Contract No:

This document was prepared in conjunction with work accomplished under Contract No. 89303321CEM000080 with the U.S. Department of Energy (DOE) Office of Environmental Management (EM).

Disclaimer:

APPENDIX G: SUPPORTING INFORMATION: INADVERTENT HUMAN INTRUDER

This appendix contains supporting information and key data used during the IHI analysis, including the following:

- A list of parent radionuclides requiring IHI inventory limits (Section G.1)
- Tables of IHI acute and chronic dose factors, inventory limits, and concentration limits for all DUs (Section G.2)
- IHI acute and chronic dose history time profiles for all DUs (Section G.3)

G.1 GENERIC AND SPECIAL WASTE FORM RADIONCUILIDES

Each DU-type has its own unique list of generic and SWF parent radionuclides that require inventory limits (Table G-1). For the NR pads (i.e., NRCDAs), two DU-types are employed within the screening process: (1) NRCDAG for generic waste; (2) NRCDAS for special waste forms. Application of these two DU-types to the two NR pads results in the following: (1) NR07E contains SWF radionuclides only and is a closed DU; (2) NR26E contains both generic and SWF disposals and is currently open.

Table G-1. DU-Types with Generic and Special Waste Form Parent Radionuclides Requiring Inadvertent Human Intruder Inventory Limits

Waste Form Radionuclide	Trenches (STs and ETs)	LAWV	ILV	NRCDAs	
				NR07E	NR26E
Generic Waste Forms					
Ag-108m	X				
Am-241	X				
Am-242m	X				
Am-243	X				
C-14	X				
Cf-249	X				
Cf-251	X				
Cm-247	X				
Cm-248	X				
Cs-137	X	X	X		
I-129	X				
K-40	X				
Nb-94	X	X			
Ni-59	X				
Ni-63	X				
Np-237	X				
Pu-239	X				
Pu-240	X				
Pu-241	X				
Ra-226	X	X	X		
Sn-126	X				
Sr-90	X	X			
Tc-99	X				
Th-229	X				
Th-230	X				
U-232	X				
U-233	X				
U-234	X				
U-236	X				
Number of Generic WF Radionuclides:	29	4	2	0	0

Table G-1 (cont'd). DU-Types with Generic and Special Waste Form Parent Radionuclides Requiring Inadvertent Human Intruder Inventory Limits

Waste Form Radionuclide	Trenches (STs and ETs)	LAWV	ILV	NRCDAs	
				NR07E	NR26E
Special Waste Forms					
U-233D	X				
C-14N	X				
C-14X	X				
Cs-137T			X		
I-129C	X				
I-129D	X				
I-129E	X				
I-129F	X				
I-129G	X				
I-129H	X				
I-129I	X				
I-129J	X				
Ra-226T	X				
Th-230T	X				
C-14K	X				
I-129K	X				
Tc-99K	X				
I-129R	X				
Sr-90R	X				
Tc-99R	X				
U-234G	X				
U-236G	X				
Ag-108mH	X				
C-14H	X				
Nb-94H	X				
Ni-59H	X				
Ni-63H	X				
Tc-99H	X				
Am-241A	X				
Am-242mA	X				
Am-243A	X				
C-14A	X				
Cf-249A	X				
Cf-251A	X				
Cm-247A	X				
Cm-248A	X				
Cs-137A	X				
I-129A	X				
K-40A	X				
Nb-94A	X				
Ni-59A	X				
Ni-63A	X				
Np-237A	X				
Pu-239A	X				
Pu-240A	X				
Pu-241A	X				
Ra-226A	X				

Table G-1 (cont'd). DU-Types with Generic and Special Waste Form Parent Radionuclides Requiring Inadvertent Human Intruder Inventory Limits

Waste Form Radionuclide	Trenches (STs and ETs)	LAWV	ILV	NRCDAs	
				NR07E	NR26E
Special Waste Forms (cont'd)					
Sn-126A	X				
Sr-90A	X				
Tc-99A	X				
U-232A	X				
U-233A	X				
U-233E (A) [a]	X				
U-234A	X				
U-236A	X				
Am-241B	X				
C-14B	X				
Cs-137B	X				
I-129B	X				
Ni-59B	X				
Np-237B	X				
Pu-239B	X				
Pu-240B	X				
Pu-241B	X				
Sr-90B	X				
Tc-99B	X				
U-233B	X				
U-233E (B) [a]	X				
U-234B	X				
Am-241S				X	X
Am-243S				X	X
Co-60S				X	X
Cs-137S				X	X
Mo-93S				X	X
Nb-93mS				X	X
Nb-94S				X	X
Ni-59S				X	X
Pu-241S				X	X
Sn-121mS					X
Sn-126S				X	X
Sr-90S				X	X
Zr-93S				X	X
Number of SWF Radionuclides:	68	0	1	12	13

Notes:

[a] Depleted uranium (U-233) contained within a special waste form.

The list of radionuclides for trenches provided in Table G-1 is employed for each specific trench (20 STs and 9 ETs). A breakdown of STs and ETs containing SWFs is provided in Table G-2, along with a tally of the SWF radionuclides per DU.

Table G-2. Slit and Engineered Trenches with Buried Special Waste Form Radionuclides Requiring Inadvertent Human Intruder Inventory Limits

Special Waste Form Radionuclides	ST01	ST02	ST03	ST04	ST05	ST06	ST07	ST08	ST09	ST10	ST11	ST14	ST17	ST18	ST19	ST20	ST21	ST22	ST23	ST24	ET01	ET02-ET09
U-233D	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
C-14N	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Ra-226T						X																
Th-230T						X																
C-14X									X													
U-234G		X																				
U-236G		X																				
I-129R					X																	
Sr-90R					X																	
Tc-99R					X																	
I-129C			X				X															
I-129D		X																			X	
I-129E																					X	
I-129F	X																					
I-129G		X																			X	
I-129H		X		X																	X	
I-129I		X	X	X																	X	
I-129J	X	X	X	X	X		X														X	
Am-241B								X	X	X												
C-14B								X	X	X												
Cs-137B								X	X	X												
I-129B								X	X	X												
Ni-59B								X	X	X												
Np-237B									X	X												
Pu-239B									X	X												
Pu-240B									X	X												
Pu-241B									X	X												
Sr-90B								X	X	X												
Tc-99B								X	X	X												
U-233B								X	X	X												
U-233E (B) [a]									X	X												
U-234B									X	X												
Ag-108mH												X										
C-14H												X										
Nb-94H												X										
Ni-59H												X										
Ni-63H												X										
Tc-99H												X										

Table G-2 (cont'd). Slit and Engineered Trenches with Buried Special Waste Form Radionuclides Requiring Inadvertent Human Intruder Inventory Limits

Special Waste Form Radionuclides	ST01	ST02	ST03	ST04	ST05	ST06	ST07	ST08	ST09	ST10	ST11	ST14	ST17	ST18	ST19	ST20	ST21	ST22	ST23	ST24	ET01	ET02-ET09
Am-241A																			X			
Am-242mA																			X			
Am-243A																			X			
C-14A																			X			
C-14K (A)																			X			
Cf-249A																			X			
Cf-251A																			X			
Cm-247A																			X			
Cm-248A																			X			
Cs-137A																			X			
I-129A																			X			
I-129K																			X			
K-40A																			X			
Nb-94A																			X			
Ni-59A																			X			
Ni-63A																			X			
Np-237A																			X			
Pu-239A																			X			
Pu-240A																			X			
Pu-241A																			X			
Ra-226A																			X			
Sn-126A																			X			
Sr-90A																			X			
Tc-99A																			X			
Tc-99K																			X			
U-232A																			X			
U-233A																			X			
U-233E (A) [a]																			X			
U-234A																			X			
U-236A																			X			
Number of SWF Radionuclides:	4	9	5	5	6	4	4	10	17	16	2	8	2	2	2	2	2	2	31	1	7	1

Notes:

[a] Depleted uranium (U-233) contained within a special waste form.

G.2 INADVERTENT HUMAN INTRUDER INVENTORY LIMITS

A total of 111 parent radionuclides (i.e., 29 within generic waste and 82 within special waste forms) require inventory limits. The IHI acute and chronic dose factors and inventory limits for all 33 DUs are provided in Section G.2.1 for STs, Section G.2.2 for ETs, Section G.2.3 for the LAWV, Section G.2.4 for the ILV, and Section G.2.5 for the NRCDAs. Table G-3 through Table G-64 present the following information on a DU basis for acute and chronic IHI pathways:

- Parent radionuclide name (SWFs have a letter at the end of the name; generic waste forms do not)
- Dose factor (mrem Ci^{-1} for acute and mrem yr^{-1} Ci^{-1} for chronic)
- Time of maximum dose within the compliance period
- Inventory limit in Curies
- Concentration limit ($\mu Ci\ m^{-3}$)
- Waste form limit

The waste form limit indicates the selected inventory limit calculational model. Specifically:

- **Generic:** The physical and chemical barriers of the waste package are not considered.
- **Special**: Some level of accounting for a waste package's physical and chemical barriers is considered.

It is important to note that many SWF radionuclides employ the generic waste form models. Special consideration is given for some SWF radionuclides to increase their inventory limits (e.g., in ST14 for SWF "HWCTR," both Ag-108mH and Nb-94H employ gamma-ray analysis that considers reactor vessel geometry). A generic model is the default; a SWF model is employed only where additional capacity is required.

G.2.1 Slit Trenches

Table G-3. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ST01

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Acute	Ag-108m	4.79E-02	171	1.04E+04	5.06E+05	Generic
	Am-241	1.05E-03	171	4.77E+05	2.31E+07	Generic
	Am-242m	1.14E-03	171	4.38E+05	2.12E+07	Generic
	Am-243	6.93E-03	171	7.21E+04	3.49E+06	Generic
	C-14	6.42E-07	171	7.79E+08	3.77E+10	Generic
	Cf-249	9.98E-03	171	5.01E+04	2.43E+06	Generic
	Cf-251	4.58E-03	171	1.09E+05	5.29E+06	Generic
	Cm-247	1.38E-02	1,171	3.63E+04	1.76E+06	Generic
	Cm-248	6.08E-02	171	8.22E+03	3.98E+05	Generic
	Cs-137	5.35E-04	171	9.34E+05	4.53E+07	Generic
	I-129	1.80E-04	171	2.77E+06	1.34E+08	Generic
	K-40	7.00E-03	171	7.14E+04	3.46E+06	Generic
	Nb-94	6.26E-02	171	7.99E+03	3.87E+05	Generic
	Ni-59	6.70E-07	171	7.47E+08	3.62E+10	Generic
	Ni-63	6.24E-08	171	8.01E+09	3.88E+11	Generic
	Np-237	8.16E-03	1,171	6.13E+04	2.97E+06	Generic
	Pu-239	1.32E-03	171	3.80E+05	1.84E+07	Generic
	Pu-240	1.30E-03	171	3.85E+05	1.86E+07	Generic
	Pu-241	3.60E-05	171	1.39E+07	6.73E+08	Generic
	Ra-226	7.00E-02	171	7.14E+03	3.46E+05	Generic
	Sn-126	7.69E-02	171	6.50E+03	3.15E+05	Generic
	Sr-90	6.61E-06	171	7.56E+07	3.66E+09	Generic
	Tc-99	1.68E-06	171	2.97E+08	1.44E+10	Generic
	Th-229	1.26E-02	171	3.97E+04	1.92E+06	Generic
	Th-230	3.02E-02	1,171	1.65E+04	8.02E+05	Generic
	U-232	1.35E-02	171	3.70E+04	1.79E+06	Generic
	U-233	1.48E-03	1,171	3.39E+05	1.64E+07	Generic
	U-234	3.14E-04	1,171	1.59E+06	7.72E+07	Generic
	U-236	1.24E-04	1,171	4.02E+06	1.95E+08	Generic
	U-233D	1.48E-03	1,171	3.39E+05	1.64E+07	Generic
	C-14N	6.42E-07	171	7.79E+08	3.77E+10	Generic
	I-129F	1.80E-04	171	2.77E+06	1.34E+08	Generic
	I-129J	1.80E-04	171	2.77E+06	1.34E+08	Generic

Notes:

SWF radionuclides with no future inventory are highlighted in red when a generic waste form model is employed to set disposal limits.

Table G-4. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ST01

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (µCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	1.12E-03	171	8.94E+04	4.33E+06	Generic
	Am-241	2.21E-05	171	4.53E+06	2.19E+08	Generic
	Am-242m	2.35E-05	171	4.25E+06	2.06E+08	Generic
	Am-243	9.85E-05	171	1.02E+06	4.92E+07	Generic
	C-14	7.98E-05	171	1.25E+06	6.07E+07	Generic
	Cf-249	1.28E-04	171	7.82E+05	3.79E+07	Generic
	Cf-251	7.14E-05	171	1.40E+06	6.79E+07	Generic
	Cm-247	1.81E-04	1,171	5.52E+05	2.67E+07	Generic
	Cm-248	7.10E-04	171	1.41E+05	6.82E+06	Generic
	Cs-137	1.56E-05	171	6.42E+06	3.11E+08	Generic
	I-129	1.50E-03	171	6.66E+04	3.23E+06	Generic
	K-40	5.97E-03	824	1.68E+04	8.12E+05	Generic
	Nb-94	5.04E-03	824	1.98E+04	9.61E+05	Generic
	Ni-59	1.64E-06	171	6.11E+07	2.96E+09	Generic
	Ni-63	1.32E-06	171	7.58E+07	3.67E+09	Generic
	Np-237	5.54E-04	1,171	1.80E+05	8.74E+06	Generic
	Pu-239	1.62E-05	171	6.19E+06	3.00E+08	Generic
	Pu-240	1.60E-05	171	6.27E+06	3.04E+08	Generic
	Pu-241	7.58E-07	171	1.32E+08	6.39E+09	Generic
	Ra-226	4.16E-02	824	2.40E+03	1.16E+05	Generic
	Sn-126	3.53E-03	824	2.84E+04	1.37E+06	Generic
	Sr-90	9.17E-05	171	1.09E+06	5.28E+07	Generic
	Tc-99	1.51E-02	171	6.61E+03	3.20E+05	Generic
	Th-229	3.76E-03	824	2.66E+04	1.29E+06	Generic
	Th-230	2.34E-02	1,171	4.27E+03	2.07E+05	Generic
	U-232	2.21E-02	171	4.53E+03	2.20E+05	Generic
	U-233	8.01E-04	1,171	1.25E+05	6.05E+06	Generic
	U-234	5.02E-04	1,171	1.99E+05	9.66E+06	Generic
	U-236	3.45E-04	171	2.90E+05	1.41E+07	Generic
	U-233D	8.01E-04	1,171	1.25E+05	6.05E+06	Generic
	C-14N	7.98E-05	171	1.25E+06	6.07E+07	Generic
	I-129F	1.50E-03	171	6.66E+04	3.23E+06	Generic
	I-129J	1.50E-03	171	6.66E+04	3.23E+06	Generic

Notes:

SWF radionuclides with no future inventory are highlighted in red when a generic waste form model is employed to set disposal limits.

Table G-5. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ST02

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	4.82E-02	171	1.04E+04	5.03E+05	Generic
	Am-241	1.05E-03	171	4.74E+05	2.30E+07	Generic
	Am-242m	1.15E-03	171	4.34E+05	2.10E+07	Generic
	Am-243	6.94E-03	171	7.20E+04	3.49E+06	Generic
	C-14	6.43E-07	171	7.78E+08	3.77E+10	Generic
	Cf-249	1.00E-02	171	4.98E+04	2.41E+06	Generic
	Cf-251	4.59E-03	171	1.09E+05	5.28E+06	Generic
	Cm-247	1.38E-02	1,171	3.63E+04	1.76E+06	Generic
	Cm-248	6.09E-02	171	8.21E+03	3.98E+05	Generic
	Cs-137	5.74E-04	171	8.71E+05	4.22E+07	Generic
	I-129	1.80E-04	171	2.77E+06	1.34E+08	Generic
	K-40	7.01E-03	171	7.14E+04	3.46E+06	Generic
	Nb-94	6.26E-02	171	7.99E+03	3.87E+05	Generic
	Ni-59	6.70E-07	171	7.46E+08	3.62E+10	Generic
	Ni-63	6.38E-08	171	7.84E+09	3.80E+11	Generic
	Np-237	8.17E-03	1,171	6.12E+04	2.97E+06	Generic
	Pu-239	1.32E-03	171	3.79E+05	1.84E+07	Generic
	Pu-240	1.30E-03	171	3.84E+05	1.86E+07	Generic
	Pu-241	3.62E-05	171	1.38E+07	6.70E+08	Generic
	Ra-226	7.02E-02	171	7.13E+03	3.46E+05	Generic
	Sn-126	7.70E-02	171	6.50E+03	3.15E+05	Generic
	Sr-90	7.12E-06	171	7.03E+07	3.41E+09	Generic
	Tc-99	1.68E-06	171	2.97E+08	1.44E+10	Generic
	Th-229	1.26E-02	171	3.96E+04	1.92E+06	Generic
	Th-230	3.01E-02	1,171	1.66E+04	8.05E+05	Generic
	U-232	1.39E-02	171	3.59E+04	1.74E+06	Generic
	U-233	1.47E-03	1,171	3.40E+05	1.65E+07	Generic
	U-234	3.13E-04	1,171	1.60E+06	7.76E+07	Generic
	U-236	1.25E-04	1,171	4.02E+06	1.95E+08	Generic
	U-233D	1.47E-03	1,171	3.40E+05	1.65E+07	Generic
	U-234G	3.13E-04	1,171	1.60E+06	7.76E+07	Generic
	U-236G	1.25E-04	1,171	4.02E+06	1.95E+08	Generic
	C-14N	6.43E-07	171	7.78E+08	3.77E+10	Generic
	I-129D	1.80E-04	171	2.77E+06	1.34E+08	Generic
	I-129G	1.80E-04	171	2.77E+06	1.34E+08	Generic
	I-129H	1.80E-04	171	2.77E+06	1.34E+08	Generic
	I-129I	1.80E-04	171	2.77E+06	1.34E+08	Generic
	I-129J	1.80E-04	171	2.77E+06	1.34E+08	Generic

Notes:

SWF radionuclides with no future inventory are highlighted in red when a generic waste form model is employed to set disposal limits.

Table G-6. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ST02

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	1.13E-03	171	8.89E+04	4.31E+06	Generic
	Am-241	2.22E-05	171	4.50E+06	2.18E+08	Generic
	Am-242m	2.38E-05	171	4.20E+06	2.04E+08	Generic
	Am-243	9.86E-05	171	1.01E+06	4.92E+07	Generic
	C-14	8.00E-05	171	1.25E+06	6.06E+07	Generic
	Cf-249	1.29E-04	171	7.77E+05	3.77E+07	Generic
	Cf-251	7.16E-05	171	1.40E+06	6.77E+07	Generic
	Cm-247	1.81E-04	1,171	5.52E+05	2.67E+07	Generic
	Cm-248	7.11E-04	171	1.41E+05	6.82E+06	Generic
	Cs-137	1.67E-05	171	5.98E+06	2.90E+08	Generic
	I-129	1.50E-03	171	6.65E+04	3.23E+06	Generic
	K-40	5.97E-03	824	1.67E+04	8.12E+05	Generic
	Nb-94	5.05E-03	824	1.98E+04	9.61E+05	Generic
	Ni-59	1.64E-06	171	6.10E+07	2.96E+09	Generic
	Ni-63	1.35E-06	171	7.42E+07	3.60E+09	Generic
	Np-237	5.55E-04	1,171	1.80E+05	8.74E+06	Generic
	Pu-239	1.62E-05	171	6.18E+06	3.00E+08	Generic
	Pu-240	1.60E-05	171	6.26E+06	3.04E+08	Generic
	Pu-241	7.62E-07	171	1.31E+08	6.36E+09	Generic
	Ra-226	4.17E-02	824	2.40E+03	1.16E+05	Generic
	Sn-126	3.53E-03	824	2.83E+04	1.37E+06	Generic
	Sr-90	9.87E-05	171	1.01E+06	4.92E+07	Generic
	Tc-99	1.51E-02	171	6.61E+03	3.20E+05	Generic
	Th-229	3.76E-03	824	2.66E+04	1.29E+06	Generic
	Th-230	2.33E-02	1,171	4.28E+03	2.08E+05	Generic
	U-232	2.28E-02	171	4.39E+03	2.13E+05	Generic
	U-233	8.00E-04	1,171	1.25E+05	6.06E+06	Generic
	U-234	5.01E-04	1,171	2.00E+05	9.68E+06	Generic
	U-236	3.45E-04	171	2.90E+05	1.41E+07	Generic
	U-233D	8.00E-04	1,171	1.25E+05	6.06E+06	Generic
	U-234G	5.01E-04	1,171	2.00E+05	9.68E+06	Generic
	U-236G	3.45E-04	171	2.90E+05	1.41E+07	Generic
	C-14N	8.00E-05	171	1.25E+06	6.06E+07	Generic
	I-129D	1.50E-03	171	6.65E+04	3.23E+06	Generic
	I-129G	1.50E-03	171	6.65E+04	3.23E+06	Generic
	I-129H	1.50E-03	171	6.65E+04	3.23E+06	Generic
	I-129I	1.50E-03	171	6.65E+04	3.23E+06	Generic
	I-129J	1.50E-03	171	6.65E+04	3.23E+06	Generic

Notes:

SWF radionuclides with no future inventory are highlighted in red when a generic waste form model is employed to set disposal limits.

Table G-7. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ST03

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	4.85E-02	171	1.03E+04	5.00E+05	Generic
	Am-241	1.06E-03	171	4.71E+05	2.29E+07	Generic
	Am-242m	1.17E-03	171	4.29E+05	2.08E+07	Generic
	Am-243	6.95E-03	171	7.20E+04	3.49E+06	Generic
	C-14	6.43E-07	171	7.78E+08	3.77E+10	Generic
	Cf-249	1.01E-02	171	4.94E+04	2.40E+06	Generic
	Cf-251	4.60E-03	171	1.09E+05	5.27E+06	Generic
	Cm-247	1.38E-02	1,171	3.63E+04	1.76E+06	Generic
	Cm-248	6.09E-02	171	8.21E+03	3.98E+05	Generic
	Cs-137	6.22E-04	171	8.04E+05	3.90E+07	Generic
	I-129	1.80E-04	171	2.77E+06	1.34E+08	Generic
	K-40	7.01E-03	171	7.13E+04	3.46E+06	Generic
	Nb-94	6.26E-02	171	7.98E+03	3.87E+05	Generic
	Ni-59	6.71E-07	171	7.46E+08	3.62E+10	Generic
	Ni-63	6.54E-08	171	7.65E+09	3.71E+11	Generic
	Np-237	8.17E-03	1,171	6.12E+04	2.97E+06	Generic
	Pu-239	1.32E-03	171	3.79E+05	1.84E+07	Generic
	Pu-240	1.30E-03	171	3.84E+05	1.86E+07	Generic
	Pu-241	3.64E-05	171	1.37E+07	6.66E+08	Generic
	Ra-226	7.03E-02	171	7.11E+03	3.45E+05	Generic
	Sn-126	7.70E-02	171	6.49E+03	3.15E+05	Generic
	Sr-90	7.74E-06	171	6.46E+07	3.13E+09	Generic
	Tc-99	1.68E-06	171	2.97E+08	1.44E+10	Generic
	Th-229	1.26E-02	171	3.96E+04	1.92E+06	Generic
	Th-230	3.01E-02	1,171	1.66E+04	8.06E+05	Generic
	U-232	1.44E-02	171	3.46E+04	1.68E+06	Generic
	U-233	1.47E-03	1,171	3.40E+05	1.65E+07	Generic
	U-234	3.12E-04	1,171	1.60E+06	7.77E+07	Generic
	U-236	1.25E-04	1,171	4.01E+06	1.95E+08	Generic
	U-233D	1.47E-03	1,171	3.40E+05	1.65E+07	Generic
	C-14N	6.43E-07	171	7.78E+08	3.77E+10	Generic
	I-129C	1.80E-04	171	2.77E+06	1.34E+08	Generic
	I-129I	1.80E-04	171	2.77E+06	1.34E+08	Generic
	I-129J	1.80E-04	171	2.77E+06	1.34E+08	Generic

Notes:

SWF radionuclides with no future inventory are highlighted in red when a generic waste form model is employed to set disposal limits.

Table G-8. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ST03

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	1.13E-03	171	8.83E+04	4.28E+06	Generic
	Am-241	2.23E-05	171	4.48E+06	2.17E+08	Generic
	Am-242m	2.41E-05	171	4.14E+06	2.01E+08	Generic
	Am-243	9.86E-05	171	1.01E+06	4.92E+07	Generic
	C-14	8.00E-05	171	1.25E+06	6.06E+07	Generic
	Cf-249	1.30E-04	171	7.72E+05	3.74E+07	Generic
	Cf-251	7.18E-05	171	1.39E+06	6.75E+07	Generic
	Cm-247	1.81E-04	1,171	5.52E+05	2.68E+07	Generic
	Cm-248	7.11E-04	171	1.41E+05	6.82E+06	Generic
	Cs-137	1.81E-05	171	5.52E+06	2.68E+08	Generic
	I-129	1.50E-03	171	6.65E+04	3.23E+06	Generic
	K-40	5.98E-03	824	1.67E+04	8.12E+05	Generic
	Nb-94	5.05E-03	824	1.98E+04	9.61E+05	Generic
	Ni-59	1.64E-06	171	6.10E+07	2.96E+09	Generic
	Ni-63	1.38E-06	171	7.24E+07	3.51E+09	Generic
	Np-237	5.55E-04	1,171	1.80E+05	8.74E+06	Generic
	Pu-239	1.62E-05	171	6.18E+06	3.00E+08	Generic
	Pu-240	1.60E-05	171	6.26E+06	3.04E+08	Generic
	Pu-241	7.67E-07	171	1.30E+08	6.33E+09	Generic
	Ra-226	4.17E-02	824	2.40E+03	1.16E+05	Generic
	Sn-126	3.53E-03	824	2.83E+04	1.37E+06	Generic
	Sr-90	1.07E-04	171	9.32E+05	4.52E+07	Generic
	Tc-99	1.51E-02	171	6.61E+03	3.20E+05	Generic
	Th-229	3.76E-03	824	2.66E+04	1.29E+06	Generic
	Th-230	2.33E-02	1,171	4.29E+03	2.08E+05	Generic
	U-232	2.36E-02	171	4.24E+03	2.06E+05	Generic
	U-233	7.99E-04	1,171	1.25E+05	6.07E+06	Generic
	U-234	5.01E-04	1,171	2.00E+05	9.69E+06	Generic
	U-236	3.45E-04	171	2.90E+05	1.41E+07	Generic
	U-233D	7.99E-04	1,171	1.25E+05	6.07E+06	Generic
	C-14N	8.00E-05	171	1.25E+06	6.06E+07	Generic
	I-129C	1.50E-03	171	6.65E+04	3.23E+06	Generic
	I-129I	1.50E-03	171	6.65E+04	3.23E+06	Generic
	I-129J	1.50E-03	171	6.65E+04	3.23E+06	Generic

Notes:

SWF radionuclides with no future inventory are highlighted in red when a generic waste form model is employed to set disposal limits.

Table G-9. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ST04

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	4.85E-02	171	1.03E+04	5.00E+05	Generic
	Am-241	1.06E-03	171	4.71E+05	2.28E+07	Generic
	Am-242m	1.17E-03	171	4.29E+05	2.08E+07	Generic
	Am-243	6.95E-03	171	7.20E+04	3.49E+06	Generic
	C-14	6.43E-07	171	7.77E+08	3.77E+10	Generic
	Cf-249	1.01E-02	171	4.94E+04	2.39E+06	Generic
	Cf-251	4.61E-03	171	1.09E+05	5.26E+06	Generic
	Cm-247	1.38E-02	1,171	3.63E+04	1.76E+06	Generic
	Cm-248	6.09E-02	171	8.21E+03	3.98E+05	Generic
	Cs-137	6.29E-04	171	7.95E+05	3.85E+07	Generic
	I-129	1.80E-04	171	2.77E+06	1.34E+08	Generic
	K-40	7.01E-03	171	7.13E+04	3.46E+06	Generic
	Nb-94	6.26E-02	171	7.98E+03	3.87E+05	Generic
	Ni-59	6.71E-07	171	7.46E+08	3.62E+10	Generic
	Ni-63	6.56E-08	171	7.62E+09	3.70E+11	Generic
	Np-237	8.17E-03	1,171	6.12E+04	2.97E+06	Generic
	Pu-239	1.32E-03	171	3.79E+05	1.84E+07	Generic
	Pu-240	1.30E-03	171	3.84E+05	1.86E+07	Generic
	Pu-241	3.64E-05	171	1.37E+07	6.65E+08	Generic
	Ra-226	7.03E-02	171	7.11E+03	3.45E+05	Generic
	Sn-126	7.70E-02	171	6.49E+03	3.15E+05	Generic
	Sr-90	7.84E-06	171	6.38E+07	3.09E+09	Generic
	Tc-99	1.68E-06	171	2.97E+08	1.44E+10	Generic
	Th-229	1.26E-02	171	3.96E+04	1.92E+06	Generic
	Th-230	3.01E-02	1,171	1.66E+04	8.06E+05	Generic
	U-232	1.45E-02	171	3.45E+04	1.67E+06	Generic
	U-233	1.47E-03	1,171	3.40E+05	1.65E+07	Generic
	U-234	3.12E-04	1,171	1.60E+06	7.77E+07	Generic
	U-236	1.25E-04	1,171	4.01E+06	1.95E+08	Generic
	U-233D	1.47E-03	1,171	3.40E+05	1.65E+07	Generic
	C-14N	6.43E-07	171	7.77E+08	3.77E+10	Generic
	I-129H	1.80E-04	171	2.77E+06	1.34E+08	Generic
	I-129I	1.80E-04	171	2.77E+06	1.34E+08	Generic
	I-129J	1.80E-04	171	2.77E+06	1.34E+08	Generic

Notes:

SWF radionuclides with no future inventory are highlighted in red when a generic waste form model is employed to set disposal limits.

Table G-10. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ST04

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	1.13E-03	171	8.83E+04	4.28E+06	Generic
	Am-241	2.24E-05	171	4.47E+06	2.17E+08	Generic
	Am-242m	2.42E-05	171	4.13E+06	2.00E+08	Generic
	Am-243	9.87E-05	171	1.01E+06	4.92E+07	Generic
	C-14	8.00E-05	171	1.25E+06	6.06E+07	Generic
	Cf-249	1.30E-04	171	7.71E+05	3.74E+07	Generic
	Cf-251	7.18E-05	171	1.39E+06	6.75E+07	Generic
	Cm-247	1.81E-04	1,171	5.52E+05	2.68E+07	Generic
	Cm-248	7.11E-04	171	1.41E+05	6.82E+06	Generic
	Cs-137	1.83E-05	171	5.46E+06	2.65E+08	Generic
	I-129	1.50E-03	171	6.65E+04	3.23E+06	Generic
	K-40	5.98E-03	824	1.67E+04	8.12E+05	Generic
	Nb-94	5.05E-03	824	1.98E+04	9.61E+05	Generic
	Ni-59	1.64E-06	171	6.10E+07	2.96E+09	Generic
	Ni-63	1.39E-06	171	7.22E+07	3.50E+09	Generic
	Np-237	5.55E-04	1,171	1.80E+05	8.74E+06	Generic
	Pu-239	1.62E-05	171	6.18E+06	3.00E+08	Generic
	Pu-240	1.60E-05	171	6.26E+06	3.03E+08	Generic
	Pu-241	7.67E-07	171	1.30E+08	6.32E+09	Generic
	Ra-226	4.18E-02	824	2.39E+03	1.16E+05	Generic
	Sn-126	3.53E-03	824	2.83E+04	1.37E+06	Generic
	Sr-90	1.09E-04	171	9.20E+05	4.46E+07	Generic
	Tc-99	1.51E-02	171	6.61E+03	3.20E+05	Generic
	Th-229	3.76E-03	824	2.66E+04	1.29E+06	Generic
	Th-230	2.33E-02	1,171	4.29E+03	2.08E+05	Generic
	U-232	2.37E-02	171	4.22E+03	2.05E+05	Generic
	U-233	7.99E-04	1,171	1.25E+05	6.07E+06	Generic
	U-234	5.01E-04	1,171	2.00E+05	9.69E+06	Generic
	U-236	3.45E-04	171	2.90E+05	1.41E+07	Generic
	U-233D	7.99E-04	1,171	1.25E+05	6.07E+06	Generic
	C-14N	8.00E-05	171	1.25E+06	6.06E+07	Generic
	I-129H	1.50E-03	171	6.65E+04	3.23E+06	Generic
	I-129I	1.50E-03	171	6.65E+04	3.23E+06	Generic
	I-129J	1.50E-03	171	6.65E+04	3.23E+06	Generic

Notes:

SWF radionuclides with no future inventory are highlighted in red when a generic waste form model is employed to set disposal limits.

Table G-11. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ST05

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	4.82E-02	171	1.04E+04	5.03E+05	Generic
	Am-241	1.06E-03	171	4.74E+05	2.30E+07	Generic
	Am-242m	1.15E-03	171	4.33E+05	2.10E+07	Generic
	Am-243	6.94E-03	171	7.20E+04	3.49E+06	Generic
	C-14	6.43E-07	171	7.78E+08	3.77E+10	Generic
	Cf-249	1.01E-02	171	4.97E+04	2.41E+06	Generic
	Cf-251	4.59E-03	171	1.09E+05	5.28E+06	Generic
	Cm-247	1.38E-02	1,171	3.63E+04	1.76E+06	Generic
	Cm-248	6.09E-02	171	8.21E+03	3.98E+05	Generic
	Cs-137	5.77E-04	171	8.66E+05	4.20E+07	Generic
	I-129	1.80E-04	171	2.77E+06	1.34E+08	Generic
	K-40	7.01E-03	171	7.13E+04	3.46E+06	Generic
	Nb-94	6.26E-02	171	7.98E+03	3.87E+05	Generic
	Ni-59	6.70E-07	171	7.46E+08	3.62E+10	Generic
	Ni-63	6.39E-08	171	7.82E+09	3.79E+11	Generic
	Np-237	8.17E-03	1,171	6.12E+04	2.97E+06	Generic
	Pu-239	1.32E-03	171	3.79E+05	1.84E+07	Generic
	Pu-240	1.30E-03	171	3.84E+05	1.86E+07	Generic
	Pu-241	3.62E-05	171	1.38E+07	6.69E+08	Generic
	Ra-226	7.02E-02	171	7.12E+03	3.45E+05	Generic
	Sn-126	7.70E-02	171	6.49E+03	3.15E+05	Generic
	Sr-90	7.16E-06	171	6.98E+07	3.39E+09	Generic
	Tc-99	1.68E-06	171	2.97E+08	1.44E+10	Generic
	Th-229	1.26E-02	171	3.96E+04	1.92E+06	Generic
	Th-230	3.01E-02	1,171	1.66E+04	8.06E+05	Generic
	U-232	1.40E-02	171	3.58E+04	1.74E+06	Generic
	U-233	1.47E-03	1,171	3.40E+05	1.65E+07	Generic
	U-234	3.12E-04	1,171	1.60E+06	7.77E+07	Generic
	U-236	1.25E-04	1,171	4.01E+06	1.95E+08	Generic
	U-233D	1.47E-03	1,171	3.40E+05	1.65E+07	Generic
	C-14N	6.43E-07	171	7.78E+08	3.77E+10	Generic
	I-129J	1.80E-04	171	2.77E+06	1.34E+08	Generic
	I-129R	1.80E-04	171	2.77E+06	1.34E+08	Generic
	Sr-90R	7.16E-06	171	6.98E+07	3.39E+09	Generic
	Tc-99R	1.68E-06	171	2.97E+08	1.44E+10	Generic

Notes:

SWF radionuclides with no future inventory are highlighted in red when a generic waste form model is employed to set disposal limits.

