive Parameters Based on PRCC for a Source of 10,000-m^2 Area and 2-m Thickness in the Residential Scenario (Continued)									
	Dominant	Rank 1		Rank 2		Rank 3		Rank 4	
Radionuclide	Pathway[a]	Parameter	PRCC	Parameter	PRCC	Parameter	PRCC	Parameter	PRCC
Cs-134	ext	SHF1	0.92	BRTF(55,1)	0.87	DROOT	-0.35	BRTF(55,2)	0.3
Cs-135	meat	BRTF(55,1)	0.99	BRTF(55,2)	0.8	DROOT	-0.77	BRTF(55,3)	0.37
Cs-137	plant + ext	BRTF(55,1)	0.91	SHF1	0.88	DROOT	-0.44	BRTF(55,2)	0.38
Eu-152	ext	SHF1	1	DCACTC(2)	0.33				
Eu-154	ext	SHF1	1	DCACTC(1)	0.26				
Eu-155	ext	SHF1	1	BRTF(63,1)	0.43	DCACTC(1)	0.26		
Fe-55	meat	BRTF(26,2)	0.93	BRTF(26,1)	0.88	DROOT	-0.34		
Fe-59	ext	SHF1	1						
Gd-152	plant	BRTF(64,1)	0.97	BRTF(64,2)	0.74	DROOT	-0.54		
Gd-153	ext	SHF1	1	BRTF(64,1)	0.33	DCACTC(1)	0.27		
Ge-68	ext + meat	SHF1	0.88	BRTF(32,1)	0.8	BRTF(32,2)	0.66	DROOT	-0.26
H-3	plant	DROOT	-0.87	RUNOFF	0.67	HCCZ	0.57	DCACTC(1)	-0.57
I-125	plant + meat	BRTF(53,1)	0.98	BRTF(53,2)	0.8	DROOT	-0.75	BRTF(53,3)	0.47
I-129	meat + water	BRTF(53,1)	0.85	BRTF(53,2)	0.4	DROOT	-0.38	HCSZ	0.34
Ir-192	ext	SHF1	1	BRTF(77,1)	0.61	DCACTC(1)	0.26		
K-40	plant	BRTF(19,1)	0.98	DROOT	-0.67	SHF1	0.62	BRTF(19,3)	0.25
Mn-54	ext	SHF1	0.99	BRTF(25,1)	0.77	DROOT	-0.27		
Na-22	ext	SHF1	0.98	BRTF(11,1)	0.74	DCACTC(1)	0.28		
Nb-93	plant	BRTF(41,1)	0.99	DROOT	-0.86	SHF1	0.32		
Nb-94	ext	SHF1	1	DCACTC(1)	0.33				
Nb-95	ext	SHF1	1	BRTF(41,1)	0.31	DCACTC(1)	0.28		
Ni-59	plant	BRTF(28,1)	0.97	BRTF(28,3)	0.8	DROOT	-0.69	BRTF(28,2)	0.36
Ni-63	plant	BRTF(28,1)	0.97	BRTF(28,3)	0.8	DROOT	-0.69	BRTF(28,2)	0.36
Np-237	plant	BRTF(93,1)	0.92	DROOT	-0.46	HCSZ	0.31		
Pa-231	plant	BRTF(91,1)	0.96	DROOT	-0.66	BRTF(89,1)	0.53		
Pb-210	plant	BRTF(82,1)	0.88	BRTF(84,1)	0.85	DROOT	-0.67	BRTF(84,2)	0.26
Pm-147	plant	BRTF(61,1)	0.96	BRTF(61,2)	0.75	DROOT	-0.58		
Po-210	plant	BRTF(84,1)	0.99	DROOT	-0.8	BRTF(84,2)	0.68		

Table C.3 Four Most Sensitive Parameters Based on PRCC for a Source of 10,000-m^2 Area and 2-m Thickness in the Residential Scenario (Continued)									
	Dominant	Rank 1		Rank 2		Rank 3		Rank 4	
Radionuclide	Pathway[a]	Parameter	PRCC	Parameter	PRCC	Parameter	PRCC	Parameter	PRCC
Pu-238	plant	BRTF(94,1)	0.99	DROOT	-0.88				
Pu-239	plant	BRTF(94,1)	0.99	DROOT	-0.89				
Pu-240	plant	BRTF(94,1)	0.99	DROOT	-0.88				
Pu-241	plant	BRTF(95,1)	0.85	BRTF(94,1)	0.69	DROOT	-0.56		
Pu-242	plant	BRTF(94,1)	0.99	DROOT	-0.87				
Pu-244	ext	SHF1	0.97	BRTF(94,1)	0.85	DROOT	-0.42		
Ra-226	plant	BRTF(88,1)	0.89	DROOT	-0.67	BRTF(82,1)	0.61	BRTF(84,1)	0.6
Ra-228	plant	BRTF(88,1)	0.97	DROOT	-0.74	SHF1	0.74		
Ru-106	ext + plant	SHF1	0.94	BRTF(44,1)	0.86	DROOT	-0.38		
S-35	meat	BRTF(16,1)	0.97	BRTF(16,2)	0.93	DROOT	-0.57		
Sb-124	ext	SHF1	1	BRTF(51,1)	0.32	DCACTC(1)	0.31		
Sb-125	ext	SHF1	1	BRTF(52,1)	0.45	DCACTC(2)	0.29		
Sc-46	ext	SHF1	1						
Se-75	meat	BRTF(34,1)	0.9	SHF1	0.8	BRTF(34,2)	0.72	DROOT	-0.35
Se-79	meat	BRTF(34,1)	0.97	BRTF(34,2)	0.91	DROOT	-0.58	BRTF(34,3)	0.33
Sm-147	plant	BRTF(62,1)	0.97	BRTF(62,2)	0.75	DROOT	-0.53		
Sm-151	plant	BRTF(62,1)	0.97	BRTF(62,2)	0.76	DROOT	-0.54		
Sn-113	ext + plant	SHF1	0.89	BRTF(50,1)	0.88	DROOT	-0.33	BRTF(50,2)	0.28
Sr-85	ext	SHF1	0.97	BRTF(38,1)	0.8	DROOT	-0.28		
Sr-89	plant	BRTF(38,1)	0.99	DROOT	-0.84	BRTF(38,2)	0.43		
Sr-90	plant	BRTF(38,1)	0.99	DROOT	-0.84	BRTF(38,2)	0.43		
Ta-182	ext	SHF1	1	DCACTC(1)	0.34				
Tc-99	plant	BRTF(43,1)	0.99	DROOT	-0.84	DCACTC(1)	0.4	EVAPTR	0.25
Te-125	plant	BRTF(52,1)	0.99	DROOT	-0.78	BRTF(52,2)	0.65	SHF1	0.37
Th-228	ext	SHF1	1	BRTF(90,1)	0.7				
Th-229	plant	BRTF(90,1)	0.95	SHF1	0.86	DROOT	-0.57		
Th-230	plant	VCZ	-0.79	DROOT	-0.53	DCACTC(4)	0.49	BRTF(88,1)	0.47
Th-232	plant	BRTF(88,1)	0.93	SHF1	0.66	DROOT	-0.6	BRTF(90,1)	0.26