Table G-12. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ST05

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	1.13E-03	171	8.88E+04	4.31E+06	Generic
	Am-241	2.22E-05	171	4.50E+06	2.18E+08	Generic
	Am-242m	2.39E-05	171	4.19E+06	2.03E+08	Generic
	Am-243	9.86E-05	171	1.01E+06	4.92E+07	Generic
	C-14	8.00E-05	171	1.25E+06	6.06E+07	Generic
	Cf-249	1.29E-04	171	7.77E+05	3.77E+07	Generic
	Cf-251	7.16E-05	171	1.40E+06	6.77E+07	Generic
	Cm-247	1.81E-04	1,171	5.52E+05	2.68E+07	Generic
	Cm-248	7.11E-04	171	1.41E+05	6.82E+06	Generic
	Cs-137	1.68E-05	171	5.95E+06	2.89E+08	Generic
	I-129	1.50E-03	171	6.65E+04	3.23E+06	Generic
	K-40	5.98E-03	824	1.67E+04	8.12E+05	Generic
	Nb-94	5.05E-03	824	1.98E+04	9.61E+05	Generic
	Ni-59	1.64E-06	171	6.10E+07	2.96E+09	Generic
	Ni-63	1.35E-06	171	7.41E+07	3.59E+09	Generic
	Np-237	5.55E-04	1,171	1.80E+05	8.74E+06	Generic
	Pu-239	1.62E-05	171	6.18E+06	3.00E+08	Generic
	Pu-240	1.60E-05	171	6.26E+06	3.04E+08	Generic
	Pu-241	7.63E-07	171	1.31E+08	6.36E+09	Generic
	Ra-226	4.17E-02	824	2.40E+03	1.16E+05	Generic
	Sn-126	3.53E-03	824	2.83E+04	1.37E+06	Generic
	Sr-90	9.93E-05	171	1.01E+06	4.89E+07	Generic
	Tc-99	1.51E-02	171	6.61E+03	3.20E+05	Generic
	Th-229	3.76E-03	824	2.66E+04	1.29E+06	Generic
	Th-230	2.33E-02	1,171	4.29E+03	2.08E+05	Generic
	U-232	2.28E-02	171	4.38E+03	2.13E+05	Generic
	U-233	7.99E-04	1,171	1.25E+05	6.07E+06	Generic
	U-234	5.00E-04	1,171	2.00E+05	9.69E+06	Generic
	U-236	3.45E-04	171	2.90E+05	1.41E+07	Generic
	U-233D	7.99E-04	1,171	1.25E+05	6.07E+06	Generic
	C-14N	8.00E-05	171	1.25E+06	6.06E+07	Generic
	I-129J	1.50E-03	171	6.65E+04	3.23E+06	Generic
	I-129R	1.50E-03	171	6.65E+04	3.23E+06	Generic
	Sr-90R	9.93E-05	171	1.01E+06	4.89E+07	Generic
	Tc-99R	1.51E-02	171	6.61E+03	3.20E+05	Generic

Notes:

SWF radionuclides with no future inventory are highlighted in red when a generic waste form model is employed to set disposal limits.

Table G-13. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ST06

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	5.10E-02	171	9.80E+03	4.75E+05	Generic
	Am-241	1.11E-03	171	4.49E+05	2.18E+07	Generic
	Am-242m	1.28E-03	171	3.91E+05	1.89E+07	Generic
	Am-243	6.97E-03	171	7.18E+04	3.48E+06	Generic
	C-14	6.46E-07	171	7.75E+08	3.76E+10	Generic
	Cf-249	1.07E-02	171	4.65E+04	2.26E+06	Generic
	Cf-251	4.72E-03	171	1.06E+05	5.14E+06	Generic
	Cm-247	1.38E-02	1,171	3.63E+04	1.76E+06	Generic
	Cm-248	6.09E-02	171	8.21E+03	3.98E+05	Generic
	Cs-137	1.26E-03	171	3.97E+05	1.92E+07	Generic
	I-129	1.80E-04	171	2.77E+06	1.34E+08	Generic
	K-40	7.01E-03	171	7.13E+04	3.46E+06	Generic
	Nb-94	6.27E-02	171	7.97E+03	3.87E+05	Generic
	Ni-59	6.71E-07	171	7.45E+08	3.62E+10	Generic
	Ni-63	8.09E-08	171	6.18E+09	3.00E+11	Generic
	Np-237	8.17E-03	1,171	6.12E+04	2.97E+06	Generic
	Pu-239	1.32E-03	171	3.79E+05	1.84E+07	Generic
	Pu-240	1.31E-03	171	3.83E+05	1.86E+07	Generic
	Pu-241	3.82E-05	171	1.31E+07	6.35E+08	Generic
	Ra-226	7.12E-02	171	7.02E+03	3.41E+05	Generic
	Sn-126	7.70E-02	171	6.49E+03	3.15E+05	Generic
	Sr-90	1.62E-05	171	3.08E+07	1.49E+09	Generic
	Tc-99	1.68E-06	171	2.97E+08	1.44E+10	Generic
	Th-229	1.27E-02	171	3.95E+04	1.92E+06	Generic
	Th-230	3.01E-02	1,171	1.66E+04	8.07E+05	Generic
	U-232	1.97E-02	171	2.54E+04	1.23E+06	Generic
	U-233	1.47E-03	1,171	3.41E+05	1.65E+07	Generic
	U-234	3.11E-04	1,171	1.61E+06	7.79E+07	Generic
	U-236	1.25E-04	1,171	4.01E+06	1.95E+08	Generic
	U-233D	1.47E-03	1,171	3.41E+05	1.65E+07	Generic
	C-14N	6.46E-07	171	7.75E+08	3.76E+10	Generic
	Ra-226T	7.12E-02	171	7.02E+03	3.41E+05	Generic
	Th-230T	3.01E-02	1,171	1.66E+04	8.07E+05	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

SWF radionuclides with no future inventory are highlighted in red when a generic waste form model is employed to set disposal limits.

Table G-14. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ST06

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	1.19E-03	171	8.39E+04	4.07E+06	Generic
	Am-241	2.35E-05	171	4.26E+06	2.07E+08	Generic
	Am-242m	2.72E-05	171	3.68E+06	1.79E+08	Generic
	Am-243	9.89E-05	171	1.01E+06	4.90E+07	Generic
	C-14	8.03E-05	171	1.25E+06	6.04E+07	Generic
	Cf-249	1.38E-04	171	7.27E+05	3.52E+07	Generic
	Cf-251	7.35E-05	171	1.36E+06	6.59E+07	Generic
	Cm-247	1.81E-04	1,171	5.52E+05	2.68E+07	Generic
	Cm-248	7.11E-04	171	1.41E+05	6.82E+06	Generic
	Cs-137	3.67E-05	171	2.72E+06	1.32E+08	Generic
	I-129	1.50E-03	171	6.65E+04	3.23E+06	Generic
	K-40	5.98E-03	824	1.67E+04	8.12E+05	Generic
	Nb-94	5.05E-03	824	1.98E+04	9.60E+05	Generic
	Ni-59	1.64E-06	171	6.10E+07	2.96E+09	Generic
	Ni-63	1.71E-06	171	5.85E+07	2.84E+09	Generic
	Np-237	5.55E-04	1,171	1.80E+05	8.74E+06	Generic
	Pu-239	1.62E-05	171	6.17E+06	2.99E+08	Generic
	Pu-240	1.60E-05	171	6.24E+06	3.03E+08	Generic
	Pu-241	8.04E-07	171	1.24E+08	6.03E+09	Generic
	Ra-226	4.23E-02	824	2.36E+03	1.15E+05	Generic
	Sn-126	3.53E-03	824	2.83E+04	1.37E+06	Generic
	Sr-90	2.25E-04	171	4.44E+05	2.15E+07	Generic
	Tc-99	1.51E-02	171	6.61E+03	3.20E+05	Generic
	Th-229	3.78E-03	824	2.65E+04	1.28E+06	Generic
	Th-230	2.33E-02	1,171	4.30E+03	2.08E+05	Generic
	U-232	3.21E-02	171	3.11E+03	1.51E+05	Generic
	U-233	7.98E-04	1,171	1.25E+05	6.08E+06	Generic
	U-234	5.00E-04	1,171	2.00E+05	9.70E+06	Generic
	U-236	3.45E-04	171	2.90E+05	1.41E+07	Generic
	U-233D	7.98E-04	1,171	1.25E+05	6.08E+06	Generic
	C-14N	8.03E-05	171	1.25E+06	6.04E+07	Generic
	Ra-226T	4.23E-02	824	2.36E+03	1.15E+05	Generic
	Th-230T	2.33E-02	1,171	4.30E+03	2.08E+05	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

SWF radionuclides with no future inventory are highlighted in red when a generic waste form model is employed to set disposal limits.

Table G-15. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ST07

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	5.10E-02	171	9.80E+03	4.75E+05	Generic
	Am-241	1.11E-03	171	4.49E+05	2.18E+07	Generic
	Am-242m	1.28E-03	171	3.91E+05	1.89E+07	Generic
	Am-243	6.97E-03	171	7.18E+04	3.48E+06	Generic
	C-14	6.45E-07	171	7.75E+08	3.76E+10	Generic
	Cf-249	1.07E-02	171	4.65E+04	2.26E+06	Generic
	Cf-251	4.71E-03	171	1.06E+05	5.14E+06	Generic
	Cm-247	1.38E-02	1,171	3.63E+04	1.76E+06	Generic
	Cm-248	6.09E-02	171	8.21E+03	3.98E+05	Generic
	Cs-137	1.26E-03	171	3.97E+05	1.92E+07	Generic
	I-129	1.80E-04	171	2.77E+06	1.34E+08	Generic
	K-40	7.01E-03	171	7.13E+04	3.46E+06	Generic
	Nb-94	6.27E-02	171	7.97E+03	3.87E+05	Generic
	Ni-59	6.71E-07	171	7.46E+08	3.62E+10	Generic
	Ni-63	8.09E-08	171	6.18E+09	3.00E+11	Generic
	Np-237	8.17E-03	1,171	6.12E+04	2.97E+06	Generic
	Pu-239	1.32E-03	171	3.79E+05	1.84E+07	Generic
	Pu-240	1.31E-03	171	3.83E+05	1.86E+07	Generic
	Pu-241	3.82E-05	171	1.31E+07	6.35E+08	Generic
	Ra-226	7.12E-02	171	7.02E+03	3.41E+05	Generic
	Sn-126	7.70E-02	171	6.49E+03	3.15E+05	Generic
	Sr-90	1.62E-05	171	3.08E+07	1.49E+09	Generic
	Tc-99	1.68E-06	171	2.97E+08	1.44E+10	Generic
	Th-229	1.27E-02	171	3.95E+04	1.92E+06	Generic
	Th-230	3.00E-02	1,171	1.66E+04	8.07E+05	Generic
	U-232	1.97E-02	171	2.54E+04	1.23E+06	Generic
	U-233	1.47E-03	1,171	3.41E+05	1.65E+07	Generic
	U-234	3.11E-04	1,171	1.61E+06	7.79E+07	Generic
	U-236	1.25E-04	1,171	4.01E+06	1.95E+08	Generic
	U-233D	1.47E-03	1,171	3.41E+05	1.65E+07	Generic
	C-14N	6.45E-07	171	7.75E+08	3.76E+10	Generic
	I-129C	1.80E-04	171	2.77E+06	1.34E+08	Generic
	I-129J	1.80E-04	171	2.77E+06	1.34E+08	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

SWF radionuclides with no future inventory are highlighted in red when a generic waste form model is employed to set disposal limits.

Table G-16. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ST07

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	1.19E-03	171	8.40E+04	4.07E+06	Generic
	Am-241	2.35E-05	171	4.26E+06	2.07E+08	Generic
	Am-242m	2.72E-05	171	3.68E+06	1.79E+08	Generic
	Am-243	9.89E-05	171	1.01E+06	4.90E+07	Generic
	C-14	8.03E-05	171	1.25E+06	6.04E+07	Generic
	Cf-249	1.38E-04	171	7.27E+05	3.52E+07	Generic
	Cf-251	7.35E-05	171	1.36E+06	6.59E+07	Generic
	Cm-247	1.81E-04	1,171	5.52E+05	2.68E+07	Generic
	Cm-248	7.11E-04	171	1.41E+05	6.82E+06	Generic
	Cs-137	3.67E-05	171	2.72E+06	1.32E+08	Generic
	I-129	1.50E-03	171	6.65E+04	3.23E+06	Generic
	K-40	5.98E-03	824	1.67E+04	8.12E+05	Generic
	Nb-94	5.05E-03	824	1.98E+04	9.60E+05	Generic
	Ni-59	1.64E-06	171	6.10E+07	2.96E+09	Generic
	Ni-63	1.71E-06	171	5.85E+07	2.84E+09	Generic
	Np-237	5.55E-04	1,171	1.80E+05	8.74E+06	Generic
	Pu-239	1.62E-05	171	6.17E+06	2.99E+08	Generic
	Pu-240	1.60E-05	171	6.24E+06	3.03E+08	Generic
	Pu-241	8.04E-07	171	1.24E+08	6.03E+09	Generic
	Ra-226	4.23E-02	824	2.36E+03	1.15E+05	Generic
	Sn-126	3.53E-03	824	2.83E+04	1.37E+06	Generic
	Sr-90	2.25E-04	171	4.44E+05	2.15E+07	Generic
	Tc-99	1.51E-02	171	6.61E+03	3.20E+05	Generic
	Th-229	3.77E-03	824	2.65E+04	1.28E+06	Generic
	Th-230	2.33E-02	1,171	4.30E+03	2.08E+05	Generic
	U-232	3.21E-02	171	3.11E+03	1.51E+05	Generic
	U-233	7.98E-04	1,171	1.25E+05	6.08E+06	Generic
	U-234	5.00E-04	1,171	2.00E+05	9.70E+06	Generic
	U-236	3.45E-04	171	2.90E+05	1.41E+07	Generic
	U-233D	7.98E-04	1,171	1.25E+05	6.08E+06	Generic
	C-14N	8.03E-05	171	1.25E+06	6.04E+07	Generic
	I-129C	1.50E-03	171	6.65E+04	3.23E+06	Generic
	I-129J	1.50E-03	171	6.65E+04	3.23E+06	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

SWF radionuclides with no future inventory are highlighted in red when a generic waste form model is employed to set disposal limits.

Table G-17. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ST08

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	5.10E-02	171	9.80E+03	4.75E+05	Generic
	Am-241	1.11E-03	171	4.49E+05	2.18E+07	Generic
	Am-242m	1.28E-03	171	3.91E+05	1.89E+07	Generic
	Am-243	6.97E-03	171	7.18E+04	3.48E+06	Generic
	C-14	6.45E-07	171	7.75E+08	3.76E+10	Generic
	Cf-249	1.07E-02	171	4.65E+04	2.26E+06	Generic
	Cf-251	4.71E-03	171	1.06E+05	5.14E+06	Generic
	Cm-247	1.38E-02	1,171	3.63E+04	1.76E+06	Generic
	Cm-248	6.09E-02	171	8.21E+03	3.98E+05	Generic
	Cs-137	1.26E-03	171	3.97E+05	1.92E+07	Generic
	I-129	1.80E-04	171	2.77E+06	1.34E+08	Generic
	K-40	7.01E-03	171	7.13E+04	3.46E+06	Generic
	Nb-94	6.27E-02	171	7.97E+03	3.87E+05	Generic
	Ni-59	6.71E-07	171	7.46E+08	3.62E+10	Generic
	Ni-63	8.09E-08	171	6.18E+09	3.00E+11	Generic
	Np-237	8.17E-03	1,171	6.12E+04	2.97E+06	Generic
	Pu-239	1.32E-03	171	3.79E+05	1.84E+07	Generic
	Pu-240	1.31E-03	171	3.83E+05	1.86E+07	Generic
	Pu-241	3.82E-05	171	1.31E+07	6.35E+08	Generic
	Ra-226	7.12E-02	171	7.02E+03	3.41E+05	Generic
	Sn-126	7.70E-02	171	6.49E+03	3.15E+05	Generic
	Sr-90	1.62E-05	171	3.08E+07	1.49E+09	Generic
	Tc-99	1.68E-06	171	2.97E+08	1.44E+10	Generic
	Th-229	1.27E-02	171	3.95E+04	1.92E+06	Generic
	Th-230	3.00E-02	1,171	1.66E+04	8.07E+05	Generic
	U-232	1.97E-02	171	2.54E+04	1.23E+06	Generic
	U-233	1.47E-03	1,171	3.41E+05	1.65E+07	Generic
	U-234	3.11E-04	1,171	1.61E+06	7.79E+07	Generic
	U-236	1.25E-04	1,171	4.02E+06	1.95E+08	Generic
	U-233D	1.47E-03	1,171	3.41E+05	1.65E+07	Generic
	C-14N	6.45E-07	171	7.75E+08	3.76E+10	Generic
	Am-241B	3.34E-03	171	1.50E+05	5.03E+07	Special
	C-14B	1.94E-06	171	2.58E+08	8.69E+10	Special
	Cs-137B	3.78E-03	171	1.32E+05	4.45E+07	Special
	I-129B	5.41E-04	171	9.24E+05	3.11E+08	Special
	Ni-59B	2.01E-06	171	2.49E+08	8.36E+10	Special
	Sr-90B	5.01E-05	171	9.98E+06	3.36E+09	Special
	Tc-99B	5.05E-06	171	9.90E+07	3.33E+10	Special
	U-233B	4.40E-03	1,171	1.14E+05	3.82E+07	Special

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

SWF radionuclides with no future inventory are highlighted in red when a generic waste form model is employed to set disposal limits.

SWF radionuclides with no future inventory are highlighted in yellow when a SWF model is employed to set disposal limits.

Table G-18. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ST08

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	1.19E-03	171	8.40E+04	4.07E+06	Generic
	Am-241	2.35E-05	171	4.26E+06	2.07E+08	Generic
	Am-242m	2.72E-05	171	3.68E+06	1.79E+08	Generic
	Am-243	9.89E-05	171	1.01E+06	4.90E+07	Generic
	C-14	8.03E-05	171	1.25E+06	6.04E+07	Generic
	Cf-249	1.38E-04	171	7.27E+05	3.52E+07	Generic
	Cf-251	7.35E-05	171	1.36E+06	6.59E+07	Generic
	Cm-247	1.81E-04	1,171	5.52E+05	2.68E+07	Generic
	Cm-248	7.11E-04	171	1.41E+05	6.82E+06	Generic
	Cs-137	3.67E-05	171	2.72E+06	1.32E+08	Generic
	I-129	1.50E-03	171	6.65E+04	3.23E+06	Generic
	K-40	5.98E-03	824	1.67E+04	8.12E+05	Generic
	Nb-94	5.05E-03	824	1.98E+04	9.60E+05	Generic
	Ni-59	1.64E-06	171	6.10E+07	2.96E+09	Generic
	Ni-63	1.71E-06	171	5.85E+07	2.84E+09	Generic
	Np-237	5.55E-04	1,171	1.80E+05	8.74E+06	Generic
	Pu-239	1.62E-05	171	6.17E+06	2.99E+08	Generic
	Pu-240	1.60E-05	171	6.24E+06	3.03E+08	Generic
	Pu-241	8.04E-07	171	1.24E+08	6.03E+09	Generic
	Ra-226	4.23E-02	824	2.36E+03	1.15E+05	Generic
	Sn-126	3.53E-03	824	2.83E+04	1.37E+06	Generic
	Sr-90	2.25E-04	171	4.44E+05	2.15E+07	Generic
	Tc-99	1.51E-02	171	6.61E+03	3.20E+05	Generic
	Th-229	3.77E-03	824	2.65E+04	1.28E+06	Generic
	Th-230	2.33E-02	1,171	4.30E+03	2.08E+05	Generic
	U-232	3.21E-02	171	3.11E+03	1.51E+05	Generic
	U-233	7.98E-04	1,171	1.25E+05	6.08E+06	Generic
	U-234	5.00E-04	1,171	2.00E+05	9.70E+06	Generic
	U-236	3.45E-04	171	2.90E+05	1.41E+07	Generic
	U-233D	7.98E-04	1,171	1.25E+05	6.08E+06	Generic
	C-14N	8.03E-05	171	1.25E+06	6.04E+07	Generic
	Am-241B	7.04E-05	171	1.42E+06	4.78E+08	Special
	C-14B	2.41E-04	171	4.15E+05	1.40E+08	Special
	Cs-137B	1.82E-04	171	5.50E+05	1.85E+08	Special
	I-129B	4.51E-03	171	2.22E+04	7.46E+06	Special
	Ni-59B	4.92E-06	171	2.03E+07	6.84E+09	Special
	Sr-90B	7.52E-04	171	1.33E+05	4.47E+07	Special
	Tc-99B	4.54E-02	171	2.20E+03	7.41E+05	Special
	U-233B	2.50E-03	1,171	4.00E+04	1.35E+07	Special

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

SWF radionuclides with no future inventory are highlighted in red when a generic waste form model is employed to set disposal limits.

SWF radionuclides with no future inventory are highlighted in yellow when a SWF model is employed to set disposal limits.

Table G-19. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ST09

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	5.10E-02	171	9.80E+03	4.75E+05	Generic
	Am-241	1.11E-03	171	4.49E+05	2.18E+07	Generic
	Am-242m	1.28E-03	171	3.91E+05	1.90E+07	Generic
	Am-243	6.97E-03	171	7.18E+04	3.48E+06	Generic
	C-14	6.45E-07	171	7.75E+08	3.76E+10	Generic
	Cf-249	1.07E-02	171	4.65E+04	2.26E+06	Generic
	Cf-251	4.71E-03	171	1.06E+05	5.14E+06	Generic
	Cm-247	1.38E-02	1,171	3.63E+04	1.76E+06	Generic
	Cm-248	6.09E-02	171	8.21E+03	3.98E+05	Generic
	Cs-137	1.26E-03	171	3.97E+05	1.92E+07	Generic
	I-129	1.80E-04	171	2.77E+06	1.34E+08	Generic
	K-40	7.01E-03	171	7.13E+04	3.46E+06	Generic
	Nb-94	6.27E-02	171	7.97E+03	3.87E+05	Generic
	Ni-59	6.71E-07	171	7.46E+08	3.62E+10	Generic
	Ni-63	8.09E-08	171	6.18E+09	3.00E+11	Generic
	Np-237	8.17E-03	1,171	6.12E+04	2.97E+06	Generic
	Pu-239	1.32E-03	171	3.79E+05	1.84E+07	Generic
	Pu-240	1.31E-03	171	3.83E+05	1.86E+07	Generic
	Pu-241	3.82E-05	171	1.31E+07	6.35E+08	Generic
	Ra-226	7.12E-02	171	7.02E+03	3.41E+05	Generic
	Sn-126	7.70E-02	171	6.49E+03	3.15E+05	Generic
	Sr-90	1.62E-05	171	3.08E+07	1.49E+09	Generic
	Tc-99	1.68E-06	171	2.97E+08	1.44E+10	Generic
	Th-229	1.27E-02	171	3.95E+04	1.92E+06	Generic
	Th-230	3.00E-02	1,171	1.67E+04	8.10E+05	Generic
	U-232	1.97E-02	171	2.54E+04	1.23E+06	Generic
	U-233	1.46E-03	1,171	3.42E+05	1.66E+07	Generic
	U-234	3.10E-04	1,171	1.61E+06	7.82E+07	Generic
	U-236	1.25E-04	1,171	4.02E+06	1.95E+08	Generic
	U-233D	1.46E-03	1,171	3.42E+05	1.66E+07	Generic
	C-14N	6.45E-07	171	7.75E+08	3.76E+10	Generic
	C-14X	6.45E-07	171	7.75E+08	3.76E+10	Generic
	Am-241B	3.34E-03	171	1.50E+05	5.03E+07	Special
	C-14B	1.94E-06	171	2.58E+08	8.69E+10	Special
	Cs-137B	3.78E-03	171	1.32E+05	4.45E+07	Special
	I-129B	5.41E-04	171	9.24E+05	3.11E+08	Special
	Ni-59B	2.01E-06	171	2.49E+08	8.36E+10	Special
	Np-237B	2.45E-02	1,171	2.04E+04	6.87E+06	Special
	Pu-239B	3.96E-03	171	1.26E+05	4.25E+07	Special
	Pu-240B	3.92E-03	171	1.28E+05	4.29E+07	Special
	Pu-241B	1.15E-04	171	4.36E+06	1.47E+09	Special
	Sr-90B	5.01E-05	171	9.98E+06	3.36E+09	Special
	Tc-99B	5.05E-06	171	9.90E+07	3.33E+10	Special
	U-233B	4.39E-03	1,171	1.14E+05	3.83E+07	Special
	U-233E	4.39E-03	1,171	1.14E+05	3.83E+07	Special
	U-234B	9.35E-04	1,171	5.35E+05	1.80E+08	Special

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

SWF radionuclides with no future inventory are highlighted in red when a generic waste form model is employed to set disposal limits.

SWF radionuclides with future inventory are highlighted in blue when a SWF model is employed to set disposal limits.

Table G-20. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ST09

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	1.19E-03	171	8.40E+04	4.07E+06	Generic
	Am-241	2.35E-05	171	4.26E+06	2.07E+08	Generic
	Am-242m	2.71E-05	171	3.68E+06	1.79E+08	Generic
	Am-243	9.89E-05	171	1.01E+06	4.90E+07	Generic
	C-14	8.03E-05	171	1.25E+06	6.04E+07	Generic
	Cf-249	1.38E-04	171	7.27E+05	3.53E+07	Generic
	Cf-251	7.35E-05	171	1.36E+06	6.59E+07	Generic
	Cm-247	1.81E-04	1,171	5.52E+05	2.68E+07	Generic
	Cm-248	7.11E-04	171	1.41E+05	6.82E+06	Generic
	Cs-137	3.67E-05	171	2.72E+06	1.32E+08	Generic
	I-129	1.50E-03	171	6.65E+04	3.23E+06	Generic
	K-40	5.98E-03	824	1.67E+04	8.12E+05	Generic
	Nb-94	5.05E-03	824	1.98E+04	9.60E+05	Generic
	Ni-59	1.64E-06	171	6.10E+07	2.96E+09	Generic
	Ni-63	1.71E-06	171	5.85E+07	2.84E+09	Generic
	Np-237	5.55E-04	1,171	1.80E+05	8.74E+06	Generic
	Pu-239	1.62E-05	171	6.17E+06	2.99E+08	Generic
	Pu-240	1.60E-05	171	6.24E+06	3.03E+08	Generic
	Pu-241	8.04E-07	171	1.24E+08	6.03E+09	Generic
	Ra-226	4.23E-02	824	2.36E+03	1.15E+05	Generic
	Sn-126	3.53E-03	824	2.83E+04	1.37E+06	Generic
	Sr-90	2.25E-04	171	4.44E+05	2.15E+07	Generic
	Tc-99	1.51E-02	171	6.61E+03	3.20E+05	Generic
	Th-229	3.77E-03	824	2.65E+04	1.28E+06	Generic
	Th-230	2.32E-02	1,171	4.31E+03	2.09E+05	Generic
	U-232	3.21E-02	171	3.11E+03	1.51E+05	Generic
	U-233	7.97E-04	1,171	1.26E+05	6.09E+06	Generic
	U-234	4.99E-04	1,171	2.00E+05	9.72E+06	Generic
	U-236	3.45E-04	171	2.90E+05	1.41E+07	Generic
	U-233D	7.97E-04	1,171	1.26E+05	6.09E+06	Generic
	C-14N	8.03E-05	171	1.25E+06	6.04E+07	Generic
	C-14X	8.03E-05	171	1.25E+06	6.04E+07	Generic
	Am-241B	7.04E-05	171	1.42E+06	4.78E+08	Special
	C-14B	2.41E-04	171	4.15E+05	1.40E+08	Special
	Cs-137B	1.82E-04	171	5.50E+05	1.85E+08	Special
	I-129B	4.51E-03	171	2.22E+04	7.46E+06	Special
	Ni-59B	4.92E-06	171	2.03E+07	6.84E+09	Special
	Np-237B	1.66E-03	1,171	6.01E+04	2.02E+07	Special
	Pu-239B	4.86E-05	171	2.06E+06	6.92E+08	Special
	Pu-240B	4.81E-05	171	2.08E+06	7.00E+08	Special
	Pu-241B	2.41E-06	171	4.15E+07	1.39E+10	Special
	Sr-90B	7.52E-04	171	1.33E+05	4.47E+07	Special
	Tc-99B	4.54E-02	171	2.20E+03	7.41E+05	Special
	U-233B	2.49E-03	1,171	4.01E+04	1.35E+07	Special
	U-233E	2.49E-03	1,171	4.01E+04	1.35E+07	Special
	U-234B	1.62E-03	1,171	6.17E+04	2.08E+07	Special

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

SWF radionuclides with no future inventory are highlighted in red when a generic waste form model is employed to set disposal limits.

SWF radionuclides with future inventory are highlighted in blue when a SWF model is employed to set disposal limits.

Table G-21. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ST10

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	5.61E-02	171	8.91E+03	4.75E+05	Generic
	Am-241	1.23E-03	171	4.08E+05	2.18E+07	Generic
	Am-242m	1.41E-03	171	3.56E+05	1.90E+07	Generic
	Am-243	7.67E-03	171	6.52E+04	3.48E+06	Generic
	C-14	7.10E-07	171	7.04E+08	3.76E+10	Generic
	Cf-249	1.18E-02	171	4.23E+04	2.26E+06	Generic
	Cf-251	5.19E-03	171	9.64E+04	5.14E+06	Generic
	Cm-247	1.51E-02	1,171	3.30E+04	1.76E+06	Generic
	Cm-248	6.70E-02	171	7.46E+03	3.98E+05	Generic
	Cs-137	1.39E-03	171	3.60E+05	1.92E+07	Generic
	I-129	1.99E-04	171	2.52E+06	1.34E+08	Generic
	K-40	7.71E-03	171	6.48E+04	3.46E+06	Generic
	Nb-94	6.90E-02	171	7.25E+03	3.87E+05	Generic
	Ni-59	7.38E-07	171	6.77E+08	3.62E+10	Generic
	Ni-63	8.90E-08	171	5.62E+09	3.00E+11	Generic
	Np-237	8.99E-03	1,171	5.56E+04	2.97E+06	Generic
	Pu-239	1.45E-03	171	3.44E+05	1.84E+07	Generic
	Pu-240	1.44E-03	171	3.48E+05	1.86E+07	Generic
	Pu-241	4.21E-05	171	1.19E+07	6.35E+08	Generic
	Ra-226	7.84E-02	171	6.38E+03	3.41E+05	Generic
	Sn-126	8.48E-02	171	5.90E+03	3.15E+05	Generic
	Sr-90	1.79E-05	171	2.80E+07	1.49E+09	Generic
	Tc-99	1.85E-06	171	2.70E+08	1.44E+10	Generic
	Th-229	1.39E-02	171	3.59E+04	1.92E+06	Generic
	Th-230	3.27E-02	1,171	1.53E+04	8.15E+05	Generic
	U-232	2.16E-02	171	2.31E+04	1.23E+06	Generic
	U-233	1.60E-03	1,171	3.13E+05	1.67E+07	Generic
	U-234	3.38E-04	1,171	1.48E+06	7.90E+07	Generic
	U-236	1.37E-04	1,171	3.65E+06	1.95E+08	Generic
	U-233D	1.60E-03	1,171	3.13E+05	1.67E+07	Generic
	C-14N	7.10E-07	171	7.04E+08	3.76E+10	Generic
	Am-241B	3.68E-03	171	1.36E+05	5.03E+07	Special
	C-14B	2.13E-06	171	2.35E+08	8.69E+10	Special
	Cs-137B	4.17E-03	171	1.20E+05	4.45E+07	Special
	I-129B	5.96E-04	171	8.39E+05	3.11E+08	Special
	Ni-59B	2.21E-06	171	2.26E+08	8.36E+10	Special
	Np-237B	2.70E-02	1,171	1.85E+04	6.87E+06	Special
	Pu-239B	4.36E-03	171	1.15E+05	4.25E+07	Special
	Pu-240B	4.31E-03	171	1.16E+05	4.29E+07	Special
	Pu-241B	1.26E-04	171	3.96E+06	1.47E+09	Special
	Sr-90B	5.52E-05	171	9.06E+06	3.36E+09	Special
	Tc-99B	5.56E-06	171	8.99E+07	3.33E+10	Special
	U-233B	4.80E-03	1,171	1.04E+05	3.86E+07	Special
	U-233E	4.80E-03	1,171	1.04E+05	3.86E+07	Special
	U-234B	1.02E-03	1,171	4.90E+05	1.82E+08	Special

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

SWF radionuclides with future inventory are highlighted in blue when a SWF model is employed to set disposal limits.

Table G-22. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ST10

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	1.31E-03	171	7.63E+04	4.07E+06	Generic
	Am-241	2.58E-05	171	3.87E+06	2.07E+08	Generic
	Am-242m	2.98E-05	171	3.35E+06	1.79E+08	Generic
	Am-243	1.09E-04	171	9.18E+05	4.90E+07	Generic
	C-14	8.84E-05	171	1.13E+06	6.04E+07	Generic
	Cf-249	1.51E-04	171	6.61E+05	3.53E+07	Generic
	Cf-251	8.09E-05	171	1.24E+06	6.59E+07	Generic
	Cm-247	1.99E-04	1,171	5.02E+05	2.68E+07	Generic
	Cm-248	7.83E-04	171	1.28E+05	6.82E+06	Generic
	Cs-137	4.04E-05	171	2.47E+06	1.32E+08	Generic
	I-129	1.65E-03	171	6.04E+04	3.23E+06	Generic
	K-40	6.58E-03	824	1.52E+04	8.12E+05	Generic
	Nb-94	5.56E-03	824	1.80E+04	9.60E+05	Generic
	Ni-59	1.80E-06	171	5.54E+07	2.96E+09	Generic
	Ni-63	1.88E-06	171	5.32E+07	2.84E+09	Generic
	Np-237	6.11E-04	1,171	1.64E+05	8.74E+06	Generic
	Pu-239	1.78E-05	171	5.61E+06	2.99E+08	Generic
	Pu-240	1.76E-05	171	5.67E+06	3.03E+08	Generic
	Pu-241	8.85E-07	171	1.13E+08	6.03E+09	Generic
	Ra-226	4.66E-02	824	2.15E+03	1.15E+05	Generic
	Sn-126	3.89E-03	824	2.57E+04	1.37E+06	Generic
	Sr-90	2.48E-04	171	4.04E+05	2.15E+07	Generic
	Tc-99	1.67E-02	171	6.00E+03	3.20E+05	Generic
	Th-229	4.15E-03	824	2.41E+04	1.28E+06	Generic
	Th-230	2.54E-02	1,171	3.94E+03	2.11E+05	Generic
	U-232	3.54E-02	171	2.83E+03	1.51E+05	Generic
	U-233	8.73E-04	1,171	1.15E+05	6.12E+06	Generic
	U-234	5.47E-04	1,171	1.83E+05	9.76E+06	Generic
	U-236	3.80E-04	171	2.63E+05	1.41E+07	Generic
	U-233D	8.73E-04	1,171	1.15E+05	6.12E+06	Generic
	C-14N	8.84E-05	171	1.13E+06	6.04E+07	Generic
	Am-241B	7.75E-05	171	1.29E+06	4.78E+08	Special
	C-14B	2.65E-04	171	3.77E+05	1.40E+08	Special
	Cs-137B	2.00E-04	171	5.00E+05	1.85E+08	Special
	I-129B	4.97E-03	171	2.01E+04	7.46E+06	Special
	Ni-59B	5.42E-06	171	1.85E+07	6.84E+09	Special
	Np-237B	1.83E-03	1,171	5.46E+04	2.02E+07	Special
	Pu-239B	5.35E-05	171	1.87E+06	6.92E+08	Special
	Pu-240B	5.29E-05	171	1.89E+06	7.00E+08	Special
	Pu-241B	2.65E-06	171	3.77E+07	1.40E+10	Special
	Sr-90B	8.28E-04	171	1.21E+05	4.47E+07	Special
	Tc-99B	5.00E-02	171	2.00E+03	7.41E+05	Special
	U-233B	2.73E-03	1,171	3.66E+04	1.36E+07	Special
	U-233E	2.73E-03	1,171	3.66E+04	1.36E+07	Special
	U-234B	1.77E-03	1,171	5.64E+04	2.09E+07	Special

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

SWF radionuclides with future inventory are highlighted in blue when a SWF model is employed to set disposal limits.

Table G-23. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ST11

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	6.55E-02	171	7.64E+03	4.75E+05	Generic
	Am-241	1.43E-03	171	3.49E+05	2.18E+07	Generic
	Am-242m	1.64E-03	171	3.05E+05	1.90E+07	Generic
	Am-243	8.94E-03	171	5.59E+04	3.48E+06	Generic
	C-14	8.29E-07	171	6.03E+08	3.76E+10	Generic
	Cf-249	1.38E-02	171	3.63E+04	2.26E+06	Generic
	Cf-251	6.05E-03	171	8.26E+04	5.14E+06	Generic
	Cm-247	1.77E-02	1,171	2.83E+04	1.76E+06	Generic
	Cm-248	7.82E-02	171	6.40E+03	3.98E+05	Generic
	Cs-137	1.62E-03	171	3.09E+05	1.92E+07	Generic
	I-129	2.32E-04	171	2.16E+06	1.34E+08	Generic
	K-40	9.00E-03	171	5.56E+04	3.46E+06	Generic
	Nb-94	8.05E-02	171	6.21E+03	3.87E+05	Generic
	Ni-59	8.61E-07	171	5.81E+08	3.62E+10	Generic
	Ni-63	1.04E-07	171	4.81E+09	3.00E+11	Generic
	Np-237	1.05E-02	1,171	4.77E+04	2.97E+06	Generic
	Pu-239	1.69E-03	171	2.95E+05	1.84E+07	Generic
	Pu-240	1.68E-03	171	2.98E+05	1.86E+07	Generic
	Pu-241	4.91E-05	171	1.02E+07	6.35E+08	Generic
	Ra-226	9.14E-02	171	5.47E+03	3.41E+05	Generic
	Sn-126	9.88E-02	171	5.06E+03	3.15E+05	Generic
	Sr-90	2.08E-05	171	2.40E+07	1.49E+09	Generic
	Tc-99	2.16E-06	171	2.31E+08	1.44E+10	Generic
	Th-229	1.62E-02	171	3.08E+04	1.92E+06	Generic
	Th-230	3.82E-02	1,171	1.31E+04	8.15E+05	Generic
	U-232	2.52E-02	171	1.98E+04	1.23E+06	Generic
	U-233	1.86E-03	1,171	2.69E+05	1.67E+07	Generic
	U-234	3.94E-04	1,171	1.27E+06	7.90E+07	Generic
	U-236	1.60E-04	1,171	3.13E+06	1.95E+08	Generic
	U-233D	1.86E-03	1,171	2.69E+05	1.67E+07	Generic
	C-14N	8.29E-07	171	6.03E+08	3.76E+10	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-24. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ST11

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	1.53E-03	171	6.54E+04	4.07E+06	Generic
	Am-241	3.01E-05	171	3.32E+06	2.07E+08	Generic
	Am-242m	3.48E-05	171	2.87E+06	1.79E+08	Generic
	Am-243	1.27E-04	171	7.87E+05	4.90E+07	Generic
	C-14	1.03E-04	171	9.70E+05	6.04E+07	Generic
	Cf-249	1.77E-04	171	5.66E+05	3.53E+07	Generic
	Cf-251	9.44E-05	171	1.06E+06	6.59E+07	Generic
	Cm-247	2.33E-04	1,171	4.30E+05	2.68E+07	Generic
	Cm-248	9.13E-04	171	1.10E+05	6.82E+06	Generic
	Cs-137	4.71E-05	171	2.12E+06	1.32E+08	Generic
	I-129	1.93E-03	171	5.18E+04	3.23E+06	Generic
	K-40	7.67E-03	824	1.30E+04	8.12E+05	Generic
	Nb-94	6.49E-03	824	1.54E+04	9.60E+05	Generic
	Ni-59	2.10E-06	171	4.75E+07	2.96E+09	Generic
	Ni-63	2.19E-06	171	4.56E+07	2.84E+09	Generic
	Np-237	7.12E-04	1,171	1.40E+05	8.74E+06	Generic
	Pu-239	2.08E-05	171	4.81E+06	2.99E+08	Generic
	Pu-240	2.06E-05	171	4.86E+06	3.03E+08	Generic
	Pu-241	1.03E-06	171	9.69E+07	6.03E+09	Generic
	Ra-226	5.43E-02	824	1.84E+03	1.15E+05	Generic
	Sn-126	4.53E-03	824	2.21E+04	1.37E+06	Generic
	Sr-90	2.89E-04	171	3.46E+05	2.15E+07	Generic
	Tc-99	1.94E-02	171	5.15E+03	3.20E+05	Generic
	Th-229	4.85E-03	824	2.06E+04	1.28E+06	Generic
	Th-230	2.96E-02	1,171	3.38E+03	2.11E+05	Generic
	U-232	4.12E-02	171	2.42E+03	1.51E+05	Generic
	U-233	1.02E-03	1,171	9.82E+04	6.12E+06	Generic
	U-234	6.38E-04	1,171	1.57E+05	9.76E+06	Generic
	U-236	4.43E-04	171	2.26E+05	1.41E+07	Generic
	U-233D	1.02E-03	1,171	9.82E+04	6.12E+06	Generic
	C-14N	1.03E-04	171	9.70E+05	6.04E+07	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-25. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ST14

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	5.10E-02	171	9.80E+03	4.75E+05	Generic
	Am-241	1.11E-03	171	4.49E+05	2.18E+07	Generic
	Am-242m	1.28E-03	171	3.91E+05	1.90E+07	Generic
	Am-243	6.97E-03	171	7.18E+04	3.48E+06	Generic
	C-14	6.45E-07	171	7.75E+08	3.76E+10	Generic
	Cf-249	1.07E-02	171	4.65E+04	2.26E+06	Generic
	Cf-251	4.71E-03	171	1.06E+05	5.14E+06	Generic
	Cm-247	1.38E-02	1,171	3.63E+04	1.76E+06	Generic
	Cm-248	6.09E-02	171	8.21E+03	3.98E+05	Generic
	Cs-137	1.26E-03	171	3.97E+05	1.92E+07	Generic
	I-129	1.80E-04	171	2.77E+06	1.34E+08	Generic
	K-40	7.01E-03	171	7.13E+04	3.46E+06	Generic
	Nb-94	6.27E-02	171	7.97E+03	3.87E+05	Generic
	Ni-59	6.71E-07	171	7.46E+08	3.62E+10	Generic
	Ni-63	8.09E-08	171	6.18E+09	3.00E+11	Generic
	Np-237	8.17E-03	1,171	6.12E+04	2.97E+06	Generic
	Pu-239	1.32E-03	171	3.79E+05	1.84E+07	Generic
	Pu-240	1.31E-03	171	3.83E+05	1.86E+07	Generic
	Pu-241	3.82E-05	171	1.31E+07	6.35E+08	Generic
	Ra-226	7.12E-02	171	7.02E+03	3.41E+05	Generic
	Sn-126	7.70E-02	171	6.49E+03	3.15E+05	Generic
	Sr-90	1.62E-05	171	3.08E+07	1.49E+09	Generic
	Tc-99	1.68E-06	171	2.97E+08	1.44E+10	Generic
	Th-229	1.27E-02	171	3.95E+04	1.92E+06	Generic
	Th-230	2.99E-02	1,171	1.67E+04	8.10E+05	Generic
	U-232	1.97E-02	171	2.54E+04	1.23E+06	Generic
	U-233	1.46E-03	1,171	3.42E+05	1.66E+07	Generic
	U-234	3.10E-04	1,171	1.61E+06	7.82E+07	Generic
	U-236	1.25E-04	1,171	4.02E+06	1.95E+08	Generic
	U-233D	1.46E-03	1,171	3.42E+05	1.66E+07	Generic
	C-14N	6.45E-07	171	7.75E+08	3.76E+10	Generic
	Ag-108mH	7.65E-27	171	---	---	Special
	C-14H	6.45E-07	171	7.75E+08	3.76E+10	Generic
	Nb-94H	9.05E-27	171	---	---	Special
	Ni-59H	6.71E-07	171	7.46E+08	3.62E+10	Generic
	Ni-63H	8.09E-08	171	6.18E+09	3.00E+11	Generic
	Tc-99H	1.68E-06	171	2.97E+08	1.44E+10	Generic

Notes:

--- = numerical values exceeding 1×10^{20}

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

SWF radionuclides with no future inventory are highlighted in red when a generic waste form model is employed to set disposal limits.

SWF radionuclides with no future inventory are highlighted in yellow when a SWF model is employed to set disposal limits.

The SWF model includes explicit gamma ray analyses (Verst, 2021a).

Table G-26. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ST14

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	1.19E-03	171	8.40E+04	4.07E+06	Generic
	Am-241	2.35E-05	171	4.26E+06	2.07E+08	Generic
	Am-242m	2.71E-05	171	3.68E+06	1.79E+08	Generic
	Am-243	9.89E-05	171	1.01E+06	4.90E+07	Generic
	C-14	8.03E-05	171	1.25E+06	6.04E+07	Generic
	Cf-249	1.38E-04	171	7.27E+05	3.53E+07	Generic
	Cf-251	7.35E-05	171	1.36E+06	6.59E+07	Generic
	Cm-247	1.81E-04	1,171	5.52E+05	2.68E+07	Generic
	Cm-248	7.11E-04	171	1.41E+05	6.82E+06	Generic
	Cs-137	3.67E-05	171	2.72E+06	1.32E+08	Generic
	I-129	1.50E-03	171	6.65E+04	3.23E+06	Generic
	K-40	5.98E-03	824	1.67E+04	8.12E+05	Generic
	Nb-94	5.05E-03	824	1.98E+04	9.60E+05	Generic
	Ni-59	1.64E-06	171	6.10E+07	2.96E+09	Generic
	Ni-63	1.71E-06	171	5.85E+07	2.84E+09	Generic
	Np-237	5.55E-04	1,171	1.80E+05	8.74E+06	Generic
	Pu-239	1.62E-05	171	6.17E+06	2.99E+08	Generic
	Pu-240	1.60E-05	171	6.24E+06	3.03E+08	Generic
	Pu-241	8.04E-07	171	1.24E+08	6.03E+09	Generic
	Ra-226	4.23E-02	824	2.36E+03	1.15E+05	Generic
	Sn-126	3.53E-03	824	2.83E+04	1.37E+06	Generic
	Sr-90	2.25E-04	171	4.44E+05	2.15E+07	Generic
	Tc-99	1.51E-02	171	6.61E+03	3.20E+05	Generic
	Th-229	3.77E-03	824	2.65E+04	1.28E+06	Generic
	Th-230	2.32E-02	1,171	4.31E+03	2.09E+05	Generic
	U-232	3.21E-02	171	3.11E+03	1.51E+05	Generic
	U-233	7.97E-04	1,171	1.26E+05	6.09E+06	Generic
	U-234	4.99E-04	1,171	2.00E+05	9.72E+06	Generic
	U-236	3.45E-04	171	2.90E+05	1.41E+07	Generic
	U-233D	7.97E-04	1,171	1.26E+05	6.09E+06	Generic
	C-14N	8.03E-05	171	1.25E+06	6.04E+07	Generic
	Ag-108mH	6.32E-03	423	1.58E+04	1.01E+09	Special
	C-14H	8.03E-05	171	1.25E+06	6.04E+07	Generic
	Nb-94H	2.26E-02	423	4.43E+03	2.83E+08	Special
	Ni-59H	1.64E-06	171	6.10E+07	2.96E+09	Generic
	Ni-63H	1.71E-06	171	5.85E+07	2.84E+09	Generic
	Tc-99H	1.51E-02	171	6.61E+03	3.20E+05	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

SWF radionuclides with no future inventory are highlighted in red when a generic waste form model is employed to set disposal limits.

SWF radionuclides with no future inventory are highlighted in yellow when a SWF model is employed to set disposal limits.

The SWF model includes explicit gamma ray analyses (Verst, 2021a).

Table G-27. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ST17

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	5.38E-02	171	9.29E+03	4.56E+05	Generic
	Am-241	1.17E-03	171	4.26E+05	2.09E+07	Generic
	Am-242m	1.40E-03	171	3.57E+05	1.75E+07	Generic
	Am-243	7.07E-03	171	7.07E+04	3.47E+06	Generic
	C-14	6.56E-07	171	7.63E+08	3.75E+10	Generic
	Cf-249	1.14E-02	171	4.37E+04	2.15E+06	Generic
	Cf-251	4.87E-03	171	1.03E+05	5.05E+06	Generic
	Cm-247	1.39E-02	1,171	3.59E+04	1.76E+06	Generic
	Cm-248	6.17E-02	171	8.11E+03	3.98E+05	Generic
	Cs-137	2.27E-03	171	2.20E+05	1.08E+07	Generic
	I-129	1.83E-04	171	2.74E+06	1.34E+08	Generic
	K-40	7.10E-03	171	7.05E+04	3.46E+06	Generic
	Nb-94	6.35E-02	171	7.87E+03	3.86E+05	Generic
	Ni-59	6.79E-07	171	7.36E+08	3.62E+10	Generic
	Ni-63	9.74E-08	171	5.13E+09	2.52E+11	Generic
	Np-237	8.27E-03	1,171	6.04E+04	2.97E+06	Generic
	Pu-239	1.34E-03	171	3.74E+05	1.84E+07	Generic
	Pu-240	1.33E-03	171	3.77E+05	1.85E+07	Generic
	Pu-241	4.02E-05	171	1.25E+07	6.12E+08	Generic
	Ra-226	7.29E-02	171	6.86E+03	3.37E+05	Generic
	Sn-126	7.80E-02	171	6.41E+03	3.15E+05	Generic
	Sr-90	3.00E-05	171	1.67E+07	8.18E+08	Generic
	Tc-99	1.71E-06	171	2.93E+08	1.44E+10	Generic
	Th-229	1.28E-02	171	3.89E+04	1.91E+06	Generic
	Th-230	3.01E-02	1,171	1.66E+04	8.15E+05	Generic
	U-232	2.56E-02	171	1.95E+04	9.59E+05	Generic
	U-233	1.47E-03	1,171	3.40E+05	1.67E+07	Generic
	U-234	3.11E-04	1,171	1.61E+06	7.90E+07	Generic
	U-236	1.26E-04	1,171	3.96E+06	1.95E+08	Generic
	U-233D	1.47E-03	1,171	3.40E+05	1.67E+07	Generic
	C-14N	6.56E-07	171	7.63E+08	3.75E+10	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-28. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ST17

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	1.26E-03	171	7.95E+04	3.91E+06	Generic
	Am-241	2.47E-05	171	4.04E+06	1.99E+08	Generic
	Am-242m	3.03E-05	171	3.30E+06	1.62E+08	Generic
	Am-243	1.00E-04	171	9.96E+05	4.89E+07	Generic
	C-14	8.16E-05	171	1.23E+06	6.02E+07	Generic
	Cf-249	1.46E-04	171	6.84E+05	3.36E+07	Generic
	Cf-251	7.59E-05	171	1.32E+06	6.47E+07	Generic
	Cm-247	1.83E-04	1,171	5.45E+05	2.68E+07	Generic
	Cm-248	7.20E-04	171	1.39E+05	6.82E+06	Generic
	Cs-137	6.60E-05	171	1.51E+06	7.44E+07	Generic
	I-129	1.52E-03	171	6.57E+04	3.23E+06	Generic
	K-40	6.05E-03	824	1.65E+04	8.12E+05	Generic
	Nb-94	5.12E-03	824	1.95E+04	9.59E+05	Generic
	Ni-59	1.66E-06	171	6.02E+07	2.96E+09	Generic
	Ni-63	2.06E-06	171	4.86E+07	2.39E+09	Generic
	Np-237	5.62E-04	1,171	1.78E+05	8.74E+06	Generic
	Pu-239	1.64E-05	171	6.09E+06	2.99E+08	Generic
	Pu-240	1.63E-05	171	6.14E+06	3.02E+08	Generic
	Pu-241	8.43E-07	171	1.19E+08	5.82E+09	Generic
	Ra-226	4.33E-02	824	2.31E+03	1.13E+05	Generic
	Sn-126	3.57E-03	824	2.80E+04	1.37E+06	Generic
	Sr-90	4.16E-04	171	2.40E+05	1.18E+07	Generic
	Tc-99	1.53E-02	171	6.52E+03	3.20E+05	Generic
	Th-229	3.83E-03	824	2.61E+04	1.28E+06	Generic
	Th-230	2.33E-02	1,171	4.29E+03	2.11E+05	Generic
	U-232	4.18E-02	171	2.39E+03	1.17E+05	Generic
	U-233	8.03E-04	1,171	1.25E+05	6.12E+06	Generic
	U-234	5.03E-04	1,171	1.99E+05	9.76E+06	Generic
	U-236	3.50E-04	171	2.86E+05	1.41E+07	Generic
	U-233D	8.03E-04	1,171	1.25E+05	6.12E+06	Generic
	C-14N	8.16E-05	171	1.23E+06	6.02E+07	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-29. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ST18

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	5.38E-02	171	9.29E+03	4.56E+05	Generic
	Am-241	1.17E-03	171	4.26E+05	2.09E+07	Generic
	Am-242m	1.40E-03	171	3.57E+05	1.75E+07	Generic
	Am-243	7.07E-03	171	7.07E+04	3.47E+06	Generic
	C-14	6.56E-07	171	7.63E+08	3.75E+10	Generic
	Cf-249	1.14E-02	171	4.37E+04	2.15E+06	Generic
	Cf-251	4.87E-03	171	1.03E+05	5.05E+06	Generic
	Cm-247	1.39E-02	1,171	3.59E+04	1.76E+06	Generic
	Cm-248	6.17E-02	171	8.11E+03	3.98E+05	Generic
	Cs-137	2.27E-03	171	2.20E+05	1.08E+07	Generic
	I-129	1.83E-04	171	2.74E+06	1.34E+08	Generic
	K-40	7.10E-03	171	7.05E+04	3.46E+06	Generic
	Nb-94	6.35E-02	171	7.87E+03	3.86E+05	Generic
	Ni-59	6.79E-07	171	7.36E+08	3.62E+10	Generic
	Ni-63	9.74E-08	171	5.13E+09	2.52E+11	Generic
	Np-237	8.27E-03	1,171	6.04E+04	2.97E+06	Generic
	Pu-239	1.34E-03	171	3.74E+05	1.84E+07	Generic
	Pu-240	1.33E-03	171	3.77E+05	1.85E+07	Generic
	Pu-241	4.02E-05	171	1.25E+07	6.12E+08	Generic
	Ra-226	7.29E-02	171	6.86E+03	3.37E+05	Generic
	Sn-126	7.80E-02	171	6.41E+03	3.15E+05	Generic
	Sr-90	3.00E-05	171	1.67E+07	8.18E+08	Generic
	Tc-99	1.71E-06	171	2.93E+08	1.44E+10	Generic
	Th-229	1.28E-02	171	3.89E+04	1.91E+06	Generic
	Th-230	3.01E-02	1,171	1.66E+04	8.15E+05	Generic
	U-232	2.56E-02	171	1.95E+04	9.59E+05	Generic
	U-233	1.47E-03	1,171	3.40E+05	1.67E+07	Generic
	U-234	3.11E-04	1,171	1.61E+06	7.90E+07	Generic
	U-236	1.26E-04	1,171	3.96E+06	1.95E+08	Generic
	U-233D	1.47E-03	1,171	3.40E+05	1.67E+07	Generic
	C-14N	6.56E-07	171	7.63E+08	3.75E+10	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-30. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ST18

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	1.26E-03	171	7.95E+04	3.91E+06	Generic
	Am-241	2.47E-05	171	4.04E+06	1.99E+08	Generic
	Am-242m	3.03E-05	171	3.30E+06	1.62E+08	Generic
	Am-243	1.00E-04	171	9.96E+05	4.89E+07	Generic
	C-14	8.16E-05	171	1.23E+06	6.02E+07	Generic
	Cf-249	1.46E-04	171	6.84E+05	3.36E+07	Generic
	Cf-251	7.59E-05	171	1.32E+06	6.47E+07	Generic
	Cm-247	1.83E-04	1,171	5.45E+05	2.68E+07	Generic
	Cm-248	7.20E-04	171	1.39E+05	6.82E+06	Generic
	Cs-137	6.60E-05	171	1.51E+06	7.44E+07	Generic
	I-129	1.52E-03	171	6.57E+04	3.23E+06	Generic
	K-40	6.05E-03	824	1.65E+04	8.12E+05	Generic
	Nb-94	5.12E-03	824	1.95E+04	9.59E+05	Generic
	Ni-59	1.66E-06	171	6.02E+07	2.96E+09	Generic
	Ni-63	2.06E-06	171	4.86E+07	2.39E+09	Generic
	Np-237	5.62E-04	1,171	1.78E+05	8.74E+06	Generic
	Pu-239	1.64E-05	171	6.09E+06	2.99E+08	Generic
	Pu-240	1.63E-05	171	6.14E+06	3.02E+08	Generic
	Pu-241	8.43E-07	171	1.19E+08	5.82E+09	Generic
	Ra-226	4.33E-02	824	2.31E+03	1.13E+05	Generic
	Sn-126	3.57E-03	824	2.80E+04	1.37E+06	Generic
	Sr-90	4.16E-04	171	2.40E+05	1.18E+07	Generic
	Tc-99	1.53E-02	171	6.52E+03	3.20E+05	Generic
	Th-229	3.83E-03	824	2.61E+04	1.28E+06	Generic
	Th-230	2.33E-02	1,171	4.29E+03	2.11E+05	Generic
	U-232	4.18E-02	171	2.39E+03	1.17E+05	Generic
	U-233	8.03E-04	1,171	1.25E+05	6.12E+06	Generic
	U-234	5.03E-04	1,171	1.99E+05	9.76E+06	Generic
	U-236	3.50E-04	171	2.86E+05	1.41E+07	Generic
	U-233D	8.03E-04	1,171	1.25E+05	6.12E+06	Generic
	C-14N	8.16E-05	171	1.23E+06	6.02E+07	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-31. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ST19

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	5.38E-02	171	9.29E+03	4.56E+05	Generic
	Am-241	1.17E-03	171	4.26E+05	2.09E+07	Generic
	Am-242m	1.40E-03	171	3.57E+05	1.75E+07	Generic
	Am-243	7.07E-03	171	7.07E+04	3.47E+06	Generic
	C-14	6.56E-07	171	7.63E+08	3.75E+10	Generic
	Cf-249	1.14E-02	171	4.37E+04	2.15E+06	Generic
	Cf-251	4.87E-03	171	1.03E+05	5.05E+06	Generic
	Cm-247	1.39E-02	1,171	3.59E+04	1.76E+06	Generic
	Cm-248	6.17E-02	171	8.11E+03	3.98E+05	Generic
	Cs-137	2.27E-03	171	2.20E+05	1.08E+07	Generic
	I-129	1.83E-04	171	2.74E+06	1.34E+08	Generic
	K-40	7.10E-03	171	7.05E+04	3.46E+06	Generic
	Nb-94	6.35E-02	171	7.87E+03	3.86E+05	Generic
	Ni-59	6.79E-07	171	7.36E+08	3.62E+10	Generic
	Ni-63	9.74E-08	171	5.13E+09	2.52E+11	Generic
	Np-237	8.27E-03	1,171	6.04E+04	2.97E+06	Generic
	Pu-239	1.34E-03	171	3.74E+05	1.84E+07	Generic
	Pu-240	1.33E-03	171	3.77E+05	1.85E+07	Generic
	Pu-241	4.02E-05	171	1.25E+07	6.12E+08	Generic
	Ra-226	7.29E-02	171	6.86E+03	3.37E+05	Generic
	Sn-126	7.80E-02	171	6.41E+03	3.15E+05	Generic
	Sr-90	3.00E-05	171	1.67E+07	8.18E+08	Generic
	Tc-99	1.71E-06	171	2.93E+08	1.44E+10	Generic
	Th-229	1.28E-02	171	3.89E+04	1.91E+06	Generic
	Th-230	3.01E-02	1,171	1.66E+04	8.15E+05	Generic
	U-232	2.56E-02	171	1.95E+04	9.59E+05	Generic
	U-233	1.47E-03	1,171	3.40E+05	1.67E+07	Generic
	U-234	3.11E-04	1,171	1.61E+06	7.90E+07	Generic
	U-236	1.26E-04	1,171	3.96E+06	1.95E+08	Generic
	U-233D	1.47E-03	1,171	3.40E+05	1.67E+07	Generic
	C-14N	6.56E-07	171	7.63E+08	3.75E+10	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-32. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ST19

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	1.26E-03	171	7.95E+04	3.91E+06	Generic
	Am-241	2.47E-05	171	4.04E+06	1.99E+08	Generic
	Am-242m	3.03E-05	171	3.30E+06	1.62E+08	Generic
	Am-243	1.00E-04	171	9.96E+05	4.89E+07	Generic
	C-14	8.16E-05	171	1.23E+06	6.02E+07	Generic
	Cf-249	1.46E-04	171	6.84E+05	3.36E+07	Generic
	Cf-251	7.59E-05	171	1.32E+06	6.47E+07	Generic
	Cm-247	1.83E-04	1,171	5.45E+05	2.68E+07	Generic
	Cm-248	7.20E-04	171	1.39E+05	6.82E+06	Generic
	Cs-137	6.60E-05	171	1.51E+06	7.44E+07	Generic
	I-129	1.52E-03	171	6.57E+04	3.23E+06	Generic
	K-40	6.05E-03	824	1.65E+04	8.12E+05	Generic
	Nb-94	5.12E-03	824	1.95E+04	9.59E+05	Generic
	Ni-59	1.66E-06	171	6.02E+07	2.96E+09	Generic
	Ni-63	2.06E-06	171	4.86E+07	2.39E+09	Generic
	Np-237	5.62E-04	1,171	1.78E+05	8.74E+06	Generic
	Pu-239	1.64E-05	171	6.09E+06	2.99E+08	Generic
	Pu-240	1.63E-05	171	6.14E+06	3.02E+08	Generic
	Pu-241	8.43E-07	171	1.19E+08	5.82E+09	Generic
	Ra-226	4.33E-02	824	2.31E+03	1.13E+05	Generic
	Sn-126	3.57E-03	824	2.80E+04	1.37E+06	Generic
	Sr-90	4.16E-04	171	2.40E+05	1.18E+07	Generic
	Tc-99	1.53E-02	171	6.52E+03	3.20E+05	Generic
	Th-229	3.83E-03	824	2.61E+04	1.28E+06	Generic
	Th-230	2.33E-02	1,171	4.29E+03	2.11E+05	Generic
	U-232	4.18E-02	171	2.39E+03	1.17E+05	Generic
	U-233	8.03E-04	1,171	1.25E+05	6.12E+06	Generic
	U-234	5.03E-04	1,171	1.99E+05	9.76E+06	Generic
	U-236	3.50E-04	171	2.86E+05	1.41E+07	Generic
	U-233D	8.03E-04	1,171	1.25E+05	6.12E+06	Generic
	C-14N	8.16E-05	171	1.23E+06	6.02E+07	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-33. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ST20

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	5.38E-02	171	9.29E+03	4.56E+05	Generic
	Am-241	1.17E-03	171	4.26E+05	2.09E+07	Generic
	Am-242m	1.40E-03	171	3.57E+05	1.75E+07	Generic
	Am-243	7.07E-03	171	7.07E+04	3.47E+06	Generic
	C-14	6.56E-07	171	7.63E+08	3.75E+10	Generic
	Cf-249	1.14E-02	171	4.37E+04	2.15E+06	Generic
	Cf-251	4.87E-03	171	1.03E+05	5.05E+06	Generic
	Cm-247	1.39E-02	1,171	3.59E+04	1.76E+06	Generic
	Cm-248	6.17E-02	171	8.11E+03	3.98E+05	Generic
	Cs-137	2.27E-03	171	2.20E+05	1.08E+07	Generic
	I-129	1.83E-04	171	2.74E+06	1.34E+08	Generic
	K-40	7.10E-03	171	7.05E+04	3.46E+06	Generic
	Nb-94	6.35E-02	171	7.87E+03	3.86E+05	Generic
	Ni-59	6.79E-07	171	7.36E+08	3.62E+10	Generic
	Ni-63	9.74E-08	171	5.13E+09	2.52E+11	Generic
	Np-237	8.27E-03	1,171	6.04E+04	2.97E+06	Generic
	Pu-239	1.34E-03	171	3.74E+05	1.84E+07	Generic
	Pu-240	1.33E-03	171	3.77E+05	1.85E+07	Generic
	Pu-241	4.02E-05	171	1.25E+07	6.12E+08	Generic
	Ra-226	7.29E-02	171	6.86E+03	3.37E+05	Generic
	Sn-126	7.80E-02	171	6.41E+03	3.15E+05	Generic
	Sr-90	3.00E-05	171	1.67E+07	8.18E+08	Generic
	Tc-99	1.71E-06	171	2.93E+08	1.44E+10	Generic
	Th-229	1.28E-02	171	3.89E+04	1.91E+06	Generic
	Th-230	3.01E-02	1,171	1.66E+04	8.15E+05	Generic
	U-232	2.56E-02	171	1.95E+04	9.59E+05	Generic
	U-233	1.47E-03	1,171	3.40E+05	1.67E+07	Generic
	U-234	3.11E-04	1,171	1.61E+06	7.90E+07	Generic
	U-236	1.26E-04	1,171	3.96E+06	1.95E+08	Generic
	U-233D	1.47E-03	1,171	3.40E+05	1.67E+07	Generic
	C-14N	6.56E-07	171	7.63E+08	3.75E+10	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-34. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ST20

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	1.26E-03	171	7.95E+04	3.91E+06	Generic
	Am-241	2.47E-05	171	4.04E+06	1.99E+08	Generic
	Am-242m	3.03E-05	171	3.30E+06	1.62E+08	Generic
	Am-243	1.00E-04	171	9.96E+05	4.89E+07	Generic
	C-14	8.16E-05	171	1.23E+06	6.02E+07	Generic
	Cf-249	1.46E-04	171	6.84E+05	3.36E+07	Generic
	Cf-251	7.59E-05	171	1.32E+06	6.47E+07	Generic
	Cm-247	1.83E-04	1,171	5.45E+05	2.68E+07	Generic
	Cm-248	7.20E-04	171	1.39E+05	6.82E+06	Generic
	Cs-137	6.60E-05	171	1.51E+06	7.44E+07	Generic
	I-129	1.52E-03	171	6.57E+04	3.23E+06	Generic
	K-40	6.05E-03	824	1.65E+04	8.12E+05	Generic
	Nb-94	5.12E-03	824	1.95E+04	9.59E+05	Generic
	Ni-59	1.66E-06	171	6.02E+07	2.96E+09	Generic
	Ni-63	2.06E-06	171	4.86E+07	2.39E+09	Generic
	Np-237	5.62E-04	1,171	1.78E+05	8.74E+06	Generic
	Pu-239	1.64E-05	171	6.09E+06	2.99E+08	Generic
	Pu-240	1.63E-05	171	6.14E+06	3.02E+08	Generic
	Pu-241	8.43E-07	171	1.19E+08	5.82E+09	Generic
	Ra-226	4.33E-02	824	2.31E+03	1.13E+05	Generic
	Sn-126	3.57E-03	824	2.80E+04	1.37E+06	Generic
	Sr-90	4.16E-04	171	2.40E+05	1.18E+07	Generic
	Tc-99	1.53E-02	171	6.52E+03	3.20E+05	Generic
	Th-229	3.83E-03	824	2.61E+04	1.28E+06	Generic
	Th-230	2.33E-02	1,171	4.29E+03	2.11E+05	Generic
	U-232	4.18E-02	171	2.39E+03	1.17E+05	Generic
	U-233	8.03E-04	1,171	1.25E+05	6.12E+06	Generic
	U-234	5.03E-04	1,171	1.99E+05	9.76E+06	Generic
	U-236	3.50E-04	171	2.86E+05	1.41E+07	Generic
	U-233D	8.03E-04	1,171	1.25E+05	6.12E+06	Generic
	C-14N	8.16E-05	171	1.23E+06	6.02E+07	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-35. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ST21

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	6.46E-02	171	7.74E+03	4.56E+05	Generic
	Am-241	1.41E-03	171	3.55E+05	2.09E+07	Generic
	Am-242m	1.68E-03	171	2.97E+05	1.75E+07	Generic
	Am-243	8.48E-03	171	5.90E+04	3.47E+06	Generic
	C-14	7.87E-07	171	6.36E+08	3.75E+10	Generic
	Cf-249	1.37E-02	171	3.65E+04	2.15E+06	Generic
	Cf-251	5.84E-03	171	8.56E+04	5.05E+06	Generic
	Cm-247	1.67E-02	1,171	2.99E+04	1.76E+06	Generic
	Cm-248	7.40E-02	171	6.76E+03	3.98E+05	Generic
	Cs-137	2.72E-03	171	1.84E+05	1.08E+07	Generic
	I-129	2.19E-04	171	2.28E+06	1.34E+08	Generic
	K-40	8.51E-03	171	5.87E+04	3.46E+06	Generic
	Nb-94	7.62E-02	171	6.56E+03	3.86E+05	Generic
	Ni-59	8.15E-07	171	6.14E+08	3.62E+10	Generic
	Ni-63	1.17E-07	171	4.28E+09	2.52E+11	Generic
	Np-237	9.92E-03	1,171	5.04E+04	2.97E+06	Generic
	Pu-239	1.60E-03	171	3.12E+05	1.84E+07	Generic
	Pu-240	1.59E-03	171	3.14E+05	1.85E+07	Generic
	Pu-241	4.82E-05	171	1.04E+07	6.12E+08	Generic
	Ra-226	8.74E-02	171	5.72E+03	3.37E+05	Generic
	Sn-126	9.35E-02	171	5.34E+03	3.15E+05	Generic
	Sr-90	3.60E-05	171	1.39E+07	8.18E+08	Generic
	Tc-99	2.05E-06	171	2.44E+08	1.44E+10	Generic
	Th-229	1.54E-02	171	3.24E+04	1.91E+06	Generic
	Th-230	3.61E-02	1,171	1.38E+04	8.15E+05	Generic
	U-232	3.07E-02	171	1.63E+04	9.59E+05	Generic
	U-233	1.76E-03	1,171	2.84E+05	1.67E+07	Generic
	U-234	3.73E-04	1,171	1.34E+06	7.90E+07	Generic
	U-236	1.51E-04	1,171	3.31E+06	1.95E+08	Generic
	U-233D	1.76E-03	1,171	2.84E+05	1.67E+07	Generic
	C-14N	7.87E-07	171	6.36E+08	3.75E+10	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-36. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ST21

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	1.51E-03	171	6.63E+04	3.91E+06	Generic
	Am-241	2.97E-05	171	3.37E+06	1.99E+08	Generic
	Am-242m	3.64E-05	171	2.75E+06	1.62E+08	Generic
	Am-243	1.20E-04	171	8.30E+05	4.89E+07	Generic
	C-14	9.78E-05	171	1.02E+06	6.02E+07	Generic
	Cf-249	1.75E-04	171	5.70E+05	3.36E+07	Generic
	Cf-251	9.11E-05	171	1.10E+06	6.47E+07	Generic
	Cm-247	2.20E-04	1,171	4.54E+05	2.68E+07	Generic
	Cm-248	8.64E-04	171	1.16E+05	6.82E+06	Generic
	Cs-137	7.92E-05	171	1.26E+06	7.44E+07	Generic
	I-129	1.83E-03	171	5.47E+04	3.23E+06	Generic
	K-40	7.26E-03	824	1.38E+04	8.12E+05	Generic
	Nb-94	6.14E-03	824	1.63E+04	9.59E+05	Generic
	Ni-59	1.99E-06	171	5.02E+07	2.96E+09	Generic
	Ni-63	2.47E-06	171	4.05E+07	2.39E+09	Generic
	Np-237	6.74E-04	1,171	1.48E+05	8.74E+06	Generic
	Pu-239	1.97E-05	171	5.08E+06	2.99E+08	Generic
	Pu-240	1.95E-05	171	5.12E+06	3.02E+08	Generic
	Pu-241	1.01E-06	171	9.88E+07	5.82E+09	Generic
	Ra-226	5.20E-02	824	1.92E+03	1.13E+05	Generic
	Sn-126	4.29E-03	824	2.33E+04	1.37E+06	Generic
	Sr-90	4.99E-04	171	2.00E+05	1.18E+07	Generic
	Tc-99	1.84E-02	171	5.44E+03	3.20E+05	Generic
	Th-229	4.60E-03	824	2.18E+04	1.28E+06	Generic
	Th-230	2.80E-02	1,171	3.57E+03	2.11E+05	Generic
	U-232	5.02E-02	171	1.99E+03	1.17E+05	Generic
	U-233	9.63E-04	1,171	1.04E+05	6.12E+06	Generic
	U-234	6.04E-04	1,171	1.66E+05	9.76E+06	Generic
	U-236	4.19E-04	171	2.38E+05	1.41E+07	Generic
	U-233D	9.63E-04	1,171	1.04E+05	6.12E+06	Generic
	C-14N	9.78E-05	171	1.02E+06	6.02E+07	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-37. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ST22