Table C.3 Four Most Sensitive Parameters Based on PRCC for a Source of 10,000-m^2 Area and 2-m Thickness in the Residential Scenario (Continued)									
		Rank 1		Rank 2		Rank 3		Rank 4	
Radionuclide	Dominant Pathway[a]	Parameter	PRCC	Parameter	PRCC	Parameter	PRCC	Parameter	PRCC
Tl-204	plant + meat	BRTF(81,1)	0.98	BRTF(81,2)	0.82	DROOT	-0.67		
U-232	ext	SHF1	0.92	DCACTC(2)	0.54	BRTF(92,1)	0.48	DROOT	-0.32
U-233	plant	BRTF(92,1)	0.78	DROOT	-0.4	DCACTC(2)	0.38	VCZ	-0.32
U-234	water + plant	BRTF(92,1)	0.91	DROOT	-0.58	DCACTU1(5)	-0.29		
U-235	plant	SHF1	0.73	BRTF(92,1)	0.65	BRTF(91,1)	0.46	DCACTC(3)	0.42
U-236	plant	BRTF(92,1)	0.93	DROOT	-0.5				
U-238	plant	BRTF(92,1)	0.92	SHF1	0.65	DROOT	-0.43		
Zn-65	meat	BRTF(30,1)	0.97	SHF1	0.75	DROOT	-0.64	BRTF(30,2)	0.63
Zr-93	water	H(1)	-0.74	HCSZ	0.7	HGWT	0.63	FR9	0.47
Zr-95	ext	SHF1	1						

[a] ext = external, fish = fish ingestion, meat = meat ingestion, plant = plant ingestion, water = water ingestion.

Table C.4 First Four Most Sensitive Parameters Based on SRRC for a 36-m^2 Volume Source in the Building Occupancy Scenario									
	Dominant	Rank 1		Rank 2		Rank 3		Rank 4	
Radionuclide	Pathway[a]	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC
Ac-227	ext	DSTH	-0.94	EROS0	0.14	AREA	-0.14		
Ag-108	ext	DSTH	-0.99						
Ag-110	ext	DSTH	-0.99						
Al-26	ext	DSTH	-0.98	THICK0	0.1				
Am-241	inh + ext	EROS0	0.5	DSTH	-0.48	AREA	-0.45	H	-0.16
Am-243	ext	DSTH	-0.97						
Au-195	ext	DSTH	-1						
BI-207	ext	DSTH	-0.99						
C-14	ext	DSTH	-0.72	EROS0	0.26	DKSUS	-0.25	UD	0.21
Ca-41	inh + ing	EROS0	0.54	AREA	-0.47	DKSUS	-0.42	UD	0.29
Cd-109	ext	DSTH	-0.99						
Ce-144	ext	DSTH	-0.99						
Cf-252	inh	EROS0	0.69	AREA	-0.61	H	-0.19		
Cl-36	ext	DSTH	-1						
Cm-243	ext	DSTH	-0.98						
Cm-244	inh	EROS0	0.68	AREA	-0.62	H	-0.19		
Cm-248	inh	EROS0	0.67	AREA	-0.62	H	-0.19		
Co-57	ext	DSTH	-1						
Co-60	ext	DSTH	-0.98	THICK0	0.1				
Cs-134	ext	DSTH	-0.99						
Cs-135	ext	DSTH	-0.79	DKSUS	-0.23	EROS0	0.2	UD	0.18
Cs-137	ext	DSTH	-0.99						
Eu-152	ext	DSTH	-0.99						
Eu-154	ext	DSTH	-0.99						