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	7.75E-02	171	6.45E+03	4.56E+05	Generic
	Am-241	1.69E-03	171	2.96E+05	2.09E+07	Generic
	Am-242m	2.02E-03	171	2.48E+05	1.75E+07	Generic
	Am-243	1.02E-02	171	4.91E+04	3.47E+06	Generic
	C-14	9.44E-07	171	5.30E+08	3.75E+10	Generic
	Cf-249	1.65E-02	171	3.04E+04	2.15E+06	Generic
	Cf-251	7.01E-03	171	7.14E+04	5.05E+06	Generic
	Cm-247	2.01E-02	1,171	2.49E+04	1.76E+06	Generic
	Cm-248	8.88E-02	171	5.63E+03	3.98E+05	Generic
	Cs-137	3.26E-03	171	1.53E+05	1.08E+07	Generic
	I-129	2.63E-04	171	1.90E+06	1.34E+08	Generic
	K-40	1.02E-02	171	4.89E+04	3.46E+06	Generic
	Nb-94	9.15E-02	171	5.47E+03	3.86E+05	Generic
	Ni-59	9.78E-07	171	5.11E+08	3.62E+10	Generic
	Ni-63	1.40E-07	171	3.57E+09	2.52E+11	Generic
	Np-237	1.19E-02	1,171	4.20E+04	2.97E+06	Generic
	Pu-239	1.92E-03	171	2.60E+05	1.84E+07	Generic
	Pu-240	1.91E-03	171	2.62E+05	1.85E+07	Generic
	Pu-241	5.78E-05	171	8.65E+06	6.12E+08	Generic
	Ra-226	1.05E-01	171	4.77E+03	3.37E+05	Generic
	Sn-126	1.12E-01	171	4.45E+03	3.15E+05	Generic
	Sr-90	4.32E-05	171	1.16E+07	8.18E+08	Generic
	Tc-99	2.46E-06	171	2.04E+08	1.44E+10	Generic
	Th-229	1.85E-02	171	2.70E+04	1.91E+06	Generic
	Th-230	4.34E-02	1,171	1.15E+04	8.15E+05	Generic
	U-232	3.69E-02	171	1.36E+04	9.59E+05	Generic
	U-233	2.11E-03	1,171	2.36E+05	1.67E+07	Generic
	U-234	4.48E-04	1,171	1.12E+06	7.90E+07	Generic
	U-236	1.82E-04	1,171	2.75E+06	1.95E+08	Generic
	U-233D	2.11E-03	1,171	2.36E+05	1.67E+07	Generic
	C-14N	9.44E-07	171	5.30E+08	3.75E+10	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-38. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ST22

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	1.81E-03	171	5.53E+04	3.91E+06	Generic
	Am-241	3.56E-05	171	2.81E+06	1.99E+08	Generic
	Am-242m	4.36E-05	171	2.29E+06	1.62E+08	Generic
	Am-243	1.45E-04	171	6.92E+05	4.89E+07	Generic
	C-14	1.17E-04	171	8.52E+05	6.02E+07	Generic
	Cf-249	2.11E-04	171	4.75E+05	3.36E+07	Generic
	Cf-251	1.09E-04	171	9.15E+05	6.47E+07	Generic
	Cm-247	2.64E-04	1,171	3.79E+05	2.68E+07	Generic
	Cm-248	1.04E-03	171	9.65E+04	6.82E+06	Generic
	Cs-137	9.51E-05	171	1.05E+06	7.44E+07	Generic
	I-129	2.19E-03	171	4.56E+04	3.23E+06	Generic
	K-40	8.71E-03	824	1.15E+04	8.12E+05	Generic
	Nb-94	7.37E-03	824	1.36E+04	9.59E+05	Generic
	Ni-59	2.39E-06	171	4.19E+07	2.96E+09	Generic
	Ni-63	2.96E-06	171	3.38E+07	2.39E+09	Generic
	Np-237	8.09E-04	1,171	1.24E+05	8.74E+06	Generic
	Pu-239	2.36E-05	171	4.23E+06	2.99E+08	Generic
	Pu-240	2.34E-05	171	4.27E+06	3.02E+08	Generic
	Pu-241	1.21E-06	171	8.24E+07	5.82E+09	Generic
	Ra-226	6.23E-02	824	1.60E+03	1.13E+05	Generic
	Sn-126	5.15E-03	824	1.94E+04	1.37E+06	Generic
	Sr-90	5.99E-04	171	1.67E+05	1.18E+07	Generic
	Tc-99	2.21E-02	171	4.53E+03	3.20E+05	Generic
	Th-229	5.52E-03	824	1.81E+04	1.28E+06	Generic
	Th-230	3.36E-02	1,171	2.98E+03	2.11E+05	Generic
	U-232	6.02E-02	171	1.66E+03	1.17E+05	Generic
	U-233	1.16E-03	1,171	8.65E+04	6.12E+06	Generic
	U-234	7.24E-04	1,171	1.38E+05	9.76E+06	Generic
	U-236	5.03E-04	171	1.99E+05	1.41E+07	Generic
	U-233D	1.16E-03	1,171	8.65E+04	6.12E+06	Generic
	C-14N	1.17E-04	171	8.52E+05	6.02E+07	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-39. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ST23

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	6.68E-02	171	7.49E+03	4.56E+05	Generic
	Am-241	1.46E-03	171	3.43E+05	2.09E+07	Generic
	Am-242m	1.74E-03	171	2.87E+05	1.75E+07	Generic
	Am-243	8.77E-03	171	5.70E+04	3.47E+06	Generic
	C-14	8.13E-07	171	6.15E+08	3.75E+10	Generic
	Cf-249	1.42E-02	171	3.53E+04	2.15E+06	Generic
	Cf-251	6.04E-03	171	8.28E+04	5.05E+06	Generic
	Cm-247	1.73E-02	1,171	2.89E+04	1.76E+06	Generic
	Cm-248	7.65E-02	171	6.54E+03	3.98E+05	Generic
	Cs-137	2.81E-03	171	1.78E+05	1.08E+07	Generic
	I-129	2.27E-04	171	2.21E+06	1.34E+08	Generic
	K-40	8.80E-03	171	5.68E+04	3.46E+06	Generic
	Nb-94	7.88E-02	171	6.34E+03	3.86E+05	Generic
	Ni-59	8.43E-07	171	5.93E+08	3.62E+10	Generic
	Ni-63	1.21E-07	171	4.14E+09	2.52E+11	Generic
	Np-237	1.03E-02	1,171	4.87E+04	2.97E+06	Generic
	Pu-239	1.66E-03	171	3.01E+05	1.84E+07	Generic
	Pu-240	1.64E-03	171	3.04E+05	1.85E+07	Generic
	Pu-241	4.98E-05	171	1.00E+07	6.12E+08	Generic
	Ra-226	9.04E-02	171	5.53E+03	3.37E+05	Generic
	Sn-126	9.67E-02	171	5.17E+03	3.15E+05	Generic
	Sr-90	3.72E-05	171	1.34E+07	8.18E+08	Generic
	Tc-99	2.12E-06	171	2.36E+08	1.44E+10	Generic
	Th-229	1.59E-02	171	3.14E+04	1.91E+06	Generic
	Th-230	3.79E-02	1,171	1.32E+04	8.04E+05	Generic
	U-232	3.18E-02	171	1.57E+04	9.59E+05	Generic
	U-233	1.85E-03	1,171	2.70E+05	1.65E+07	Generic
	U-234	3.93E-04	1,171	1.27E+06	7.75E+07	Generic
	U-236	1.56E-04	1,171	3.20E+06	1.95E+08	Generic
	U-233D	1.85E-03	1,171	2.70E+05	1.65E+07	Generic
	C-14K	2.00E-05	824	2.50E+07	4.72E+09	Special
	I-129K	6.36E-03	824	7.87E+04	1.48E+07	Special
	Tc-99K	7.21E-05	824	6.93E+06	1.31E+09	Special
	Am-241A	5.71E-02	823	8.76E+03	1.65E+06	Special
	Am-242mA	1.22E-02	823	4.09E+04	7.71E+06	Special
	Am-243A	3.62E-01	824	1.38E+03	2.60E+05	Special
	C-14A	2.00E-05	824	2.50E+07	4.72E+09	Special
	Cf-249A	1.57E-01	823	3.18E+03	6.00E+05	Special
	Cf-251A	2.44E-01	824	2.05E+03	3.86E+05	Special
	Cm-247A	6.02E-01	1,171	8.30E+02	1.56E+05	Special
	Cm-248A	2.49E+00	824	2.00E+02	3.78E+04	Special
	Cs-137A	2.89E-05	371	1.73E+07	3.26E+09	Special
	I-129A	6.36E-03	824	7.87E+04	1.48E+07	Special
	K-40A	2.18E-01	824	2.29E+03	4.32E+05	Special
	Nb-94A	1.91E+00	824	2.61E+02	4.93E+04	Special
	Ni-59A	2.16E-05	824	2.31E+07	4.36E+09	Special
	Ni-63A	7.87E-08	371	6.35E+09	1.20E+12	Special
	Np-237A	3.47E-01	1,171	1.44E+03	2.72E+05	Special
	Pu-239A	2.36E-01	824	2.12E+03	4.00E+05	Special
	Pu-240A	2.21E-01	824	2.26E+03	4.25E+05	Special

Table G-39 (cont'd). Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ST23

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Pu-241A	1.96E-03	823	2.55E+05	4.81E+07	Special
	Ra-226A	1.67E+00	824	3.00E+02	5.65E+04	Special
	Sn-126A	2.40E+00	824	2.08E+02	3.93E+04	Special
	Sr-90A	6.29E-07	171	7.95E+08	1.50E+11	Special
	Tc-99A	7.21E-05	824	6.93E+06	1.31E+09	Special
	U-232A	9.14E-03	371	5.47E+04	1.03E+07	Special
	U-233A	9.93E-02	1,171	5.04E+03	9.49E+05	Special
	U-233E	9.93E-02	1,171	5.04E+03	9.49E+05	Special
	U-234A	2.56E-02	1,171	1.95E+04	3.68E+06	Special
	U-236A	1.78E-02	824	2.81E+04	5.29E+06	Special

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

SWF radionuclides with no future inventory are highlighted in yellow when a SWF model is employed to set disposal limits.

Table G-40. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ST23

IHI Dose	Radionuclide	Dose Factor (mrem $yr^{-1}\ Ci^{-1}$)	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Chronic	Ag-108m	1.56E-03	171	6.41E+04	3.91E+06	Generic
	Am-241	3.07E-05	171	3.26E+06	1.99E+08	Generic
	Am-242m	3.76E-05	171	2.66E+06	1.62E+08	Generic
	Am-243	1.25E-04	171	8.03E+05	4.89E+07	Generic
	C-14	1.01E-04	171	9.88E+05	6.02E+07	Generic
	Cf-249	1.82E-04	171	5.51E+05	3.36E+07	Generic
	Cf-251	9.42E-05	171	1.06E+06	6.47E+07	Generic
	Cm-247	2.28E-04	1,171	4.39E+05	2.67E+07	Generic
	Cm-248	8.93E-04	171	1.12E+05	6.82E+06	Generic
	Cs-137	8.19E-05	171	1.22E+06	7.44E+07	Generic
	I-129	1.89E-03	171	5.29E+04	3.23E+06	Generic
	K-40	7.51E-03	824	1.33E+04	8.12E+05	Generic
	Nb-94	6.35E-03	824	1.57E+04	9.59E+05	Generic
	Ni-59	2.06E-06	171	4.86E+07	2.96E+09	Generic
	Ni-63	2.55E-06	171	3.92E+07	2.39E+09	Generic
	Np-237	6.97E-04	1,171	1.43E+05	8.74E+06	Generic
	Pu-239	2.04E-05	171	4.91E+06	2.99E+08	Generic
	Pu-240	2.02E-05	171	4.95E+06	3.02E+08	Generic
	Pu-241	1.05E-06	171	9.56E+07	5.82E+09	Generic
	Ra-226	5.37E-02	824	1.86E+03	1.13E+05	Generic
	Sn-126	4.43E-03	824	2.25E+04	1.37E+06	Generic
	Sr-90	5.16E-04	171	1.94E+05	1.18E+07	Generic
	Tc-99	1.90E-02	171	5.26E+03	3.20E+05	Generic
	Th-229	4.75E-03	824	2.10E+04	1.28E+06	Generic
	Th-230	2.93E-02	1,171	3.41E+03	2.08E+05	Generic
	U-232	5.19E-02	171	1.93E+03	1.17E+05	Generic
	U-233	1.01E-03	1,171	9.95E+04	6.06E+06	Generic
	U-234	6.30E-04	1,171	1.59E+05	9.67E+06	Generic
	U-236	4.34E-04	171	2.31E+05	1.41E+07	Generic
	U-233D	1.01E-03	1,171	9.95E+04	6.06E+06	Generic

Table G-40 (cont'd). Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ST23

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	C-14K	8.75E-02	824	1.14E+03	2.15E+05	Special
	I-129K	2.34E+00	824	4.27E+01	8.05E+03	Special
	Tc-99K	1.79E+01	824	5.59E+00	1.05E+03	Special
	Am-241A	7.91E-01	641	1.26E+02	2.38E+04	Special
	Am-242mA	1.62E-01	641	6.16E+02	1.16E+05	Special
	Am-243A	4.64E+01	641	2.15E+00	4.06E+02	Special
	C-14A	8.75E-02	824	1.14E+03	2.15E+05	Special
	Cf-249A	2.88E+01	641	3.48E+00	6.55E+02	Special
	Cf-251A	1.64E+01	641	6.09E+00	1.15E+03	Special
	Cm-247A	1.05E+02	1,171	9.54E-01	1.80E+02	Special
	Cm-248A	4.72E+02	824	2.12E-01	4.00E+01	Special
	Cs-137A	1.73E-03	171	5.77E+04	1.09E+07	Special
	I-129A	2.34E+00	824	4.27E+01	8.05E+03	Special
	K-40A	6.00E+01	824	1.67E+00	3.14E+02	Special
	Nb-94A	5.10E+02	641	1.96E-01	3.70E+01	Special
	Ni-59A	6.83E-03	824	1.46E+04	2.76E+06	Special
	Ni-63A	1.81E-05	784	5.53E+06	1.04E+09	Special
	Np-237A	6.33E+01	1,171	1.58E+00	2.98E+02	Special
	Pu-239A	9.65E-02	824	1.04E+03	1.95E+05	Special
	Pu-240A	8.20E-02	824	1.22E+03	2.30E+05	Special
	Pu-241A	2.72E-02	641	3.68E+03	6.94E+05	Special
	Ra-226A	4.59E+02	641	2.18E-01	4.11E+01	Special
	Sn-126A	6.37E+02	823	1.57E-01	2.96E+01	Special
	Sr-90A	3.42E-04	171	2.93E+05	5.52E+07	Special
	Tc-99A	1.79E+01	824	5.59E+00	1.05E+03	Special
	U-232A	9.71E-01	641	1.03E+02	1.94E+04	Special
	U-233A	9.53E+00	1,171	1.05E+01	1.98E+03	Special
	U-233E	9.53E+00	1,171	1.05E+01	1.98E+03	Special
	U-234A	1.87E+00	1,171	5.35E+01	1.01E+04	Special
	U-236A	4.24E-01	1,171	2.36E+02	4.45E+04	Special

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

SWF radionuclides with no future inventory are highlighted in yellow when a SWF model is employed to set disposal limits.

Table G-41. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ST24

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	5.32E-02	171	9.40E+03	4.56E+05	Generic
	Am-241	1.16E-03	171	4.31E+05	2.09E+07	Generic
	Am-242m	1.38E-03	171	3.61E+05	1.75E+07	Generic
	Am-243	6.98E-03	171	7.16E+04	3.47E+06	Generic
	C-14	6.47E-07	171	7.72E+08	3.75E+10	Generic
	Cf-249	1.13E-02	171	4.43E+04	2.15E+06	Generic
	Cf-251	4.81E-03	171	1.04E+05	5.05E+06	Generic
	Cm-247	1.38E-02	1,171	3.63E+04	1.76E+06	Generic
	Cm-248	6.09E-02	171	8.21E+03	3.98E+05	Generic
	Cs-137	2.24E-03	171	2.23E+05	1.08E+07	Generic
	I-129	1.80E-04	171	2.77E+06	1.34E+08	Generic
	K-40	7.01E-03	171	7.13E+04	3.46E+06	Generic
	Nb-94	6.28E-02	171	7.97E+03	3.86E+05	Generic
	Ni-59	6.71E-07	171	7.45E+08	3.62E+10	Generic
	Ni-63	9.62E-08	171	5.20E+09	2.52E+11	Generic
	Np-237	8.17E-03	1,171	6.12E+04	2.97E+06	Generic
	Pu-239	1.32E-03	171	3.79E+05	1.84E+07	Generic
	Pu-240	1.31E-03	171	3.82E+05	1.85E+07	Generic
	Pu-241	3.97E-05	171	1.26E+07	6.12E+08	Generic
	Ra-226	7.20E-02	171	6.95E+03	3.37E+05	Generic
	Sn-126	7.70E-02	171	6.49E+03	3.15E+05	Generic
	Sr-90	2.96E-05	171	1.69E+07	8.18E+08	Generic
	Tc-99	1.68E-06	171	2.97E+08	1.44E+10	Generic
	Th-229	1.27E-02	171	3.94E+04	1.91E+06	Generic
	Th-230	2.97E-02	1,171	1.68E+04	8.15E+05	Generic
	U-232	2.53E-02	171	1.98E+04	9.59E+05	Generic
	U-233	1.45E-03	1,171	3.45E+05	1.67E+07	Generic
	U-234	3.07E-04	1,171	1.63E+06	7.90E+07	Generic
	U-236	1.25E-04	1,171	4.01E+06	1.95E+08	Generic
	U-233D	1.45E-03	1,171	3.45E+05	1.67E+07	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-42. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ST24

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	1.24E-03	171	8.05E+04	3.91E+06	Generic
	Am-241	2.44E-05	171	4.10E+06	1.99E+08	Generic
	Am-242m	2.99E-05	171	3.34E+06	1.62E+08	Generic
	Am-243	9.92E-05	171	1.01E+06	4.89E+07	Generic
	C-14	8.05E-05	171	1.24E+06	6.02E+07	Generic
	Cf-249	1.44E-04	171	6.92E+05	3.36E+07	Generic
	Cf-251	7.50E-05	171	1.33E+06	6.47E+07	Generic
	Cm-247	1.81E-04	1,171	5.52E+05	2.68E+07	Generic
	Cm-248	7.11E-04	171	1.41E+05	6.82E+06	Generic
	Cs-137	6.52E-05	171	1.53E+06	7.44E+07	Generic
	I-129	1.50E-03	171	6.65E+04	3.23E+06	Generic
	K-40	5.98E-03	824	1.67E+04	8.12E+05	Generic
	Nb-94	5.06E-03	824	1.98E+04	9.59E+05	Generic
	Ni-59	1.64E-06	171	6.10E+07	2.96E+09	Generic
	Ni-63	2.03E-06	171	4.92E+07	2.39E+09	Generic
	Np-237	5.55E-04	1,171	1.80E+05	8.74E+06	Generic
	Pu-239	1.62E-05	171	6.17E+06	2.99E+08	Generic
	Pu-240	1.61E-05	171	6.22E+06	3.02E+08	Generic
	Pu-241	8.33E-07	171	1.20E+08	5.82E+09	Generic
	Ra-226	4.28E-02	824	2.34E+03	1.13E+05	Generic
	Sn-126	3.53E-03	824	2.83E+04	1.37E+06	Generic
	Sr-90	4.11E-04	171	2.43E+05	1.18E+07	Generic
	Tc-99	1.51E-02	171	6.61E+03	3.20E+05	Generic
	Th-229	3.78E-03	824	2.64E+04	1.28E+06	Generic
	Th-230	2.30E-02	1,171	4.34E+03	2.11E+05	Generic
	U-232	4.13E-02	171	2.42E+03	1.17E+05	Generic
	U-233	7.93E-04	1,171	1.26E+05	6.12E+06	Generic
	U-234	4.97E-04	1,171	2.01E+05	9.76E+06	Generic
	U-236	3.45E-04	171	2.90E+05	1.41E+07	Generic
	U-233D	7.93E-04	1,171	1.26E+05	6.12E+06	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

G.2.2 Engineered Trenches

Table G-43. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ET01

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	3.33E-02	171	1.50E+04	2.19E+06	Generic
	Am-241	7.27E-04	171	6.88E+05	1.00E+08	Generic
	Am-242m	8.07E-04	171	6.20E+05	9.04E+07	Generic
	Am-243	4.71E-03	171	1.06E+05	1.55E+07	Generic
	C-14	4.36E-07	171	1.15E+09	1.67E+11	Generic
	Cf-249	6.95E-03	171	7.19E+04	1.05E+07	Generic
	Cf-251	3.14E-03	171	1.59E+05	2.33E+07	Generic
	Cm-247	9.33E-03	1,171	5.36E+04	7.82E+06	Generic
	Cm-248	4.12E-02	171	1.21E+04	1.77E+06	Generic
	Cs-137	4.98E-04	171	1.00E+06	1.46E+08	Generic
	I-129	1.22E-04	171	4.09E+06	5.97E+08	Generic
	K-40	4.84E-03	171	1.03E+05	1.51E+07	Generic
	Nb-94	4.25E-02	171	1.18E+04	1.71E+06	Generic
	Ni-59	4.54E-07	171	1.10E+09	1.61E+11	Generic
	Ni-63	4.66E-08	171	1.07E+10	1.57E+12	Generic
	Np-237	5.53E-03	1,171	9.04E+04	1.32E+07	Generic
	Pu-239	8.93E-04	171	5.60E+05	8.17E+07	Generic
	Pu-240	8.82E-04	171	5.67E+05	8.27E+07	Generic
	Pu-241	2.50E-05	171	2.00E+07	2.92E+09	Generic
	Ra-226	4.89E-02	171	1.02E+04	1.49E+06	Generic
	Sn-126	5.22E-02	171	9.58E+03	1.40E+06	Generic
	Sr-90	6.72E-06	171	7.44E+07	1.08E+10	Generic
	Tc-99	1.14E-06	171	4.38E+08	6.39E+10	Generic
	Th-229	8.58E-03	171	5.83E+04	8.50E+06	Generic
	Th-230	2.09E-02	1,171	2.39E+04	3.49E+06	Generic
	U-232	1.16E-02	171	4.32E+04	6.31E+06	Generic
	U-233	1.00E-03	1,171	5.00E+05	7.29E+07	Generic
	U-234	2.15E-04	1,171	2.33E+06	3.40E+08	Generic
	U-236	8.44E-05	1,171	5.93E+06	8.65E+08	Generic
	U-233D	1.00E-03	1,171	5.00E+05	7.29E+07	Generic
	I-129D	1.22E-04	171	4.09E+06	5.97E+08	Generic
	I-129E	1.22E-04	171	4.09E+06	5.97E+08	Generic
	I-129G	1.22E-04	171	4.09E+06	5.97E+08	Generic
	I-129H	1.22E-04	171	4.09E+06	5.97E+08	Generic
	I-129I	1.22E-04	171	4.09E+06	5.97E+08	Generic
	I-129J	1.22E-04	171	4.09E+06	5.97E+08	Generic

Notes:

SWF radionuclides with no future inventory are highlighted in red when a generic waste form model is employed to set disposal limits.

Table G-44. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ET01

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	2.20E-03	171	4.55E+04	6.64E+06	Generic
	Am-241	1.53E-05	171	6.53E+06	9.53E+08	Generic
	Am-242m	2.68E-05	171	3.73E+06	5.44E+08	Generic
	Am-243	6.69E-05	171	1.50E+06	2.18E+08	Generic
	C-14	5.42E-05	171	1.84E+06	2.69E+08	Generic
	Cf-249	8.91E-05	171	1.12E+06	1.64E+08	Generic
	Cf-251	4.89E-05	171	2.04E+06	2.98E+08	Generic
	Cm-247	1.23E-04	1,171	8.14E+05	1.19E+08	Generic
	Cm-248	4.82E-04	171	2.08E+05	3.03E+07	Generic
	Cs-137	3.92E-05	171	2.55E+06	3.72E+08	Generic
	I-129	1.02E-03	171	9.82E+04	1.43E+07	Generic
	K-40	8.12E-03	171	1.23E+04	1.80E+06	Generic
	Nb-94	7.10E-03	171	1.41E+04	2.06E+06	Generic
	Ni-59	1.11E-06	171	8.98E+07	1.31E+10	Generic
	Ni-63	9.83E-07	171	1.02E+08	1.48E+10	Generic
	Np-237	3.76E-04	1,171	2.66E+05	3.88E+07	Generic
	Pu-239	1.10E-05	171	9.12E+06	1.33E+09	Generic
	Pu-240	1.08E-05	171	9.23E+06	1.35E+09	Generic
	Pu-241	5.25E-07	171	1.90E+08	2.78E+10	Generic
	Ra-226	8.81E-02	171	1.14E+03	1.66E+05	Generic
	Sn-126	4.38E-03	171	2.28E+04	3.33E+06	Generic
	Sr-90	1.12E-04	171	8.89E+05	1.30E+08	Generic
	Tc-99	1.03E-02	171	9.75E+03	1.42E+06	Generic
	Th-229	3.79E-03	171	2.64E+04	3.85E+06	Generic
	Th-230	3.70E-02	1,171	2.70E+03	3.94E+05	Generic
	U-232	7.38E-02	171	1.36E+03	1.98E+05	Generic
	U-233	6.55E-04	1,171	1.53E+05	2.23E+07	Generic
	U-234	4.63E-04	1,171	2.16E+05	3.15E+07	Generic
	U-236	2.34E-04	1,171	4.28E+05	6.24E+07	Generic
	U-233D	6.55E-04	1,171	1.53E+05	2.23E+07	Generic
	I-129D	1.02E-03	171	9.82E+04	1.43E+07	Generic
	I-129E	1.02E-03	171	9.82E+04	1.43E+07	Generic
	I-129G	1.02E-03	171	9.82E+04	1.43E+07	Generic
	I-129H	1.02E-03	171	9.82E+04	1.43E+07	Generic
	I-129I	1.02E-03	171	9.82E+04	1.43E+07	Generic
	I-129J	1.02E-03	171	9.82E+04	1.43E+07	Generic

Notes:

SWF radionuclides with no future inventory are highlighted in red when a generic waste form model is employed to set disposal limits.

Table G-45. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ET02

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	3.20E-02	171	1.56E+04	2.11E+06	Generic
	Am-241	6.99E-04	171	7.15E+05	9.66E+07	Generic
	Am-242m	8.03E-04	171	6.23E+05	8.41E+07	Generic
	Am-243	4.37E-03	171	1.14E+05	1.55E+07	Generic
	C-14	4.05E-07	171	1.24E+09	1.67E+11	Generic
	Cf-249	6.74E-03	171	7.42E+04	1.00E+07	Generic
	Cf-251	2.96E-03	171	1.69E+05	2.28E+07	Generic
	Cm-247	8.64E-03	1,171	5.79E+04	7.82E+06	Generic
	Cm-248	3.82E-02	171	1.31E+04	1.77E+06	Generic
	Cs-137	7.92E-04	171	6.32E+05	8.53E+07	Generic
	I-129	1.13E-04	171	4.42E+06	5.97E+08	Generic
	K-40	4.49E-03	171	1.11E+05	1.51E+07	Generic
	Nb-94	3.94E-02	171	1.27E+04	1.71E+06	Generic
	Ni-59	4.21E-07	171	1.19E+09	1.61E+11	Generic
	Ni-63	5.07E-08	171	9.85E+09	1.33E+12	Generic
	Np-237	5.12E-03	1,171	9.76E+04	1.32E+07	Generic
	Pu-239	8.28E-04	171	6.04E+05	8.16E+07	Generic
	Pu-240	8.19E-04	171	6.11E+05	8.25E+07	Generic
	Pu-241	2.40E-05	171	2.09E+07	2.82E+09	Generic
	Ra-226	4.58E-02	171	1.09E+04	1.48E+06	Generic
	Sn-126	4.83E-02	171	1.03E+04	1.40E+06	Generic
	Sr-90	1.10E-05	171	4.56E+07	6.16E+09	Generic
	Tc-99	1.06E-06	171	4.73E+08	6.39E+10	Generic
	Th-229	7.96E-03	171	6.28E+04	8.48E+06	Generic
	Th-230	1.93E-02	1,171	2.59E+04	3.49E+06	Generic
	U-232	1.36E-02	171	3.69E+04	4.98E+06	Generic
	U-233	9.24E-04	1,171	5.41E+05	7.31E+07	Generic
	U-234	1.94E-04	1,171	2.52E+06	3.41E+08	Generic
	U-236	7.81E-05	1171	6.40E+06	8.65E+08	Generic
	U-233D	9.24E-04	1,171	5.41E+05	7.31E+07	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-46. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ET02

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	2.11E-03	171	4.73E+04	6.39E+06	Generic
	Am-241	1.47E-05	171	6.79E+06	9.18E+08	Generic
	Am-242m	2.74E-05	171	3.65E+06	4.93E+08	Generic
	Am-243	6.21E-05	171	1.61E+06	2.18E+08	Generic
	C-14	5.04E-05	171	1.99E+06	2.68E+08	Generic
	Cf-249	8.64E-05	171	1.16E+06	1.56E+08	Generic
	Cf-251	4.61E-05	171	2.17E+06	2.93E+08	Generic
	Cm-247	1.14E-04	1,171	8.79E+05	1.19E+08	Generic
	Cm-248	4.46E-04	171	2.24E+05	3.03E+07	Generic
	Cs-137	6.23E-05	171	1.61E+06	2.17E+08	Generic
	I-129	9.43E-04	171	1.06E+05	1.43E+07	Generic
	K-40	7.52E-03	171	1.33E+04	1.80E+06	Generic
	Nb-94	6.58E-03	171	1.52E+04	2.05E+06	Generic
	Ni-59	1.03E-06	171	9.70E+07	1.31E+10	Generic
	Ni-63	1.07E-06	171	9.33E+07	1.26E+10	Generic
	Np-237	3.48E-04	1,171	2.87E+05	3.88E+07	Generic
	Pu-239	1.02E-05	171	9.84E+06	1.33E+09	Generic
	Pu-240	1.01E-05	171	9.95E+06	1.34E+09	Generic
	Pu-241	5.04E-07	171	1.98E+08	2.68E+10	Generic
	Ra-226	8.23E-02	171	1.21E+03	1.64E+05	Generic
	Sn-126	4.05E-03	171	2.47E+04	3.33E+06	Generic
	Sr-90	1.83E-04	171	5.46E+05	7.37E+07	Generic
	Tc-99	9.49E-03	171	1.05E+04	1.42E+06	Generic
	Th-229	3.52E-03	171	2.84E+04	3.84E+06	Generic
	Th-230	3.42E-02	1,171	2.92E+03	3.95E+05	Generic
	U-232	8.65E-02	171	1.16E+03	1.56E+05	Generic
	U-233	6.06E-04	1,171	1.65E+05	2.23E+07	Generic
	U-234	4.27E-04	1,171	2.34E+05	3.16E+07	Generic
	U-236	2.16E-04	1,171	4.62E+05	6.24E+07	Generic
	U-233D	6.06E-04	1,171	1.65E+05	2.23E+07	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-47. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ET03

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	4.14E-02	171	1.21E+04	2.11E+06	Generic
	Am-241	9.04E-04	171	5.53E+05	9.66E+07	Generic
	Am-242m	1.04E-03	171	4.82E+05	8.41E+07	Generic
	Am-243	5.65E-03	171	8.85E+04	1.55E+07	Generic
	C-14	5.24E-07	171	9.55E+08	1.67E+11	Generic
	Cf-249	8.72E-03	171	5.73E+04	1.00E+07	Generic
	Cf-251	3.83E-03	171	1.31E+05	2.28E+07	Generic
	Cm-247	1.12E-02	1,171	4.48E+04	7.82E+06	Generic
	Cm-248	4.94E-02	171	1.01E+04	1.77E+06	Generic
	Cs-137	1.02E-03	171	4.88E+05	8.53E+07	Generic
	I-129	1.46E-04	171	3.42E+06	5.97E+08	Generic
	K-40	5.80E-03	171	8.62E+04	1.51E+07	Generic
	Nb-94	5.10E-02	171	9.81E+03	1.71E+06	Generic
	Ni-59	5.44E-07	171	9.19E+08	1.61E+11	Generic
	Ni-63	6.56E-08	171	7.62E+09	1.33E+12	Generic
	Np-237	6.63E-03	1,171	7.54E+04	1.32E+07	Generic
	Pu-239	1.07E-03	171	4.67E+05	8.16E+07	Generic
	Pu-240	1.06E-03	171	4.72E+05	8.25E+07	Generic
	Pu-241	3.10E-05	171	1.61E+07	2.82E+09	Generic
	Ra-226	5.92E-02	171	8.45E+03	1.48E+06	Generic
	Sn-126	6.25E-02	171	7.99E+03	1.40E+06	Generic
	Sr-90	1.42E-05	171	3.53E+07	6.16E+09	Generic
	Tc-99	1.37E-06	171	3.66E+08	6.39E+10	Generic
	Th-229	1.03E-02	171	4.85E+04	8.48E+06	Generic
	Th-230	2.48E-02	1,171	2.01E+04	3.52E+06	Generic
	U-232	1.75E-02	171	2.85E+04	4.98E+06	Generic
	U-233	1.19E-03	1,171	4.21E+05	7.36E+07	Generic
	U-234	2.54E-04	1,171	1.97E+06	3.43E+08	Generic
	U-236	1.01E-04	1,171	4.95E+06	8.65E+08	Generic
	U-233D	1.19E-03	1,171	4.21E+05	7.36E+07	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-48. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ET03

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	2.73E-03	171	3.66E+04	6.39E+06	Generic
	Am-241	1.90E-05	171	5.25E+06	9.18E+08	Generic
	Am-242m	3.55E-05	171	2.82E+06	4.93E+08	Generic
	Am-243	8.03E-05	171	1.25E+06	2.18E+08	Generic
	C-14	6.52E-05	171	1.53E+06	2.68E+08	Generic
	Cf-249	1.12E-04	171	8.95E+05	1.56E+08	Generic
	Cf-251	5.97E-05	171	1.68E+06	2.93E+08	Generic
	Cm-247	1.47E-04	1,171	6.80E+05	1.19E+08	Generic
	Cm-248	5.77E-04	171	1.73E+05	3.03E+07	Generic
	Cs-137	8.06E-05	171	1.24E+06	2.17E+08	Generic
	I-129	1.22E-03	171	8.20E+04	1.43E+07	Generic
	K-40	9.73E-03	171	1.03E+04	1.80E+06	Generic
	Nb-94	8.51E-03	171	1.18E+04	2.05E+06	Generic
	Ni-59	1.33E-06	171	7.50E+07	1.31E+10	Generic
	Ni-63	1.39E-06	171	7.21E+07	1.26E+10	Generic
	Np-237	4.51E-04	1,171	2.22E+05	3.88E+07	Generic
	Pu-239	1.31E-05	171	7.61E+06	1.33E+09	Generic
	Pu-240	1.30E-05	171	7.69E+06	1.34E+09	Generic
	Pu-241	6.52E-07	171	1.53E+08	2.68E+10	Generic
	Ra-226	1.07E-01	171	9.39E+02	1.64E+05	Generic
	Sn-126	5.24E-03	171	1.91E+04	3.33E+06	Generic
	Sr-90	2.37E-04	171	4.22E+05	7.37E+07	Generic
	Tc-99	1.23E-02	171	8.14E+03	1.42E+06	Generic
	Th-229	4.55E-03	171	2.20E+04	3.84E+06	Generic
	Th-230	4.40E-02	1,171	2.27E+03	3.97E+05	Generic
	U-232	1.12E-01	171	8.93E+02	1.56E+05	Generic
	U-233	7.80E-04	1,171	1.28E+05	2.24E+07	Generic
	U-234	5.49E-04	1,171	1.82E+05	3.18E+07	Generic
	U-236	2.80E-04	1,171	3.57E+05	6.24E+07	Generic
	U-233D	7.80E-04	1,171	1.28E+05	2.24E+07	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-49. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ET04

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	3.24E-02	171	1.54E+04	2.11E+06	Generic
	Am-241	7.08E-04	171	7.06E+05	9.66E+07	Generic
	Am-242m	8.11E-04	171	6.16E+05	8.43E+07	Generic
	Am-243	4.42E-03	171	1.13E+05	1.55E+07	Generic
	C-14	4.10E-07	171	1.22E+09	1.67E+11	Generic
	Cf-249	6.82E-03	171	7.33E+04	1.00E+07	Generic
	Cf-251	2.99E-03	171	1.67E+05	2.28E+07	Generic
	Cm-247	8.74E-03	1,171	5.72E+04	7.83E+06	Generic
	Cm-248	3.87E-02	171	1.29E+04	1.77E+06	Generic
	Cs-137	8.01E-04	171	6.24E+05	8.53E+07	Generic
	I-129	1.15E-04	171	4.36E+06	5.97E+08	Generic
	K-40	4.54E-03	171	1.10E+05	1.51E+07	Generic
	Nb-94	3.99E-02	171	1.25E+04	1.71E+06	Generic
	Ni-59	4.26E-07	171	1.17E+09	1.61E+11	Generic
	Ni-63	5.14E-08	171	9.73E+09	1.33E+12	Generic
	Np-237	5.19E-03	1,171	9.64E+04	1.32E+07	Generic
	Pu-239	8.38E-04	171	5.97E+05	8.16E+07	Generic
	Pu-240	8.29E-04	171	6.03E+05	8.25E+07	Generic
	Pu-241	2.43E-05	171	2.06E+07	2.82E+09	Generic
	Ra-226	4.63E-02	171	1.08E+04	1.48E+06	Generic
	Sn-126	4.90E-02	171	1.02E+04	1.40E+06	Generic
	Sr-90	1.11E-05	171	4.50E+07	6.16E+09	Generic
	Tc-99	1.07E-06	171	4.68E+08	6.39E+10	Generic
	Th-229	8.06E-03	171	6.20E+04	8.48E+06	Generic
	Th-230	1.93E-02	1,171	2.59E+04	3.54E+06	Generic
	U-232	1.37E-02	171	3.64E+04	4.98E+06	Generic
	U-233	9.24E-04	1,171	5.41E+05	7.40E+07	Generic
	U-234	1.98E-04	1,171	2.53E+06	3.46E+08	Generic
	U-236	7.91E-05	1,171	6.32E+06	8.65E+08	Generic
	U-233D	9.24E-04	1,171	5.41E+05	7.40E+07	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-50. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ET04

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	2.14E-03	171	4.67E+04	6.39E+06	Generic
	Am-241	1.49E-05	171	6.71E+06	9.18E+08	Generic
	Am-242m	2.77E-05	171	3.60E+06	4.93E+08	Generic
	Am-243	6.28E-05	171	1.59E+06	2.18E+08	Generic
	C-14	5.10E-05	171	1.96E+06	2.68E+08	Generic
	Cf-249	8.75E-05	171	1.14E+06	1.56E+08	Generic
	Cf-251	4.67E-05	171	2.14E+06	2.93E+08	Generic
	Cm-247	1.15E-04	1,171	8.69E+05	1.19E+08	Generic
	Cm-248	4.52E-04	171	2.21E+05	3.03E+07	Generic
	Cs-137	6.31E-05	171	1.59E+06	2.17E+08	Generic
	I-129	9.55E-04	171	1.05E+05	1.43E+07	Generic
	K-40	7.62E-03	171	1.31E+04	1.80E+06	Generic
	Nb-94	6.66E-03	171	1.50E+04	2.05E+06	Generic
	Ni-59	1.04E-06	171	9.58E+07	1.31E+10	Generic
	Ni-63	1.08E-06	171	9.22E+07	1.26E+10	Generic
	Np-237	3.53E-04	1,171	2.84E+05	3.88E+07	Generic
	Pu-239	1.03E-05	171	9.72E+06	1.33E+09	Generic
	Pu-240	1.02E-05	171	9.82E+06	1.34E+09	Generic
	Pu-241	5.11E-07	171	1.96E+08	2.68E+10	Generic
	Ra-226	8.34E-02	171	1.20E+03	1.64E+05	Generic
	Sn-126	4.10E-03	171	2.44E+04	3.33E+06	Generic
	Sr-90	1.86E-04	171	5.39E+05	7.37E+07	Generic
	Tc-99	9.61E-03	171	1.04E+04	1.42E+06	Generic
	Th-229	3.56E-03	171	2.81E+04	3.84E+06	Generic
	Th-230	3.42E-02	1,171	2.92E+03	4.00E+05	Generic
	U-232	8.76E-02	171	1.14E+03	1.56E+05	Generic
	U-233	6.08E-04	1,171	1.64E+05	2.25E+07	Generic
	U-234	4.27E-04	1,171	2.34E+05	3.20E+07	Generic
	U-236	2.19E-04	1,171	4.56E+05	6.24E+07	Generic
	U-233D	6.08E-04	1,171	1.64E+05	2.25E+07	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-51. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ET05

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	3.39E-02	171	1.48E+04	2.02E+06	Generic
	Am-241	7.39E-04	171	6.77E+05	9.28E+07	Generic
	Am-242m	8.82E-04	171	5.67E+05	7.77E+07	Generic
	Am-243	4.45E-03	171	1.12E+05	1.54E+07	Generic
	C-14	4.12E-07	171	1.21E+09	1.66E+11	Generic
	Cf-249	7.19E-03	171	6.96E+04	9.54E+06	Generic
	Cf-251	3.06E-03	171	1.63E+05	2.24E+07	Generic
	Cm-247	8.76E-03	1,171	5.71E+04	7.83E+06	Generic
	Cm-248	3.88E-02	171	1.29E+04	1.77E+06	Generic
	Cs-137	1.43E-03	171	3.50E+05	4.80E+07	Generic
	I-129	1.15E-04	171	4.35E+06	5.97E+08	Generic
	K-40	4.55E-03	171	1.10E+05	1.51E+07	Generic
	Nb-94	4.01E-02	171	1.25E+04	1.71E+06	Generic
	Ni-59	4.27E-07	171	1.17E+09	1.60E+11	Generic
	Ni-63	6.13E-08	171	8.16E+09	1.12E+12	Generic
	Np-237	5.20E-03	1,171	9.61E+04	1.32E+07	Generic
	Pu-239	8.41E-04	171	5.95E+05	8.15E+07	Generic
	Pu-240	8.34E-04	171	6.00E+05	8.22E+07	Generic
	Pu-241	2.53E-05	171	1.98E+07	2.72E+09	Generic
	Ra-226	4.70E-02	171	1.06E+04	1.46E+06	Generic
	Sn-126	4.91E-02	171	1.02E+04	1.40E+06	Generic
	Sr-90	2.03E-05	171	2.46E+07	3.37E+09	Generic
	Tc-99	1.07E-06	171	4.66E+08	6.39E+10	Generic
	Th-229	8.11E-03	171	6.17E+04	8.46E+06	Generic
	Th-230	1.94E-02	1,171	2.58E+04	3.54E+06	Generic
	U-232	1.77E-02	171	2.82E+04	3.87E+06	Generic
	U-233	9.26E-04	1,171	5.40E+05	7.40E+07	Generic
	U-234	1.98E-04	1,171	2.52E+06	3.46E+08	Generic
	U-236	7.93E-05	1,171	6.30E+06	8.65E+08	Generic
	U-233D	9.26E-04	1,171	5.40E+05	7.40E+07	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-52. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ET05

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	2.24E-03	171	4.47E+04	6.13E+06	Generic
	Am-241	1.56E-05	171	6.43E+06	8.82E+08	Generic
	Am-242m	3.10E-05	171	3.23E+06	4.43E+08	Generic
	Am-243	6.32E-05	171	1.58E+06	2.17E+08	Generic
	C-14	5.13E-05	171	1.95E+06	2.67E+08	Generic
	Cf-249	9.21E-05	171	1.09E+06	1.49E+08	Generic
	Cf-251	4.78E-05	171	2.09E+06	2.87E+08	Generic
	Cm-247	1.15E-04	1,171	8.67E+05	1.19E+08	Generic
	Cm-248	4.53E-04	171	2.21E+05	3.03E+07	Generic
	Cs-137	1.12E-04	171	8.90E+05	1.22E+08	Generic
	I-129	9.58E-04	171	1.04E+05	1.43E+07	Generic
	K-40	7.64E-03	171	1.31E+04	1.80E+06	Generic
	Nb-94	6.68E-03	171	1.50E+04	2.05E+06	Generic
	Ni-59	1.05E-06	171	9.55E+07	1.31E+10	Generic
	Ni-63	1.29E-06	171	7.73E+07	1.06E+10	Generic
	Np-237	3.54E-04	1,171	2.83E+05	3.88E+07	Generic
	Pu-239	1.03E-05	171	9.69E+06	1.33E+09	Generic
	Pu-240	1.02E-05	171	9.77E+06	1.34E+09	Generic
	Pu-241	5.31E-07	171	1.88E+08	2.58E+10	Generic
	Ra-226	8.45E-02	171	1.18E+03	1.62E+05	Generic
	Sn-126	4.12E-03	171	2.43E+04	3.33E+06	Generic
	Sr-90	3.40E-04	171	2.94E+05	4.04E+07	Generic
	Tc-99	9.64E-03	171	1.04E+04	1.42E+06	Generic
	Th-229	3.58E-03	171	2.79E+04	3.83E+06	Generic
	Th-230	3.43E-02	1,171	2.91E+03	4.00E+05	Generic
	U-232	1.13E-01	171	8.85E+02	1.21E+05	Generic
	U-233	6.10E-04	1,171	1.64E+05	2.25E+07	Generic
	U-234	4.28E-04	1,171	2.33E+05	3.20E+07	Generic
	U-236	2.20E-04	1,171	4.55E+05	6.24E+07	Generic
	U-233D	6.10E-04	1,171	1.64E+05	2.25E+07	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-53. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ET06

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	3.43E-02	171	1.46E+04	2.02E+06	Generic
	Am-241	7.48E-04	171	6.68E+05	9.28E+07	Generic
	Am-242m	8.93E-04	171	5.60E+05	7.77E+07	Generic
	Am-243	4.50E-03	171	1.11E+05	1.54E+07	Generic
	C-14	4.18E-07	171	1.20E+09	1.66E+11	Generic
	Cf-249	7.28E-03	171	6.87E+04	9.54E+06	Generic
	Cf-251	3.10E-03	171	1.61E+05	2.24E+07	Generic
	Cm-247	8.87E-03	1,171	5.63E+04	7.83E+06	Generic
	Cm-248	3.93E-02	171	1.27E+04	1.77E+06	Generic
	Cs-137	1.45E-03	171	3.46E+05	4.80E+07	Generic
	I-129	1.16E-04	171	4.30E+06	5.97E+08	Generic
	K-40	4.61E-03	171	1.08E+05	1.51E+07	Generic
	Nb-94	4.06E-02	171	1.23E+04	1.71E+06	Generic
	Ni-59	4.33E-07	171	1.16E+09	1.60E+11	Generic
	Ni-63	6.20E-08	171	8.06E+09	1.12E+12	Generic
	Np-237	5.27E-03	1,171	9.49E+04	1.32E+07	Generic
	Pu-239	8.52E-04	171	5.87E+05	8.15E+07	Generic
	Pu-240	8.44E-04	171	5.92E+05	8.22E+07	Generic
	Pu-241	2.56E-05	171	1.96E+07	2.72E+09	Generic
	Ra-226	4.76E-02	171	1.05E+04	1.46E+06	Generic
	Sn-126	4.97E-02	171	1.01E+04	1.40E+06	Generic
	Sr-90	2.06E-05	171	2.43E+07	3.37E+09	Generic
	Tc-99	1.09E-06	171	4.60E+08	6.39E+10	Generic
	Th-229	8.21E-03	171	6.09E+04	8.46E+06	Generic
	Th-230	1.96E-02	1,171	2.55E+04	3.54E+06	Generic
	U-232	1.79E-02	171	2.79E+04	3.87E+06	Generic
	U-233	9.38E-04	1,171	5.33E+05	7.40E+07	Generic
	U-234	2.01E-04	1,171	2.49E+06	3.46E+08	Generic
	U-236	8.03E-05	1,171	6.22E+06	8.65E+08	Generic
	U-233D	9.38E-04	1,171	5.33E+05	7.40E+07	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-54. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ET06

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	2.27E-03	171	4.41E+04	6.13E+06	Generic
	Am-241	1.58E-05	171	6.35E+06	8.82E+08	Generic
	Am-242m	3.14E-05	171	3.19E+06	4.43E+08	Generic
	Am-243	6.40E-05	171	1.56E+06	2.17E+08	Generic
	C-14	5.20E-05	171	1.92E+06	2.67E+08	Generic
	Cf-249	9.33E-05	171	1.07E+06	1.49E+08	Generic
	Cf-251	4.84E-05	171	2.07E+06	2.87E+08	Generic
	Cm-247	1.17E-04	1,171	8.56E+05	1.19E+08	Generic
	Cm-248	4.59E-04	171	2.18E+05	3.03E+07	Generic
	Cs-137	1.14E-04	171	8.79E+05	1.22E+08	Generic
	I-129	9.70E-04	171	1.03E+05	1.43E+07	Generic
	K-40	7.74E-03	171	1.29E+04	1.80E+06	Generic
	Nb-94	6.77E-03	171	1.48E+04	2.05E+06	Generic
	Ni-59	1.06E-06	171	9.43E+07	1.31E+10	Generic
	Ni-63	1.31E-06	171	7.63E+07	1.06E+10	Generic
	Np-237	3.58E-04	1,171	2.79E+05	3.88E+07	Generic
	Pu-239	1.05E-05	171	9.56E+06	1.33E+09	Generic
	Pu-240	1.04E-05	171	9.65E+06	1.34E+09	Generic
	Pu-241	5.37E-07	171	1.86E+08	2.58E+10	Generic
	Ra-226	8.56E-02	171	1.17E+03	1.62E+05	Generic
	Sn-126	4.17E-03	171	2.40E+04	3.33E+06	Generic
	Sr-90	3.44E-04	171	2.91E+05	4.04E+07	Generic
	Tc-99	9.76E-03	171	1.02E+04	1.42E+06	Generic
	Th-229	3.63E-03	171	2.76E+04	3.83E+06	Generic
	Th-230	3.48E-02	1,171	2.88E+03	4.00E+05	Generic
	U-232	1.14E-01	171	8.74E+02	1.21E+05	Generic
	U-233	6.18E-04	1,171	1.62E+05	2.25E+07	Generic
	U-234	4.34E-04	1,171	2.30E+05	3.20E+07	Generic
	U-236	2.23E-04	1,171	4.49E+05	6.24E+07	Generic
	U-233D	6.18E-04	1,171	1.62E+05	2.25E+07	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-55. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ET07

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	3.49E-02	171	1.43E+04	2.11E+06	Generic
	Am-241	7.62E-04	171	6.57E+05	9.66E+07	Generic
	Am-242m	8.73E-04	171	5.73E+05	8.43E+07	Generic
	Am-243	4.76E-03	171	1.05E+05	1.55E+07	Generic
	C-14	4.41E-07	171	1.13E+09	1.67E+11	Generic
	Cf-249	7.34E-03	171	6.81E+04	1.00E+07	Generic
	Cf-251	3.22E-03	171	1.55E+05	2.28E+07	Generic
	Cm-247	9.40E-03	1,171	5.32E+04	7.83E+06	Generic
	Cm-248	4.16E-02	171	1.20E+04	1.77E+06	Generic
	Cs-137	8.62E-04	171	5.80E+05	8.53E+07	Generic
	I-129	1.23E-04	171	4.06E+06	5.97E+08	Generic
	K-40	4.89E-03	171	1.02E+05	1.51E+07	Generic
	Nb-94	4.29E-02	171	1.16E+04	1.71E+06	Generic
	Ni-59	4.58E-07	171	1.09E+09	1.61E+11	Generic
	Ni-63	5.53E-08	171	9.05E+09	1.33E+12	Generic
	Np-237	5.58E-03	1,171	8.96E+04	1.32E+07	Generic
	Pu-239	9.02E-04	171	5.55E+05	8.16E+07	Generic
	Pu-240	8.92E-04	171	5.60E+05	8.25E+07	Generic
	Pu-241	2.61E-05	171	1.91E+07	2.82E+09	Generic
	Ra-226	4.98E-02	171	1.00E+04	1.48E+06	Generic
	Sn-126	5.27E-02	171	9.49E+03	1.40E+06	Generic
	Sr-90	1.19E-05	171	4.19E+07	6.16E+09	Generic
	Tc-99	1.15E-06	171	4.34E+08	6.39E+10	Generic
	Th-229	8.68E-03	171	5.76E+04	8.48E+06	Generic
	Th-230	2.08E-02	1,171	2.40E+04	3.54E+06	Generic
	U-232	1.48E-02	171	3.38E+04	4.98E+06	Generic
	U-233	9.94E-04	1,171	5.03E+05	7.40E+07	Generic
	U-234	2.13E-04	1,171	2.35E+06	3.46E+08	Generic
	U-236	8.51E-05	1,171	5.88E+06	8.65E+08	Generic
	U-233D	9.94E-04	1,171	5.03E+05	7.40E+07	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-56. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ET07

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	2.30E-03	171	4.34E+04	6.39E+06	Generic
	Am-241	1.60E-05	171	6.24E+06	9.18E+08	Generic
	Am-242m	2.99E-05	171	3.35E+06	4.93E+08	Generic
	Am-243	6.76E-05	171	1.48E+06	2.18E+08	Generic
	C-14	5.49E-05	171	1.82E+06	2.68E+08	Generic
	Cf-249	9.41E-05	171	1.06E+06	1.56E+08	Generic
	Cf-251	5.03E-05	171	1.99E+06	2.93E+08	Generic
	Cm-247	1.24E-04	1,171	8.08E+05	1.19E+08	Generic
	Cm-248	4.86E-04	171	2.06E+05	3.03E+07	Generic
	Cs-137	6.78E-05	171	1.47E+06	2.17E+08	Generic
	I-129	1.03E-03	171	9.73E+04	1.43E+07	Generic
	K-40	8.20E-03	171	1.22E+04	1.80E+06	Generic
	Nb-94	7.17E-03	171	1.40E+04	2.05E+06	Generic
	Ni-59	1.12E-06	171	8.90E+07	1.31E+10	Generic
	Ni-63	1.17E-06	171	8.57E+07	1.26E+10	Generic
	Np-237	3.79E-04	1,171	2.64E+05	3.88E+07	Generic
	Pu-239	1.11E-05	171	9.03E+06	1.33E+09	Generic
	Pu-240	1.10E-05	171	9.13E+06	1.34E+09	Generic
	Pu-241	5.49E-07	171	1.82E+08	2.68E+10	Generic
	Ra-226	8.97E-02	171	1.11E+03	1.64E+05	Generic
	Sn-126	4.42E-03	171	2.26E+04	3.33E+06	Generic
	Sr-90	2.00E-04	171	5.01E+05	7.37E+07	Generic
	Tc-99	1.03E-02	171	9.67E+03	1.42E+06	Generic
	Th-229	3.83E-03	171	2.61E+04	3.84E+06	Generic
	Th-230	3.68E-02	1,171	2.72E+03	4.00E+05	Generic
	U-232	9.43E-02	171	1.06E+03	1.56E+05	Generic
	U-233	6.54E-04	1,171	1.53E+05	2.25E+07	Generic
	U-234	4.60E-04	1,171	2.18E+05	3.20E+07	Generic
	U-236	2.36E-04	1,171	4.24E+05	6.24E+07	Generic
	U-233D	6.54E-04	1,171	1.53E+05	2.25E+07	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-57. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ET08

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	3.49E-02	171	1.43E+04	2.11E+06	Generic
	Am-241	7.62E-04	171	6.57E+05	9.66E+07	Generic
	Am-242m	8.73E-04	171	5.73E+05	8.43E+07	Generic
	Am-243	4.76E-03	171	1.05E+05	1.55E+07	Generic
	C-14	4.41E-07	171	1.13E+09	1.67E+11	Generic
	Cf-249	7.34E-03	171	6.81E+04	1.00E+07	Generic
	Cf-251	3.22E-03	171	1.55E+05	2.28E+07	Generic
	Cm-247	9.40E-03	1,171	5.32E+04	7.83E+06	Generic
	Cm-248	4.16E-02	171	1.20E+04	1.77E+06	Generic
	Cs-137	8.62E-04	171	5.80E+05	8.53E+07	Generic
	I-129	1.23E-04	171	4.06E+06	5.97E+08	Generic
	K-40	4.89E-03	171	1.02E+05	1.51E+07	Generic
	Nb-94	4.29E-02	171	1.16E+04	1.71E+06	Generic
	Ni-59	4.58E-07	171	1.09E+09	1.61E+11	Generic
	Ni-63	5.53E-08	171	9.05E+09	1.33E+12	Generic
	Np-237	5.58E-03	1,171	8.96E+04	1.32E+07	Generic
	Pu-239	9.02E-04	171	5.55E+05	8.16E+07	Generic
	Pu-240	8.92E-04	171	5.60E+05	8.25E+07	Generic
	Pu-241	2.61E-05	171	1.91E+07	2.82E+09	Generic
	Ra-226	4.98E-02	171	1.00E+04	1.48E+06	Generic
	Sn-126	5.27E-02	171	9.49E+03	1.40E+06	Generic
	Sr-90	1.19E-05	171	4.19E+07	6.16E+09	Generic
	Tc-99	1.15E-06	171	4.34E+08	6.39E+10	Generic
	Th-229	8.68E-03	171	5.76E+04	8.48E+06	Generic
	Th-230	2.08E-02	1,171	2.40E+04	3.54E+06	Generic
	U-232	1.48E-02	171	3.38E+04	4.98E+06	Generic
	U-233	9.94E-04	1,171	5.03E+05	7.40E+07	Generic
	U-234	2.13E-04	1,171	2.35E+06	3.46E+08	Generic
	U-236	8.51E-05	1,171	5.88E+06	8.65E+08	Generic
	U-233D	9.94E-04	1,171	5.03E+05	7.40E+07	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-58. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ET08

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	2.30E-03	171	4.34E+04	6.39E+06	Generic
	Am-241	1.60E-05	171	6.24E+06	9.18E+08	Generic
	Am-242m	2.99E-05	171	3.35E+06	4.93E+08	Generic
	Am-243	6.76E-05	171	1.48E+06	2.18E+08	Generic
	C-14	5.49E-05	171	1.82E+06	2.68E+08	Generic
	Cf-249	9.41E-05	171	1.06E+06	1.56E+08	Generic
	Cf-251	5.03E-05	171	1.99E+06	2.93E+08	Generic
	Cm-247	1.24E-04	1,171	8.08E+05	1.19E+08	Generic
	Cm-248	4.86E-04	171	2.06E+05	3.03E+07	Generic
	Cs-137	6.78E-05	171	1.47E+06	2.17E+08	Generic
	I-129	1.03E-03	171	9.73E+04	1.43E+07	Generic
	K-40	8.20E-03	171	1.22E+04	1.80E+06	Generic
	Nb-94	7.16E-03	171	1.40E+04	2.05E+06	Generic
	Ni-59	1.12E-06	171	8.90E+07	1.31E+10	Generic
	Ni-63	1.17E-06	171	8.57E+07	1.26E+10	Generic
	Np-237	3.79E-04	1,171	2.64E+05	3.88E+07	Generic
	Pu-239	1.11E-05	171	9.03E+06	1.33E+09	Generic
	Pu-240	1.10E-05	171	9.13E+06	1.34E+09	Generic
	Pu-241	5.49E-07	171	1.82E+08	2.68E+10	Generic
	Ra-226	8.97E-02	171	1.11E+03	1.64E+05	Generic
	Sn-126	4.42E-03	171	2.26E+04	3.33E+06	Generic
	Sr-90	2.00E-04	171	5.01E+05	7.37E+07	Generic
	Tc-99	1.03E-02	171	9.67E+03	1.42E+06	Generic
	Th-229	3.83E-03	171	2.61E+04	3.84E+06	Generic
	Th-230	3.68E-02	1,171	2.72E+03	4.00E+05	Generic
	U-232	9.43E-02	171	1.06E+03	1.56E+05	Generic
	U-233	6.54E-04	1,171	1.53E+05	2.25E+07	Generic
	U-234	4.60E-04	1,171	2.18E+05	3.20E+07	Generic
	U-236	2.36E-04	1,171	4.24E+05	6.24E+07	Generic
	U-233D	6.54E-04	1,171	1.53E+05	2.25E+07	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-59. Inadvertent Human Intruder Acute Dose Factors and Inventory Limits for ET09

IHI Dose	Radionuclide	Dose Factor (mrem Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit ($\mu Ci\ m^{-3}$)	Waste Form Limit
Acute	Ag-108m	3.49E-02	171	1.43E+04	2.11E+06	Generic
	Am-241	7.62E-04	171	6.57E+05	9.66E+07	Generic
	Am-242m	8.73E-04	171	5.73E+05	8.43E+07	Generic
	Am-243	4.76E-03	171	1.05E+05	1.55E+07	Generic
	C-14	4.41E-07	171	1.13E+09	1.67E+11	Generic
	Cf-249	7.34E-03	171	6.81E+04	1.00E+07	Generic
	Cf-251	3.22E-03	171	1.55E+05	2.28E+07	Generic
	Cm-247	9.40E-03	1,171	5.32E+04	7.83E+06	Generic
	Cm-248	4.16E-02	171	1.20E+04	1.77E+06	Generic
	Cs-137	8.62E-04	171	5.80E+05	8.53E+07	Generic
	I-129	1.23E-04	171	4.06E+06	5.97E+08	Generic
	K-40	4.89E-03	171	1.02E+05	1.51E+07	Generic
	Nb-94	4.29E-02	171	1.16E+04	1.71E+06	Generic
	Ni-59	4.58E-07	171	1.09E+09	1.61E+11	Generic
	Ni-63	5.53E-08	171	9.05E+09	1.33E+12	Generic
	Np-237	5.58E-03	1,171	8.96E+04	1.32E+07	Generic
	Pu-239	9.02E-04	171	5.55E+05	8.16E+07	Generic
	Pu-240	8.92E-04	171	5.60E+05	8.25E+07	Generic
	Pu-241	2.61E-05	171	1.91E+07	2.82E+09	Generic
	Ra-226	4.98E-02	171	1.00E+04	1.48E+06	Generic
	Sn-126	5.27E-02	171	9.49E+03	1.40E+06	Generic
	Sr-90	1.19E-05	171	4.19E+07	6.16E+09	Generic
	Tc-99	1.15E-06	171	4.34E+08	6.39E+10	Generic
	Th-229	8.68E-03	171	5.76E+04	8.48E+06	Generic
	Th-230	2.08E-02	1,171	2.40E+04	3.54E+06	Generic
	U-232	1.48E-02	171	3.38E+04	4.98E+06	Generic
	U-233	9.94E-04	1,171	5.03E+05	7.40E+07	Generic
	U-234	2.13E-04	1,171	2.35E+06	3.46E+08	Generic
	U-236	8.51E-05	1,171	5.88E+06	8.65E+08	Generic
	U-233D	9.94E-04	1,171	5.03E+05	7.40E+07	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

Table G-60. Inadvertent Human Intruder Chronic Dose Factors and Inventory Limits for ET09

IHI Dose	Radionuclide	Dose Factor (mrem yr^{-1} Ci^{-1})	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Chronic	Ag-108m	2.30E-03	171	4.34E+04	6.39E+06	Generic
	Am-241	1.60E-05	171	6.24E+06	9.18E+08	Generic
	Am-242m	2.99E-05	171	3.35E+06	4.93E+08	Generic
	Am-243	6.76E-05	171	1.48E+06	2.18E+08	Generic
	C-14	5.49E-05	171	1.82E+06	2.68E+08	Generic
	Cf-249	9.41E-05	171	1.06E+06	1.56E+08	Generic
	Cf-251	5.03E-05	171	1.99E+06	2.93E+08	Generic
	Cm-247	1.24E-04	1,171	8.08E+05	1.19E+08	Generic
	Cm-248	4.86E-04	171	2.06E+05	3.03E+07	Generic
	Cs-137	6.78E-05	171	1.47E+06	2.17E+08	Generic
	I-129	1.03E-03	171	9.73E+04	1.43E+07	Generic
	K-40	8.20E-03	171	1.22E+04	1.80E+06	Generic
	Nb-94	7.17E-03	171	1.40E+04	2.05E+06	Generic
	Ni-59	1.12E-06	171	8.90E+07	1.31E+10	Generic
	Ni-63	1.17E-06	171	8.57E+07	1.26E+10	Generic
	Np-237	3.79E-04	1,171	2.64E+05	3.88E+07	Generic
	Pu-239	1.11E-05	171	9.03E+06	1.33E+09	Generic
	Pu-240	1.10E-05	171	9.13E+06	1.34E+09	Generic
	Pu-241	5.49E-07	171	1.82E+08	2.68E+10	Generic
	Ra-226	8.97E-02	171	1.11E+03	1.64E+05	Generic
	Sn-126	4.42E-03	171	2.26E+04	3.33E+06	Generic
	Sr-90	2.00E-04	171	5.01E+05	7.37E+07	Generic
	Tc-99	1.03E-02	171	9.67E+03	1.42E+06	Generic
	Th-229	3.83E-03	171	2.61E+04	3.84E+06	Generic
	Th-230	3.68E-02	1,171	2.72E+03	4.00E+05	Generic
	U-232	9.43E-02	171	1.06E+03	1.56E+05	Generic
	U-233	6.54E-04	1,171	1.53E+05	2.25E+07	Generic
	U-234	4.60E-04	1,171	2.18E+05	3.20E+07	Generic
	U-236	2.36E-04	1,171	4.24E+05	6.24E+07	Generic
	U-233D	6.54E-04	1,171	1.53E+05	2.25E+07	Generic

Notes:

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

G.2.3 Low-Activity Waste Vault

Table G-61. Inadvertent Human Intruder Acute and Chronic Dose Factors and Inventory Limits for Low-Activity Waste Vault

IHI Dose	Radionuclide	Dose Factor*	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Acute	Cs-137	2.87E-07	171	1.74E+09	3.95E+10	Generic
	Nb-94	1.96E-05	171	2.55E+07	5.78E+08	Generic
	Ra-226	2.44E-04	171	2.05E+06	4.65E+07	Generic
	Sr-90	3.17E-07	171	1.58E+09	3.58E+10	Generic
Chronic	Cs-137	1.52E-02	171	6.59E+03	1.50E+05	Generic
	Nb-94	5.81E-01	171	1.72E+02	3.91E+03	Generic
	Ra-226	1.32E+00	171	7.58E+01	1.72E+03	Generic
	Sr-90	9.40E-04	171	1.06E+05	2.41E+06	Generic

Note:

* mrem Ci^{-1} (Acute), mrem yr^{-1} Ci^{-1} (Chronic)

G.2.4 Intermediate-Level Vault

Table G-62. Inadvertent Human Intruder Acute and Chronic Dose Factors and Inventory Limits for Intermediate-Level Vault

IHI Dose	Radionuclide	Dose Factor*	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Acute	Cs-137	9.09E-07	171	5.50E+08	7.18E+10	Generic
	Ra-226	1.36E-03	171	3.68E+05	4.80E+07	Generic
	Cs-137T	9.09E-07	171	5.50E+08	7.18E+10	Generic
Chronic	Cs-137	4.89E-05	171	2.04E+06	2.67E+08	Generic
	Ra-226	7.32E-02	171	1.37E+03	1.78E+05	Generic
	Cs-137T	4.89E-05	171	2.04E+06	2.67E+08	Generic

Notes:

* mrem Ci^{-1} (Acute), mrem yr^{-1} Ci^{-1} (Chronic)

SWF radionuclides with future inventory are highlighted in green when a generic waste form model is employed to set disposal limits.

G.2.5 Naval Reactor Component Disposal Areas

Table G-63. Inadvertent Human Intruder Acute and Chronic Dose Factors and Inventory Limits for NR07E

IHI Dose	Radionuclide	Dose Factor*	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Acute	Am-241S	5.06E-10	171	9.88E+11	3.30E+14	Special
	Am-243S	4.53E-09	171	1.10E+11	3.68E+13	Special
	Co-60S	5.45E-36	171	---	---	Special
	Cs-137S	4.33E-28	171	---	---	Special
	Mo-93S	5.56E-30	171	---	---	Special
	Nb-93mS	2.94E-33	171	---	---	Special
	Nb-94S	9.05E-27	171	---	---	Special
	Ni-59S	9.09E-27	171	---	---	Special
	Pu-241S	2.45E-28	171	---	---	Special
	Sn-121mS	4.21E-31	171	---	---	Special
	Sn-126S	4.24E-04	171	1.18E+06	3.94E+08	Special
	Sr-90S	1.85E-06	171	2.71E+08	9.03E+10	Special
	Zr-93S	1.80E-26	243	---	---	Special
Chronic	Am-241S	2.94E+00	171	3.40E+01	1.14E+04	Special
	Am-243S	8.59E+01	171	1.16E+00	3.88E+02	Special
	Co-60S	8.71E-13	171	1.15E+14	3.83E+16	Special
	Cs-137S	4.55E-07	171	2.20E+08	7.34E+10	Special
	Mo-93S	4.71E-02	171	2.12E+03	7.09E+05	Special
	Nb-93mS	7.23E-06	171	1.38E+07	4.62E+09	Special
	Nb-94S	9.09E-05	171	1.10E+06	3.67E+08	Special
	Ni-59S	1.07E-11	171	9.39E+12	3.13E+15	Special
	Pu-241S	1.32E-26	171	---	---	Special
	Sn-121mS	1.15E-02	171	8.66E+03	2.89E+06	Special
	Sn-126S	1.13E+03	171	8.86E-02	2.96E+01	Special
	Sr-90S	8.41E-02	171	1.19E+03	3.97E+05	Special
	Zr-93S	9.68E-25	243	---	---	Special

Notes:

--- = numerical values exceeding 1 x 10^{20}

* mrem Ci^{-1} (Acute), mrem yr^{-1} Ci^{-1} (Chronic)

SWF radionuclides with no future inventory are highlighted in yellow when a SWF model is employed to set disposal limits.

SWF model that includes explicit gamma ray analyses (Verst, 2021a) is highlighted in green.

Table G-64. Inadvertent Human Intruder Acute and Chronic Dose Factors and Inventory Limits for NR26E

IHI Dose	Radionuclide	Dose Factor*	Time of Max Dose (Year)	Inventory Limit (Ci)	Concentration Limit (μCi m^{-3})	Waste Form Limit
Acute	Am-241S	6.89E-11	171	7.26E+12	2.99E+14	Special
	Am-243S	5.62E-10	171	8.90E+11	3.66E+13	Special
	Co-60S	1.77E-32	171	---	---	Special
	Cs-137S	1.78E-27	171	---	---	Special
	Mo-93S	6.89E-31	171	---	---	Special
	Nb-93mS	5.09E-33	171	---	---	Special
	Nb-94S	9.07E-27	171	---	---	Special
	Ni-59S	9.09E-27	171	---	---	Special
	Pu-241S	3.36E-28	171	---	---	Special
	Sn-121mS	1.37E-31	171	---	---	Special
	Sn-126S	5.22E-05	171	9.58E+06	3.94E+08	Special
	Sr-90S	1.00E-06	171	4.99E+08	2.05E+10	Special
	Zr-93S	1.80E-26	253	---	---	Special
Chronic	Am-241S	4.00E-01	171	2.50E+02	1.03E+04	Special
	Am-243S	1.07E+01	171	9.39E+00	3.86E+02	Special
	Co-60S	2.83E-09	171	3.53E+10	1.45E+12	Special
	Cs-137S	1.87E-06	171	5.35E+07	2.20E+09	Special
	Mo-93S	5.86E-03	171	1.71E+04	7.03E+05	Special
	Nb-93mS	1.25E-05	171	7.99E+06	3.29E+08	Special
	Nb-94S	9.11E-05	171	1.10E+06	4.51E+07	Special
	Ni-59S	1.07E-11	171	9.38E+12	3.86E+14	Special
	Pu-241S	1.81E-26	171	---	---	Special
	Sn-121mS	3.76E-03	171	2.66E+04	1.10E+06	Special
	Sn-126S	1.39E+02	171	7.19E-01	2.96E+01	Special
	Sr-90S	4.56E-02	171	2.19E+03	9.03E+04	Special
	Zr-93S	9.68E-25	253	---	---	Special

Notes:

--- = numerical values exceeding 1 x 10^{20}

* mrem Ci^{-1} (Acute), mrem yr^{-1} Ci^{-1} (Chronic)

SWF radionuclides with future inventory are highlighted in blue when a SWF model is employed to set disposal limits.