Table C.4 First Four Most Sensitive Parameters Based on SRRC for a 36-m^2 Volume Source in the Building Occupancy Scenario (Continued)									
	Dominant	Rank 1		Rank 2		Rank 3		Rank 4	
Radionuclide	Pathway[a]	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC
Eu-155	ext	DSTH	-1						
Fe-55	inh	EROS0	0.67	AREA	-0.61	H	-0.18	UD	0.11
Gd-152	inh	EROS0	0.68	AREA	-0.62	H	-0.19		
Gd-153	ext	DSTH	-1						
Ge-68	ext	DSTH	-0.99						
H-3	inh + ing	AREA	-0.71	DKSUS	-0.33	UD	0.25	H	-0.22
I-129	ext	DSTH	-0.49	EROS0	0.37	DKSUS	-0.35	UD	0.29
K-40	ext	DSTH	-0.98	THICK0	0.1				
Mn-54	ext	DSTH	-0.99						
Na-22	ext	DSTH	-0.99						
Nb-94	ext	DSTH	-0.99						
Ni-59	inh	EROS0	0.63	AREA	-0.57	DKSUS	-0.22	H	-0.18
Ni-63	inh	EROS0	0.64	AREA	-0.58	DKSUS	-0.2	H	-0.18
Np-237	ext	DSTH	-0.99						
Pa-231	ext	DSTH	-0.9	AREA	-0.2	EROS0	0.2		
Pb-210	ext	DSTH	-0.74	EROS0	0.29	AREA	-0.28	DKSUS	-0.18
Pm-147	ext	DSTH	-0.91	EROS0	0.18	AREA	-0.16		
Pu-238	inh	EROS0	0.68	AREA	-0.62	H	-0.19		
Pu-239	inh	EROS0	0.67	AREA	-0.62	H	-0.19		
Pu-240	inh	EROS0	0.67	AREA	-0.62	H	-0.19		
Pu-241	inh	EROS0	0.66	AREA	-0.6	H	-0.18	DSTH	-0.17
Pu-242	inh	EROS0	0.67	AREA	-0.62	H	-0.19		
Pu-244	ext	DSTH	-0.99						
Ra-226	ext	DSTH	-0.99						
Ra-228	ext	DSTH	-0.99						
Ru-106	ext	DSTH	-0.99						
Sb-125	ext	DSTH	-0.99						
Sm-147	inh	EROS0	0.68	AREA	-0.62	H	-0.19		

Table C.4 First Four Most Sensitive Parameters Based on SRRC for a 36-m^2 Volume Source in the Building Occupancy Scenario (Continued)									
		Rank 1		Rank 2		Rank 3		Rank 4	
Radionuclide	Dominant Pathway[a]	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC
Sm-151	inh	EROS0	0.67	AREA	-0.61	H	-0.2		
Sr-90	ext	DSTH	-0.27	UD	-0.14	DSDEN	-0.13		
Tc-99	ext	DSTH	-0.95	EROS0	0.1				
Th-228	ext	DSTH	-0.98	THICK0	0.11				
Th-229	ext	DSTH	-0.97						
Th-230	inh	AREA	-0.55	EROS0	0.55	DSTH	-0.43	H	-0.17
Th-232	ext	DSTH	-0.95	AREA	-0.12	EROS0	0.12		
Tl-204	ext	DSTH	-0.99						
U-232	ext	DSTH	-0.98	THICK0	0.11				
U-233	inh	EROS0	0.56	AREA	-0.55	DSTH	-0.4	H	-0.17
U-234	inh	EROS0	0.67	AREA	-0.62	H	-0.19		
U-235	ext	DSTH	-0.99						
U-236	inh	EROS0	0.68	AREA	-0.62	H	-0.19		
U-238	ext	DSTH	-0.98						
Zn-65	ext	DSTH	-0.99						

[a] ext = external, ing = ingestion, inh = inhalation.

Table C.5 First Four Most Sensitive Parameters Based on SRRC for a 200-m^2 Volume Source in the Building Occupancy Scenario									
		Rank 1		Rank 2		Rank 3		Rank 4	
Radionuclide	Dominant Pathway[a]	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC
Ac-227	ext	DSTH	-0.8	AREA	-0.31	EROS0	0.31		
Ag-108	ext	DSTH	-0.99						
Ag-110	ext	DSTH	-0.99						
Al-26	ext	DSTH	-0.99						
Am-241	inh	EROS0	0.62	AREA	-0.56	DSTH	-0.24	H	-0.19
Am-243	ext	DSTH	-0.9	EROS0	0.19	AREA	-0.18		
Au-195	ext	DSTH	-1						
Bi-207	ext	DSTH	-0.99						
C-14	ext	DSTH	-0.57	EROS0	0.34	DKSUS	-0.32	AREA	-0.28
Ca-41	inh + ing	EROS0	0.54	AREA	-0.47	DKSUS	-0.42	UD	0.29
Cd-109	ext	DSTH	-0.97						
Ce-144	ext	DSTH	-0.99						
Cf-252	inh	EROS0	0.68	AREA	-0.62	H	-0.18		
Cl-36	ext	DSTH	-0.99						
Cm-243	ext	DSTH	-0.93	EROS0	0.16	AREA	-0.16		
Cm-244	inh	EROS0	0.68	AREA	-0.62	H	-0.18		
Cm-248	inh	EROS0	0.67	AREA	-0.62	H	-0.19		
Co-57	ext	DSTH	-1						
Co-60	ext	DSTH	-0.99						
Cs-134	ext	DSTH	-0.99						
Cs-135	ext	DSTH	-0.65	DKSUS	-0.32	EROS0	0.28	UD	0.26
Cs-137	ext	DSTH	-0.99						
Eu-152	ext	DSTH	-0.99						
Eu-154	ext	DSTH	-0.99						

Table C.5 First Four Most Sensitive Parameters Based on SRRC for a 200-m^2 Volume Source in the Building Occupancy Scenario (Continued)									
		Rank 1		Rank 2		Rank 3		Rank 4	
Radionuclide	Dominant Pathway[a]	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC
Eu-155	ext	DSTH	-1						
Fe-55	inh	EROS0	0.67	AREA	-0.61	H	-0.18	UD	0.11
Gd-152	inh	EROS0	0.68	AREA	-0.62	H	-0.19	DENSI0	0.03
Gd-153	ext	DSTH	-1						
Ge-68	ext	DSTH	-0.99						
H-3	inh + ing	AREA	-0.71	DKSUS	-0.33	UD	0.25	H	-0.22
I-129	ext	EROS0	0.41	DSTH	-0.39	DKSUS	-0.39	AREA	-0.33
K-40	ext	DSTH	-0.99						
Mn-54	ext	DSTH	-0.99						
Na-22	ext	DSTH	-0.99						
Nb-94	ext	DSTH	-0.99						
Ni-59	inh	EROS0	0.63	AREA	-0.57	DKSUS	-0.22	H	-0.18
Ni-63	inh	EROS0	0.64	AREA	-0.58	DKSUS	-0.2	H	-0.18
Np-237	ext	DSTH	-0.94	AREA	-0.14	EROS0	0.13		
Pa-231	ext	DSTH	-0.68	AREA	-0.4	EROS0	0.39	H	-0.12
Pb-210	ext	DSTH	-0.47	EROS0	0.46	AREA	-0.43	DKSUS	-0.24
Pm-147	ext	DSTH	-0.8	EROS0	0.29	AREA	-0.26		
Pu-238	inh	EROS0	0.68	AREA	-0.62	H	-0.19		
Pu-239	inh	EROS0	0.67	AREA	-0.62	H	-0.19		
Pu-240	inh	EROS0	0.67	AREA	-0.62	H	-0.19		
Pu-241	inh	EROS0	0.68	AREA	-0.62	H	-0.19		
Pu-242	inh	EROS0	0.67	AREA	-0.62	H	-0.19		
Pu-244	ext	DSTH	-0.99						
Ra-226	ext	DSTH	-0.99						
Ra-228	ext	DSTH	-0.99						
Ru-106	ext	DSTH	-0.99						
Sb-125	ext	DSTH	-0.99						
Sm-147	inh	EROS0	0.68	AREA	-0.62	H	-0.19		

Table C.5 First Four Most Sensitive Parameters Based on SRRC for a 200-m^2 Volume Source in the Building Occupancy Scenario (Continued)

Radionuclide	Dominant Pathway[a]	Rank 1		Rank 2		Rank 3		Rank 4	
		Parameter	SRRC	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC
Sm-151	inh	EROS0	0.67	AREA	-0.62	H	-0.19		
Sr-90	ext	DSTH	-0.3	AREA	-0.14	DSDEN	-0.13	UD	-0.12
Tc-99	ext	DSTH	-0.88	EROS0	0.17	AREA	-0.15	DKSUS	-0.11
Th-228	ext	DSTH	-0.99						
Th-229	ext	DSTH	-0.89	AREA	-0.21	EROS0	0.21		
Th-230	inh	EROS0	0.67	AREA	-0.61	H	-0.19	DSTH	-0.13
Th-232	ext	DSTH	-0.81	AREA	-0.31	EROS0	0.29		
Tl-204	ext	DSTH	-0.99						
U-232	ext	DSTH	-0.97						
U-233	inh	EROS0	0.67	AREA	-0.61	H	-0.19	DSTH	-0.12
U-234	inh	EROS0	0.68	AREA	-0.62	H	-0.19		
U-235	ext	DSTH	-0.97	AREA	-0.1				
U-236	inh	EROS0	0.68	AREA	-0.62	H	-0.19		
U-238	ext	DSTH	-0.94	AREA	-0.15	EROS0	0.14		
Zn-65	ext	DSTH	-0.99						

[a] ext = external, ing = ingestion, inh = inhalation.

Table C.6 First Four Most Sensitive Parameters Based on SRRC for a 900-m^2 Volume Source in the Building Occupancy Scenario									
	Dominant	Rank 1		Rank 2		Rank 3		Rank 4	
Radionuclide	Pathway[a]	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC
Ac-227	ext+inh	DSTH	-0.51	EROS0	0.51	AREA	-0.51	H	-0.15
Ag-108	ext	DSTH	-0.99						
Ag-110	ext	DSTH	-0.99						
Al-26	ext	DSTH	-0.99						
Am-241	inh	EROS0	0.67	AREA	-0.61	H	-0.19		
Am-243	ext	DSTH	-0.76	EROS0	0.33	AREA	-0.32		
Au-195	ext	DSTH	-0.99						
Bi-207	ext	DSTH	-0.99						
C-14	ext	DSTH	-0.42	EROS0	0.41	DKSUS	-0.38	AREA	-0.35
Ca-41	inh + ing	EROS0	0.54	AREA	-0.47	DKSUS	-0.42	UD	0.29
Cd-109	ext	DSTH	-0.94	EROS0	0.14	AREA	-0.13		
Ce-144	ext	DSTH	-0.99						
Cf-252	inh	EROS0	0.68	AREA	-0.62	H	-0.18		
Cl-36	ext	DSTH	-0.98						
Cm-243	ext	DSTH	-0.8	EROS0	0.31	AREA	-0.3		
Cm-244	inh	EROS0	0.68	AREA	-0.62	H	-0.18		
Cm-248	inh	EROS0	0.67	AREA	-0.62	H	-0.19		
Co-57	ext	DSTH	-1						
Co-60	ext	DSTH	-0.99						
Cs-134	ext	DSTH	-0.99						
Cs-135	ext	DSTH	-0.51	DKSUS	-0.38	EROS0	0.35	UD	0.31
Cs-137	ext	DSTH	-0.99						
Eu-152	ext	DSTH	-0.99						
Eu-154	ext	DSTH	-0.99						