SWF model that includes explicit gamma ray analyses (Verst, 2021a) is highlighted in green.

G.3 INADVERTENT HUMAN INTRUDER DOSE HISTORY TIME PROFILES

The IHI acute and chronic dose history time profiles for 27 of the 33 ELLWF DUs are presented in Figure G-1 through Figure G-15 for STs; Figure G-16 through Figure G-23 for ETs; Figure G-24 for the LAWV; Figure G-25 for the ILV; and Figure G-26 through Figure G-27 for the two NRCDAs. In all graphs, dose factors and doses are shown only for the top five radionuclides of the given DU. Two exceptions are the LAWV and ILV because only four and two radionuclides, respectively, remain after screening (Section 2.3.7) and are included in the IHI analysis. In addition, the top five radionuclides for acute and chronic dose factors and the top five radionuclides for acute and chronic doses are not necessarily the same because of differences in 2065 projected CWTS inventories.

In Figure G-1 through Figure G-27, plots (a) [acute] and (b) [chronic] display mrem and mrem yr^{-1}, respectively, per curie of disposed radionuclide versus model year, while plots (c) [acute] and (d) [chronic] display the expected IHI doses in mrem and mrem yr^{-1}, respectively, versus model year for the projected 2065 radionuclide CWTS inventories for the respective DU.

The following six DUs located in the eastern sector of the ELLWF (Figure 2-33) are excluded: ST17, ST19, ST20, ST21, ST22, and ET06. ST18 is the only DU located southeast of the LAWV with a dose history time profile. As explained in Chapter 8, the adverse flow field in the eastern sector results in significant overlap of individual DU contaminant plumes and leads to unacceptable inventory limits for these six excluded DUs.

G.3.1 Slit Trenches

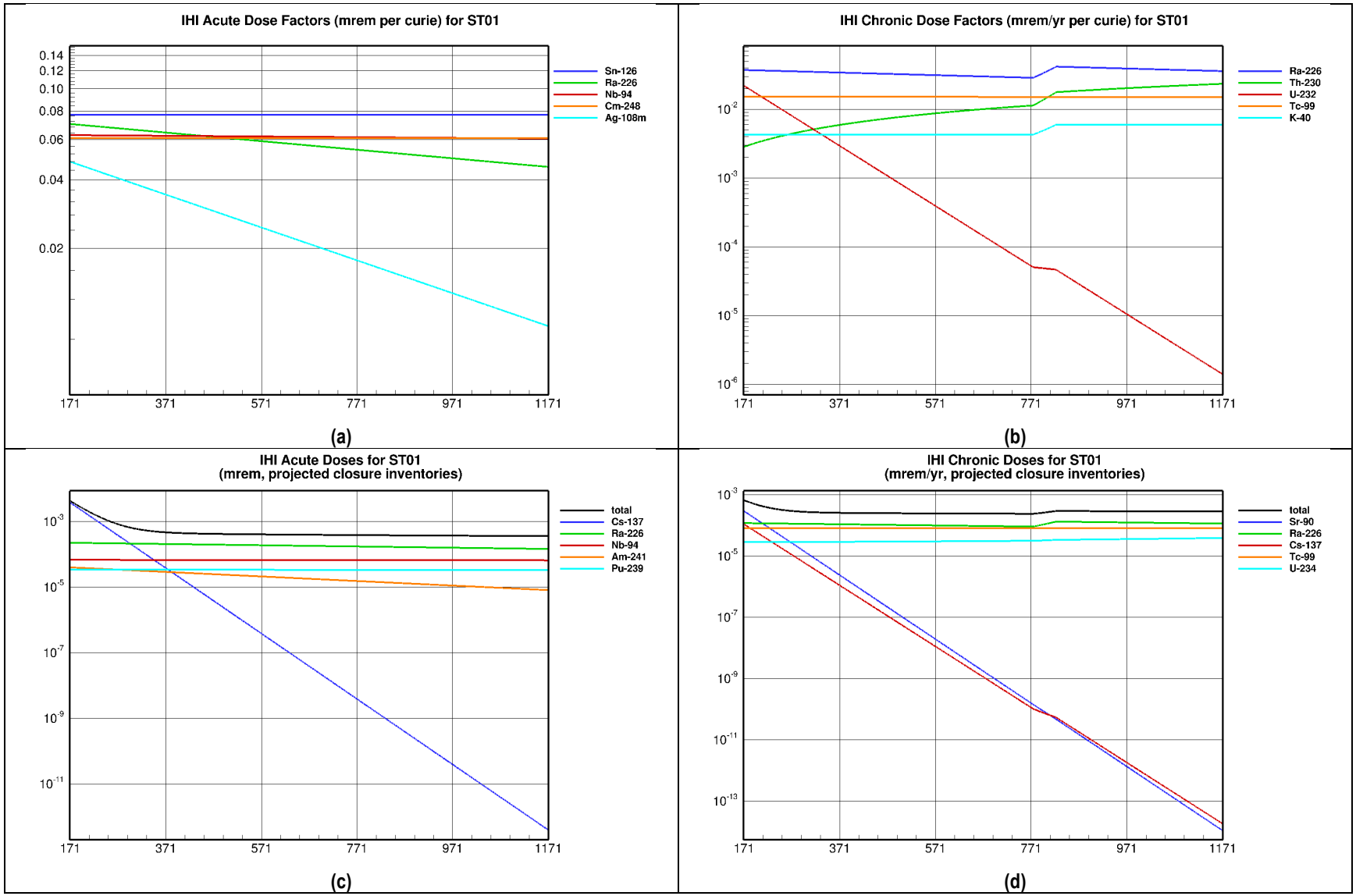


Figure G-1. Inadvertent Human Intruder Acute and Chronic Dose Factors and Doses for ST01

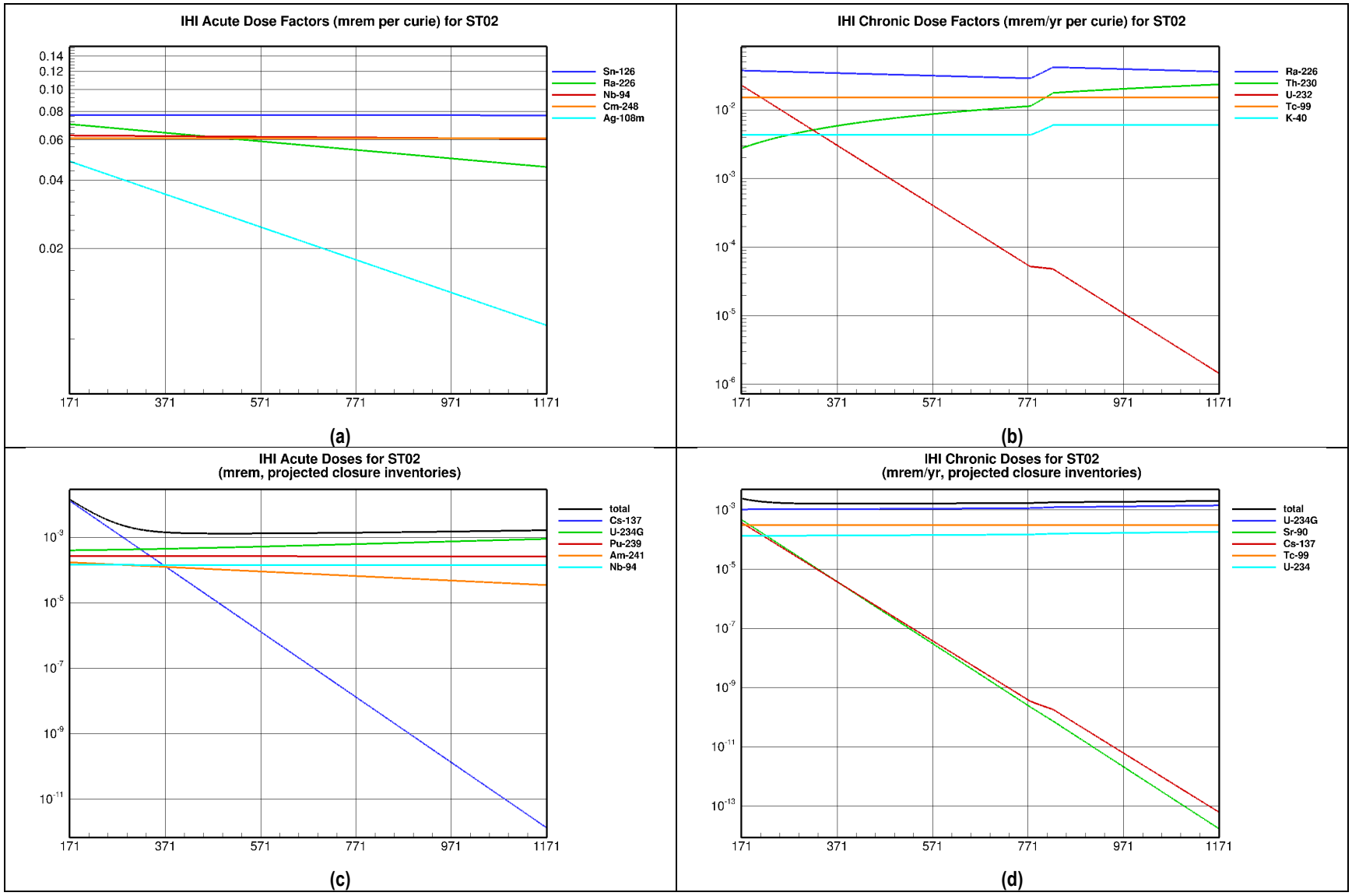


Figure G-2. Inadvertent Human Intruder Acute and Chronic Dose Factors and Doses for ST02

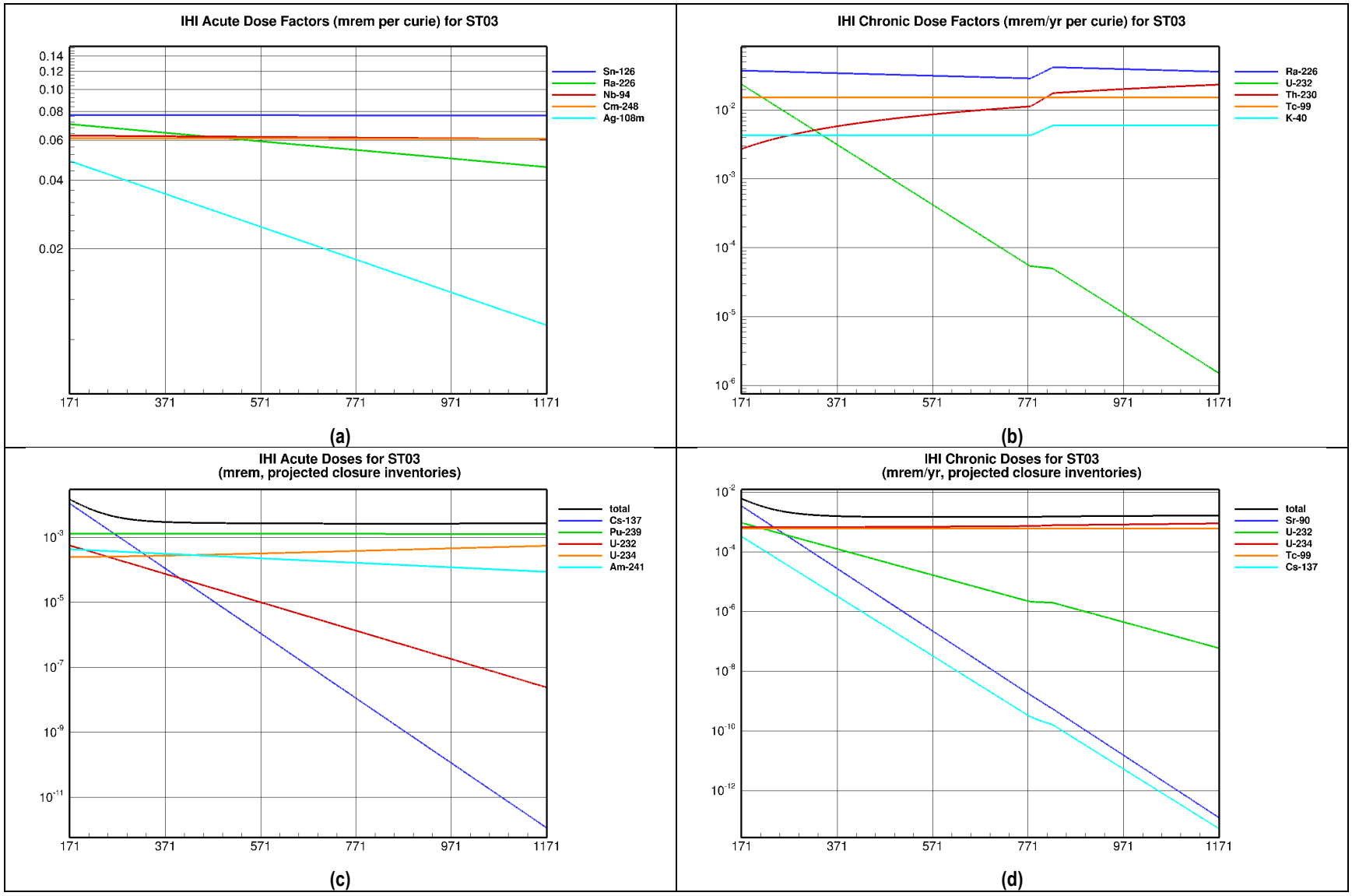


Figure G-3. Inadvertent Human Intruder Acute and Chronic Dose Factors and Doses for ST03

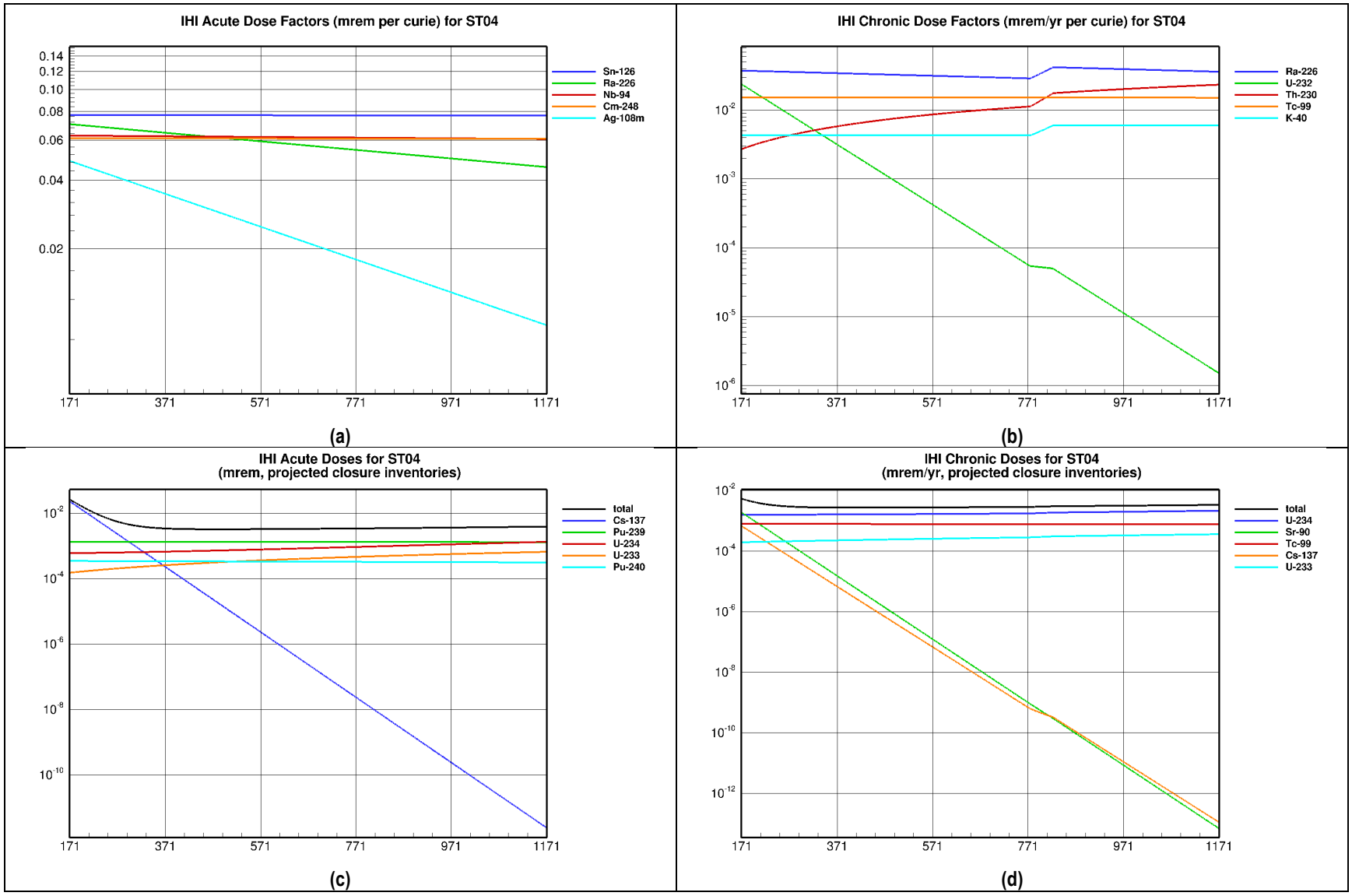


Figure G-4. Inadvertent Human Intruder Acute and Chronic Dose Factors and Doses for ST04

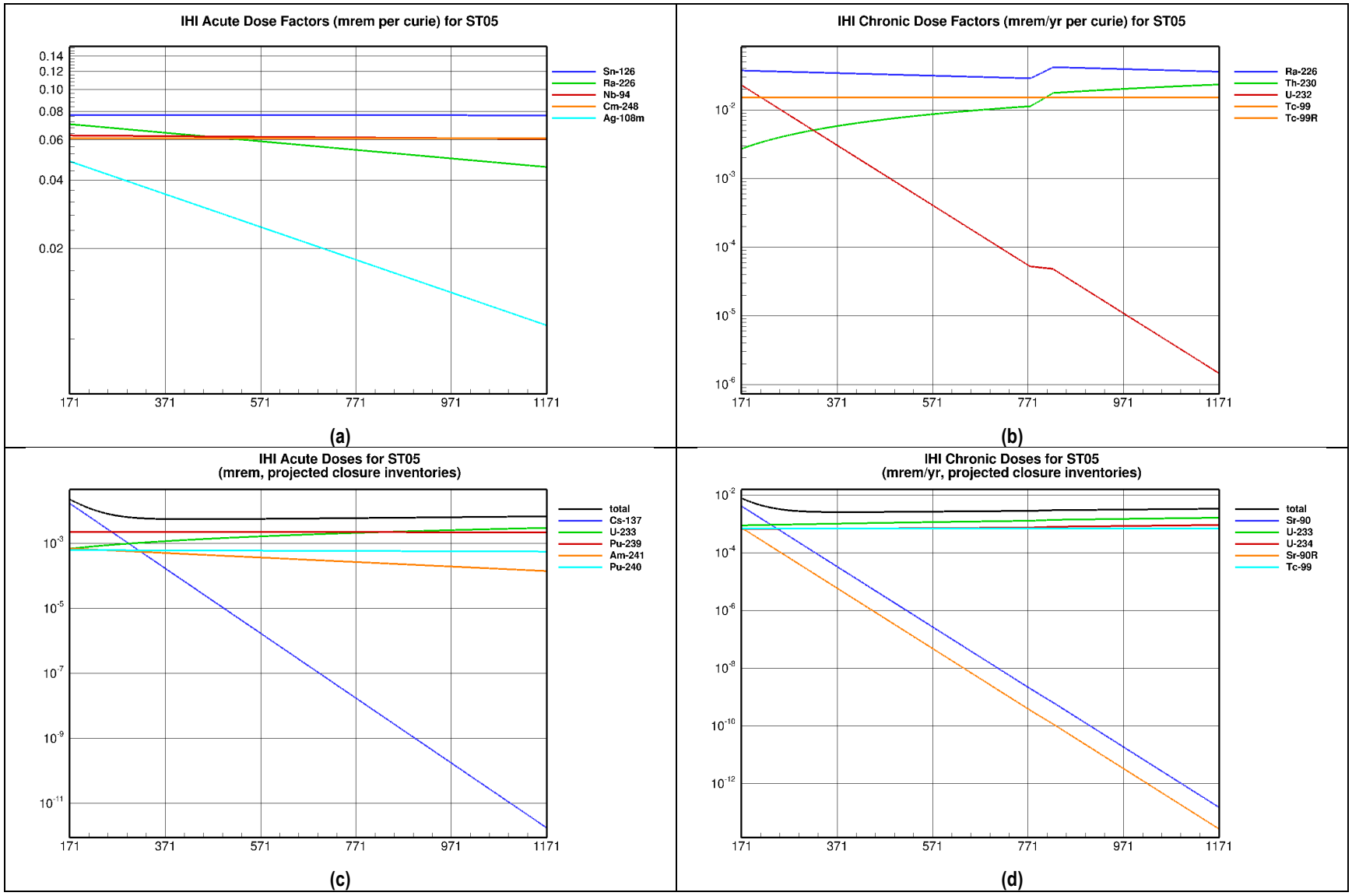
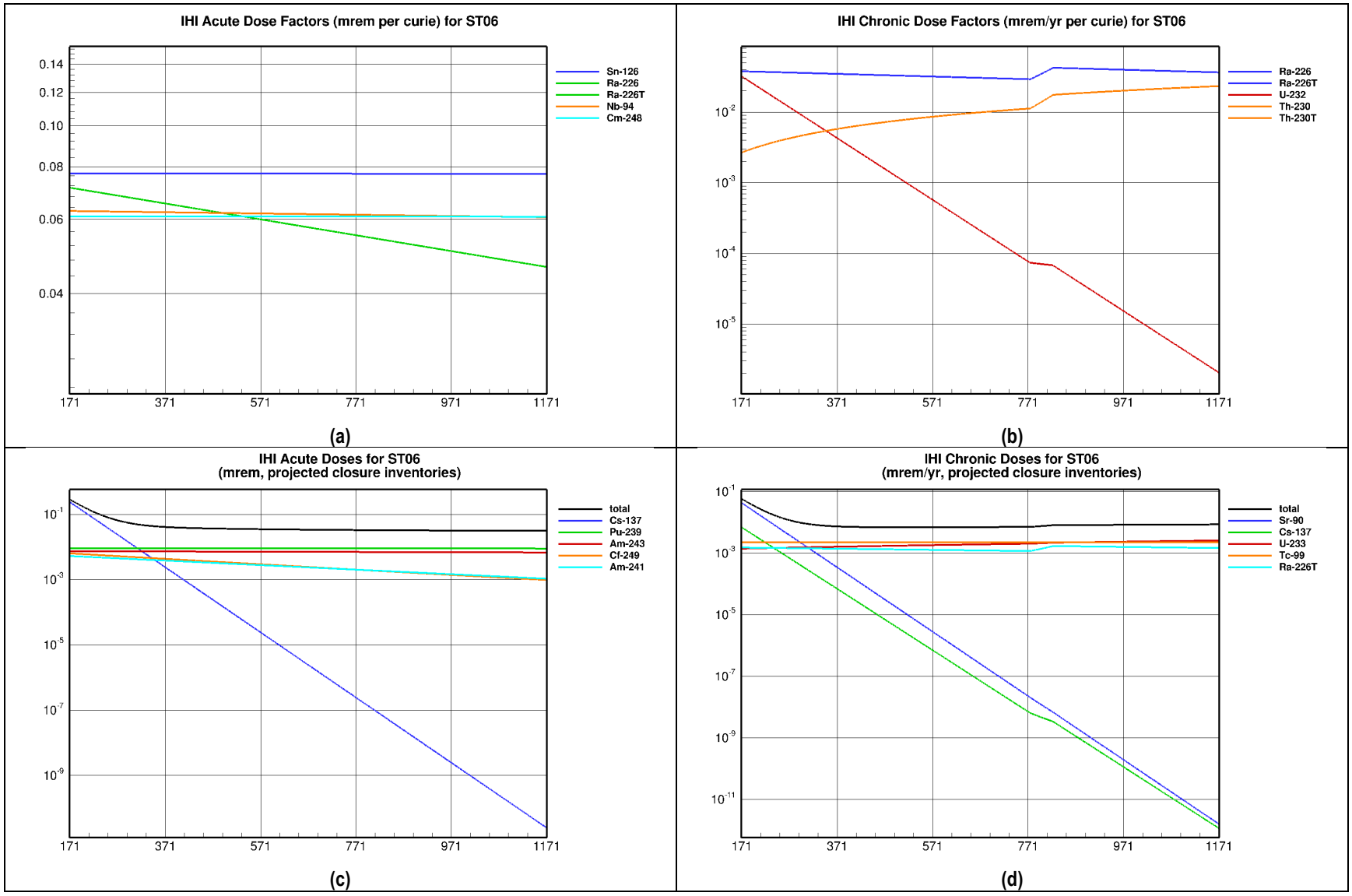


Figure G-5. Inadvertent Human Intruder Acute and Chronic Dose Factors and Doses for ST05



Note: The acute and chronic dose factors for Ra-226 and Th-230 in the SWF (Ra-226T and Th-230T) are the same as those for generic waste; therefore, only one curve is shown in (a) and (b) for each.

Figure G-6. Inadvertent Human Intruder Acute and Chronic Dose Factors and Doses for ST06

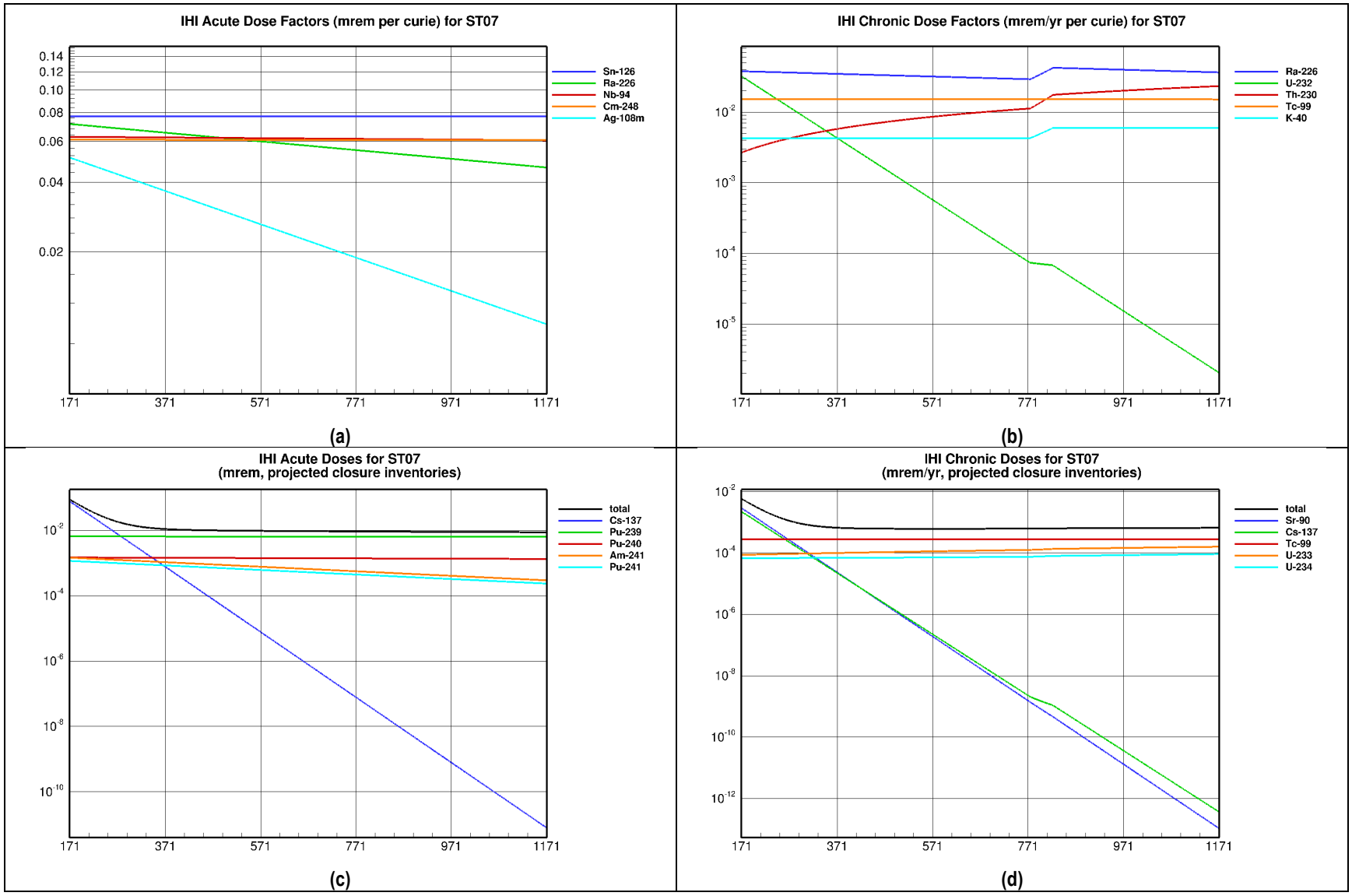


Figure G-7. Inadvertent Human Intruder Acute and Chronic Dose Factors and Doses for ST07

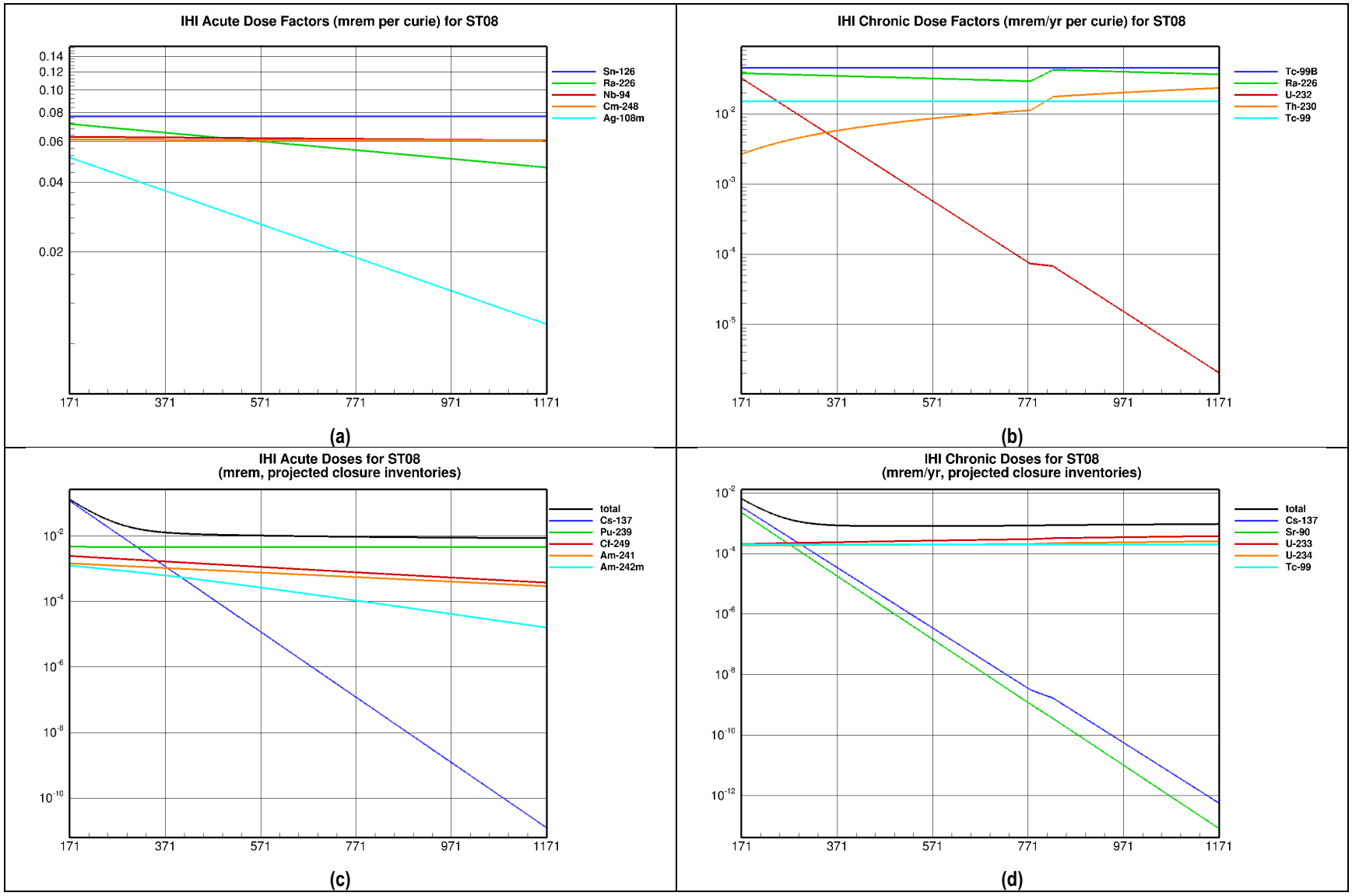


Figure G-8. Inadvertent Human Intruder Acute and Chronic Dose Factors and Doses for ST08

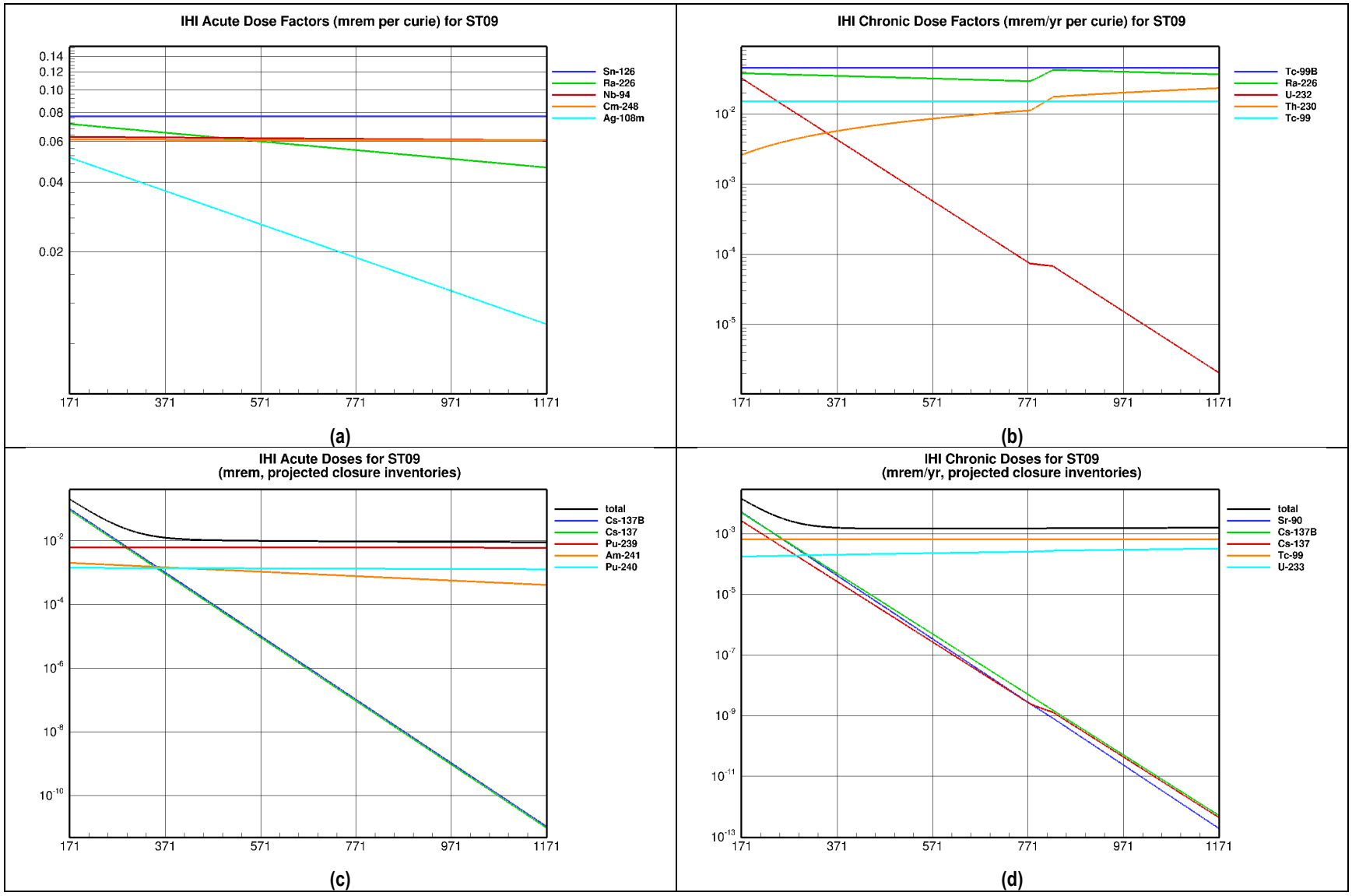


Figure G-9. Inadvertent Human Intruder Acute and Chronic Dose Factors and Doses for ST09