Table C.6 First Four Most Sensitive Parameters Based on SRRC for a 900-m^2 Volume Source in the Building Occupancy Scenario (Continued)									
	Dominant	Rank 1		Rank 2		Rank 3		Rank 4	
Radionuclide	Pathway[a]	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC
Eu-155	ext	DSTH	-0.99						
Fe-55	inh	EROS0	0.67	AREA	-0.61	H	-0.18	UD	0.11
Gd-152	inh	EROS0	0.68	AREA	-0.62	H	-0.19		
Gd-153	ext	DSTH	-0.99						
Ge-68	ext	DSTH	-0.99						
H-3	inh + ing	AREA	-0.71	DKSUS	-0.33	UD	0.25	H	-0.22
I-129	inh + ing	EROS0	0.45	DKSUS	-0.42	AREA	-0.36	UD	0.32
K-40	ext	DSTH	-0.99						
Mn-54	ext	DSTH	-0.99						
Na-22	ext	DSTH	-0.99						
Nb-94	ext	DSTH	-0.99						
Ni-59	inh	EROS0	0.63	AREA	-0.57	DKSUS	-0.22	H	-0.18
Ni-63	inh	EROS0	0.64	AREA	-0.58	DKSUS	-0.2	H	-0.18
Np-237	ext	DSTH	-0.83	AREA	-0.27	EROS0	0.27		
Pa-231	inh	EROS0	0.58	AREA	-0.57	DSTH	-0.34	H	-0.18
Pb-210	inh	EROS0	0.58	AREA	-0.52	DKSUS	-0.26	UD	0.24
Pm-147	ext	DSTH	-0.62	EROS0	0.43	AREA	-0.4	H	-0.12
Pu-238	inh	EROS0	0.68	AREA	-0.62	H	-0.19		
Pu-239	inh	EROS0	0.67	AREA	-0.62	H	-0.19		
Pu-240	inh	EROS0	0.67	AREA	-0.62	H	-0.19		
Pu-241	inh	EROS0	0.68	AREA	-0.62	H	-0.19		
Pu-242	inh	EROS0	0.67	AREA	-0.62	H	-0.19		
Pu-244	ext	DSTH	-0.98						
Ra-226	ext	DSTH	-0.99						
Ra-228	ext	DSTH	-0.99						
Ru-106	ext	DSTH	-0.99						
Sb-125	ext	DSTH	-0.99						
Sm-147	inh	EROS0	0.68	AREA	-0.62	H	-0.19		

Table C.6 First Four Most Sensitive Parameters Based on SRRC for a 900-m^2 Volume Source in the Building Occupancy Scenario (Continued)									
	Dominant	Rank 1		Rank 2		Rank 3		Rank 4	
Radionuclide	Pathway[a]	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC
Sm-151	inh	EROS0	0.67	AREA	-0.62	H	-0.19		
Sr-90	ext	DSTH	-0.32	AREA	-0.24	EROS0	0.19	DSDEN	-0.13
Tc-99	ext	DSTH	-0.77	EROS0	0.26	AREA	-0.23	DKSUS	-0.17
Th-228	ext	DSTH	-0.98						
Th-229	ext	DSTH	-0.69	AREA	-0.4	EROS0	0.39	H	-0.11
Th-230	inh	EROS0	0.68	AREA	-0.62	H	-0.19		
Th-232	inh + ext	AREA	-0.52	EROS0	0.51	DSTH	-0.5	H	-0.16
Tl-204	ext	DSTH	-0.97						
U-232	ext	DSTH	-0.9	AREA	-0.2	EROS0	0.19		
U-233	inh	EROS0	0.68	AREA	-0.62	H	-0.19		
U-234	inh	EROS0	0.68	AREA	-0.62	H	-0.19		
U-235	ext	DSTH	-0.9	EROS0	0.2	AREA	-0.19		
U-236	inh	EROS0	0.68	AREA	-0.62	H	-0.19		
U-238	ext	DSTH	-0.79	AREA	-0.32	EROS0	0.31		
Zn-65	ext	DSTH	-0.99						

[a] ext = external, ing = ingestion, inh = inhalation.

Table C.7 First Four Most Sensitive Parameters Based on SRRC for a 36-m^2 Area Source in the Building Occupancy Scenario									
Radionuclide	Dominant Pathway[a]	Rank 1		Rank 2		Rank 3		Rank 4	
		Parameter	SRRC	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC
Ac-227	inh	AREA	-0.6	RF0	-0.53	RMVFR	0.47	H	-0.21
Ag-108	ext	DSTH	-1						
Ag-110	ext	DSTH	-1						
Al-26	ext	DSTH	-1						
Am-241	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.46	H	-0.22
Am-243	inh	AREA	-0.55	RF0	-0.47	RMVFR	0.4	DSTH	-0.3
Au-195	ext	DSTH	-0.98						
Bi-207	ext	DSTH	-1						
C-14	inh + ing	AREA	-0.42	DKSUS	-0.4	RF0	-0.35	RMVFR	0.28
Ca-41	inh + ing	AREA	-0.47	DKSUS	-0.43	RF0	-0.41	RMVFR	0.35
Cd-109	ext	DSTH	-0.83	AREA	-0.26	RF0	-0.2	RMVFR	0.17
Ce-144	ext	DSTH	-1						
Cf-252	inh	AREA	-0.6	RF0	-0.54	RMVFR	0.47	H	-0.2
Cl-36	ext	DSTH	-0.88	AREA	-0.19	RF0	-0.17	UD	0.1
Cm-243	inh	AREA	-0.57	RF0	-0.47	RMVFR	0.41	DSTH	-0.31
Cm-244	inh	AREA	-0.6	RF0	-0.54	RMVFR	0.47	H	-0.21
Cm-248	inh	AREA	-0.58	RF0	-0.54	RMVFR	0.46	H	-0.22
Co-57	ext	DSTH	-1						
Co-60	ext	DSTH	-1						
Cs-134	ext	DSTH	-1						
Cs-135	inh + ing	DKSUS	-0.43	AREA	-0.39	RF0	-0.32	DSTH	-0.3
Cs-137	ext	DSTH	-1						
Eu-152	ext	DSTH	-1						
Eu-154	ext	DSTH	-1						
Eu-155	ext	DSTH	-0.98						
Fe-55	inh	AREA	-0.59	RF0	-0.53	RMVFR	0.46	H	-0.21
Gd-152	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.47	H	-0.21

Table C.7 First Four Most Sensitive Parameters Based on SRRC for a 36-m^2 Area Source in the Building Occupancy Scenario (Continued)									
Radionuclide	Dominant Pathway[a]	Rank 1		Rank 2		Rank 3		Rank 4	
		Parameter	SRRC	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC
Gd-153	ext	DSTH	-0.98						
Ge-68	ext	DSTH	-1						
H-3	inh + ing	AREA	-0.53	RF0	-0.47	RMVFR	0.39	DKSUS	-0.29
I-129	inh + ing	DKSUS	-0.42	AREA	-0.39	RF0	-0.31	RMVFR	0.27
K-40	ext	DSTH	-1						
Mn-54	ext	DSTH	-1						
Na-22	ext	DSTH	-1						
Nb-94	ext	DSTH	-1						
Ni-59	inh	AREA	-0.55	RF0	-0.51	RMVFR	0.42	H	-0.2
Ni-63	inh	AREA	-0.55	RF0	-0.52	RMVFR	0.43	H	-0.2
Np-237	inh	AREA	-0.56	RF0	-0.48	RMVFR	0.4	DSTH	-0.3
Pa-231	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.46	H	-0.22
Pb-210	inh	AREA	-0.54	RF0	-0.48	RMVFR	0.4	DKSUS	-0.24
Pm-147	inh	AREA	-0.57	RF0	-0.46	RMVFR	0.42	DSTH	-0.29
Pu-238	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.47	H	-0.21
Pu-239	inh	AREA	-0.58	RF0	-0.54	RMVFR	0.46	H	-0.22
Pu-240	inh	AREA	-0.58	RF0	-0.54	RMVFR	0.46	H	-0.22
Pu-241	inh	AREA	-0.6	RF0	-0.54	RMVFR	0.47	H	-0.21
Pu-242	inh	AREA	-0.58	RF0	-0.54	RMVFR	0.46	H	-0.22
Pu-244	ext	DSTH	-0.75	AREA	-0.35	RF0	-0.3	RMVFR	0.21
Ra-226	ext	DSTH	-0.98						
Ra-228	ext	DSTH	-0.94	AREA	-0.14	RF0	-0.13		
Ru-106	ext	DSTH	-1						
Sb-125	ext	DSTH	-1						
Sm-147	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.47	H	-0.22
Sm-151	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.46	H	-0.22
Sr-90	inh	AREA	-0.42	RF0	-0.38	DSTH	-0.26	RMVFR	0.23
Tc-99	inh + ext	DSTH	-0.53	AREA	-0.4	RF0	-0.34	RMVFR	0.24
Th-228	ext	DSTH	-0.81	AREA	-0.3	RF0	-0.26	RMVFR	0.17
Th-229	inh	AREA	-0.59	RF0	-0.52	RMVFR	0.46	H	-0.22
Th-230	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.47	H	-0.22
Th-232	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.47	H	-0.22

Table C.7 First Four Most Sensitive Parameters Based on SRRC for a 36-m^2 Area Source in the Building Occupancy Scenario (Continued)

Radionuclide	Dominant Pathway[a]	Rank 1		Rank 2		Rank 3		Rank 4	
		Parameter	SRRC	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC
Tl-204	ext	DSTH	-0.93	AREA	-0.13	RF0	-0.1		
U-232	inh	AREA	-0.59	RF0	-0.49	RMVFR	0.42	DSTH	-0.28
U-233	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.47	H	-0.22
U-234	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.47	H	-0.22
U-235	inh + ext	DSTH	-0.56	AREA	-0.47	RF0	-0.38	RMVFR	0.33
U-236	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.47	H	-0.22
U-238	inh	AREA	-0.59	RF0	-0.51	RMVFR	0.44	H	-0.22
Zn-65	ext	DSTH	-1						

[a] ext = external, ing = ingestion, inh = inhalation.

Table C.8 First Four Most Sensitive Parameters Based on SRRC for a 200-m^2 Area Source in the Building Occupancy Scenario									
	Dominant	Rank 1		Rank 2		Rank 3		Rank 4	
Radionuclide	Pathway[a]	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC
Ac-227	inh	AREA	-0.6	RF0	-0.54	RMVFR	0.47	H	-0.21
Ag-108	ext	DSTH	-1						
Ag-110	ext	DSTH	-1						
Al-26	ext	DSTH	-1						
Am-241	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.46	H	-0.22
Am-243	inh	AREA	-0.58	RF0	-0.52	RMVFR	0.45	H	-0.22
Au-195	ext	DSTH	-0.95	AREA	-0.11				
Bi-207	ext	DSTH	-1						
C-14	inh + ing	AREA	-0.46	DKSUS	-0.42	RF0	-0.39	RMVFR	0.32
Ca-41	inh + ing	AREA	-0.47	DKSUS	-0.43	RF0	-0.41	RMVFR	0.35
Cd-109	ext	DSTH	-0.67	AREA	-0.39	RF0	-0.3	RMVFR	0.26
Ce-144	ext	DSTH	-0.98						
Cf-252	inh	AREA	-0.6	RF0	-0.54	RMVFR	0.47	H	-0.2
Cl-36	ext	DSTH	-0.69	AREA	-0.33	RF0	-0.29	RMVFR	0.18
Cm-243	inh	AREA	-0.6	RF0	-0.52	RMVFR	0.46	H	-0.21
Cm-244	inh	AREA	-0.6	RF0	-0.54	RMVFR	0.47	H	-0.21
Cm-248	inh	AREA	-0.58	RF0	-0.54	RMVFR	0.46	H	-0.22
Co-57	ext	DSTH	-1						
Co-60	ext	DSTH	-1						
Cs-134	ext	DSTH	-1						
Cs-135	inh + ing	DKSUS	-0.46	AREA	-0.44	RF0	-0.36	RMVFR	0.3
Cs-137	ext	DSTH	-1						
Eu-152	ext	DSTH	-1						
Eu-154	ext	DSTH	-1						