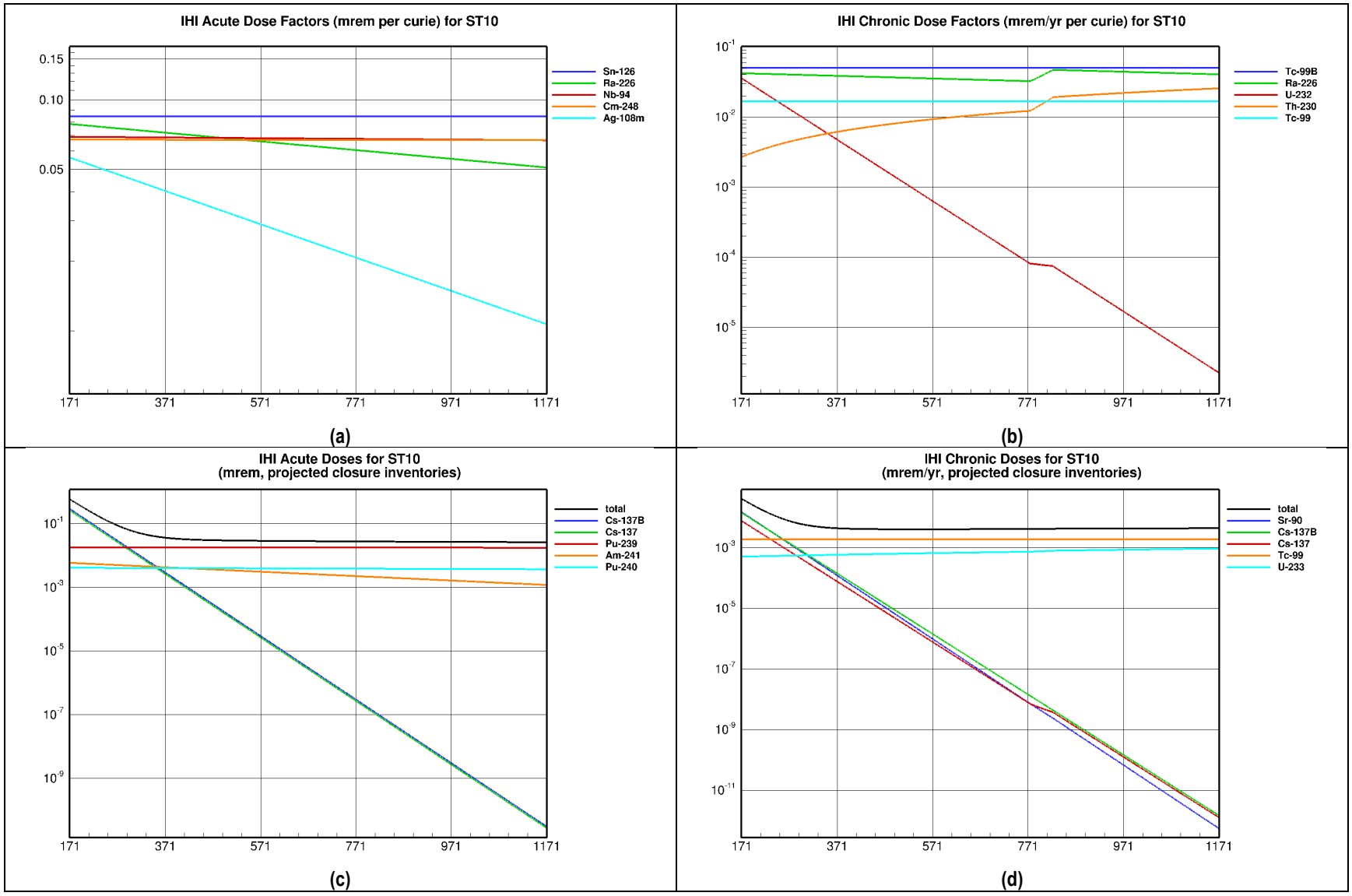


Figure G-10. Inadvertent Human Intruder Acute and Chronic Dose Factors and Doses for ST10

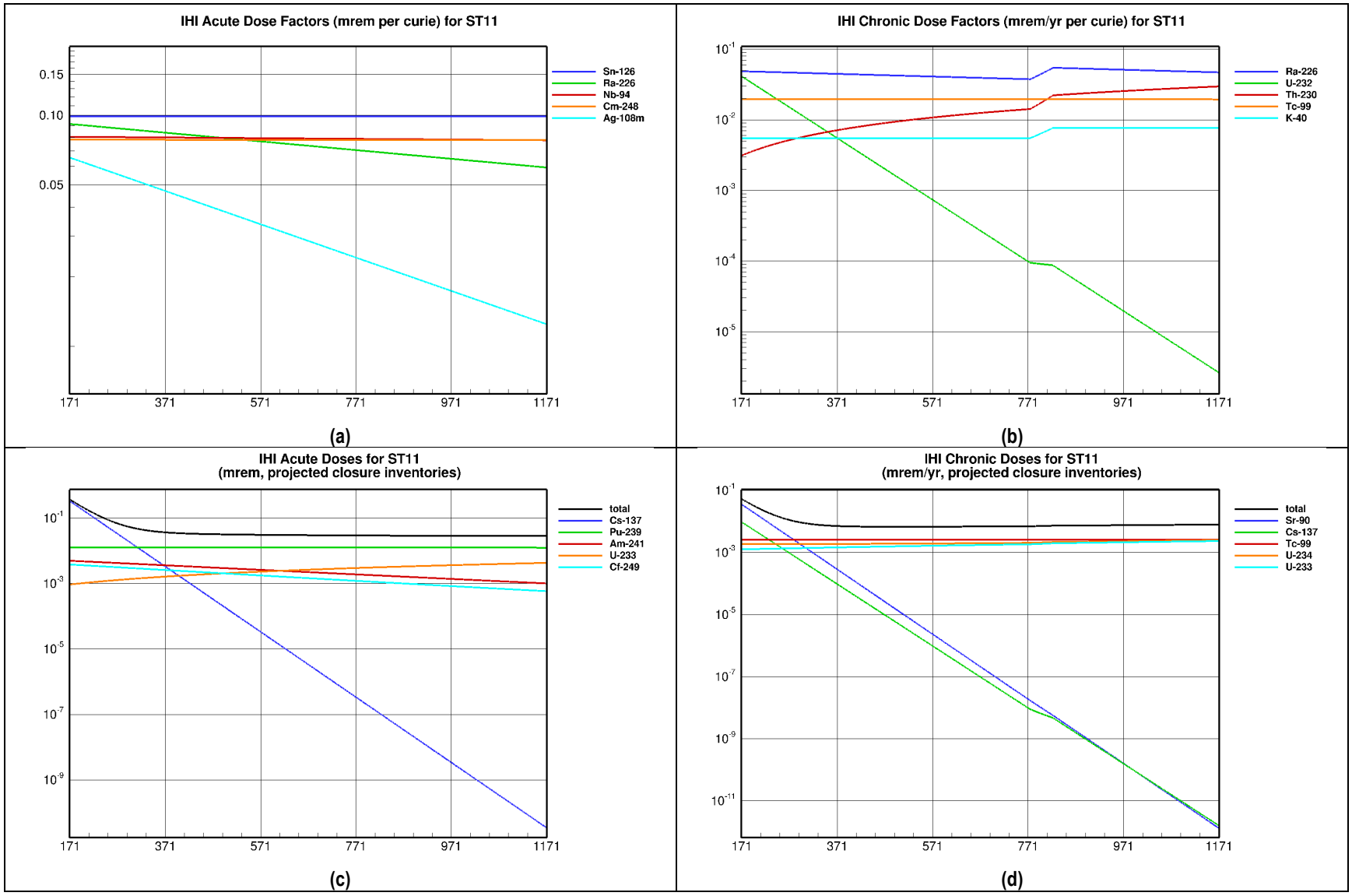


Figure G-11. Inadvertent Human Intruder Acute and Chronic Dose Factors and Doses for ST11

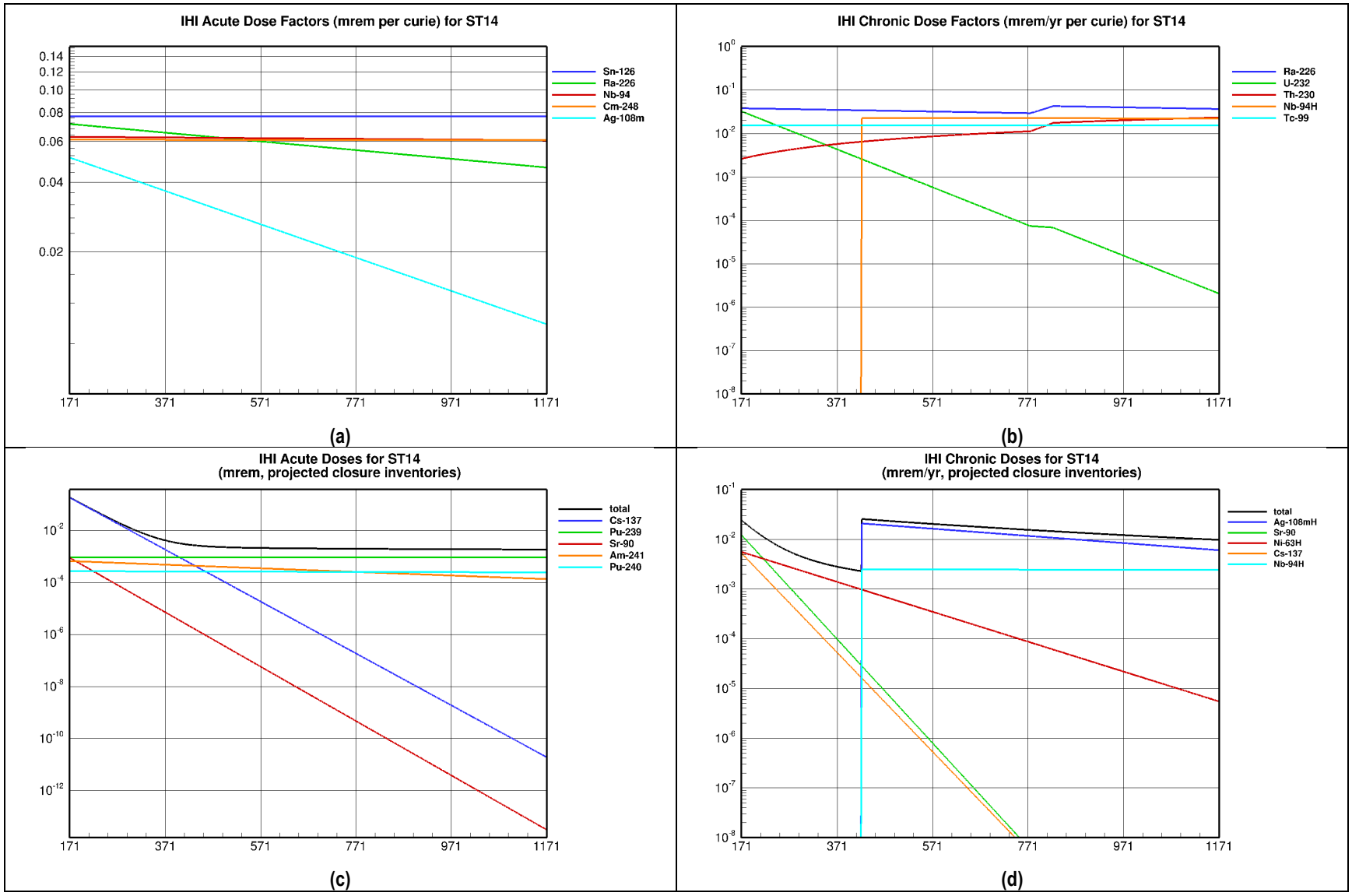


Figure G-12. Inadvertent Human Intruder Acute and Chronic Dose Factors and Doses for ST14

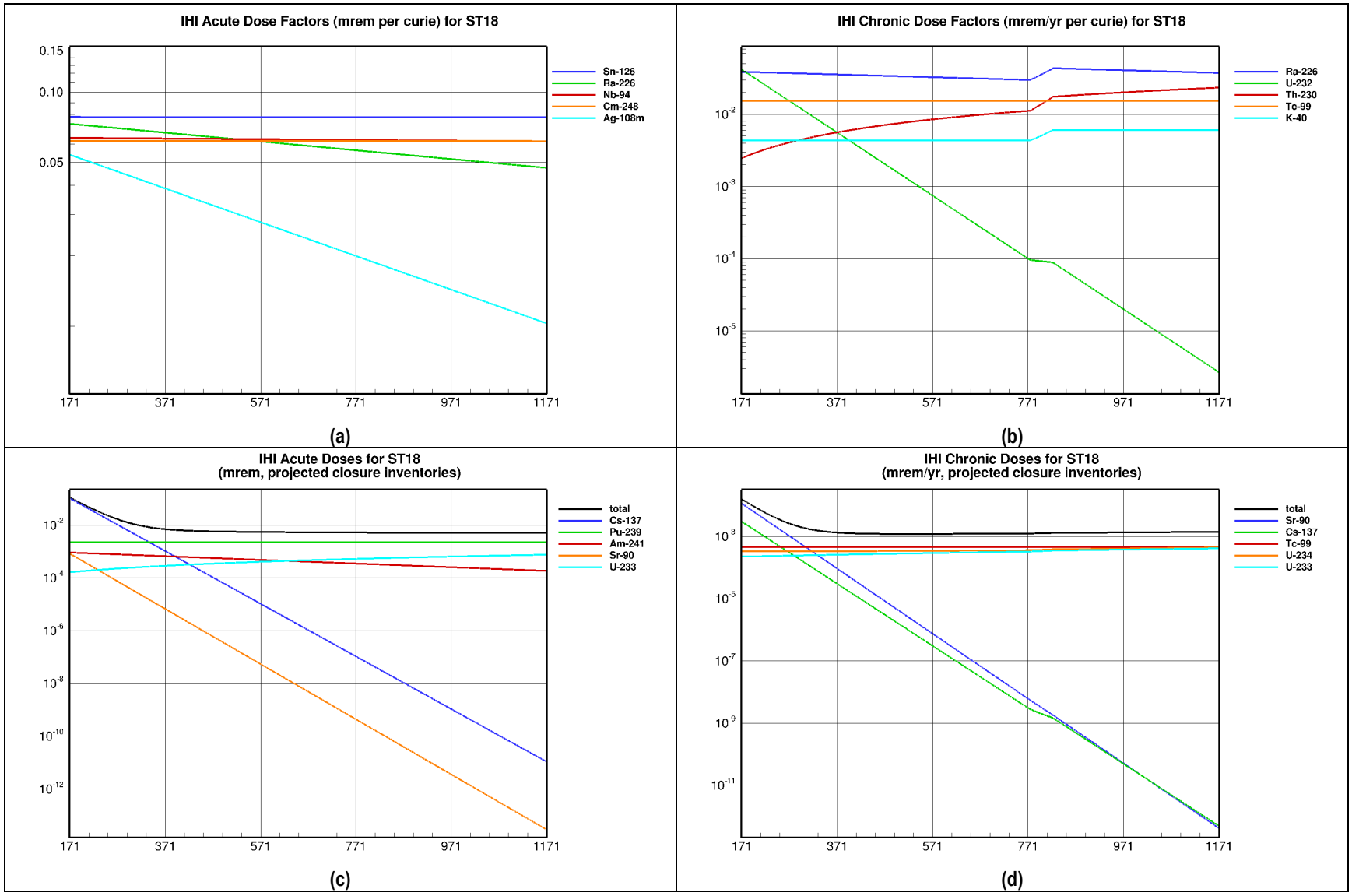


Figure G-13. Inadvertent Human Intruder Acute and Chronic Dose Factors and Doses for ST18

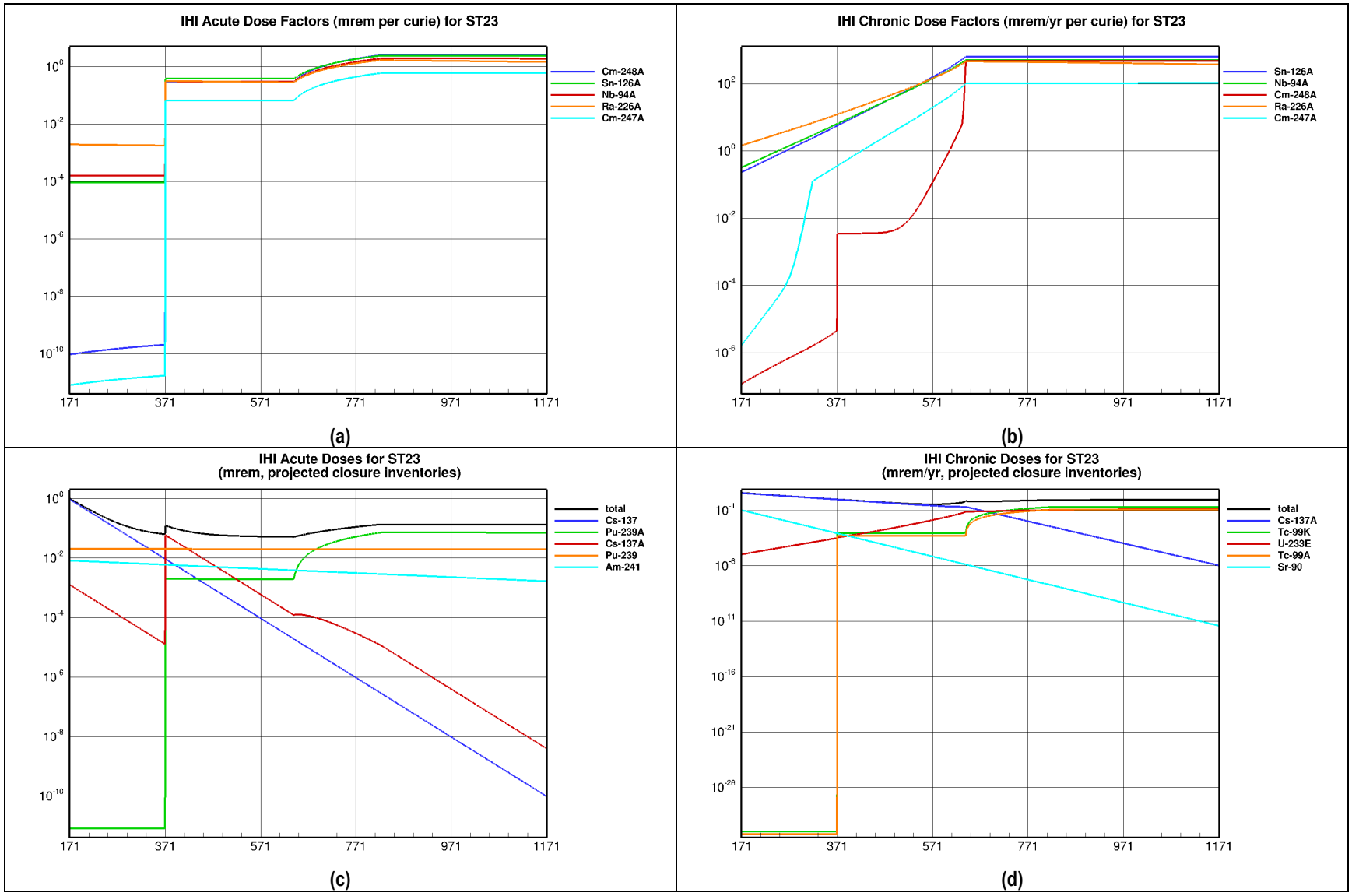


Figure G-14. Inadvertent Human Intruder Acute and Chronic Dose Factors and Doses for ST23

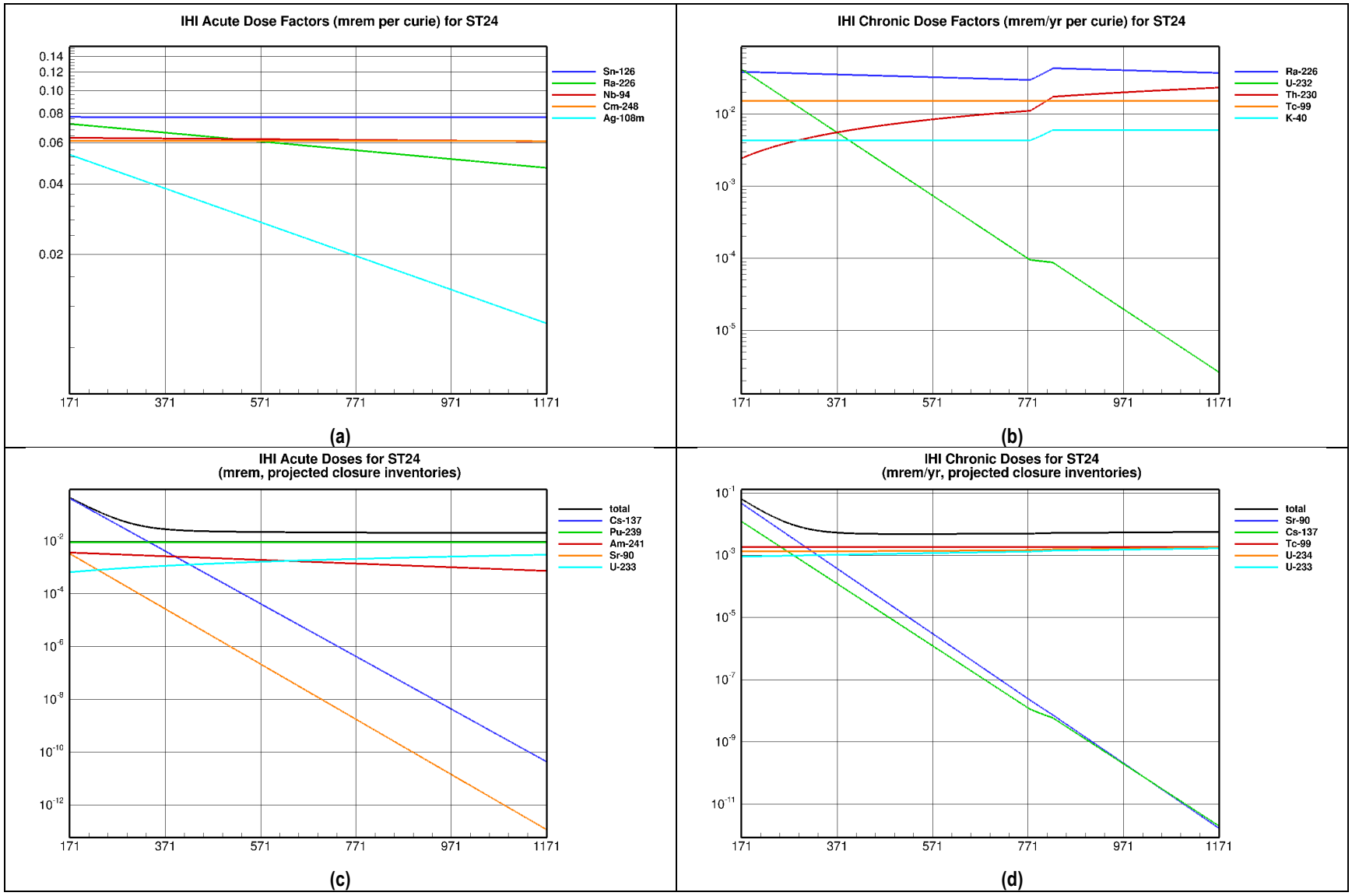


Figure G-15. Inadvertent Human Intruder Acute and Chronic Dose Factors and Doses for ST24

G.3.2 Engineered Trenches

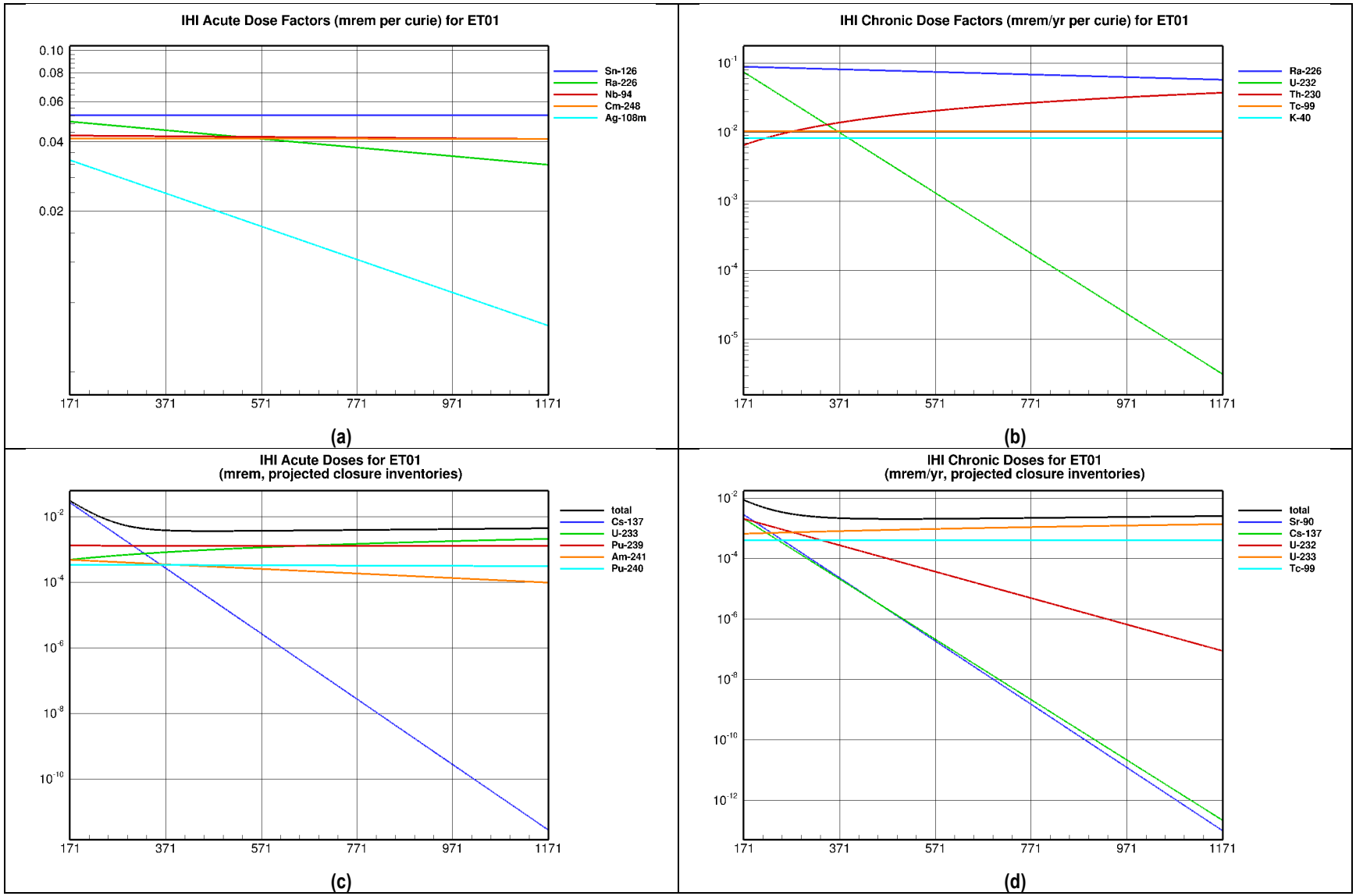


Figure G-16. Inadvertent Human Intruder Acute and Chronic Dose Factors and Doses for ET01

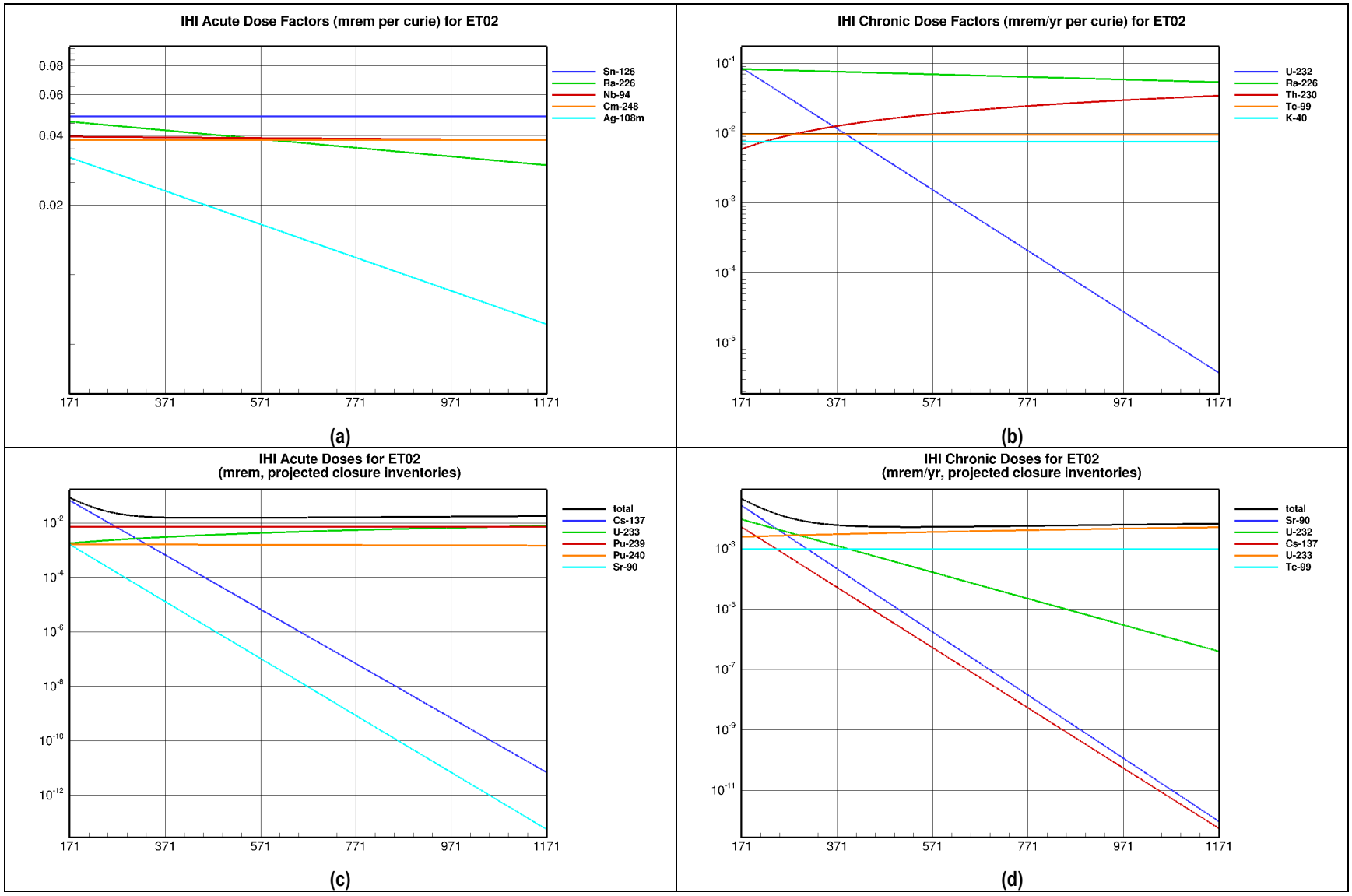


Figure G-17. Inadvertent Human Intruder Acute and Chronic Dose Factors and Doses for ET02

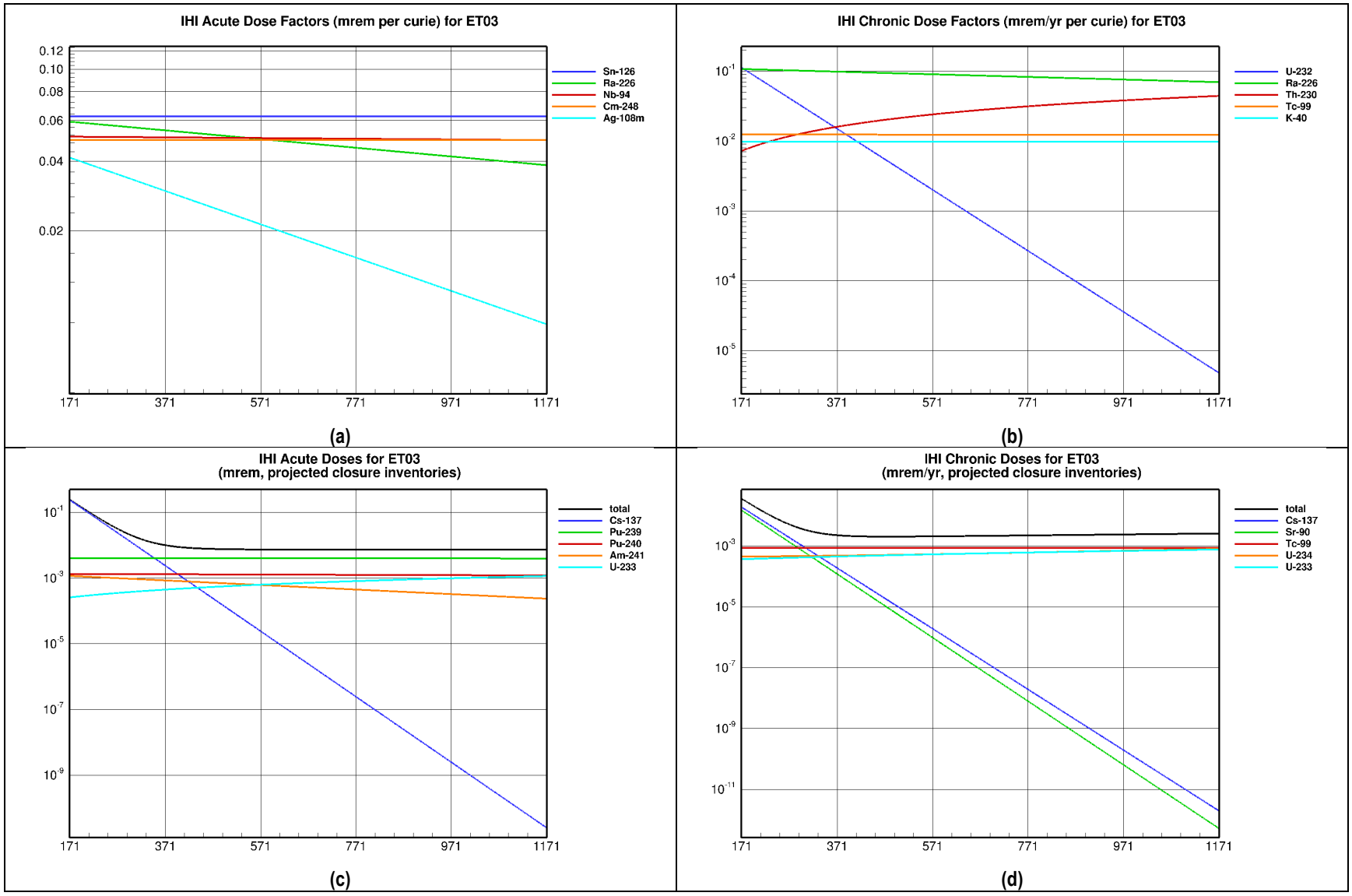


Figure G-18. Inadvertent Human Intruder Acute and Chronic Dose Factors and Doses for ET03