Table C.8 First Four Most Sensitive Parameters Based on SRRC for a 200-m^2 Area Source in the Building Occupancy Scenario (Continued)									
	Dominant	Rank 1		Rank 2		Rank 3		Rank 4	
Radionuclide	Pathway[a]	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC
Eu-155	ext	DSTH	-0.94	AREA	-0.13	RF0	-0.11		
Fe-55	inh	AREA	-0.59	RF0	-0.53	RMVFR	0.46	H	-0.21
Gd-152	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.47	H	-0.21
Gd-153	ext	DSTH	-0.95	AREA	-0.11	RF0	-0.1		
Ge-68	ext	DSTH	-1						
H-3	inh + ing	AREA	-0.53	RF0	-0.47	RMVFR	0.39	DKSUS	-0.29
I-129	inh + ing	DKSUS	-0.44	AREA	-0.41	RF0	-0.34	RMVFR	0.29
K-40	ext	DSTH	-0.98						
Mn-54	ext	DSTH	-1						
Na-22	ext	DSTH	-1						
Nb-94	ext	DSTH	-1						
Ni-59	inh + ing	AREA	-0.55	RF0	-0.51	RMVFR	0.42	H	-0.2
Ni-63	inh + ing	AREA	-0.55	RF0	-0.52	RMVFR	0.43	H	-0.2
Np-237	inh	AREA	-0.58	RF0	-0.53	RMVFR	0.45	H	-0.22
Pa-231	inh	AREA	-0.58	RF0	-0.54	RMVFR	0.46	H	-0.22
Pb-210	inh + ing	AREA	-0.54	RF0	-0.49	RMVFR	0.4	DKSUS	-0.25
Pm-147	inh	AREA	-0.6	RF0	-0.52	RMVFR	0.46	H	-0.21
Pu-238	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.47	H	-0.21
Pu-239	inh	AREA	-0.58	RF0	-0.54	RMVFR	0.46	H	-0.22
Pu-240	inh	AREA	-0.58	RF0	-0.54	RMVFR	0.46	H	-0.22
Pu-241	inh	AREA	-0.6	RF0	-0.54	RMVFR	0.47	H	-0.21
Pu-242	inh	AREA	-0.58	RF0	-0.54	RMVFR	0.46	H	-0.22
Pu-244	inh	AREA	-0.52	DSTH	-0.45	RF0	-0.43	RMVFR	0.36
Ra-226	ext	DSTH	-0.94	AREA	-0.11	RF0	-0.1		
Ra-228	ext	DSTH	-0.81	AREA	-0.3	RF0	-0.25	RMVFR	0.17
Ru-106	ext	DSTH	-0.99						
Sb-125	ext	DSTH	-1						
Sm-147	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.47	H	-0.22

Table C.8 First Four Most Sensitive Parameters Based on SRRC for a 200-m^2 Area Source in the Building Occupancy Scenario (Continued)									
	Dominant	Rank 1		Rank 2		Rank 3		Rank 4	
Radionuclide	Pathway[a]	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC
Sm-151	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.46	H	-0.21
Sr-90	inh	AREA	-0.54	RF0	-0.48	RMVFR	0.36	UD	0.19
Tc-99	inh	AREA	-0.49	RF0	-0.42	RMVFR	0.32	DSTH	-0.28
Th-228	ext	DSTH	-0.54	AREA	-0.49	RF0	-0.39	RMVFR	0.33
Th-229	inh	AREA	-0.59	RF0	-0.53	RMVFR	0.47	H	-0.22
Th-230	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.47	H	-0.22
Th-232	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.47	H	-0.22
Tl-204	ext	DSTH	-0.85	AREA	-0.23	RF0	-0.17	UD	0.13
U-232	inh	AREA	-0.6	RF0	-0.53	RMVFR	0.46	H	-0.21
U-233	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.47	H	-0.22
U-234	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.47	H	-0.22
U-235	inh	AREA	-0.58	RF0	-0.48	RMVFR	0.43	DSTH	-0.26
U-236	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.47	H	-0.22
U-238	inh	AREA	-0.59	RF0	-0.53	RMVFR	0.47	H	-0.22
Zn-65	ext	DSTH	-1						

[a] ext = external, ing = ingestion, inh = inhalation.

Table C.9 First Four Most Sensitive Parameters Based on SRRC for a 900-m^2 Area Source in the Building Occupancy Scenario									
	Dominant	Rank 1		Rank 2		Rank 3		Rank 4	
Radionuclide	Pathway[a]	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC
Ac-227	inh	AREA	-0.6	RF0	-0.54	RMVFR	0.47	H	-0.21
Ag-108	ext	DSTH	-0.99						
Ag-110	ext	DSTH	-1						
Al-26	ext	DSTH	-0.99						
Am-241	inh	AREA	-0.58	RF0	-0.54	RMVFR	0.46	H	-0.22
Am-243	inh	AREA	-0.58	RF0	-0.54	RMVFR	0.46	H	-0.22
Au-195	ext	DSTH	-0.9	AREA	-0.18	RF0	-0.14	RMVFR	0.13
Bi-207	ext	DSTH	-0.99						
C-14	inh + ing	AREA	-0.46	DKSUS	-0.43	RF0	-0.4	RMVFR	0.33
Ca-41	inh + ing	AREA	-0.47	DKSUS	-0.43	RF0	-0.41	RMVFR	0.35
Cd-109	inh	AREA	-0.51	DSTH	-0.45	RF0	-0.4	RMVFR	0.36
Ce-144	ext	DSTH	-0.91	AREA	-0.19	RF0	-0.16	RMVFR	0.1
Cf-252	inh	AREA	-0.6	RF0	-0.54	RMVFR	0.47	H	-0.2
Cl-36	inh	AREA	-0.46	DSTH	-0.44	RF0	-0.39	RMVFR	0.28
Cm-243	inh	AREA	-0.6	RF0	-0.54	RMVFR	0.47	H	-0.21
Cm-244	inh	AREA	-0.6	RF0	-0.54	RMVFR	0.47	H	-0.21
Cm-248	inh	AREA	-0.58	RF0	-0.54	RMVFR	0.46	H	-0.22
Co-57	ext	DSTH	-0.99						
Co-60	ext	DSTH	-1						
Cs-134	ext	DSTH	-1						
Cs-135	ing	DKSUS	-0.47	AREA	-0.45	RF0	-0.38	RMVFR	0.32
Cs-137	ext	DSTH	-0.98						
Eu-152	ext	DSTH	-1						
Eu-154	ext	DSTH	-0.99						

Table C.9 First Four Most Sensitive Parameters Based on SRRC for a 900-m^2 Area Source in the Building Occupancy Scenario (Continued)									
		Rank 1		Rank 2		Rank 3		Rank 4	
Radionuclide	Dominant Pathway[a]	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC
Eu-155	ext	DSTH	-0.88	AREA	-0.22	RF0	-0.17	RMVFR	0.14
Fe-55	inh	AREA	-0.59	RF0	-0.53	RMVFR	0.46	H	-0.21
Gd-152	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.47	H	-0.21
Gd-153	ext	DSTH	-0.9	AREA	-0.19	RF0	-0.15	RMVFR	0.13
Ge-68	ext	DSTH	-1						
H-3	inh + ing	AREA	-0.53	RF0	-0.47	RMVFR	0.39	DKSUS	-0.29
I-129	inh + ing	DKSUS	-0.45	AREA	-0.43	RF0	-0.36	RMVFR	0.3
K-40	ext	DSTH	-0.97						
Mn-54	ext	DSTH	-1						
Na-22	ext	DSTH	-1						
Nb-94	ext	DSTH	-0.98						
Ni-59	inh	AREA	-0.55	RF0	-0.51	RMVFR	0.42	H	-0.2
Ni-63	inh	AREA	-0.55	RF0	-0.52	RMVFR	0.43	H	-0.2
Np-237	inh	AREA	-0.58	RF0	-0.54	RMVFR	0.46	H	-0.22
Pa-231	inh	AREA	-0.58	RF0	-0.54	RMVFR	0.46	H	-0.22
Pb-210	inh + ing	AREA	-0.54	RF0	-0.49	RMVFR	0.4	DKSUS	-0.25
Pm-147	inh	AREA	-0.6	RF0	-0.53	RMVFR	0.47	H	-0.2
Pu-238	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.47	H	-0.21
Pu-239	inh	AREA	-0.58	RF0	-0.54	RMVFR	0.46	H	-0.22
Pu-240	inh	AREA	-0.58	RF0	-0.54	RMVFR	0.46	H	-0.22
Pu-241	inh	AREA	-0.6	RF0	-0.54	RMVFR	0.47	H	-0.21
Pu-242	inh	AREA	-0.58	RF0	-0.54	RMVFR	0.46	H	-0.22
Pu-244	inh	AREA	-0.58	RF0	-0.51	RMVFR	0.43	H	-0.22
Ra-226	ext	DSTH	-0.83	AREA	-0.23	RF0	-0.2	UD	0.12
Ra-228	ext	DSTH	-0.56	AREA	-0.48	RF0	-0.38	RMVFR	0.32
Ru-106	ext	DSTH	-0.95	AREA	-0.13	RF0	-0.12		
Sb-125	ext	DSTH	-1						
Sm-147	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.47	H	-0.22

Table C.9 First Four Most Sensitive Parameters Based on SRRC for a 900-m^2 Area Source in the Building Occupancy Scenario (Continued)									
		Rank 1		Rank 2		Rank 3		Rank 4	
Radionuclide	Dominant Pathway[a]	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC	Parameter	SRRC
Sm-151	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.46	H	-0.21
Sr-90	inh	AREA	-0.56	RF0	-0.51	RMVFR	0.41	H	-0.2
Tc-99	inh + ing	AREA	-0.52	RF0	-0.46	RMVFR	0.37	DKSUS	-0.26
Th-228	inh	AREA	-0.59	RF0	-0.49	RMVFR	0.43	DSTH	-0.26
Th-229	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.47	H	-0.22
Th-230	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.47	H	-0.22
Th-232	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.47	H	-0.22
Tl-204	ext	DSTH	-0.71	AREA	-0.32	RF0	-0.23	UD	0.18
U-232	inh	AREA	-0.6	RF0	-0.54	RMVFR	0.47	H	-0.21
U-233	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.47	H	-0.22
U-234	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.47	H	-0.22
U-235	inh	AREA	-0.59	RF0	-0.53	RMVFR	0.46	H	-0.22
U-236	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.47	H	-0.22
U-238	inh	AREA	-0.59	RF0	-0.54	RMVFR	0.47	H	-0.22
Zn-65	ext	DSTH	-1						

[a] ext = external, ing = ingestion, inh = inhalation.