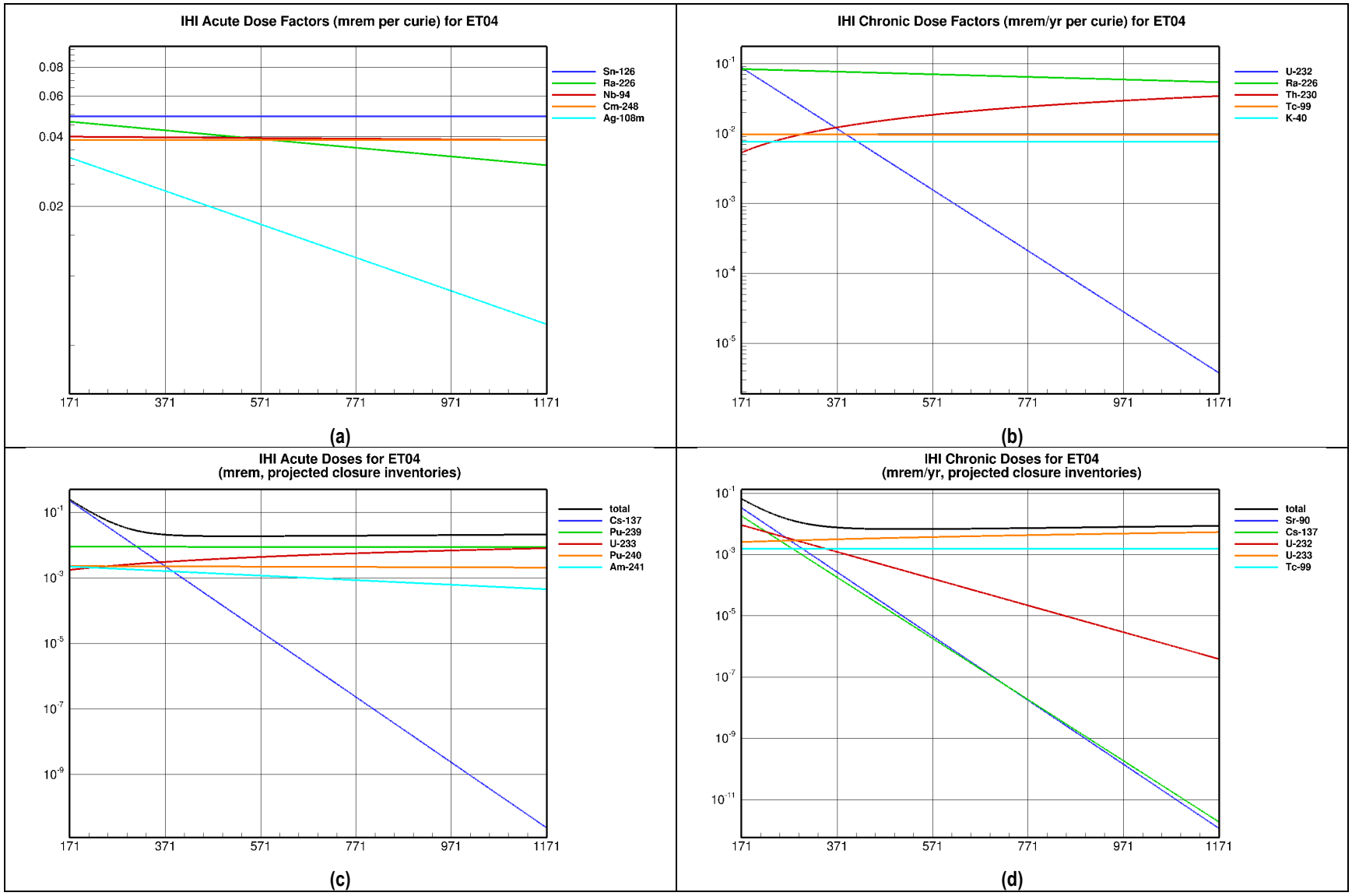


Figure G-19. Inadvertent Human Intruder Acute and Chronic Dose Factors and Doses for ET04

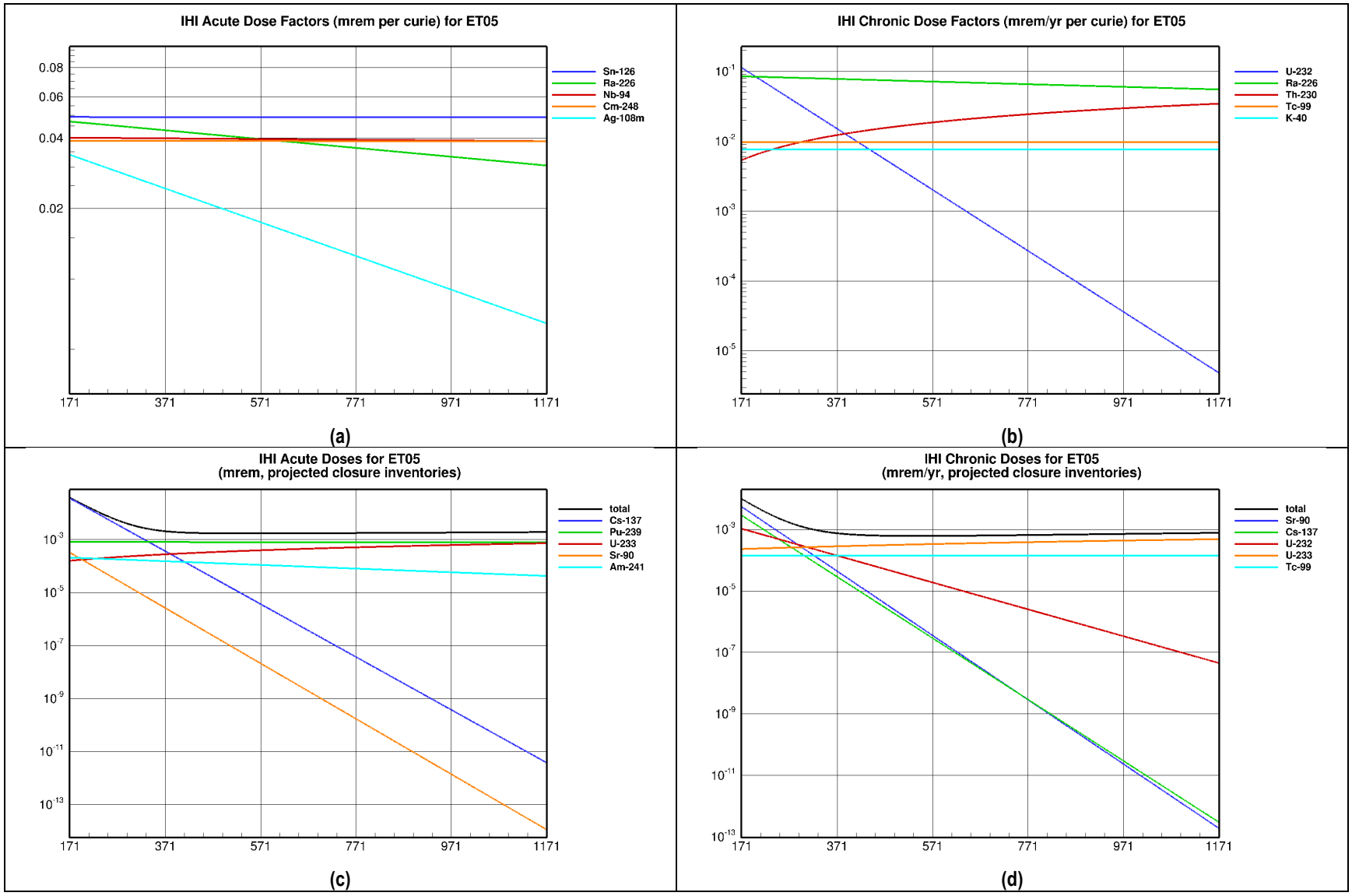


Figure G-20. Inadvertent Human Intruder Acute and Chronic Dose Factors and Doses for ET05

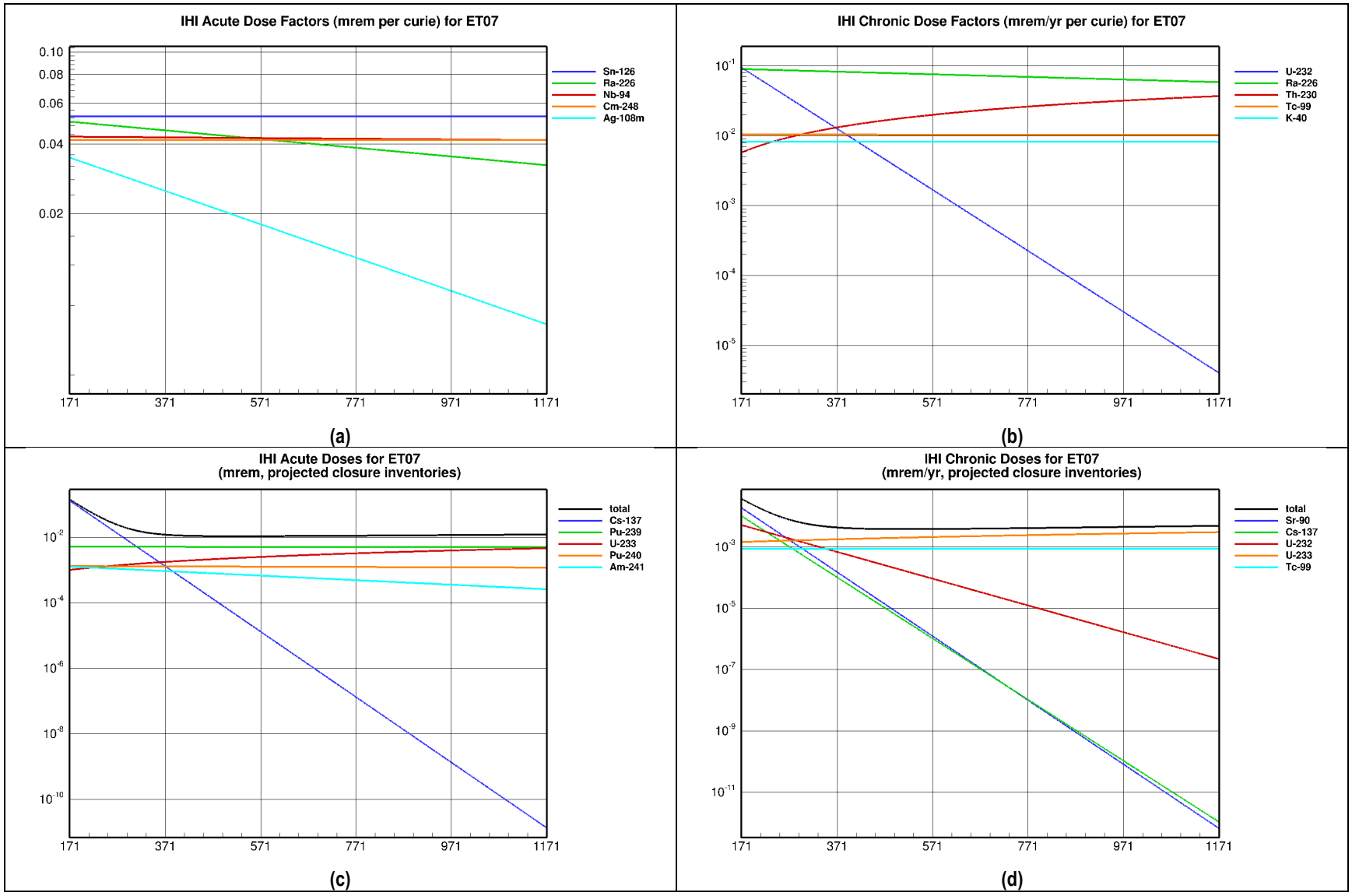


Figure G-21. Inadvertent Human Intruder Acute and Chronic Dose Factors and Doses for ET07

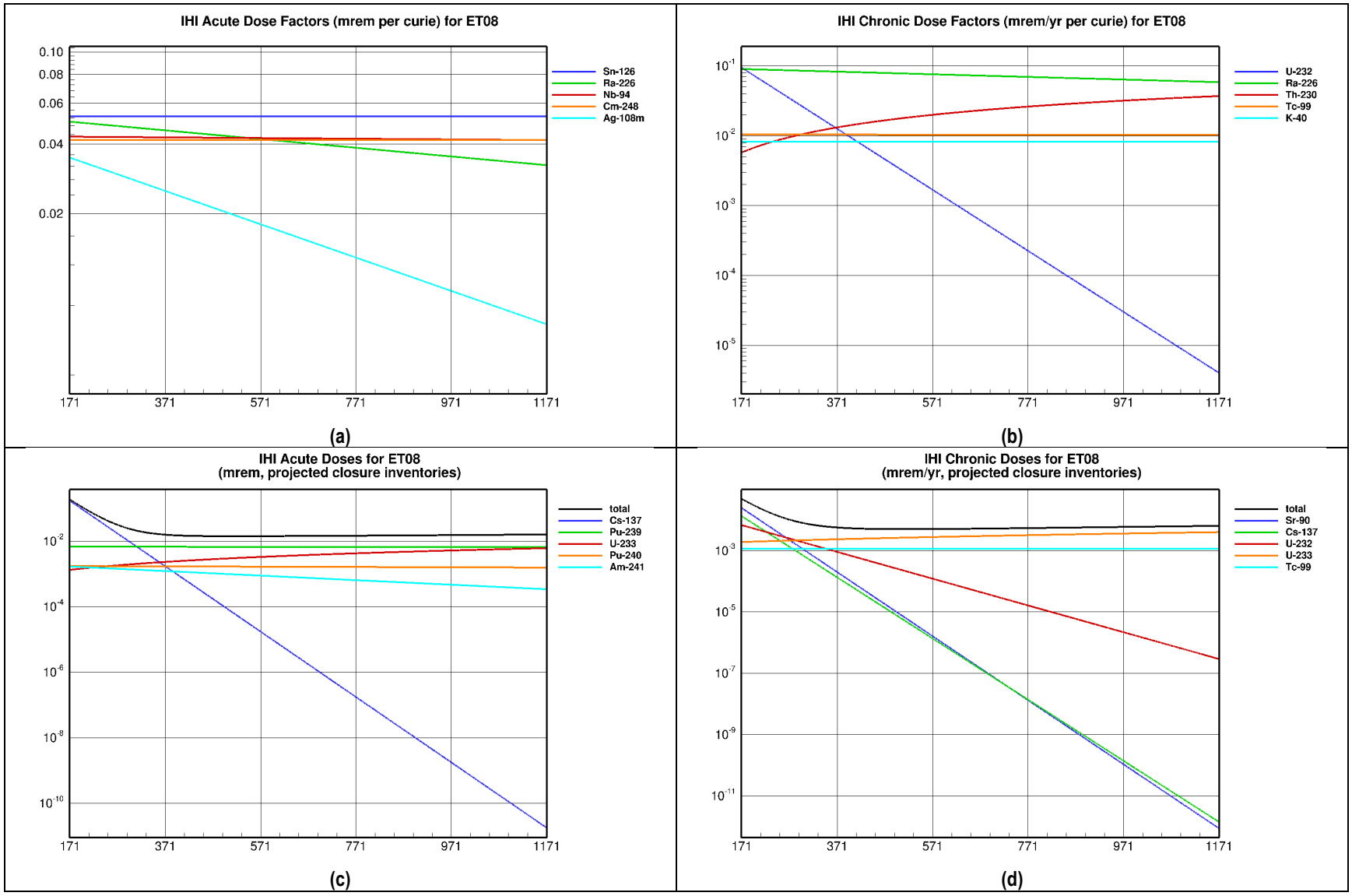


Figure G-22. Inadvertent Human Intruder Acute and Chronic Dose Factors and Doses for ET08

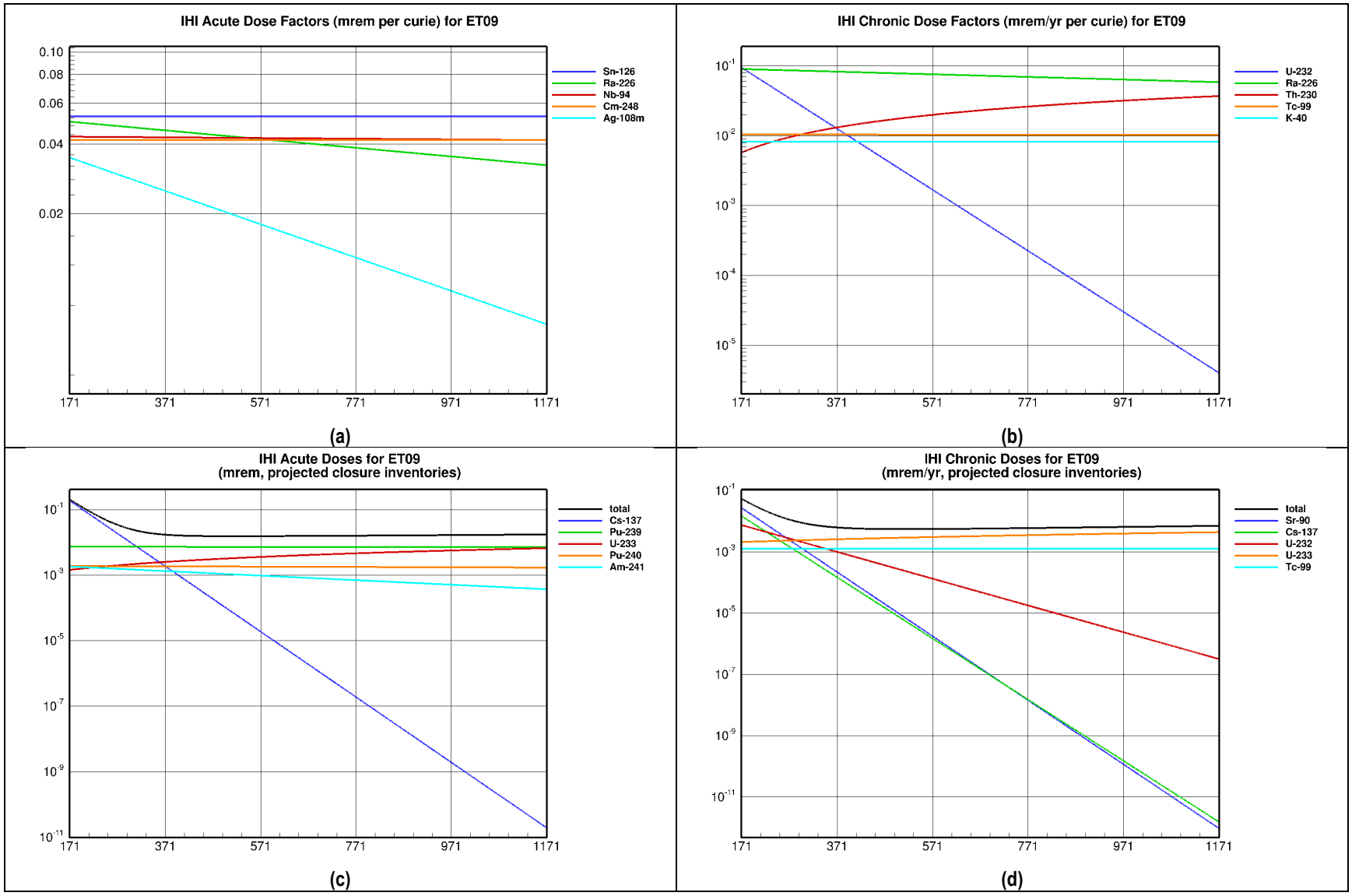


Figure G-23. Inadvertent Human Intruder Acute and Chronic Dose Factors and Doses for ET09

G.3.3 Low-Activity Waste Vault

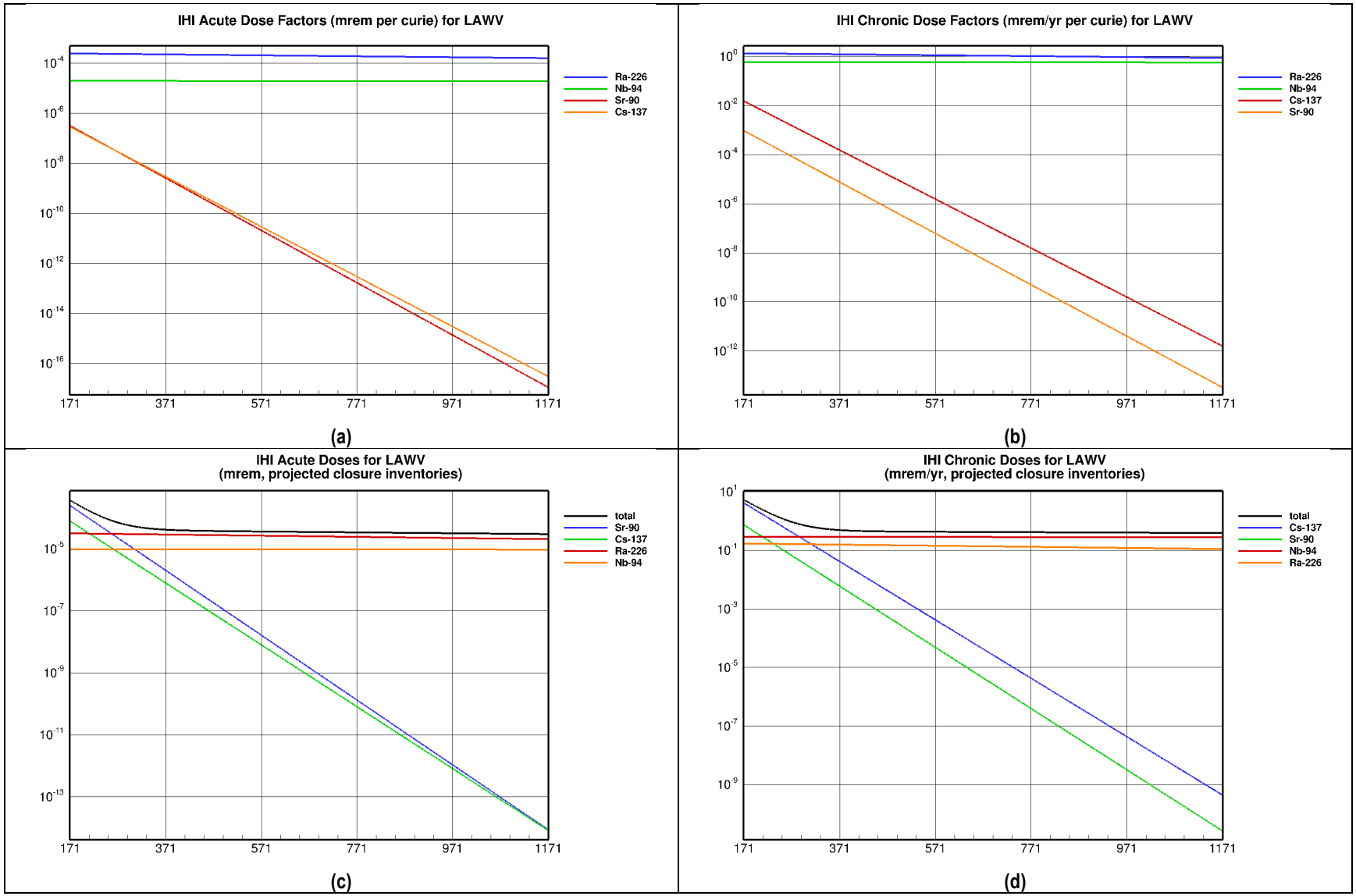
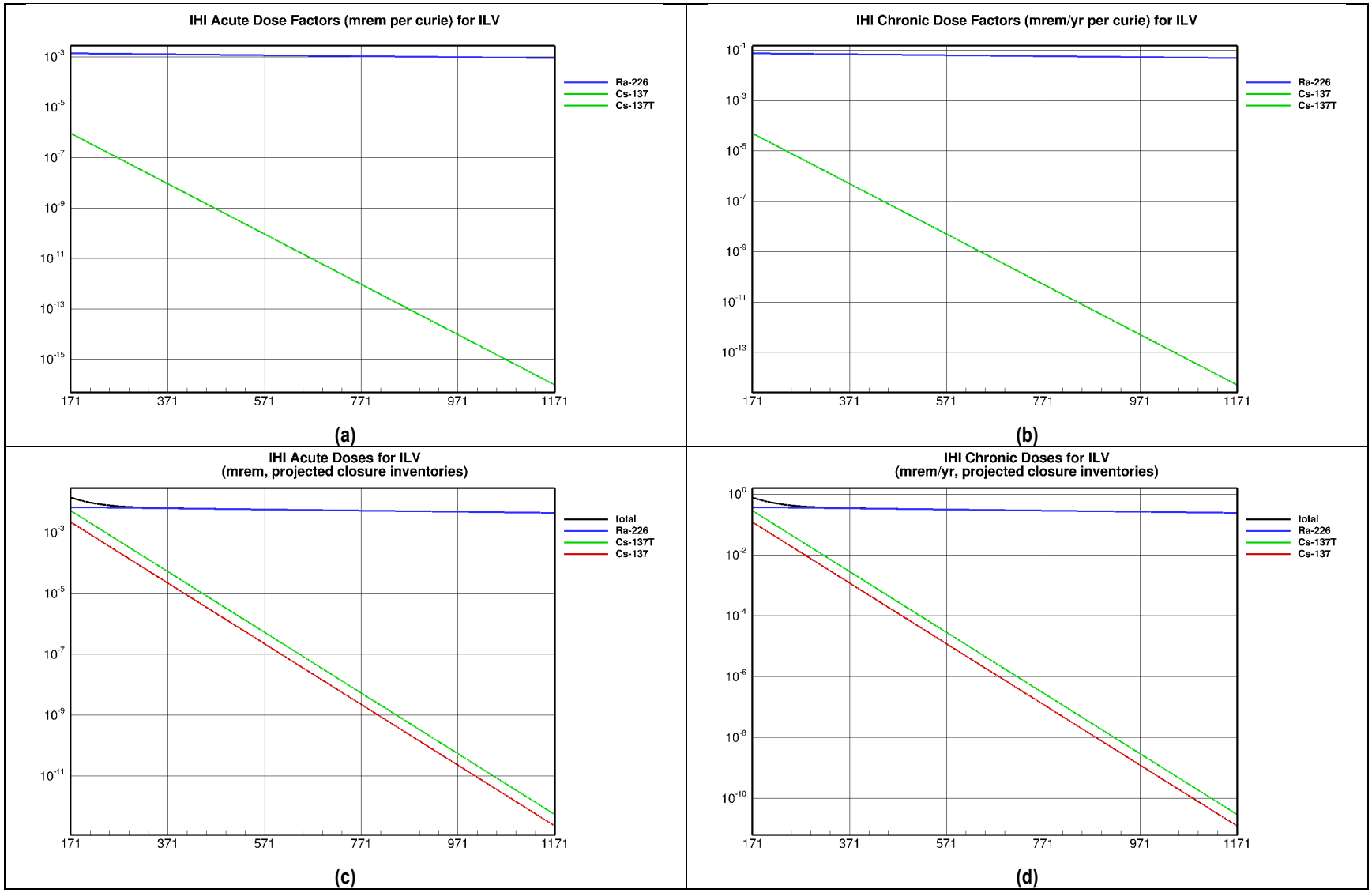


Figure G-24. Inadvertent Human Intruder Acute and Chronic Dose Factors and Doses for Low-Activity Waste Vault

G.3.4 Intermediate-Level Vault



Note: The acute and chronic dose factors for Cs-137 in the SWF (Cs-137T) are the same as those for generic waste; therefore, only one curve is shown in (a) and (b).

Figure G-25. Inadvertent Human Intruder Acute and Chronic Dose Factors and Doses for Intermediate-Level Vault

G.3.5 Naval Reactor Component Disposal Areas

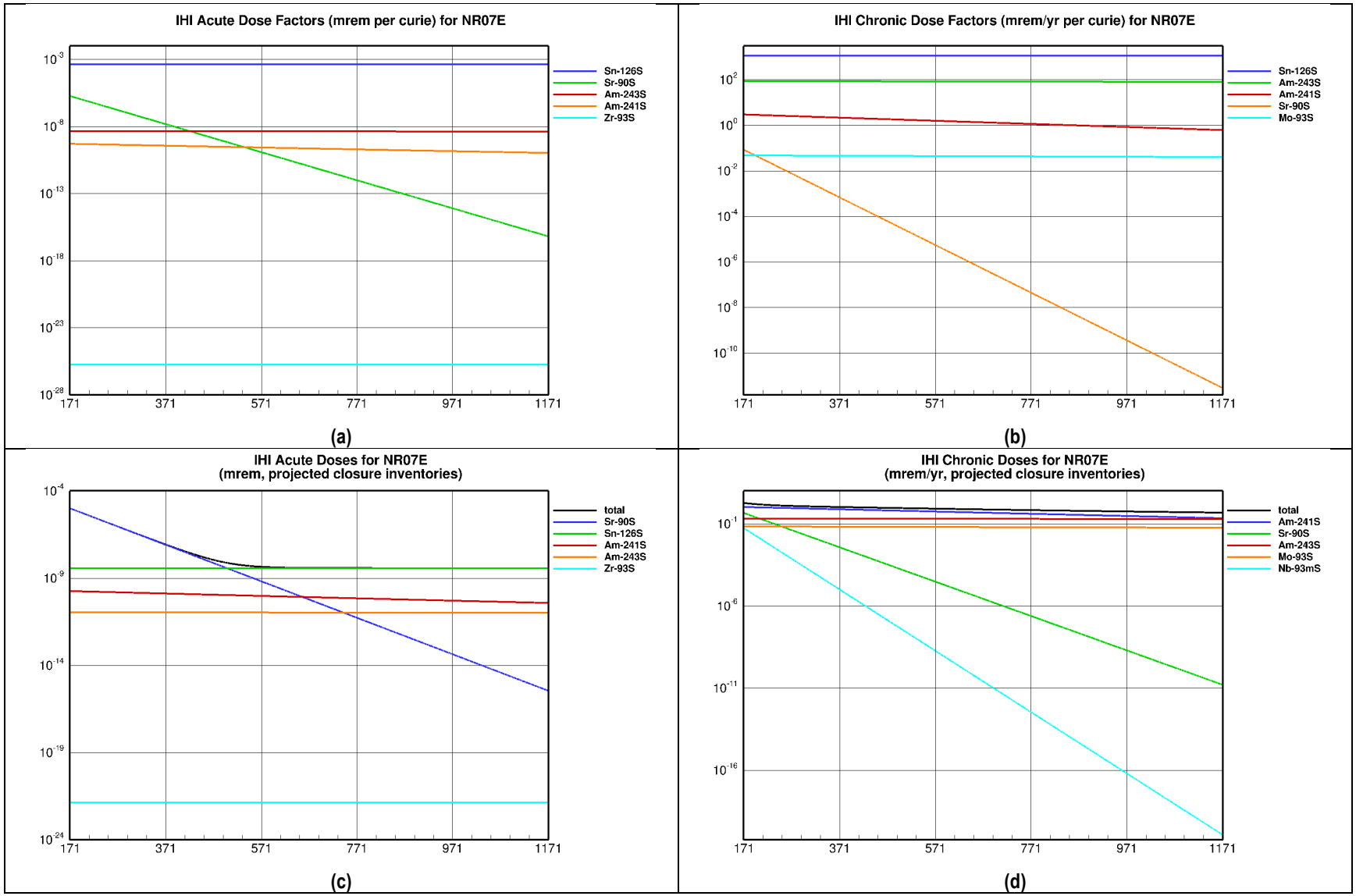


Figure G-26. Inadvertent Human Intruder Acute and Chronic Dose Factors and Doses for NR07E

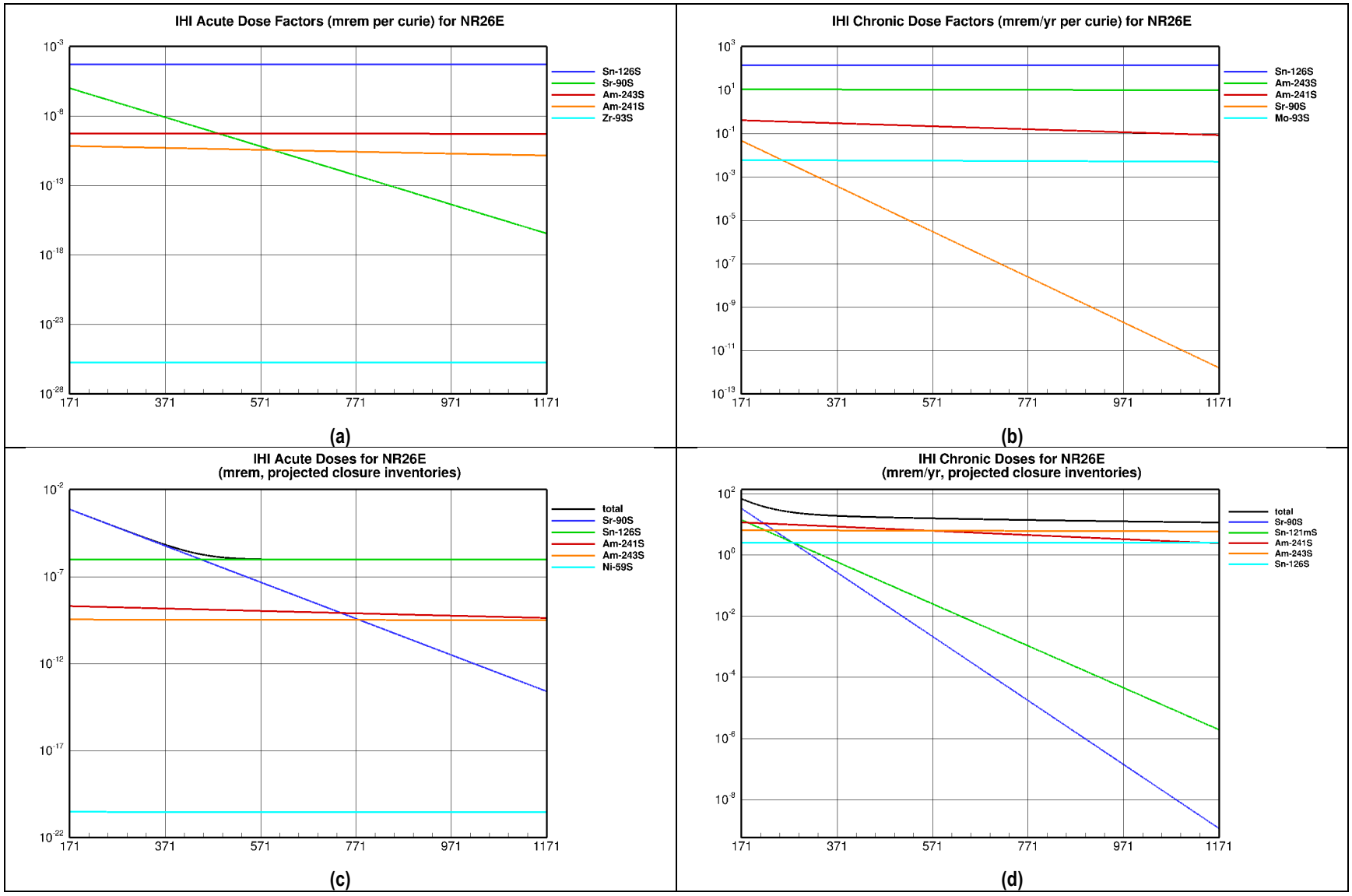


Figure G-27. Inadvertent Human Intruder Acute and Chronic Dose Factors and Doses for NR26E

G.4 REFERENCES

Verst, C. (2021a). "Calculated Gamma Factors at Human Receptor Locations Near HWCTR and NR Cask Special Waste Forms in E-Area." SRNL-STI-2021-00307. Savannah River National Laboratory, Aiken, SC. June 2021.